SAARANSH
RKG JOURNAL OF MANAGEMENT

Vol :9   **No :2**   **January 2018**

SAARANSH

Vol. 9

No.2

January 2018

ISSN 0975-4601

Contents

An International Bi-annual Refereed Research Journal

Aims & Scope

SAARANSH is an international bi-annual refereed research journal published by RKGIT (MBA), Ghaziabad. The objective of the journal is to provide a forum for discussion of advancement in the area of management. The journal published research papers, articles, book reviews & case studies. The journal invites manuscripts on all aspects of management and business environment.

FROM THE DESK OF THE EDITOR ✍

The present issue carries twelve articles with case study and book review. The first article explores the relevant factors of Research of Human Capital in the Intellectual Capital Management in the effective performance of Institutions in higher learning. From this study it has been established that research as component of human capital has significant impact on the intellectual capital management in institutions of Higher Learning.

Second article talks about the importance of combination, merger, amalgamation and takeover and how they have become order of the day for undertaking these M &A activities. Some of such significant issues include those related to ethical, social and human resource aspects. The present paper explores these issues after discussing the preliminary introduction of M & A.

Third article empirically explores the vital considerations associated with Indian industry withadoption of the VAT Act and systematically measures the determinants of VAT divergence and its adverse impact on divergent rates. The present study tries to explore the factors responsible for this and the remedies available to this issue.

Fourth article focus on customer's preference for online shopping as in 21stcentury. India has witnessed enormous increase in the number of online shoppers.

Fifth article explored the entrepreneurial behavior of rural women farmers engaged in dairy enterprise which is influenced by socio-economic attributes and psychological attributes. Major contributing factors for entrepreneurial behavior were identified and revealed.

Sixth article explored the Tourism of Almora and Nainital in Kumaun region and how it has become a key element in the contemporary society. This study aims to find the preferences of the tourists and examines the tour intentions in selecting the above two main tour destinations.

Seventh article is designed to investigate the market efficiency of Indian Sectorial Indexes of NSE. Daily observations are considered for the period of eleven years (April 01, 2005 to March 31, 2016). Descriptive statisticsis used to analyze the market's informational weak form efficiency.

Eighth article consists of objective to study the implementation of Green Marketing initiatives by the Indian organizations and the challenges that lie before the green marketing initiators.

Ninth article show the changing attitude of buying behaviour and how it is forcing many firms to incorporate green processes.

Tenth article discusses the considerations of new Foreign Trade Policy and the current exports scenario in India. The paper also examines the mechanism for trade advancement and infrastructure adopted in the New FTP for reviving and stimulating India's Exports.

Eleventh article focuses on the RBI, Government of India initiatives, current status and future prospects of financial inclusion in India on the basis of facts and data provided by various secondary sources.

There is a case study on TIE-UP BETWEEN IRCTC & FOOD PANDA with book review of "The Future of Indian Economy: Past Reforms and Challenges Ahead" which highlights that economists say that if India won its political independence in 1947, it won its economic independence in 1991.

We hope it will enlighten the management practitioners to better understand the modern India& Business world. Moreover, I am thankful to all the authors for contributing their research work & express my heartiest gratitude for their valuable support and wishing Happy New Year with expectation of your patronage in future.

–Dr Vibhuti

EXPERT'S-COMMENTS
for
"SAARANSH" RKG Journal of Management

CONTENTS

A Study on Human Capital with Emphasis on Research in The Intellectual Capital Management in Institutions of Higher Learning An Empirical Study with Special Reference to Select Universities of Andhra Pradesh State

Dr. Shaik Rahamath Bee*
Dr. P. Sree Devi**

ABSTRACT

Intellectual Capital is an intangible asset that can be enriched with various measures one such measure of accountability is the factor of Research in Institutions of higher learning. It is a tangible intangible entity. An organization can accumulate wealth with the help of intangibles. Intellectual Capital is knowledge that can be transformed into usefulness which has worth.. The knowledge that, needs to be transformed into use which has worth needs to focus more on the intangibility nature of individual's intellect. This study brings together the relevant factors of Research of human capital in the Intellectual Capital Management in the effective performance in Institutions of higher learning. The importance of Research on the recognition of the measures that enrich human capital that an organization might provide to increase the performance of its intangible resources. To accomplish these objectives data is collected with the help of Questionnaire and administered to permanent teaching fraternity of select universities in Andhra Pradesh using random sampling technique and the data is analysed using SPSS with reliability and validity measures.

Findings: From this study it has been established that Research a component of human capital has significant impact on the intellectual capital management in institutions of Higher Learning.

Key words: Intellectual capital, Human Capital, Intangible Asset, Research

INTRODUCTION

Intellectual capital "consists of assets created through intellectual activities ranging from acquiring new knowledge learning and inventions to creating valuable relationships[1] There are various components in intellectual capital one such component is Human Capital. Human capital refers to knowledge and skills of human resources. Universities are meant for the transfer of knowledge and enhancement of skills. In the present study pertaining to universities Research aspects is taken as a variable for the study in Intellectal Capital Management to analyse the role of human capital on the effective performance of select universities. The value chain of a university is seen with the rate of research projects that have been taken up by the university. Internal competency of a university can be developed with

research. Research plays a pivotal part in a university. There are various funding committees which aid research in a university in the form of fellowships to the students and in the form of research projects to the teachers. The competency of a teacher is developed by doing in-depth research in the area of interest and social relevancy to the student. Funding caters to the necessities of research arising at different points of time in the form of chemicals and instruments to the researcher in the field of science and in the form of collecting data and travel contingencies in social research. Knowledge generation is a part of Research and Knowledge transmission is a part of teaching are the core functions in a university. The competency of a professor is enhanced with the number of projects handled and in progress by the professors in the university and with the number of projects increases the efficiency of

* Professor, Sri Indu PG College, Hyderabad
** HOD, BS&HSS, JNTUK-UCEV, Vizianagaram, Email: sreedevipidugu@gmail.com Cell:9493759290

professor in the form of knowledge generation in a university and the nature of the research projects that are being taken up by the teaching professionals also enhance the image of the teaching personnel as well as building a brand image to the university with the diverse set of projects. The efficiency and effectiveness of a teacher which leads to effective performance of individual as well as the university is known with the kind of research that is being carried out, the nature of research, whether research is an on-going process if research is an ongoing process what is the frequency of research projects completion of research that is being carried out by the researcher and also whether there are projects that are in pipeline by the researcher. The value chain of a university is seen with the rate of research projects that have been taken up by the university. Internal competency of a university can be developed with research. Research plays a pivotal part in a university. There are various funding committees which aid research in a university in the form of fellowships to the students and in the form of research projects to the teachers. The competency of a teacher is developed by doing in-depth research in the area of interest and social relevancy to the student. There are various apex bodies that govern the universities like UGC, ICSSR, CSIR and various other committees or bodies that provide research funding to the agencies in the universities. Universities create a platform for knowledge generation in universities with a diverse set of experience. Universities are knowledge producers *per se*, their most important output is knowledge, incorporated in research results, publications, educated students and productive relationships with their stakeholders. Among their most valuable resources are their researchers, managers and students with their organizational processes and networks of relationships, Warden,[2]. Management and diffusion of knowledge is also an important aspect in Universities. They also provide an efficient methodology to identify measure, manage and diffuse knowledge, that is to say, a proper way to improve internal management and transparency. This should be translated into greater dynamic, excellence and multidisciplinary in higher education organizations Elena,[3] Knowledge and intellectual capital play a central role in the actual knowledge-based economy, universities

become critical elements for the production, transmission and dissemination of knowledge, Universities are the knowledge producers whether the tacit knowledge is converted into explicit knowledge by the research supervisor, whether new knowledge is imparted in the form of research. Intellectual capital management become critical at universities mainly due to the fact that universities' main goals are the production and the diffusion of knowledge and their more important investments are in research and human resources Elena,[4] so, both inputs and outputs are mainly intangibles. Universities are the knowledge producers. It is the perfect place where tacit knowledge is converted into explicit knowledge by the research supervisor. new knowledge is imparted in the form of research. Intellectual capital management become critical at universities mainly due to the fact that universities' main goals are the production and the diffusion of knowledge and their more important investments are in research and human resources Elena,[5] Intellectual capital management provides an efficient methodology to identify, measure, manage and spread knowledge, a proper way to improve internal management and transparency at universities. Though knowledge is treated as intangible the associated aspects of knowledge like research publications give a tangible nature to the research output. It is the nature of research activities in teaching that is being taken up by the teaching professional. The project activity enriches the practical orientation of the theoretical subjects. it is the theory put into practice in research activity. Imparting and enrichment of knowledge through formal procedures like conducting and attending seminars and conferences, workshops, Symposia's etc. how the conversion of knowledge takes place in the form of research publications, utility oriented output.

3. NEED AND IMPORTANCE OF THE STUDY

Intellectual capital management provides an efficient methodology to identify, measure, manage and spread knowledge, a proper way to improve internal management and transparency at universities. Though knowledge is treated as intangible the associated aspects of knowledge like research publications give a tangible nature to the research output. It is the nature of research activities in teaching that is being taken up by the

teaching professional. The project activity enriches the practical orientation of the theoretical subjects. it is the theory put into practice in research activity. Imparting and enrichment of knowledge through formal procedures like conducting and attending seminars and conferences, workshops, Symposia's etc. how the conversion of knowledge takes place in the form of research publications, utility oriented output. Intellectual Capital Management has emerged as the best practice in helping universities to achieve the effective performance in the era of ever changing times.

4. RESEARCH METHOD AND DESIGN

4.1 Objectives of the Study

- To identify the importance of intellectual capital management in institutions of higher learning.

- To study the impact of Research variable of human capital in intellectual capital management in effective performance of universities.

- To analyse the factors of Research in effective performance of universities.

4.2 Research Hypothesis

H_1. Research variable of human capital in intellectual capital management has positive impact in effective performance of universities

H_0. Research variable of human capital in intellectual capital management has no impact in effective performance of universities

4.3 Nature of Research It is empirical and descriptive in nature

4.4 Research Design Process

The research design process followed a three stage approach, i) questionnaire design ii) a pilot survey and (iii) main survey. The first step involved the operationalisation of measures, which was achieved using the literature review to measure the constructs and design the draft questionnaire for pre testing. In step two 300 draft questionnaires and schedules were directly administered to permanent teaching fraternity in select universities of Andhra Pradesh.167 questionnaires and schedules were perfectly filled and complete data collected and assessed using Factor analysis and

Reliability testing to refine and finalise the questionnaire administered to the main survey. For the last step, final questionnaire and schedules were used to collect data from 267 permanent teaching fraternity from select universities in Andhra Pradesh.

4.5 Sample Frame

In this study, the sampling frame were based on the list of all universities located in Rayalaseema region of Andhra Pradesh.

4.6 Sampling technique

Simple Random sampling technique is used for collecting information from the selected respondents.

4.7 Method of Data Collection

In this research data is collected from the sample respondents with the help of administration of structured questionnaire and schedule

4.8 Tools of Data Analysis

The collected data is analysed with the help of SPSS (20 version). In this research both descriptive and Inferential statistics are used.

5. ANALYSIS AND IMPLICATION

Factor Analysis: Factor analysis is performed in the study to reduce the attribute the space from a larger to a smaller number of variables. This is considered useful in developing a scale. **(Table 1) (Table 1.1)**

Explanation of the factors derived

Three factors are extracted from the eleven variables relating to the concept of Research on human capital in Intellectual Capital Management for which data has been collected from permanent teaching fraternity working in universities of Andhra Pradesh especially in Rayalaseema region. These three factors account for 84.665% of variance. These factors are labeled under them based on factor loading.

As per the outcome of the factor analysis, factor one **Research projects and its valuation** has scored a variance of 43.273 this includes receiving projects from funding agencies (.656) operation of research projects underself (.861) projects in pipeline (.736) total value of projects (.875) From

the analysis it is interpreted that teaching fraternity have research projects operated under them and it is to be keenly noted and inferred that The funding of research projects from agencies need to be enhanced.

Pertaining to the results of factor analysis for the factor two **Funding Sources for Research** has scored a variance of 24.709 which comprises of projects funded from outsiders (.967) projects outside india without funding (.980) projects having industry or other collaboration organisations (.913) projects in collaboration with other departments in the university (.972) Upon examination of the factors it is construed that funding sources having collaborations has to be enhanced though funding is done for various projects.

Elucidating the results of factor analysis for the factor three **Research guidance** has scored a variance of 16.682 which comprises having students for research guidance (.665) research guidance for Ph.D (.921) research guidance for Ph.D and M.Phil (.924) Upon scrutinizing the factors it can be said that the students have to be increased for research guidance. **(Table 2)**

Findings

Data interpretation: The research embarks here on interpretation as an offshoot of the statistical processing, table no 2 illustrates the outcomes in the form of Mean and Standard Deviation, conceptually higher SD indicates high deviation, moderate SD indicates moderate deviation, and a low SD indicates low deviation and the standard deviation value is between 0-2 hence it is low

deviation for the entire variables. The table 2 presents Gender, Age and Experience wise responses on research variable of human capital in the selected respondent universities. Irrespective of Gender, Age, and Experience the respondents have a highly positive opinion on the aspects that the teaching faculty receives projects from funding agencies. And also a similar response is opined that there are students under them for research guidance for Ph.D.

Testing of Hypothesis: The Chi-Square values in table no 2 on various aspects of human capital like receiving projects from funding agencies to guide good number of researchers, to have enough number of research publications and Hence null Hypothesis which states that there is no impact of Research variable of human capital on the effective performance of select universities has been rejected and the alternate Hypothesis which states that there is an impact of Research variable of human capital on the effective performance of select universities is accepted.

6. CONCLUSION

In the era of globalization, privatization, liberalization where the world is shrunk into a global village it is the knowledge which is an intangible asset, is to be taken as a tool to face the uncertain world in the times of ever changing concepts and ideas it is the knowledge that is embedded in human capital that forms the basis for the enhanced development through research in institutions of higher learning hence human capital should be utilized as a competitive edge in the world of cut-throat competition.

REFERENCES

1. Quinn, J.B. (1992) Intelligent Enterprise: A Knowledge and Service Based Paradigm for Industry, Free Press, New York.

2. Warden, C. (2004). Valuation and Evaluation of Intangibles in Universities and Research Centres. Available at:http://www.earma.org/WG/vimak/vimak.html

3. Elena, S. (2007), "Governing the university of the 21st century: intellectual capital as a tool for strategic management: lessons from the European experience", Doctoral thesis, Autonomous University of Madrid, Madrid.

4. Shaik.Rahamath Bee (2017). Intellectual Capital Management, Its growing utility in the knowledge based economy in the globalised world-Intercontinental Journal of Human Resource Research Review, Volume 5, Issue 7, pp.108-111.

5. Shaik.Rahamath Bee and P. Sree Devi (2017) The Impact of Human Capital with Emphasis on Candidness in The Intellectual Capital Management in Institutions of Higher Learning An Empirical Study with Special Reference to Select Universities of Andhra Pradesh State-Scholarly Research Journal for Interdisciplinary Studies, Vol. 4/36, pp. 6624-6630.

A Study on Human Capital with Emphasis on Research in The Intellectual Capital
Management in Institutions of Higher Learning An Empirical Study with
Special Reference to Select Universities of Andhra Pradesh State
● Dr. Shaik Rahamath Bee
● Dr. P. Sree Devi

6.   Shaik.Rahamath Bee, P. Murali Krishna & D.Appal Raju (2016) The Significance of Structural Capital with emphasis on Autonomy in The Intellectual Capital Management in Institutions of Higher Learning -An Empirical Study with special reference to select Universities of Andhra Pradesh State. EPRA International Journal of Economic and Business Review, Vol 4 Issue 6, pp 84-87.

7.   Shaik.Rahamath Bee, P. Murali Krishna (2013) The Strategic Management of Intellectual Capital.2'nd International Conference on managing human resources at workplace SDMIMD Mysore India.

8.   Michael Gibbons.,1997, "What kind of university?Research and teaching in the 21st century" Victoria University of Technology Beanland lecture pp 9

9.   Altenburger, O.A. and Schaffhauser-Linzatti, M.M. (2006), "The order on the intellectual capital Statements of Austrian universities", paper presented at the IFSAM – International Federation of Scholarly Associations of Management 8th World Congress, Berlin, 28-30 September.

10. Bonaccorsi, A. and Daraio, C. (2007), "Theoretical perspectivesonuniversity strategy", in Bonaccorsi,A. and Daraio, C. (Eds), Universities and Strategic Knowledge Creation. Specialization and Performance in Europe, Prime Series, Edward Elgar, Cheltenham, pp. 3-30.

11. Altenburger, O.A., Novotny-Farkas, Z. and Schaffhauser-Linzatti, M.M. (2006), "Intellectual capital reports for universities; a trial intellectual capital report at the University of Vienna", paper presented at the 29th Annual Congress of the European Accounting Association, University College Dublin, Dublin, 22-24 March.

12. Davies,I.C. (1999), "Evaluation and performance management in government", Evaluation, Vol. 5 No. 5, pp. 150-9.

13. Chatterton, P. and Goddard, J.B. (2003), "The response of universities to regional needs", in Boekema, F., Kuypers, E. and Rutten, R. (Eds), Economic Geography of Higher Education: Knowledge, Infrastructure and Learning Regions, Routledge, London, pp. 19-41.

14. Steynberg, L. 2005. *Commercialization of higher education in South Africa*. [Online]. available at http://www.ezinearticles.com/

15. Bontis, N. (2003) 'Intellectual capital disclosure in Canadian corporations', Journal of Human Resource Costing and Accounting, Vol. 7, Nos. 1/2, pp. 9–20.

16. L. Edvinsson and S. Malone. Intellectual Capital – Realizing your company's true value by finding its hidden Brainpower. Harper Business, New York, 1997.

17. Sullivan, P.H. (2000). Value-driven intellectual capital: How to convert intangible corporate assets into market value. New York: John Wiley & Sons.

18. Drucker, Peter F, 1993, Post Capitalist Society, Butterworth-Heinemann and Stewart, Thomas A, 1997, Intellectual Capital-The New Wealth of Organizations, Nicholas Brealey.

19. Lev B and Zambon S (2003) Intangibles and intellectual capital: an introduction to a special issue. European Accounting Review 12(4),597–603.

20. "University Organisation and Studies Act (Universities Act 2002)", University Organisation Amendment Act and Universities of the Arts Organisation Amendment Act, Federal Law Gazette of the Republic of Austria, 2002, No. 120, [online], http://www.cepes.ro/hed/policy/legislation/pdf/Austria.pdf.

21. Wall, A. (2005) "The Measurement and Management of Intellectual Capital in the Public Sector: Taking the Lead or Waiting for Direction?", Public Management Review, Vol 7, No. 2, pp 289-303.

22. Michael Gibbons.,1997, "What kind of university? Research and teaching in the 21st century" Victoria University of Technology Beanland lecture pp9

23. M. Paloma Sa'nchez, Susana Elena, Roci'o Castrillo, Intellectual capital dynamics in universities: a reporting model www.emeraldinsight.com/1469-1930.htm

24. EUA (2007), Lisbon Declaration: Europe's Universities Beyond 2010: Diversity with a Common Purpose, European University Association, Brussels, available at: www.eua.be/fileadmin/ user_upload/files/Publications/ Lisbon_declaration.pdf

25. Hortwitch, M and Armacoat,R., 2002, "Helping Knowledge Management be All it can be,"Journal of Business Strategy, Vol 23, No 3,May/June, pp. 26-31

26. Tiwari, T.D., 2003,Challenges for Indian Management Education in Global Context. In J.L.Batra & Sanjay Srivatsava (Ed.) Strategies for Sustainable Growth: Challenges for Indian Business and Management Education,
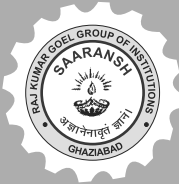
Noida: Amity Business School, p, 204-216.

27. Lee H. and Choi, B., 2003, Knowledge Management enablers, processes and organizational performance: An integrative view and empirical examination, Journal of Management Education Systems, p 20, 179-228.

28. Porter, M.E., and V.E. Millar, 1985, How Information gives you competitive advantage. Harvard Business Review, Vol. 63, No 4, pp 149-158.

29. Polanyi, M., 162, Personal Knowledge: Towards a Post-Critical Philosophy, Chicago & London: Chicago University Press, p 201.

30. Nonaka I, 1994 A dynamic theory of Organizational Knowledge Creation, Organizational Science 5(1),14-37

31. Sveiby, KE. (2001) "Intellectual capital and knowledge management", [online], http://www.sveiby.com/articles/IntellectualCapital.html

32. Polanyi, M., 162, Personal Knowledge: Towards a Post-Critical Philosophy, Chicago & London: Chicago University Press, p 201.

33. Nonaka I, 1994 A dynamic theory of Organizational Knowledge Creation,Organizational Science 5(1),14-37

34. Addicot. Rachel, McGivern, Gerry, Ferlic, Ewan(2006)."Networks, Organizational Learning and Knowledge Management, NHS Cancer networks" Public Money and Management 26(2);pp 87-94

35. Dunleavy, P., Margetts, H., Bastow, S. and Thinkler, J. (2006), "New public management is dead. Long live digital-era governance", Journal of Public Administration Research and Theory, Vol. 16 No. 3, pp. 467-94.

36. Pöyhönen, A. (2005). "Exploring the Dynamic Dimension of Intellectual Capital: Renewal Capability, Knowledge Assets and Production of Sustained Competitive Advantage". Paper presented at the 2005 PMA IC Symposium: Management and Measurement of Intangible Assets and Intellectual Capital: Multidisciplinary Insights. New York, 15-16 December.

37. MERITUM (2002). Cañibano, L.; Sánchez, P.; García-Ayuso, M.; Chaminade, C. (Eds.) "Guidelines for Managing and Reporting on Intangibles (Intellectual Capital Statements)". Vodafone Foundation. Madrid.

38. Shiela Corall, University of Pittsburgh,Library Service Capital:The Case for Measuring and Managing Intangible Assets.

39. Usherwood, B. (2002). Demonstrating impact through qualitative research. *Performance Measurement and Metrics, 3*(3), 117-122.

40. Savage, Charles,1995, Fifth Generation management: Co-creating through virtual enterprising, dynamic teaming & knowledge-networking. Boston, butterworth-Heinemann p 128-131.

41. M. Paloma Sánchez, Rocío Castrillo, Susana Elena "Intellectual Capital Management And Reporting In Universities. Usefulness, Comparability And Diffusion. Best Practices In Data Gathering And Analysis From The Autonomous University Of Madrid's Experience" Paper presented at the International Conference on Science, Technology and Innovation Indicators. History and New Perspectives. Lugano 15-17 November 2006.

42. Edvinsson, L. Corporate Longitute, Person Education, Book House Publishing, 2002, www.corporatelongitude.com

43. Abeysekera I (2013), A template for integrated reporting, Journal of Intellectual Capital, Vol. 14 No. 2, pp. 227-245

44. Corrall, S. (2012). Roles and responsibilities: Libraries, librarians and data. In G. Pryor (Ed.),Managing research data (pp. 105-133). London: Facet.

45. European Commission (2006), "Ricardis: Reporting Intellectual Capital to Augment Research, Development and Innovation in SMEs. Report to the Commission of the High Level Expert Group on Ricardis", available at: http://ec.europa.eu/invest-in-research/pdf/download_en/ 2006-2977_web1.pdf

46. Andrew Kok 'Intellectual Capital Management as Part of Knowledge Management Initiatives at Institutions of Higher Learning'

47. www.financialdictionary.com

48. www.issuu.com/dr.yashpalnetragaonkar

49. www.intangiblecapital.org

A Study on Human Capital with Emphasis on Research in The Intellectual Capital
Management in Institutions of Higher Learning An Empirical Study with
Special Reference to Select Universities of Andhra Pradesh State
● Dr. Shaik Rahamath Bee
● Dr. P. Sree Devi

50. www.ukessays.com

51. www.kmirc.ise.polyu.edu.hk./kmp/2012/f

52. www.inderscienceonline.com/doi/fu

53. www.economictimes.indiatimes.com

54. www.cles.org.uk/wp-content.upload

55. www.linkedin.alirezaghezal.com

Table 1. Reliability and Validity Tests

	Reliability Statistics	Values	Analysis
1	Cronbach's Alpha	.748	good
2	Cronbach's Alpha Based on Standardized Items	.740	Good
3	N of Items	11	Adequate
	KMO and Bartlett's Test		
1	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.633	Minimum
2	Approx. Chi-Square	5595.22	
3	Bartlett'sTestofSphericity df	55	
4	Bartlett'sTestofSphericity Sig.	.000	-

Source: Statistical analysis of field data

Table 1.1 Factor Labelling and Loading

S.No	Factor 1- Research projects and its valuation	Factor loading
1	I receive projects from funding agencies	.656
2	I have research projects operated under me	.861
3	I have projects in pipeline	.736
4	Total value of projects	.875
	Initial Eigen value	**4.760**
	%Variance	**43.273**
	Factor 2- Funding Sources for Research	
5	I have projects funded from outsiders	.967
6	I have projects outside India without funding	.980
7	I have projects having industry or other collaboration organization	.913
8	I have projects in collaboration with other departments in the university	.972
	Initial Eigen value	**2.713**
	%Variance	**24.709**
	Factor 3- Research guidance	
9	I have students under me for research guidance	.665
10	There are students under your research guidance for Ph.D	.921
11	There are students working under me for M.Phil and Ph.D	.924
	Initial Eigen value	**1.835**
	%Variance	**16.682**

Source: Statistical analysis of field data

Table 2: Statistical Responses of respondents on 'Research' variable of Human Capital in Sample Universities

S.No	Statements	X^2	D.F	Sig. lvl	Mean
1	I receive projects from funding agencies	71.439[a]	3	.000	3.0936
2	I have research projects operated under me	10.334[a]	2	.006	2.8764
3	I have projects in pipeline	25.538[a]	4	.000	4.6667
4	Total value of projects	11.286[a]	4	.024	4.9663
5	I have projects funded from outsiders	14.317[a]	2	.001	1.1161
6	I have projects having industry or other collaboration organization	3.011[a]	1	.083	1.0337
7	I have projects in collaboration with other departments in the university	12.629[a]	2	.002	1.2509
8	I have students under me for research guidance	27.827[a]	2	.000	1.1199
9	There are students under your research guidance for M.Phil	12.907[a]	3	.005	4.8614
10	There are students under your research guidance for Ph.D	60.061[a]	4	.000	3.5918
11	There are students working under me for M.Phil and Ph.D	57.184[a]	4	.000	3.5955
12	I have enough number of research publications	57.184[a]	4	.000	3.5955

Table 3: Rotated Component Matrix[a]

	Component		
	1	2	3
I receive projects from funding agencies	.392	-.308	.656
I have research projects operated under me	.304	.861	-.222
I have projects in pipeline	-.215	.736	.134
Total value of projects	-.251	.875	.023
I have projects funded from outsiders	.967	-.142	.138
I have projects outside India without funding	.980	-.066	.094
I have projects having industry or other collaboration organization	.913	-.188	.179
I have projects in collaboration with other departments in the university	.972	-.088	.106
I have students under me for research guidance	-.369	.665	.406
There are students under your research guidance for Ph.D	.109	.137	.921
There are students working under me for M.Phil and Ph.D	.109	.128	.924

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Total Variance Explained

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	4.760	43.273	43.273
2	2.718	24.709	67.983
3	1.835	16.682	84.665

Do Merger and Acquisition Practices Connect to Non-monetary Issues?

Mukesh Kumar Jain*
Dr. Ashish Chandra**
Dr. Ravindra Kumar Gupta***

ABSTRACT

In the turbulent industrial and economic scenario faced by all the economies, whether developing or developed as of late, stress is to gain more effectiveness and efficiency for standing tall against the global complexities with challenges and worldwide competition by extracting scale economies and one-upmanship. Merger and takeover activities, a significant aspect of restructure of corporate is presently undergoing a metamorphosis. The present paper explores these issues after discussing the preliminary introduction of M & A.

Key words: Mergers, Acquisitions & Takeover

INTRODUCTION

In the turbulent industrial and economic scenario faced by all the economies whether developing or developed as of late, when the focus is on globalization opening up of economy, expanding markets beyond the frontiers, rapidly changing technologies, cut throat competition, unending needs for finance, need for diversification, small is no longer beautiful in the field of business and commerce of any developing economy.

As of now stress is to gain more effectiveness and efficiency for standing tall against the global complexities and challenges and worldwide competition by extracting scale economies and one-upmanship. This leads to a merger wave in India and around the globe. Several multinationals and transnational are expanding by the way of amalgamation, takeovers and mergers.

Merger and takeover activities, a significant aspect of restructure of corporate is presently undergoing a metamorphosis. Government's regulations are being designed in a way to boost healthy practices of merger, acquisition and takeover which could result into maximizing the shareholders' returns and induce overall industrial and economic growth.

Though combination, merger, amalgamation and takeover have become order of the day, there are much more other concerning issues which are required to be addressed while undertaking these M & A activities. Some of such significant issues include those related to ethical, social and human resource aspects. The present paper explores these issues after discussing the preliminary introduction of M & A.

DEFINING MERGERS, ACQUISITIONS AND TAKEOVER

Merger

Merger can be understood as a blend of two corporations in which one corporation survives while other loses its existence. In consideration of the payment in the form of shares or debentures or cash, survivor acquires assets as well as the liabilities of merged company. Indian Law often use term Amalgamation for merger. A merger can take up in any of the following two forms:

1. When two or more companies combine into an existing company: In this case of merger, all companies generally lose their own identity except one.

2. When two or more companies combine into a newly formed company : In this arrangement of merger, a new company is born and all the companies get dissolved legally.

* Associate Professor, Zakir Husain Delhi College, University of Delhi Email: mukesh.kr07@gmail.com Mob: 9810923545
** Associate Professor, Department of Commerce, Delhi school of Economics, University of Delhi, Email: dr.ashishchandra@gmail.com, Mob: 9899092300
*** Principal, PGDAV College (Eve), University of Delhi, Email: rkguptamk@gmail.com, Mob: 9868115311

Acquisition

When one company acquires a controlling stake in share capital of the existing company, it is known as **acquisition**. It is affected by:

- Agreement with those persons who hold majority interest in the management of company's interest like major shareholders having the command on the majority of voting power or the members of the board.

- Purchasing of the shares from the open market.

- Purchasing of new shares with the help of private treaty.

- Acquiring the share capital of one company with the help of issue of share capital / debentures of new company or cash.

Takeover

Takeover refers to a process whereby a company acquires control of the another company against the will of the current management. This is generally done by purchasing from the open market a sizeable shares amount of the target company. Further, takeovers are of different forms, some involve straight takeover of a company by the other through acquisition of shares and deciding to operate the company as the independent entity. In some other cases takeover may be to the extent of capturing the controlling ownership in a company. Another variant includes takeover of the sick companies for their revival.

REASONS FOR MERGER

There are numerous reasons responsible for the acquisitions and mergers. Some of them include:

- Diversification
- Fast growth
- Synergy
- Scale economies
- Improved management
- Tax benefits
- Resource transfer

All of the above reasons by and large highlight financial or monetary aspects involved in mergers and acquisitions. However, a number of studies have shown that non-monetary issues also have played a pivotal and many times decisive role in formulating and finalizing M & A practices. These issues include ethical, social, human resource and so on. The ensuing paragraphs discuss these issues.

ETHICAL ISSUES IN MERGERS

There are two approaches to determine ethical and unethical merger activities:

- **Utilitarian approach:** As per this ethics of a merger activity are considered from the perspective of losses and gains or as actions that will increase or reduce efficiency. Hence, even if a merger is a hostile merger, it increases efficiency; the efforts of current management to oppose it would to be unethical.

- **Rights approach:** It holds that any action that violates anyone's rights is unethical whether *it is a game of positive sum or even if the majority gets benefit from action to oppose the merger.*

Ethical Issues according to Utilitarian Approach:

✓ **Rationale:** From a utilitarian ethical view, acquisition and merger activity is ethical if merger results in increase in the efficiency or if winners are going to exceed losers in positive-sum game. If such an activity is going to pass the utilitarian ethics test, one might conclude logically that acts done by individuals to prevent such kind of ethical activity must necessarily constitute the unethical conduct, as their efforts for opposing the acquisition or the merger must necessarily give reduced efficiency.

✓ **Key rationalizations for explaining unethical conduct:**

1) Merger results in lot of benefits, such as:

- ➢ The old shareholders get the benefit of premium on the stocks held by them.

- ➢ By purchasing stock, new shareholders get benefit from being a part of the company which is in the stage of going to be more competitive and efficient company.

- ➢ Those who do not tender their stock also get benefits as due to the result of tender offer, the market price of stock increases.

- ➢ The general public benefits as the more efficient company resulting from merger is having the capacity to reduce the prices of its offerings and/or create provision of improved quality goods and services.

➢ Employees also get benefitted as a healthy company is having less chances of going out of business. Certain evidences give suggestion that the hostile takeovers have created a positive impact on employment and wages.

2) Those that do not benefit include:

➢ *Present company's management stand to lose their job as a result of the acquisition or merger.*

➢ *As per a report, within three years of takeover, up to 50 % of top management tends to lose their jobs.*

➢ If a merger is being opposed, then the management is the only group which will get the benefit. This results in complexities because the management is also having fiduciary duty towards the shareholders of the company to execute actions which benefit the shareholders. Still the *management uniformly accepts such kind of activity whenever a hostile takeover takes place.*

Ethical Issues as per Rights Approach:

✓ Being the entirely different approach, rights approach does away with the two pitfalls of utilitarian ethical approach. The rights approach to ethics would hold that any action that violates anyone's rights is unethical, even if the majority benefits by the action and even if there is a game of positive sum.

✓ In the event of merger or acquisition, the individual's rights initiating the attempt to takeover and the shareholder's rights are being violated if these are prohibited or hindered from entering in the contract to sell or buy shares.

✓ When one takes a rights approach to ethics, there is no need to first measure increase or decrease in efficiency or total happiness against total unhappiness prior determining of ethical or unethical act.

✓ Those who tried to prevent a takeover activity are those who are basically acting unethically, not the people who initiated the takeover attempt. They are using force or the forced threat (government) to prevent one individual group from buying shares and another group of individuals from selling their shares. Thus, they are violating both contract and property rights by preventing such transactions from taking place.

MERGER AND SOCIAL ISSUES

While the issues of price and premium are key terms in any public transaction, the resolution of important social issues is often a key to reach the meeting of a minds in high profile stock-for-stock transactions. These social issues entails matters like the name of the combined entity, the location of its headquarters, the composition of the combined board and, most importantly, who is going to lead the resultant company post closure of transaction. For both worthy and less noble reasons, these social issues, particularly who will lead the combined company after the transaction, often play significant roles in determining whether negotiations for stock-for-stock transactions proceed or fall apart. A legitimate reason for a board to focus upon which CEO (and other executives) will lead the combined company is that the success of any transaction (e.g., realization of cost and/or revenue synergies) is dependent on effective leadership. Board members of the constituent parties can also be properly concerned that their continuing role on the board of the combined company is critical to ensuring that the reason behind the merger is realized. Of course, any action by a CEO or board in negotiating social issues would not be proper to the extent primarily driven by an entrenchment motive.

Social impact of mergers is determined essentially in the scenario of competition policy of the country. Hence the determinants would be in the form of effect on competition and market structure that give may result into monopoly or a dominant enterprise.

Most mergers actually are beneficial for consumers and competition as they allow firms to operate with more efficiency. But some are likely to reduce competition. Reduction in competition can lead to

➢ Increase in prices

➢ Decline in quality of products

➢ Reduction in availability of products or services, and

➢ Lesser innovation

Few merger results into concentrated market, while others enable the possibility of a single firm seeking increase in prices.

Mergers create the unilateral effect when it empowers the single firm to command over prices and hence increase the price without even coordinating with its other competitors. If a firm is enjoying wider share of market, then a firm may increase prices unilateral way, if this merger is going to close down its closest competitor and also if the remaining firms in the market fail to give substantial competition.

There are two necessary conditions, in general, to stop the merger from having anticompetitive effect:

➢ There must be significant concentration of the market after merger, and

➢ In the wake of complexities to enter into market (barriers to entry)in the near future, new firms should offer effective competition.

The justification for the second condition is that if it is going to be very easy for the new firms to enter into market and bring the prices down then the firms may not raise prices to anticompetitive levels.

MERGERS AND HUMAN RESOURCE ISSUES

It is believed that merger & acquisition give a platform to company for the growth and expansion in a better way but many times it has been seen that it has a great impact on the employees working conditions too. The merging and acquiring company's employees are mostly affected by the said merger & acquisition. Just because of this fact, there is mostly failure of M&A. To change the mindset of people working in companies who are going through the process of M&A and to convince them that the merger is for their goodness and growth is normally an uphill task.

Many a times, this non-integration of human resources of transferor and transferee companies results into main reason for the failure of merger.

It is also not flourishing because the merger of two corporations is actually a merger of individual and groups who are working in these companies which have an immense impact on individuals working in a company such as it create ego clashes among individuals working in the company.

There is also failure of M&A when purchasers' plans & strategies are not clear to employees of acquired firm.

Few prominent issues and concerns relating to the case of mergers and acquisitions in the context of human resource have been cited below:

➢ When two entities having different attitude and style of functioning merge together, we have often seen a clash between the companies which basically pulls them together into the different paths which are distant from their main aims & objectives and in this process of progression jeopardize the main fruits envisaged both in the real terms as well as in the amalgamation scheme.

➢ Company enters into M&A activity without recognizing the effect on the organization and the overall affect on the human element within the two merging companies. When M&A activity does not meet corporate objectives, it results in lost revenue, customer dissatisfaction, employers' attrition issues and so on.

➢ Concerns of employees like salaries, benefits, pension of employees are also affected by the M&A.

➢ Ego clashes amid the top management followed by lack of co-ordination and communication among them may cause company to collapse after merger.

➢ There is also an anxiety among the employees due to separation because they think some of their co-workers will be leaving the company.

➢ On realizing that their potential for future growth within the company is dwindling, employees often withdraw themselves and become frustrated which in turn may impact the productivity of company very severely.

➢ M&A affects the company's CEOs as they are the most creative and talented people within the organization. The resultant loss of control distresses these individuals.

➢ Both the companies' employees are often strained with the fear of loss of hierarchical level position, transfer and retrenchment.

➢ A lot of reorganization & restructuring happens inside the company during the days when M&A process is going on. This M&A process has a huge impact on the work culture during those days as it disturbs whole organization of the company.

➢ The M&As uncertainties shift the focus of

employees from productive work to issues with respect to interpersonal conflicts, layoffs, career growth with the acquirer company, compensation etc. This may have negative impact on employee's performance.

➢ Each organization has its own values which may conflict with those of acquired company. Inability to adore the new culture increases stress level among employees and results in low job performance.

CONCLUSION

To conclude, if success is to be achieved in M&A, a cohesive, well integrated and motivated workforce is required who is willing to take on the challenges that arise in the M & A process. Along with this, an utmost care has to be taken for addressing all the ethical and social issues generated out of M&As genuinely and sincerely.

BIBLIOGRAPHY

1. Baker H. Kent; Halil Kiymaz, "The Art of Capital Restructuring: Creating Shareholder Value through Mergers and Acquisitions", John Wiley & Sons.

2. Balmer John M. T. & Dinnie Keith, "Merger Madness:- The Final coup De Grace", Jounal of General Management Vol 24 no. 4 Summer 1999.

3. Basant Rakesh, Corporate Response to Economic Reforms, Economic and Political Weekly, March 4, 2004.

4. Beena P.L, Mergers and Amalgamation, An Analysis of the Changes Structure of Indian Oligopoly, Centre for Economic Studies and Planning, JNU, 1998

5. Business Standard, Delhi, Various Issues

6. Business Today, Delhi, Various Issues

7. Cooke Torence E., Mergers and Acquisitions, 1986.

8. Doctoroff Mark, Company Mergers and Takeovers, Gower Press London.

9. Financial Express, Delhi, Various Issues

10. Handbook on Mergers, Amalgamations and Takeovers, Institute of Company Secretaries of India, New Delhi, 2001

11. Journal of Law and Economics, June 1984

12. Keenan M and J.J White, Merger and Acquisition, D.C. Heath, Lexington Mass, 1982

13. Khan M.Y. and Jain P.K., Financial Management-Text and Problems, Tata McGraw Hill publishing company limited.

14. Kumar Ashok N, R. K. Darachuri, M & As in India, The Times Research Foundation, Pune, 1999.

15. Mueller, D.C., A Theory of Conglomerate Merger, Quarterly Journal of Economics, 1969

16. Mukhopadhyay Abhijit, "Merger and Amalgamation in India", Chartered Secretary, July 1997.

17. R. K. Mandal, Corporate Mergers in India, Kanishka Publishers, 1995.

18. Reid S.R., Mergers, Managers and Economy, Mac Graw Hill, New York, 1968

19. Sankar, K. R. and Rao K.V, Takeover as strategy of Turn Around, An Empirical Study, Chartered Secretary, Feb 1999

20. SAR Economist, January 2007

21. The Economic Times, Delhi, Various Issues

22. The Times of India, Delhi, Various Issues

23. Vanhorne J.C., Financial Management and Policy, Prentice Hall of India.

24. Verma J.C., Corporate Mergers and Takeovers- Concept, Practices and Procedures, Bharath Publishing.

25. Vijay P.N., "The M & A Mania Continues Unabated", The Chartered Accountant, December 1998.

26. Weinburg M.A., Take-overs and Amalgamations, Sweet and Maxwell Publishers.

27. www.rbi.org.in

28. www.unctadindia.org

29. Yadav S. Jain P. K and Jain N. Profitability of Merger- Some Selected Cases, Journal of Management Accountant, July 1999.

Modeling the Adverse Impact of Disharmony in VAT Provisions on the Divergent Prices

Dr. Sunil Kumar*

ABSTRACT

This paper empirically explores the vital considerations associated with Indian industry badly hammered by the uneven adoption of the VAT Act and systematically measures the determinants of VAT divergence and its adverse impact on divergent rates. One of the vital objectives of VAT execution in India was to eradicate the defects of the former Sales Tax System such as tax rate divergence, documentation complexity, multipoint sales tax, tax evasion, lower tax collection etc. However, many significant defects could not be medicated even after the VAT adoption, rather many new problems have cropped up due to the VAT implementation. The major terror due to VAT adoption is Interjurisdictional Divergence and the unnecessary rate war with respect to the VAT rates/Threshold limits/ and other enactment intrastate and Inter-states causing industrial migration to the native states. The present study tries to explore the factors responsible for this and the remedies available to this issue and its adverse impact on Industrial migration. Five factors are extracted ('State Rivalry', 'Socio Economic Factors', 'VAT Act Drawback', 'Low Tax Compliance', and 'Political Factor') causing VAT Divergence intra-state and interstate wise. Among these State rivalry concerning VAT rates , VAT subsidy and VAT enactment emerged to be the most important factor causing VAT Divergence . The second important factor which is responsible for the divergent VAT rates is the socio-economic conditions of the states such as Industry Level, Economic Backwardness, Economic Conditions, and Social Structure of the States which influence the government to uplift the states. The process of model testing was carried out after factor analysis to evaluate the model found by the application of the EFA (Exploratory Factor Analysis). In short, the SEM model confirms the five-factor structure of the variables causing the VAT rate divergence. The present research work concludes that the objectives of the VAT implementation as suggested by the Kelkar committee could not be attained fully. The study reveals the main factor which is causing VAT divergence is the existence of unwanted state rivalry which is due to federalism and their respective efforts to develop the concerned state through attracting industry and investment from the developed states. This tendency has caused unnecessary rate war and disharmony in the various legal provisions in the VAT Act. Although it may develop the respective state but has violated the vary purpose of the VAT implementation. There is dire need to bring uniformity across the states with respect to the VAT rates and various other legal provisions and no doubt the implementation of GST as on 1st July 2017 is the answer to this type of problem.

Keywords: VAT, State Rivalry, VAT Disharmony, Divgergence JEL Classification: H71, H72, M41, M48

INTRODUCTION

Value Added Tax (VAT), is an indirect tax that has turned out to be the most provocative and prolific raiser of the government revenues. Introduction of the VAT(in the period 2003–2006) ,to replace the erstwhile the Sales Tax Regime on the sale transactions within the state that had been in operation for more than half a century, has been rightly acclaimed as the boldest tax reform undertaken in the independent India. The implementation of the Value Added Tax is considered to be a major development over the pre-existing Central Excise Duty at the National level and the Sales Tax System at the State level. The Value Added Tax is an ad valorem tax imposed on consumption, in the sense that it

drives a wedge between the prices paid by the consumer and the money received or kept by the seller, with the seller being an agent for collection in India(Doe Lubin, 2006). It is also referred to as a domestic consumption tax because, under the destination principle, it is a tax on consumption expenditure as opposed to a tax on capital expenditure or exports.

The prima facie motto of the VAT adoption was to bring about the uniformity in the prevailing tax rates intra states and interstates as recommended by the Kelkar Task Force Committee. However the very purpose of VAT adoption could not be attained and still divergence in the VAT rates interstate and intra-state exits which resulted in price discrimination, diversion of trade, unnecessary

---

* Asst. Prof. in PG Department of Commerce, Trinity College, Jalandhar City

unhealthy Tax Rate war among the states and causing a race to the bottom in rates (Sthanumoorthy, 2006).

This paper aims to measure the determinants of VAT divergence based on the empirical data collected from the Registered VAT dealers located in Punjab state . The present research paper contributes to the development of the knowledge in connection with the provisions of the VAT Act and other relating aspects causing disharmony in the VAT rates and other relating provisions. The structure of the paper includes model and hypotheses , research methods , empirical results , discussion and implications and concluding remarks. At the same time several hypotheses are proposed to measure the effects of the constructs on the VAT divergence. It attempt to illustrates the statistical procedures used to test the hypotheses , followed by presentation of empirical results. The discussion of the findings on the relative impacts of different variables.

MODEL AND HYPOTHESES

Proposed Model for the research
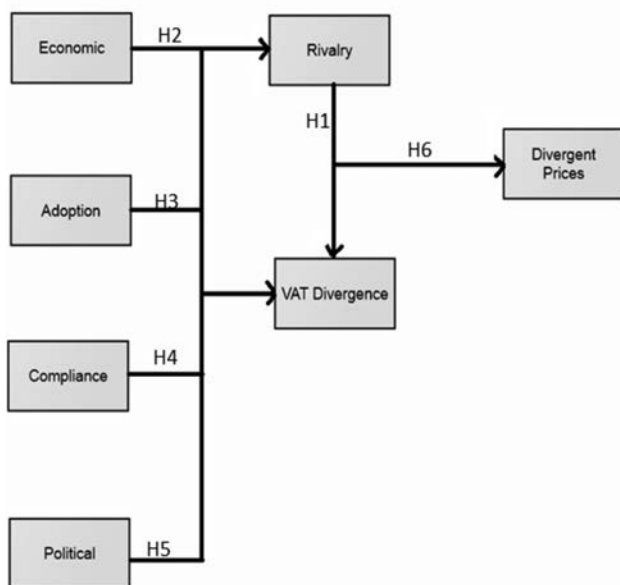
The Literature (Sthanumoorthy, 2006) on Indirect Tax Competition Among Same-level, Subnational Jurisdictions, has focused on excises and the role of cross-border shopping in eroding the tax base and forcing a convergence of statutory rates among neighboring jurisdictions, typically to a lower level of taxation. Interjurisdictional Tax Competition (Rao, 1994) takes three forms;

Firstly, the proposed model depicts the influence of **State Rivalry** causing VAT divergence among states. India, by virtue, has a federal system of government comprising Central Government at the national level and State Governments at the sub-national (SNGs) level. These dissimilar levels of government can be financed using fiscal instruments such as taxation and intergovernmental transfers. Due to this reason, when one state accelerates its tax rate, the other will have an option to reduce or to retain its rates, thereby increasing the tax base. Hence any single government can increase or decrease its tax base which would certainly have a blow on the others. This sort of increase or decrease in tax rates among SNGs is defined as tax rate war which needs to be tuned in (Sthanumoorthy, 2006). Due to the differential VAT prevalence, consumers of a high-tax state can purchase a commodity from a low-tax state to take advantage of tax rate differentials. Similarly, the investors can voyage their location of production in accordance with the tax concessions/breaks offered by the respective governments. The fact that each state has its own Sales Tax Legislation and that both trade and investment can move across state boundary and each state has an incentive to fix a low rate or to provide tax incentives in order to attract trade and investment.

H1: State Rivalry has positive effect on the VAT divergence

H1a: Federal system exists in India has positive effect on the State Rivalry.

H1b: Customers of the Native States has positive effect on the State Rivalry

H1c: Investors of the Native States has positive effect on the State Rivalry

H1d: Industrial Migration has positive effect on the State Rivalry

H1e: Uplift of SSI is positively related to the State Rivalry

H1f: Change in VAT rates by neighboring states positively effect on the State Rivalry

Secondly, Socio Economic condition of the states forces the government of the concerned states to uplift the backward states or economically lessor developed states modify the VAT enactment suitable to that states rather attract the investor to that particular states. In India Baddi a small town in Himachal Pradesh states had been announced

as tax free states for the new venture and afterword levying a tiny rate of VAT rates. Like wise to enhance the SSI in UP, the Sports Industry had been declared as tax fee states , although the other states are levying above 14% . Price Water House Cooper (2006) has conducted a survey of around more than 100 companies in India and found that taxes are not uniformly implemented in India.

H2: Socio Economic conditions has positive effect on the VAT Divergence.

H2.1 : Socio Economic Factors has positive effect on the State Rivalry

H2a: Level of industry is responsible for Socio Economic Factors

H2b: State backwardness is responsible for Socio Economic factors.

H2c: Economic Conditions are positively related to Socio Economic Factors

H2d : Social Structure of the states is related to the Socio Economic factors

Thirdly, many economists are of the opinion that VAT by virtue is a magnificent tool to the Government to accelerate the tax collection, but however when it is effectively implemented by the government it becomes a head ach rather put the future of the industry into dark. It gives liberty to the state government to mold the legal provisions under the Act like Change in Threshold Limits in some States, No VAT is to be levied by the TOT dealers, due to lessor tax collection is some states posing them to levy at a higher rate.

H3: VAT Act Adoption has positively effected VAT divergence

H3a: Low Threshold Limits in Neighboring States is positively related to VAT Act Adoption

H3b: No VAT is charged by TOT dealers is positively related to VAT Act Adoption

H3c: VAT Act is not uniformly implemented in India is positively related to VAT Act Adoption

H3d: VAT is taken as input cost is positively related to VAT Act Adoption

Fourthly, VAT is always welcome to overcome the fraud and tax evasion in a country like India where Tax collection is lesser in the states and to compensate it govt. charges more VAT and goods are mostly sold without issuing an invoice.

H4: Low Tax Compliance Positively effect the VAT Divergence.

H4a:Tax collection is lesser in the states is positively related to Low Tax Compliance

H4b:Fraud and tax evasion is positively related to Low Tax Compliance

H4c:Sales without invoicing is positively related to Low Tax Compliance

Fifthly, An economy can not be escaped from the VAT divergence where political system is not open rather unhealthy where public threat the government to amend the legal provisions by showing weapons of strike and lockout. Bird (2001) reveals that the dominance of the VAT poses a serious problem for the finance of regional governments, since conventional wisdom has long held that the only good VAT is the one levied by the central government. Baldwin's study (2002) has concluded that the greater economic integration may lead to a 'race to the top' rather than a race to the bottom. Tax harmonization may harm nations, a result that may explain why real-world tax harmonization is rare.

H5: Political Factor Positively affect the VAT Divergence.

H5a: Political pressure is positively related to the Political Factor

H5b: Strike and Lock out is positively related to the Political Factor.

Lastly VAT divergence hampers the smooth movement of goods across the states and destroying the very purpose of introducing VAT. Due to hike in the VAT rates some industrial units are shifting from the Punjab state to other state such as Baddi (Himachal) and U.P. and Haryana and the same is the case in the rest part of the India. When the industrial units move to other states, investment, labour, management experts also follow in the same fashion.

H7: VAT divergence causes Rate Disharmony.

DATA COLLECTION

This project involves the collection of empirical data regarding the use of Internet e-banking provided by commercial banks in Singapore. Firstly, a questionnaire was designed to obtain Dealers feedback with respect to the legal provisions under the VAT regime particularly relating to VAT divergence. It includes multiple items to test the hypotheses proposed in the

previous section. The descriptions of the survey items are shown in Table 1. Respondents were requested to indicate their perceptions with regard to the importance of each item based on a seven-point Likert scale of 1-7, with 1 scoring the lowest point 'not important at all,' to 7 scoring the highest point 'extremely important. The primary data of this work comes from a survey of 400 industrial units located in the three districts of the Punjab State which are Jalandhar, Ludhiana and Amritsar, with the help of well-drafted and pre-tested structured interview schedule. The universe of the study comprises of the industrial units located in the three districts of the Punjab State. The choice of these three districts is made due to the following reasons:

● There are a totaling 2,35,654 registered VAT dealers in the Punjab (till March 2015) and the majority of registered VAT dealers are located in the above mentioned three districts.

● The VAT collection in Punjab during 2007-2008 was Rs. 5871.29 crores, Rs.6,290 Crore in the year 2008-2009, Rs.7,577crores in the year 2009-2010, Rs. 10,778 crores during 2010-11, Rs. 12,113 crores during 2011-12 , Rs. 13,442 crores during 2012-13, Rs. 15,897 crores during 2013-14, Rs. 16,112 crores during 2014-15 and Rs. 17,760/-crores projected during 2015-2016. 75 per cent of the total VAT collection belongs to these three districts.

MEASUREMENT MODEL

On the basis of the assumed causal relationships of different variables and their potential impacts on VAT divergence due to VAT Provision under the VAT regime, we validate the measures using structural equation modeling. The following mathematically illustrates the analytical process of our research model. For example N be VAT Divergence which depends upon b1(State Rivalry), b2 (Socio Economic), b3 (VAT Adoption), b4 (Low Tax Compliance) and b5 (Political Factor). We hypothesize VAT Divergence, y (Observable), satisfies the following relation:

$$Y= b1+b2+b3+b4+b5+e = N+e \quad —(1)$$

Here e is an error term with. As all the exogenous variables b1, b2, b3, b4 and b5 are hypothesized to lead to the latent endogenous variable y positively. (Table 1)

This part of the study is carried out to confirm the various factors explored with the help of EFA, which are responsible for the VAT rate divergence. There are typically no tests of significance for EFA. On the other hand, we have a theoretically or empirically based conception of the structure of measured variables which factors and enable us to test the adequacy of a particular "measurement model" to the data. The confirmatory factor analysis (CFA) of the hypothesized model (Figure 1) is performed, which includes linear structural equations and measurements of the exogenous latent variables. The correlation analysis is also employed to obtain a correlation matrix based on all items for each dimension, which is then used as an input of the path analysis. The CFA allows the examination of the rigorousness of our research model in terms of unidimensionality, reliability and convergent validity of the scales (Gefen et al, 2000). The unidimensionality is the extent to which the items are strongly associated with each other, and represent a single factor, which is a necessary condition for reliability analysis and construct validation (Anderson and Gerbing, 1982). The benefit of using the CFA, as opposed to an exploratory factor analysis, is the availability of test for factor loadings to examine statistical significance. Both reliability test and correlation analysis can be incorporated into the CFA when assessing the unidimensionality of each factor. The convergent validity is the extent to which different approaches used to construct measurements can yield similar results (Campbell and Fisk, 1959).

The convergent validity of a scale can be calculated using the Bentler-Bonett coefficient (A) (Bender and Bonett, 1980). The Bentler-Bonett coefficient (A) is the ratio of the difference between the chi square values of the null measurement model (model with no hypothesized factor loading on a common construct) and the specified hypothesized measurement model to the chi-square value of the null model. In general, a value of between 0.80 and 0.90 is considered acceptable, while 0.90 or above demonstrates strong convergent validity (Gefenet al, 2000).

The five factors proposed model determined with the help of EFA is depicted in the figure 1 which is tested with the help of AMOS 18.0 to conform to the five factors and to determine the estimated model exploring the various factors causing VAT rate divergence.Which factor is more accountable and which is less, depends up. (Fig. 1)

The exploratory study suggests that the first main factor which is responsible for the VAT Rate Divergence is the State Rivalry. The loading values in respect of six variables Federalism , Customer Migration, Investment Migration, Industrial Migration, Uplift Migration, Neighboring State are obtained with the help of AMOS 18.0 are .964, .915, .867, .796, .679 and .594. The next important factor is Socio-Economic Factors which is dependent on the four factors i.e. Industry Level, State Conditions, Economic Conditions, Social Structure with Loading Values .965, .828 .913 and .871 respectively.

The third factor that is responsible for the VAT divergence is the 'VAT Act Drawback'. Four statements are loaded with this factor and out of which three statements are heavily loaded i.e. Low Threshold Limits, Disharmony and Wrong Treatment .976, .916 and .867 respectively while the fourth statement is somewhat below .650

The fourth factor that is accountable for the VAT rate divergence is 'Low Tax Compliance'. In some states the tax collection is lower as compared to the other states due to fraud and wrong tax collection policy of that very state government. Three statements are loaded on this factor and out of which two are highly loaded i.e. X7 ('Tax Collection') and X9 ('Fraud and Evasion') while one statement X18 ('Compulsory Invoicing') is loaded at a value of .49 which is definitely creating problem for the model fit.

The fifth factor which is responsible for the VAT rate divergence is the 'Political Factors' involving the political stress on the government to amend the provisions laid in the VAT Act. Some states are politically threatened to lower the VAT rates while in the neighboring states the rate may be higher. Two statements are loaded on this factor i.e. X4 ('Political Pressure') and X14 ('Strike and Lock-out'). (Table 2 & 3)

The Model C duly obtained after the requisite modifications proves to be an acceptable model fit the data ($\chi 2$ = 278.21, p< .001; GFI = 0.9224; AGFI =0.8765; CFI = 0.932; TLI = 0.922; IFI = 0.943; NFI = 0.977 and RMSEA = 0.0641) which indicates that all the indicators loaded significantly on the latent constructs. The values of the fit indices indicate a reasonable fit of the measurement model with data. In short, the SEM model confirms the five-factor structure of the variables causing the rate divergence.

The process of model testing is carried out with the help of AMOS 18 and a new estimated model is obtained as depicted in the figure 2. The model consists of the five factor structure, consisting of five latent variables (State Rivalry, Socio-Eonomic, VAT Act Drawback, Low Tax Compliance and Political Factors) with the measurement variables loading in accordance with the pattern. (Table 4)

First of all, HI is supported, because the path coefficient $\beta 1$ in the CFA model (State Rivalry $\rightarrow$VAT Divergence) is 0.2939 and positively significant

At the 0.01 level (Table 2). At the same time, Hla, Hlb and Hlc are H1d and H1e are supported, because the factor loadings resulted from exploratory factor analysis (Usefulness) range from 0.521 to 0.855 (Table 1). There is a confirmation of convergent validity, because the high correlation values between the items associated with the factor, ranging from 0.245 to 0.7838 are positively significant at the 0.01 level. The factor loadings resulted from the confirmatory factor analysis for perceived usefulness range from 0.594 to 0.9638, which are positively significant at the 0.01 level.

Like is the case of the rest of hypothesis which were tested and were found to be significant . Hence the foregoing analysis revealed that the VAT divergence exist in India due to the five factors and among these five factors State rivalry and socio economic factors are more responsible for the VAT divergence which forces the industrial units to shift to the native states.

Assessing the significance of the hypothesized relationships after applying bootstrapping, t-statics are obtained which can be used to evaluate the significance of the hypothesis. Two-tail t-static at significance level of 5% were used to test the path co-efficient, if their calculated values are greater than 1.96 it means the hypothesis is significant otherwise insignificant.

CONCLUSION

Undoubtedly the implementation of VAT in India was one of the boldest step for the development over the pre-existing Sales Tax System. The vital objectives of VAT execution in India was to bring about the uniformity among states with respects to VAT rates, various legal provisions etc. in the former Sales Tax System, However, the present study showed that inter jurisdicational VAT

divergence still exits. The study was divided into two sections , first part of the study covers the exploratory research work to know the factors causing VAT divergence and the next part covers the modeling the explored factors evaluated with the help of factor analysis.

Five factors are extracted ('State Rivalry', 'Socio Economic Factors', 'VAT Act Drawback', 'Low Tax Compliance', and 'Political Factor') explaining the variance of 65.8% and having Eigen values greater than unity. Among the five factors the main factor causing VAT divergence is the State rivalry among the states due to the Federalism, Customer Migration, and Industrial Migration causing unnecessary rate war among states. Although when the VAT was implemented, main stress was put on the uniformity by the Kelkar Task Force, but however this objective of the VAT implementation was not achieved. The analysis reveals that the divergent VAT rates still exist Intrastate and Interstate. The next important factor which is responsible for the divergent VAT rates is the socio-economic conditions of the states such as Industry Level, Economic Backwardness, Economic Conditions, and Social Structure of the States which influence the government to uplift the states. Further the next significant factors which are responsible for the disharmony in the VAT rates are the VAT Act drawback and Low tax compliance. The VAT Act is also responsible for the divergent VAT rates such as low threshold limits in the neighbouring states, No VAT is

charged by the TOT dealers, and the VAT is not uniformly implemented in India. Govt. also alternates the VAT rates due to the lesser tax collection in those very states and to compensate the low tax collection, the VAT rates are increased. When there is fraud and tax evasion, the tax collection in that very state decrease and to compensate it, the tax rates are accelerated.

The process of model testing was carried out after factor analysis to evaluate the model found by the application of the EFA (Exploratory Factor Analysis). In short, the SEM model confirms the five-factor structure of the variables causing the VAT rate divergence.

The present research work concludes that the objectives of the VAT implementation as suggested by the Kelkar committee could not be attained fully. The study reveals the main factor which is causing VAT divergence is the existence of unwanted state rivalry which is due to federalism and their respective efforts to develop the concerned state through attracting industry and investment from the developed states. This tendency has caused unnecessary rate war and disharmony in the various legal provisions in the VAT Act. Although it may develop the respective state but has violated the vary purpose of the VAT implementation. There is dire need to bring uniformity across the states with respect to the VAT rates and various other legal provisions and no doubt the implementation of GST as on 1st July 2017 is the answer to this type of problem.

BIBLIOGRAPHY

Agha, A.A. and Haughton, J. (1996). VAT Systems: Some Efficiency Considerations. *The Review of Economics and Statistics*, Vol. 78, No. 2 , 303-308

Ahuja, G. (2007).*CENVAT Law & Practice.* Bharat Law House Pvt. Ltd., New Delhi

Anne. (1993). Interstate Tax Competition after TRA86, *Journal of Policy Analysis and Management,* Vol. 12, No. 1, 136-148

Baldwin, E. R. and Krugman, P. (2002).Agglomeration, Integration and Tax Harmonization, *European Economic Review,*48, 1-23

Baldwina, L. R. and Krugmanb, P. (2004), Agglomeration, Integration and Tax Harmonisation, *European Economic Review,* 1-23

Benson, L. B. (1990). Interstate Tax Competition, Incentives to Collude, and Federal Influences. *Cato Journal,*Vol. 10, No.1. 75-90

Bhushan, K. (2006).*Working with VAT.* Pearson Education, New Delhi, Ist Edition

Bird, M.R. and Gendron, P. P.(1998). Dual VATs and Cross-Border Trade: Two problems, one solution?.*International Tax and Public Finance,* Vol. 5: issue 3, 429-442

Bruce, L. B.(1990),interstate tax competition, incentives to collude, and federal influences, *Cato journal,* Vol. 10, No. 1

Brueckner, J. K. and Luz, A. (2001), Do Local Governments Engage in Strategic Tax Competition?, *National Tax Journal*, Vol. 54, 203-29.

Cnossen, S. (1998).Global Trends and Issues in Value Added Taxation., *International Tax and Public Finance*, 5, 399–428

Datey, S. V. (2009). *VAT and Service Tax,* TAXMANN Publication, New Delhi 7-12

Doe, L. (2006), Harmonization of Domestic Consumption Taxes in Central and Western African Countries, *International Monetary Fund*, 1-30

Fisher, R. C. and John, C. N. (1992), State-Local Fiscal Behaviour: Analysis of Interjurisdictional Differences, *Public Finance Quarterly*, Vol. 20, 433-49.

Force, T.K. (KTF). (1993). Report on Indirect Taxes, A report of the committee on Indirect taxes. 2007, Oct. 3 Retrieved from http://finmin.nic.in/kelkar /final_idt.htm

Frenkel, A. J. (1991). International VAT Harmonization: Economic Effects. *NBER Working Papers Series*, Working Paper No.3656

Goodspeed, T. J. (1998). Tax Competition, Benefit Taxes and Fiscal Federalism, *National Tax Journal*, Vol. 51, 579-86.

Guerard, M. (1973). The Brazilian State Value-Added Tax .*International Monetary Fund*, Vol. 20, No. 1 (Mar., 1973), 118-169

Kanbur, R., and Keen, M. J. (1993), Tax competition and tax coordination when countries differ in size, *American Economic Review* 83:887-92.

Keen, M. J. (1993). Tax competition and tax coordination when countries differ in size. *American Economic Review*Vol.83,887-92.

Keen, M. J. and Christos K. (2004), Tax competition in federations and the welfare consequences of decentralization, *Journal of Urban Economics* 56 (3): 397-407.

Mello, D. L. (2008) , Competition among the States The Brazilian 'Tax War': The Case of Value-Added Tax , *Public Finance Review ,* Volume 36 Number 2 March 2008 169–193

Mukhopadhyay, S. (2005). *The Economic of Value Added Tax: Theory and Practice.* CentaxPublications, New Delhi, 2005 656

Pillai, K.G. (2005). *VAT – A way out of the Indian Tax Muddle*. Jaico Publishing House, Mumbai

Purohit, M. C. (2001), National and Sub-National VATs: A Road Map for India, *Economic and Political Weekly*, March 3, 757-72.

Purohit, M. C. (2005), Do States Need Uniform VAT Rates?, *Economic Times* (Face-Off), April 22.

RaoG. M.(1994),Interstate Tax Disharmony in India : A Comparative Perspective, *Oxford University Press*, Vol. 24, No. 4 99-114

Rao, M.G. and Vaillancourt, F.(1994), Inter-State Tax Disharmony in India: A Comparative Perspective, *The Journal of Federalism*, Vol.24, 99-114.

Rattan, N. (2002).*Legal Mechanism relating to Sales Tax: A Critical evaluation.* Ph.D. thesis , G.N.D.U. Amritsar

Ravi, K. Y. (2005), VAT in India – Issues & concerns, *The Journal of Chartered Accounts of India*, June 2005, 1616-1618

Robert, J. S. (1996), *The Case For and Against Value-Added Taxation*, Progressive Policy Institute Talking Points. Retrieved from http://www.ppionl ine.org/ppic.cfin?knlgAreaD=125&subsecID

Roy, C. V. (2008), High VAT costs Punjab bus units dearly, *Business Standard*, Jan 08

Rustagi, T. R. (2005), Do States Need Uniform VAT Rates?, *Economic Times (Face-Off)*, April 22.

Shanmugam, K. R. and R Sthanumoorthy (2004), Sales Tax Policy Interaction among the State Governments in India, *Journal of Quantitative Economics*, New Series Vol. 2, 147-63.

Sharma, C. (2004) Implementing VAT in India :Implications for Federal Polity, *The Indian Journal of Political Science,* Vol. LXVI, No.4, Oct-Dec., 2005

Sthanumoorthy, R. (2006), Rate War, Race to the Bottom and Uniform State VAT Rates, *Economic & Political Weekly,* Volume 41 No. 24 June 23

Sthanumoorthy.R.(2006). State Level VAT in India: Issues, Challenges and Experience.*ICFAI,* 1ˢᵗEdition

Wheaton, W. C. (1983), Interstate Differences in the Level of Business Taxation, *National Tax Journal*, Vol 36.

Wilson, J. D. (1999), Theories of Tax Competition, *National Tax Journal*, Vol 52, 269-304.

Fig. 1
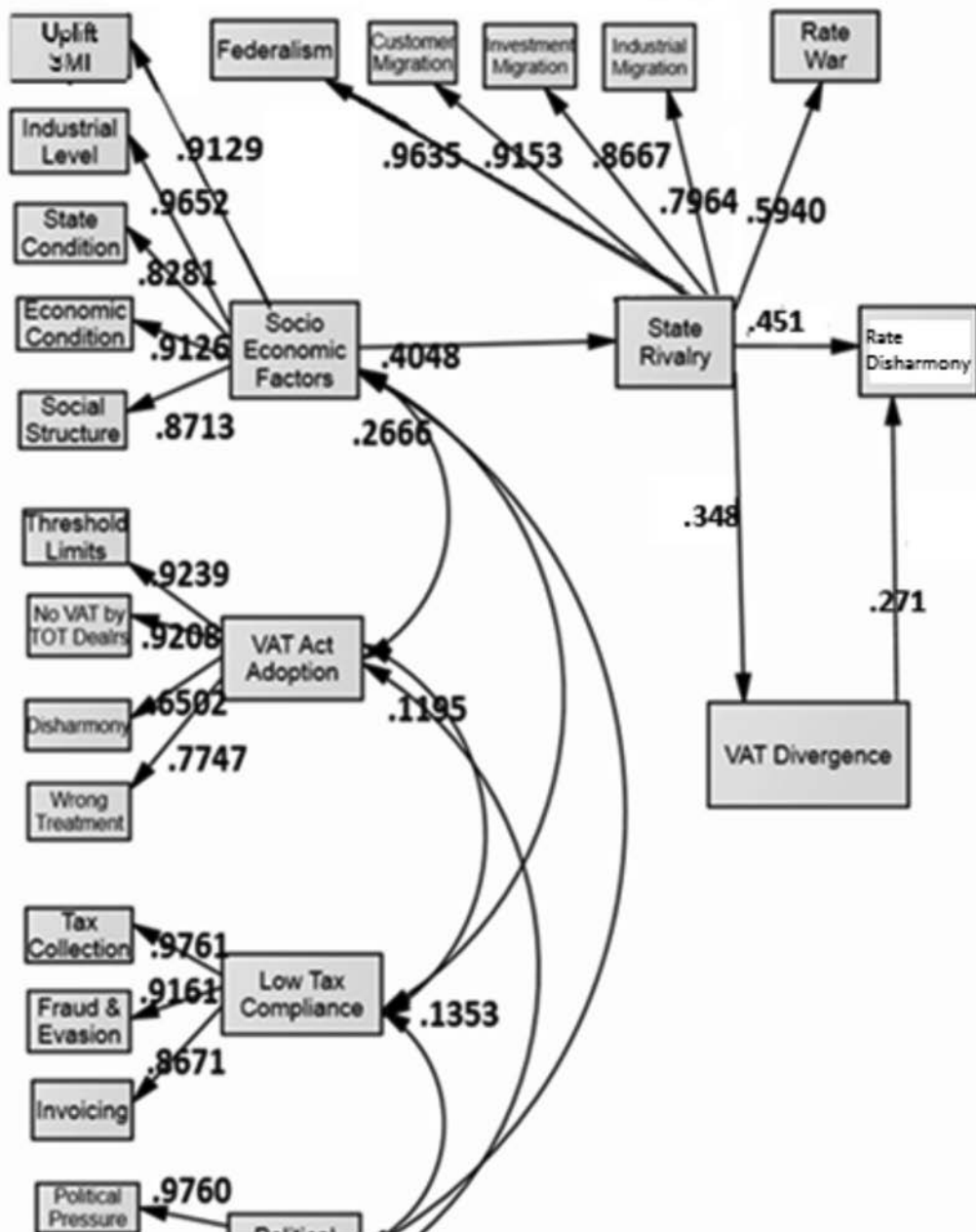
Table 1: Results of Exploratory Factor Analysis and Reliability Test

Construct	Item	Description of Survey Item	Factor Loading	Cronbach X
Rivalry	R1	Federal system exists in India which empowers the state Govt. to amend the VAT Act	0.855	**0.7841**
	R2	To attract the customer from other state	0.812	
	R3	To attract the investment from the outside investors	0.769	
	R4	To stop Industrial migration from high VAT state to Low VAT state	0.603	
	R5	When neighboring state increase or decrease VAT rates	0.521	
Socio Economic	S1	Level of industry is responsible for different rates	0.945	**0.9215**
	S2	State backwardness insists on govt. to levy lesser VAT rates	0.914	
	S3	Due to different Economic Conditions of the states	0.873	
	S4	Social Structure of the states	0.831	
	S5	To Uplift the Small and Medium Industry	0.827	
VAT Adoption	A1	Low Threshold Limits in Neighboring States	0.879	**0.8024**
	A2	No VAT is charged by TOT dealers	0.843	
	A3	VAT Act is not uniformly implemented in India.	0.743	
	A4	VAT is taken as input cost	0.866	
Low Tax Compliance	C1	Tax collection is lesser in the states and to compensate it govt. charges more VAT	0.866	.7724
	C2	Govt. charges more VAT due to the fraud and tax evasion	0.858	
	C3	Sales without invoicing to attract customer	0.501	
Political Factor	P1	Due to political pressure by the opposition party on the ruling party	0.862	**0.7098**
	P2	Strike and Lock out by industry to threaten Govt. to lower VAT rates.	0.829	

Note: Respondents were requested to assess the importance of the survey items with regard to VAT Divergence using a seven-point Likert scale of 1-7.

Table 2: Results of Confirmatory Factor Analysis

Construct and Measurement Item	Standardized Item Construct Loading	t-value	R-Square
State Rivalry			
Federalism	0.9638	22.1400	0.8856
Customer Migration	0.9153	14.5800	0.5832
Investment Migration	0.8667	18.5350	0.6414
Industrial Migration	0.7964	23.3388	0.7336
Rate war	0.5940	17.9496	0.7180
Socio-Economic factor			
Economic Conditions	0.9126	11.5122	0.7005
Industry Level	0.9652	22.3490	0.8740
Uplift SMI	0.9129	23.4522	0.9381
Social Structure	0.8713	14.5122	0.7005
State Condition	0.8281	18.5328	0.7413
VAT Act Drawback			
Low Threshold	0.9239	12.6036	0.5041
No VAT by TOT Dealers	0.9208	11.4636	0.6985
Disharmony	0.6502	23.3507	0.9340
Wrong Treatment	0.7747	18.4680	0.7387
Low Tax Compliance			
Tax Collection	0.9761	18.4842	0.7394
Fraud & Evasion	0.9161	22.8653	0.9146
CompulsoryInvoicing	0.8671	22.1400	0.8856

Political Factor

Political Pressure	0.9760	18.5350	0.7414
Strike & Lock Out	0.5498	23.3388	0.9336

Latent Variable equations

β_1	0.4048	8.1456
β_2	0.2666	5.4653
β_3	0.1195	2.4789
β_4	0.1353	2.3648
β_5	0.0691	3.3347

Table 3: Statistics for Confirmatory Factor Analysis

Goodness of Fit Index (GFI)	0.9224
Adjusted GFI	0.8765
RMSEA	0.0641
Chi-Square	278.21
BentlerBonett Non normed Index	0.9245
Boolen Non normed Index	0.9123
Bentler Comparative Fit Index	0.8564

Table 4: Summary of Empirical findings

Hypothesis	Effect	Loading	Hypothesis Result
H1	State Rivalry has positive effect on the VAT divergence	0.3480	Significant
H1a	Federal system exists in India has positive effect on the State Rivalry.	0.9638	Significant
H1b	Customers of the Native States has positive effect on the State Rivalry	0.9153	Significant
H1c	Investors of the Native States has positive effect on the State Rivalry	0.8667	Significant
H1d	Industrial Migration has positive effect on the State Rivalry	0.7964	Significant
H1f	Change in VAT rates by neighboring states positively effect on the State Rivalry	0.5940	Significant
H2	Socio Economic Factors has positive effect on the VAT divergence	0.3480	Significant
H2.1	Socio Economic Factors has positive effect on the State Rivalry	.4048	Significant
H2a	Level of industry is responsible for Socio Economic Factors	0.9126	Significant
H2b	State backwardness is responsible for Socio Economic factors.	0.9652	Significant
H2c	Economic Conditions are positively related to Socio Economic Factors	0.9129	Significant
H2d	Social Structure of the states is related to the Socio Economic factors	0.8713	Significant
H1e	Uplift of SSI is positively related to the State Rivalry	0.8281	Significant
H3	VAT Act Adoption has positively affected VAT divergence	.2666	Significant
H3a	Low Threshold Limits in Neighboring States is positively related to VAT Act Adoption	0.9239	Significant
H3b	No VAT is charged by TOT dealers is positively related to VAT Act Adoption	0.9208	Significant
H3c	VAT Act is not uniformly implemented in India is positively related to VAT Act Adoption	0.6502	Significant
H3d	VAT is taken as input cost is positively related to VAT Act Adoption	0.7747	Significant
H4	Low Tax Compliance Positively affects the VAT Divergence.	.1195	Significant
H4a	Tax collection is lesser in the states is positively related to Low Tax Compliance	0.9761	Significant
H4b	Fraud and tax evasion is positively related to Low Tax Compliance	0.9161	Significant
H4c	Sales without invoicing is positively related to Low Tax Compliance	0.8671	Significant
H5	Political Factor Positively affects the VAT Divergence.	.1353	Significant
H5a	Political pressure is positively related to the Political Factor	0.9760	Significant
H5b	Strike and Lock out is positively related to the Political Factor.	0.5498	Significant
H6	State Rivalry causes industrial migration.	.4510	Significant
H7	VAT divergence causes Rate Disharmony.	.2710	Significant

A Study of Customer Preference Towards Online Shopping With Special Emphasis in Bengaluru City

A. Mayur Kumar*
Dr. A. Hariharanatha Reddy**

ABSTRACT

The 21st century in India has witnessed for enormous increase in the number of online shoppers. China has the highest percentage of internet users (21.97%), followed by the U.S. (9.58%) and India (8.33%).**Asia, as a continent, has the most internet users.** It accounts for 48.4% of global internet users. **There are currently 966 million websites in the world today.** India may reach 500 million internet users by end of 2016.India will have 100 million online shoppers and the country's e-tailing sector will become a $15 billion market by 2016,Customer are playing an important role in online shopping. In India youth population most interesting in online shopping. This research focuses 420 sample responses belonging to varied group of customers and on the basis of age, sex, income, life style, purchasing preferences, geographical location, economics status, frequency and visit of the online shopping etc., in the Bangalore city. Present study consists and the questionnaire two parts. Part-I questionnaire measures the distribution of participants on the bases demographic characteristics and part-II questionnaire measures customers dimension at online shopping on a five point liker scale ranging from (1) strongly disagree to (5) "strongly agree". Sample was collected on the basis of non-probabilistic convenience sampling method. The population in this study comprise of customer who loves online shopping at Bangalore city. This study is undertaken reliability analysis to identify the customer preferences towards online shopping by using factor analysis, Correlation analysis and regression analysis tests and Result of research as concluded the important to enhance the customer preferences towards online shopping at Bangalore city.

Key words: online shopping, Internet, Usage, Loyalty

INTRODUCTION

Online shopping is a form of electronic or e-commerce which allows consumers or buyers to directly purchase goods or services from a seller over the internet using a web browser. Today Customer is playing an important role in online shopping. According to the report from IAMAI, the number of total internet users in India will reach 462 million marks by June 2016, a 31% YoY growth during the first half of 2016. **71% of the estimated 371 million mobile internet users in India will belong to urban area.** Compared to 71% male, only 29% of females in India are using the web; however, the growth is slowly catching up. Male internet users are growing at a rate of 50%, while female internet users are growing at a rate of 46%.India is 2th place internet users in the world wide. The world today revolves around the online shopping . Online shopping is a process of buying and selling of goods and services using World Wide Web system. The number of nuclear families is increasing and both husband and wife are working, as they have less time to go to the market for purchasing every now to shortage of time, traffic jams, late working hours, and versatility of plastic money and above all the approach of internet at the door step of whosoever desires it. Online retailers have improved their service and consumers have found it convenient. Online shopping has been shown to provide more satisfaction to modern consumers seeking convenience and speed ((Yu and Wu, 2007). Customer purchase decision typically starts with need awareness, then information search, alternative evaluations, deciding to purchase and finally, post-purchasing behavior. Online shoppers are expected to increase from 20 million in 2013 to 40 million in 2016, It also predicts that the Indian e-commerce market is estimated to grow at a compounded annual growth rate (CAGR) of 63 percent to reach $8.5 billion (Rs. 54,304 crores approximately) in 2016 on the back of growth in the penetration levels of mobile and Internet and increased consumer demand. On the mode of payment, almost 45 per cent of online shoppers

---

* Assistant Professor, K.S.R.M college of Management studies, K.S.R.M. college of Engineering, campus, Kadapa. (A.P.) PIN 516003 E-Mail-rohinimayur@gmail.com Cell: 09000453094
** Head of Department of MBA, Assistant Professor, K.L.M college of Engineering for women, Kadapa A.P

reportedly preferred cash on delivery mode of payment over credit cards (16 per cent) and debit cards (21 per cent). Only 10 per cent opted for internet banking and a scanty 7 per cent preferred cash cards, mobile wallets, and other such modes of payment.

REVIEW OF LITERATURE

P.Kuppuraj and; Dr.N.Ravichandran (2014) in his article define One of the fastest growing areas of e-commerce is online purchasing, the internet provides a platform where sellers and buyers can come in contact for sale and purchase of goods and services. AronM.Levin, Irwin P. Levin and Joshua A. Weller (2005) "A Multi-attribute analysis of preferences for online and offline shopping: differences across products, consumers, and shopping stages" concluded Preferences for shopping online or offline were shown to vary across products, consumers, and stages of the shopping experience. Our approach of examining how attribute-level perceptions drive preferences for online vs. offline shopping can be useful to those trying to model this important issue in consumer behavior. Dr. Amaravathi, M. and Mr. Anand Shankar Raja, M.(2015) point to the Due to the numerous advantages and benefits, more and more people prefer online shopping over conventional shopping these days. It is important to understand the psyche of the online shopper and the situation in which they are. Some spend a lot of their leisure time for shopping, whereas some don't. From shopping in their pyjamas, there is convenience for an array of consumers, especially for the elderly and disabled consumer. S. VenuGopalRao and Vajjhala.V. Gopal (2012) have studied Consumers look to variety, quality, convenience and the right price while shopping for groceries. Keeping all the above gaps in view a study specifically aimed at organized grocery retailing and buyer behavior was contemplated. Given the fact that the sector is still at a nascent stage and nothing significant beyond consulting reports are available, the authors thought it fit to embark on this study. Manjunatha S. (2013) stated that online shoppers are culturally, religiously, linguistically and regionally differ. Their attitudes and expectations towards online shopping also differ widely. In India with the vast increasing of young population the demand for online shopping is largely increasing. So, no single online website company can cater the service required. Hence

the joint venture is required, all these players have to work together to make things happen.

OBJECTIVES OF THE STUDY

● To study the customer preferences of shoppers towards of online shopping in Bengaluru city.

● To study the impact of customer preferences offered by retailers of loyalty in online shopping.

RESEARCH METHODOLOGY

In order to accomplish the objective of the study to collect data for this research study, both primary and secondary sources were used. Secondary data collected through the researcher-reviewed articles related to research objective that appeared in the scholarly literature, key journals, reports, magazines and proceeding were systematically scanned for articles related to the research topic. Primary data collected through an empirical investigation, online survey was conducted, using a structure questionnaire. Present study consists and the questionnaire two parts. The questionnaire measures CRM dimensions at shopping mall on a five point scale ranging from (i) strongly disagree to (5) "strongly agree" Sample was collected on the basis of non-probabilistic convenience sampling method. The sampling method followed in the study is non-probabilistic-snowball sampling method. The data collected for pretest are through online survey. E-mail ids were gathered from various sources belonging to India. Questionnaire for the pretest was designed on web portal of quia.com, present of data is January 2016.The population in this study comprise of customer who loves online shopping at Bangalore city. It is decided to choose in order to collect the data a through online survey structured questionnaire was farmed Questionnaires were distributed amongst the sample of 500 But received 420 customers respondents of online shopping. The data was collected tying a survey and interpretation through to check the reliability of the data, cron bach alpha test was applied in order to find out the most preferable customer preferences towards online shopping view point factor analysis correlation and regression was applied. All the analysis was carried out by SPSS 21.0.

RESEARCH HYPOTHESES

H_1: There is significant impact on positive relationship between Customer preferences

of sale promotion and loyalty in online shopping.

H_2: There is significant impact on positive relationship between Customer preferences of customer services and loyalty in online shopping.

H_3: There is significant impact on positive relationship between Customer preferences of Motivation drive and loyalty in online shopping.

H_4: There is significant impact on positive relationship between Customer preferences of Customer communication and loyalty in online shopping.

H_5: There is significant impact on positive relationship between Customer preferences of attitude and loyalty in online shopping.

H_6: There is significant impact on positive relationship between Customer preferences of Technology and loyalty in online shopping

HYPOTHESES MODEL
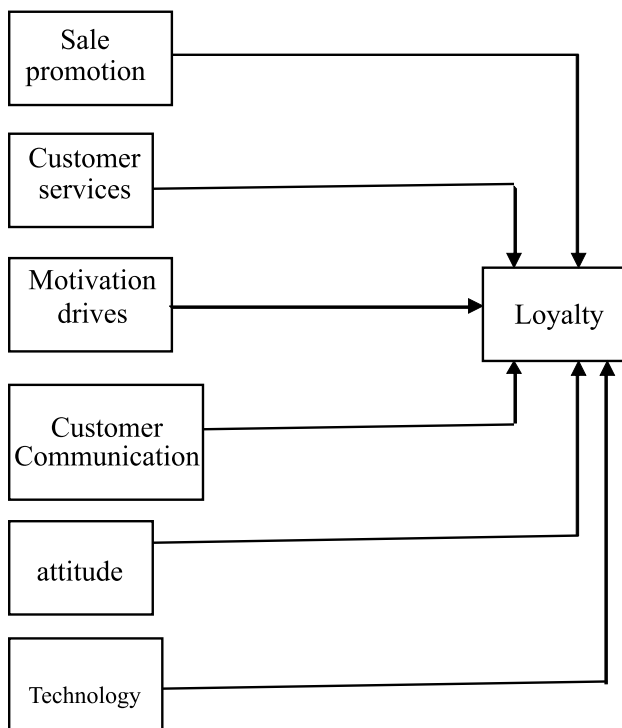
ANALYSIS AND INTERPRETATION

A total number 420 respondent participated in the survey the demographic characteristics the respondent (Table 1) shows that the sample consisted, majority of respondents 54.5 percent of male and 45.5 percent female respectively. The analysis shows that age composition of the sampled respondents has major categories of customers were 26.0 percent of the respondents were between groups 36-45. The respondents were mostly between the ages 35.7percent of age groups 26-35, this shows the majority of the respondents were in the group of middle age persons shows much more influencing to come for shopping malls at Bangalore city. Education qualification of the consumer is also considered for the analysis, 45.5 percent are Post graduates, and 39.6 percent have consumers have graduation.37.4 percent have under graduate are reported that education level play more significant dominated to give preferences and exportations to purchase, online shopping. It is observed from the monthly income of the respondents that 25.5 percent of the (20,001 – 30,000) income groups, 23.1 percent of the (10,000 – 20,000) income groups and it is followed by 17.4 percent in the income group of 30,000 – 40,000, 15.5 percent lies in the inform group of (40,001 - 50,000) and 12.4 percent consumer have their income in the group of more than 60,000. From the study working status 41.7 percent of employee, 20 percent student, 17.4 of employer represents is making happy and joy online shopping an attractive place at Bangalore city? (Table 2)

A) Majority of the respondents. 93.3 percent like online shopping and 6.7 percent form a negligible like online shopping.

B) 53.6 percent of customer is frequent visit normal days online shopping purposely and 46.4 percent of customers are in frequent visit weekend day in online shopping in Bangalore city.

C) It is clear from the results that the customer are showing the interest time to spend 35.7 percent to visit the below 1 hour on line shopping,35.2 percent showing the interest 1-2 hour, 2-4 showing 18.3 percent and 5-above showing 10.7.

D) As per consumer's 23.8 percent 6 month span of association online shopping, 35.5 percent of the respondents 1 year, and 25.5 percent 2 year times, 15.2 percent more than two years.

E) The study identified the perception towards time you like to visit a online shopping, they explained that 21.0 percent online shopping every day, 30.2 percent weekly ones times,

32.1 percent say prefer once a month and 16.7 every 2 or 3 month .

F) According to this study collected their opinion on approximate time you visit online shopping customer says, respondents said that 10.7 percent morning time, 24.8 percent at afternoon time, 42.4 percent at evening time and 22.1 percent at night time.

G) The majority of respondents get sources of awareness of online shopping through friends 28.8 percent, Newspapers 13.3 percent, T.V 19.8, family 8.1 percent, internet 21.4, magazines 8.6 percent, so that people get more awareness about online shopping by friends, newspapers, T.V, Internet can play major role.

H) Respondent rated the mode of payment cash in hand 30.5 percent, debit card 33.8 percent, credit card 19.5 percent, net banking16.2. Most of the respondents show interest to making cash purchases.

I) 51.2 percent does not waste your time in online shopping. 48.8 waste your time in online shopping

J) The study explain customer stay that 71 percent little times and effort to purchase through online shopping.

K) From the table show that The respondent preference and interest to purchase in online shopping to buy products like clothing 13 percent ,Books 16 percent, Mobiles and tabs 10.7 percent, Foot ware 5 percent make more influence to purchase easy and more comfortable to shop in the online shopping.

L) From the survey flip kart .com 11.9 percent, amazon.com 11.4 percent, jabong.com 9.8 percent, eBay 9.5 percent, Myntra.com 9.3 percent, Naaptal.com9.0 percent, shopping.rediff.com 7.1 percent, homeshoping18.com 5.7 percent and MyGrahak.com 5.5 percent sites do you like to shop in online shopping

ANALYSIS AND INTERPRETATIONS

Interpretations through factor analysis

Factor analysis is most frequently used to identify a small number of factors that explain most of the variance observed in a much larger number of manifest variables. Factor analysis is used in the present empirical study to understand the important factors that contribute to which preferences are close to make influences to satisfaction customer preferences offered by online shopping retailers to the customers. To test the sampling adequacy, the reliability of data was checked with the help and cronbach alpha test the value of alpha for the data was 0.711 which is greater 0.6. Showing the data is reliable and suitable for the analysis. Kaiser-Mayer-Olkin (KMO) test (1974) recommends accepting values greater than 0.5 as acceptable. A measure >0.9 is measure "marvelous" > 0.8 is "meritorious" > 0.7 is middling > 0.6 is "mediocre" > 0.5 is "miserable" and < 0.5uunacceptable

In this study as given (Table 3), Kaiser-Mayes-Olkin (KMO) measures of sampling adequacy and the resultant value was 0. 720, which is greater than 0.5 showing that the sample is mediocre. This indicates that the factor analysis is appropriate for these data. The resultant value of Bartlett's test was (p<0.001); showing that it was significant. SPSS output lists the Eigen values associated with linear component factor before extraction, after extraction and after rotation. Eigen values are designed to show the proportion of variance accounted for by each factor (George and Mallemy, 2010) SPSS has identified 27 linear components within the data set. Table-3 the Eigen values associated with each component represents the variance explained by that particular component. Next all components with eigen value greater than 1 are extracted, which leaves us with 9 factors. It can be interpreted from table-, under some factors there are less than three items .so, these items where be rearranged based on the next highest loading. Thus, the study has arrived at nine components by explaining 58.615 variance on the dependent variable customer preference i.e. In the final part of the table (Rotation sums of the squared loading), the eigenvalues of the factor after rotation are displayed. Rotation has the effect of optimizing the factors structure. Before rotation factor 1 accounted for considerably more variance than the remaining nine only 15.913 of variance (compared to 9.620, 5.578, 5.395, 4.996, 4.680, 4.266, 4.150, 4.016). however after extraction it account for only (14.366% compared to 6.492, 6.466, 5.909, 5.749, 5.326, 5.105, 5.070, 4.133,) The percentage of total variance is used as our index to determine how views the total factor

solution account for what the variable together represent. The Index for the present study accounts for 58.615 of the total variance for customer preferences in online shopping in Bengaluru city. This is a very good extraction as it can economize on a number of factors (from 27, it has reduced to nine factors),

The rotated Factor matrix (Table 4) for the variables relating to the services offered by mall retailers in shopping malls for the 27 statements have been extracted into four factors namely F_1, F_2, F_3, F_4, F_5, F_6, F_7, from table 4. The factors with identified new names, which influence customer preferences in online shopping in Bengaluru city are discussed in the following paragraph.

Factor I (F_1) SALE PROMOTION:

Factor I shows there are seven significant loading the variable namely In time delivery 0.845, cash back offers 0.830, updating the information regarding product/services 0.803, E-gift vouchers 0.787, Allows cancellation, return, and re-funds 0.688, help line services...469, EMI payment option 0.423 are the factors with higher positive loadings on Factor I. The above said seven factors with high loadings on factor I are characterized as "sale promotion" creating a positive image of preference in the minds of customer improvements can lead to a significant increase in rate of sale promotion. Sales promotion is one level or types of marketing activate which can be push and pull strategy of product in mind of customer. *Sales promotions* are the set of marketing activities undertaken to boost *sales* of the product or service.

Factor II (F_2) CUSTOMER SERVICES:

The second factors consists of factors such as Availability of wide variety of brand 0.748, prices are comfortable 0.711, time saving 0.568, Quick ordering 0.696 These are the factors with higher positive loadings on Factor II. Hence, F_2 is termed as "customer services" offered by retailers play a major role in meeting customer preference, make comfortable better online shopping. Customer services levels are make clear and improve some measures those levels to bridge the gap to build long term relationship enhances customers satisfaction and offers a pleasant shopping experiences when the customers are visiting online shopping.

Factor III (F_3) MOTIVETION DRIVES:

The significant factors loading under Factor III (F_3) are convenient to shop in online compared with traditional retailing shopping 0.806, provide offer better value of money 0.779, Easy, fast and comfortable to complete a transition surfing online shopping sites 0.822 are the factor with higher positive loadings. Factor III are characterized, as "MOTIVETION DRIVES" was important strength of the relationship between an individual's relative attitudes and repeat patronage. Online retailers are able to gather some very useful information about their combination of desire and energy directed at achieving a goal. *Drive* is often the starting point of *motivation*. This *drive* helps individuals focus on specific goals they wish to achieve.

Factor IV (F_4): CUSTOMER COMMUNICATION

Cheek the current status of my order 0.669, sending any new product /offer catalogs/ new letters 0.587, free shipping 0.511; these are the important factors with higher positive loading on the factor IV namely as "Customer communication". *Customer Communication* refers to a convergent set of Information Technology solutions that help businesses achieve these objectives by providing a tool to advance the way they *communicate* with their *customers.*

Factor V (F_5) CUSTOMER LOYALTY:

This factors consists of three variables concerned with the free gift/prices with purchase of good/ services 0.687, warranty and hidden costs 0.651,special offer to loyal customer 0.607, named as "**customer loyalty**" which influences to motives that customer can visits online shopping again and again is drive to perceived to made long term relationship in the minds of customers.

Factor VI (F_6) ATTITUDE:

This factor measures the factors loading under Factor VI are customer support 24x7 0.695, to use my credit/debit card/net banking in online shopping 0.520, cancel my order 0.477, Do you face out of stock problem 0.879 named as "attitude" simply as a composite of a consumer's beliefs, feelings, and behavioral intentions toward some object within the context of online shopping.

Factor VII (F_7): TECHNOLOGY

This factor measures the factors loading under Factor VII are websites provides in depth information about product and services 0.667, agree the term and conditions in online shopping 0.492, product are hygienically packed your door steps 0.421, named as "technology" technology play an important role in online shopping. Technology for business it's easy to get distracted by the latest shiny new object. Social media, tablets and the cloud have created a tremendous amount of buzz about the revolutions each technology promises to deliver online shopping

CORRELATION ANALYSES

H_1: There is significant impact on positive relationship between Customer preferences of sale promotion and loyalty in online shopping. (Table 5)

The Pearson correlation (p) value for customer preferences of sale promotion and loyalty is 0.262 and the significant level is 0.01 (P<0.01). The table shows that the p-value is 0.000, which is less than 0.01. The table shows the correlation summary of the variables is indicating which shows the positive and strong relationship between the predicator variable (sale promotion) and dependent variable (loyalty) in online shopping. Therefore sale promotion which includes which is more important to online shopping So, mall retailers can implement the sale promotion to make retain the customer online shopping. Therefore H_1 was support.

H_2: There is significant impact on positive relationship between Customer preferences of Customer services and loyalty in online shopping.

The Pearson correlation (p) value for customer preferences of customer services and loyalty is 0.017 and the significant level is 0.01 (P<0.01). The table shows that the p-value is 0.000, which is less than 0.01. The table shows the correlation summary of the variables is indicating which shows the positive and strong relationship between the predicator variable (customer services) and dependent variable (loyalty) in online shopping. Therefore customer services which includes which is more important to online shopping So, mall retailers can implement the customer services to make retain the customer in online shopping. Therefore H_2 was support.

H_3: There is significant impact on positive relationship between Customer preferences of Motivation drive and loyalty in online shopping.

The Pearson correlation (p) value for motivation drives and loyalty is 0.034 and the significant level is 0.01 (P<0.01). The table shows that the p-value is 0.000, which is less than 0.01. The table shows the correlation summary of the variables is indicating which shows the positive and strong relationship between the predicator variable (motivation drives) and dependent variable (loyalty) in online shopping. Therefore motivation drives which includes which is more important to online shopping So, mall retailers can implement the motivation drives to make retain the customer in online shopping. Therefore H_3 was support.

H_4: There is significant impact on positive relationship between Customer preferences of Customer communication and loyalty in online shopping.

In the table no above, the correlation coefficient of trust is 0.175 and the significant level is 0.01 (p<0.01) the table shows that the p-value is 0.0001 which is less than 0.01. The correlation summary of the variables is indicating which the positive and strong relationship between the customer preferences of Customer communication and loyalty. Hence, the online retailers are encouraging the customer communication program is may be able to retain maximum number of customer in online shopping. H_4 was supported.

H_5: There is significant impact on positive relationship between Customer preferences of attitude and loyalty in online shopping.

In the table no above, the correlation coefficient of trust is 0.052 and the significant level is 0.01 (p<0.01) the table shows that the p-value is 0.0001 which is less than 0.01. The correlation summary of the variables is indicating which the positive and strong relationship between the customer preferences of attitude and loyalty. Therefore attitude which includes customer support 24x7, to use my credit/debit card /net banking in online shopping, cancel my order, Do you face out of stock problem of a online shopping is significantly associated with loyalty. H_5 was supported.

H_6: There is significant impact on positive relationship between Customer preferences of Technology and loyalty in online shopping.

In the above table the correlation summary of the

variable is indicating Technology 0.021 and the significant level is 0.01 (p<0.01) the table shows that the p-value is 0.0001 which is less than 0.01. The variable of Technology and loyalty has strong positive and strong relationship between the variables. So H_6 is support.

REGRESSION

Regression Analysis

The table 6 shows the results of regression analysis of model loyalty as the dependent variable. The regression summary table is indicating the value of R=0.300 (R-ranges from – 1 to 1) which shows the positive and strong relationship between the predictor variables (sale promotion, customer services, Motivation drive, customer communication, attitude and Technology and dependent variable (loyalty). Regression coefficient is significant at the 0.05 level (P=0.000, R^2=0.090 ad F=6.805). So, the rule R^2 should be greater than 0.5 in the summary of table R^2 = 0.090. So, the model is a good fit for data. The results indicate a strong, positive relationship between the evaluation of sale promotion and customer communication, (b=0.225, b=0.129 p<0.001), which support the hypothesized relationship H_1, H4.The results thus, give limited support for the customer service (b=0.019,

p=0.69), Motivation drives (b=-.066, p=0.19) attitude and Technology (b=0.027, p=0.63), Technology (b=0.033, p=0.49). The hypothesized H_2, H_3, H_5, H_6 thus not supported.

CONCLUSION

The customer preference is important variables in the success of the online shopping. The new challenge like window-shopping has decreased the turnover of the online shopping; in this era, the study has made some use full insights to increase the customer preference. The study has identified the variables influencing customer preference. It can be understood the factor-1 and factor-2 are having high factor loading and high variance in explaining towards customer preferences by online shopping retailers at Bangalore. The retailers should see in implementing the services of factor-1and factor-2 variables for enhanced satisfying to go for shopping to build a long-term relationship with services provided retailer by customers. Online retailers should take in to consideration and understanding the customers touch points related to customer preferences by online shopping. Today "customers is God" services offered by mall retailers play a major role in meeting customers' expectations and perception make comfortable better online shopping

REFERENCES

Ankur kumar Rastogi (2010) "A study of Indian online consumers and their buying behaviour, July 2000, Research gate.

AronM.Levin, Irwin P. Levin and Joshua A. Weller "A Multi-attribute analysis of preferences for online and offline shopping: differences across products, consumers, and shopping stages" Journal of Electronic Commerce Research, VOL 6, NO.4, 2005 pp 281- 290.

Dr. Amaravathi, M. and Mr. Anand Shankar Raja, M "Customers' preference towards online shopping with special reference to the city of Kochi" International Journal of Information Research and ReviewVol. 2, Issue, 10, pp. 1213-1219, October, 2015.

Manjunatha S "A Sociological Study on the Emergence and Growth of Online Shopping in India" International Journal of Management and Social Sciences Research, Volume 2, No. 8, August 2013,pp1-9Manjunatha S., (2013) "The Usage of Social Networking Sites Among the College Students in India", International Research Journal of Social Sciences, 2(5), 15-21.

P.Kuppuraj and; Dr.N.Ravichandran "consumers' preference towards on online shopping websites in Coimbatore city: an empirical analysis" International Journal of Marketing, Financial Services & Management ResearchVol.3 (12), DEC (2014), pp. 143-159.

S. VenuGopalRao and Vajjhala.V. Gopal "A Study of grocery shopping behavior in India" Far East Journal of Marketing and Management. Vol. 2 No. 3 Dec 2012,pp11-33.

Vellido, A., Lisboa, P.J.G. and Meehan, K., "Quantitative characterization and prediction of on-line purchasing behavior: A latent variable approach", International Journal of Electronic Commerce, Vol. 4, No. 4: , (2000),pp 83-104,

Table 1: Appendix I Questionnaire: Analysis and interpretation s-Demographic factors – sample

Gender	Frequency	Percent
Male	229	54.5
Female	191	45.5
Age		
"20-25"	86	20.5
"26-35"	150	35.7
36-45	109	26.0
46-60	30	7.1
60-above	45	10.7
Education		
Undergraduate	46	11.0
Graduate	157	37.4
post graduate	191	45.5
Other	26	6.2
Monthly		
lessthan-10000	26	6.2
10001-20000	97	23.1
20001-30000	107	25.5
30001-40000	73	17.4
40001-50000	65	15.5
More than- 60000	52	12.4
Working status		
Employee	175	41.7
Employer	73	17.4
house wife	40	9.5
Student	87	20.7
Retired	16	3.8
Unemployed	29	6.9
Total	420	100.0

Table 2

	Frequency	Percent
A) Do like on line shopping		
Yes	392	93.3
No	28	6.7
B) Which day you like online shopping		
Normal days	225	53.6
Weekends	195	46.4
C) time you spend		
below 1 hour	150	35.7
1-2 hour	148	35.2
2-4 hour	77	18.3
5-above	45	10.7
D) span of Association		
6 month	100	23.8
one year	149	35.5
two year	107	25.5
More than two year	64	15.2

E) How many times visit online shopping		
Every day	88	21.0
weekly ones	127	30.2
once a month	135	32.1
every 2 or 3 month	70	16.7
F) What time you like to visit online shopping		
Morning	45	10.7
afternoon time	104	24.8
evening time	178	42.4
night time	93	22.1
G) Sources of awareness		
Friends	121	28.8
Family	34	8.1
T.V	83	19.8
New paper	56	13.3
Internet	90	21.4
Magazines	36	8.6
H) mode of payment		
cash on delivery	128	30.5
Debit cards	142	33.8
credit cards	82	19.5
Net banking	68	16.2
I) Does not waste your time		
Yes	215	51.2
No	205	48.8
J) little time and effort to purchase through online shopping		
Yes	298	71.0
No	122	29.0
K) What type of shopping do you interest to purchase in online stores		
clothing	57	13.6%
Foot ware	21	5.0%
watches	26	6.2%
Bags, wallets and belts	28	6.7%
Mobiles and tabs	45	10.71%
Laptops and accessories	32	7.6%
cameras	14	3.3%
Audio players and speakers	18	4.2%
software	17	4.0%
Home and kitchens	16	3.8%
Books	68	16.2%
Gaming	18	4.2%
Music, movies	20	4.8%
Baby-care and toys	10	2.4%
sports and fitness	11	2.6%
Furniture	19	4.5%
L) Which sites do you like to shop		
flip kart .com	50	11.9%
EBay. in	40	9.5%
Myntra.com	39	9.3%
homeshoping18.com	24	5.7%
Yebhi.com	15	3.5%
amazon.com	48	11.4%
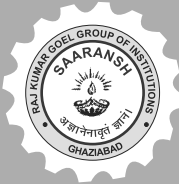
jabong.com	41	9.8%
tradus.in	15	3.6%
firstcury.com	25	6.0%
MyGrahak.com	23	5.5%
letsbay.com	12	2.9%
Naaptal.com	38	9.0%
shopping.rediff.com	30	7.1%
pepperfry.com	20	4.8%
	420	100.0

Table 3: Reliability Statistics

Cronbach's Alpha	N of Items
.711	27

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.720
Bartlett's Test of Sphericity	Approx. Chi-Square	2.814E3
	df	351
	Sig.	.000

Table 4

Sale promotion F1	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6	Factor7
In time delivery	.845						
cash back offers	.830						
updating the information regarding product/services	.803						
E-gift vouchers	.787						
Allows cancellation, return, and refunds	.688						
help line services	.469						
EMI payment option	.423						
Customer services F2							
Availability of wide variety of brand		.748					
prices are comfortable		.711					
time saving		.568					
Quick ordering		.696					
Motivation drives F3							
convenient to shop in online compared with traditional retailing shopping			.806				
provide offer better value of money			.779				
Easy, fast and comfortable to complete a transition suffing online shopping site			.822				
Customer communication F4							
cheek the current status of my order				.669			
sending any new product /offer catalogs/ new letters				.587			
free shipping				.511			
Customer loyalty F5							
free gift/prices with purchase of good/ services					.687		
warranty and hidden costs					.651		
special offer to loyal customer					.607		
Attributes F6							
customer support 24x7						.695	
to use my credit/debit card /net banking in online shopping						.520	
cancel my order						.477	
Do you face out of stock problem						.778	
Technology F7							
websites provides in depth information about product and services							.667
agree the term and conditions in online shopping							-.492
product are hygienically packed your door steps							.421

Table 5: Correlations

		Sale promotion	Customer services	Motivation drive	Customer communication	loyalty	Atti-tude	techno-logy
Loyalty	Pearson Correlation	.262**	.017**	.034**	.175**	1	.052**	.021**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000
	N	420	420	420	420	420	420	420

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

Table 6

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.300a	.090	.077	.66371

a. Predictors: (Constant), t, cc, a, o, cs, md

ANOVA[b]

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.986	6	2.998	6.805	.000a
	Residual	181.932	413	.441		
	Total	199.918	419			

a. Predictors: (Constant), t, cc, a, o, cs, md
b. Dependent Variable: ol

Coefficients

	Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	Hypothesis	Analysis
1	(Constant)	2.542	.328		7.739	.000		
	Sp	.225	.046	.240	4.939	.000	H1	Supported
	Cs	.019	.048	.020	.388	.698	H2	Not Supported
	Md	-.066	.051	-.069	-1.312	.190	H3	Not supported
	Cc	.129	.048	.129	2.666	.008	H4	Supported
	A	.027	.057	.023	.481	.630	H5	Not Supported
	T	-.033	.048	-.034	-.680	.497	H6	Not Supported

a. Dependent Variable: loyalty
(Note: Sp- sale promotion, Cs- customer services, Md- Motivation drives, cc-customer communication, A-attitude, t- Technology)

Entrepreneurial Behavior of Rural Women Farmers In Dairying: A Study in Hassan District

Dr. P. Paramashivaiah*
Mr. Puttaswamy**

ABSTRACT

Entrepreneurial behavior of rural women farmers engaged in dairy enterprise is influenced by socio-economic attributes and psychological attributes. Since women financial empowerment is the need of the hour, women engagement in various entrepreneurial activity is thought utmost significant. The present study is an ex-post facto research based on proportionate random sampling method of data collection through interview and questionnaires filled during personal interview of 140 respondents at various milk producers' cooperative societies in 8 villages of 4 Grampanchayaths. Data analysed for 8 components of entrepreneurial behavior. Major contributing factors for entrepreneurial behavior were identified and correlation with socio-economic factors reveal that land holding, number milk cattle they own, experience, innovativeness, decision orientation, risk taking behavior, social participation, training, management orientation have great significance. Majority of the respondents are medium scale entrepreneurs, and they have high level entrepreneurial traits with respect to dairy farming. It is suggested that timely and adequate, relevant training, information, financial support and vital campaign at massive level could contribute to improved version of dairy enterprise and increase their knowledge and economic status

Key words: Dairy farming, Entrepreneurial behavior, Rural women, Economic status

"Just as a bird couldn't fly with its one wing only, a nation could not march forward if the women are left behind. -Swami Vivekananda

INTRODUCTION

Rural women constitute 50 percent of total rural population. They play a pivotal role in every sphere of economic activities which result in rich contribution towards national income. Women are regarded as backbone of a nation. They are much ahead of the men in contributing community development. More than 60 percent of the total population in India lives in rural area. The countries overall growth requires an adequate development in all the spheres of the rural India. There are many rural enterprises contribute to the improvement in socio-economic condition of rural women in particular during the last few decades. Women entrepreneurship in rural area attained great significance in the wake of globalization and financial sector revolution. Of the major enterprises in rural areas of the country, dairy farming has been considered as an important instrument of socio-economic change that supplemented the income and employment generation to the rural sector in general and rural women in particular.

IMPORTANCE

According to a report 85 percent of rural women are engaged in livestock production (Vishwanathan 1989). Studies also highlight that women play a significant role in dairy farming activities. Micro level studies on similar issues indicate that women contribution cannot be overlooked in dairy production. (Waghmare and chaudari 1989; Prakash Singh et al 2005). The dairy industry needs rejuvenation ecology of the particular locality with maximum entry and participation of women entrepreneurs. Despite rapid social transformation, technological advancement and improvement of literacy level, the most baffling problem in India has been the unemployment. In this background, women entrepreneurship in rural area assumes utmost significance.

Since entrepreneurship is a form of human resource, a successful entrepreneurship demands useful traits and behavior. Entrepreneurial behavior depends on a number of factors like skill,

*   Professor & Chairman, Department of Studies & Research in Commerce, Tumkur University, Tumkur
**   Assistant Professor & Research Scholar, Govt First Grade College Hirisave, Hassan District-573124, Email: swamisure@gmail.com, Mobile: +919741836197

knowledge of the enterprise, risk taking ability, achievement motivation, exposure to mass media, trainings received, and innovative entrepreneurship. Entrepreneurial behavior denotes the change in knowledge, skills and attitude of entrepreneurs in their jobs.

Hassan District is one of the most upcoming developed regions in the dairy farming where majority of the rural population earn income from dairy farming and a generally adapted occupation. Majority of rural women are actively involved in dairy enterprise through women dairy cooperatives or milk producers women cooperative societies

OBJECTIVES OF THE STUDY

The main objectives of the present study are-

● To study the entrepreneurial behavior of rural women farmers engaged in dairying

● To trace out the factors contributing towards entrepreneurial behavior

● To understand the Relation between socio-economic factors and entrepreneurial behavior of rural women farmers

MATERIALS AND METHOD

The present study is ex-post facto research. The study was conducted in Hassan District of Karnataka. 8 villages from four panchayaths were randomly selected and a total of 140 dairy women farmers were selected by proportionate random sampling method from three categories based on the milk cattle (cows and buffaloes) possession. Thus 47 small farmers (with less than 3 milk cattle), 74 medium farmers (3-5 cattle) and 19 large farmers (5 and above) were taken as respondents. The data was collected through interview schedules, the personal interview and the same was analyzed by using SPSS version 16.0. The researcher regarded percentage and correlation techniques more appropriate for this study.

COMPONENTS OF ENTREPRENEURIAL BEHAVIOR

Dairy entrepreneurial behavior index was constituted with 8 components selected out of 15 components, based on weighted mean score as per experts' ratings. The experts from veterinary

department and Live stock production Management from different universities were consulted and asked to rate the variables suitable for dairy enterprise activities. Apart from the experts consultation, a study of relevant literature in the field of livestock production and veterinary extension, discussion with the officials of Karnataka Milk Federation unit of Hassan and Channarayapattana have directed us with 15 components which are normally considered as components in entrepreneurial behavior. Of these, 8 components rated by 26 experts have got more than average values and identified as most relevant to constitute entrepreneurial behavior index. These components are–

Dairy farming orientation, Risk taking behavior, Innovativeness, level of confidence, Decision orientation, Achievement motivation, Entrepreneurship knowledge, information seeking behavior. The psychological profile and various components are recognized relevant. Based on the literature survey, psychological components such as experience, best practice, managerial assistance, result orientation, leadership traits, social participation and coordination with routine farming activities are listed in the questionnaire for data collection. On the basis of primary data collected the study identifies the factor contributing to the level of entrepreneurial behavior among rural women farmers.

DISCUSSION AND ANALYSIS

Table 1 highlights the socio-economic or demographic profile of respondents. As such the respondents were classified into three groups on the basis of number of cattle (cows/Buffaloes) owned and maintained. The age wise analysis reveals that 64.20 percent of respondents have 3-5 cattle are in the 35-40 years group, 56.80 percent in the 30-35 years group. This shows middle age farmer women have medium level dairy farming activities having 3-5 cattle. Education wise analysis shows that higher the level of education less is the interest in dairy farming occupation.

Along with the primary occupation-agriculture farmers having medium land holding ranging from 5 to 10 acres have highest (64.10 percent) cattle they own and maintain while 53.60 percent have small land holding up to 5 acres of land. Respondents with large land holding of above 10

acres of land are managing primary occupation and dairy enterprising with 80 percent in the category. This could be attributed to the reason such as fodder availability, in their agricultural field, to the cattle. Income wise classification highlights that majority of farming women with dairy enterprising earn income up to Rupees 50000 per year. The present socio-economic profile has been presented through the following chart more clearly. Components of entrepreneurial index(table 2) shows that 63.30 percent of medium scale dairy farming women adapt traditional method while 53.20 percent adapt mixed method where as 45.50 percent of lower scale (less than 3 cattle) farming women adapt improved and scientific method. Only 15 percent of higher scale dairy farming women adapt mixed method while 10 percent adapt scientific method. Most of the dairy farming women adapt mixed method of enterprising. The reasons for adapting traditional method of dairy farming could be their continued religious beliefs and untrained orientation (Goswami et al 2000). 48 percent of the Respondents with medium scale are aggressive in risk taking. 47 percent of low scale dairy farming women always prefer innovative methods in their occupation. The level of confidence of 46.40 percent with medium scale farming women is very high, 56.56 percent women with medium scale take their independent decision, 48.10 percent with medium scale are highly motivated with their achievement, 48.70 percent have formal knowledge of enterprising, and 44.44 percent with medium scale farmers obtain dairy farming information from officials. The data analysis reveal that dairy farming women, with medium scale of having 3-5 cattle, found to have better entrepreneurial traits compared to low scale and large scale dairy farming women. The reason can be attributed to their motivation from their achievement and having small and medium scale of land holding which contributed to their zeal to extend their dairy farming activities more professionally than others.

Psychological profile (table 3) indicates that majority of the dairy farming women are medium level of dairy farming activities with higher percentage of psychological variables. Majority of them do not involve in leadership activities which shows that their social participation is at the moderate level. It affects their value orientation as well as management orientation due to their traditional thinking, lack of experience and training

(Reddy 1995). Majority of medium scale dairy women farmers have management orientation those with low scale farming have not adapted expert dairy farming practices. Very few of the medium level farmer women have high level training and best practices; this is due to their low social participation and very moderate management orientation (Fulzele and Meena 1994 ; Bhatt 1995)

Relative contribution of entrepreneurial behavior and level of entrepreneurial behavior

From the above analysis it can be conferred that except dairy farming orientation and innovativeness, medium scaled farmer women have high level of entrepreneurial traits, while those with low scale have high level of dairy farming orientation and innovativeness. This fact describes that farmer women with low scale can balance their regular agricultural activities with dairy enterprising activities. The reason could be attributed to their desire to extend their farming occupation with the eagerness to earn income along with agricultural produce. What is lacking in their business is the training and social participation which hinder their march towards professional and managerial orientation towards dairy entrepreneurship due to less freedom from their family and spouse and lack of government support at the Gram panchayath level. Data analysis also reveal that their low level training and medium managerial orientation is due to less number of milk cattle and also low level of land holding. At the same time the level of education and the age also important component that affect their level of management orientation and low level of entrepreneurial behavior. Decision making and achievement motivation is low in the case of large scale farmers. This is due to lack of coordination between various activities and work pressure, lack of training and traditional method of information seeking behavior. Farmers with large land holding and having more milk cattle have less motivation. Obviously farmers with small land holding and up to 5 milk cattle have motivation and desire to increase the source of their dairy farming activities. And naturally they adapt improved method, take risk, adapt innovations, collect information from official and credible source, take up leadership activities, but they do not seek managerial or any special assistance in their work. They try to make use of every opportunity to excel in dairy entrepreneurship. Thus their entrepreneurial

behavior is more of growth oriented and active rather; thereby leads to increase in the income. This is what is required especially in the rural India that ultimately takes rural women towards self-sufficient and empowerment.

The next point posed concern to the researcher is whether there is association between important socio-economic factors with that of entrepreneurial behavior. For the purpose correlation analysis (Table 4) was adapted. Correlation analysis shows that education has the negative significance. This might be that women farmers with low education have concentrated to adapt dairy entrepreneurship to earn income and increase their economic status. Social participation, dairy income, number of cattle, land holding and expert dairy practice has greater significance on the entrepreneurial behavior of rural women farmers. Social participation and training improves their knowledge in the dairy farming, dairy income and number of cattle motivates to concentrate more on dairy farming that help women farmers adapt expert advice and best practice by collecting official information from credible sources. These are morale boosters of dairy entrepreneurship activities among rural women farmers who adapt managerial skills and innovative methods to regard dairy enterprising their economic activities and generate more income to the rural folk.

SUGGESTIONS AND CONCLUSIONS

The above analysis reveals that rural women farmer with the different number of milk cattle differ in their entrepreneurial behavior. There are many socio-economic factors and psychological factors contributed to entrepreneurial behavior. Management orientation leads to proper planning, innovative methods, knowledge and information seeking, training decision making in their production and marketing activities of dairy farming output. Land holding, education, experience, social participation, adaption of expert dairy farming method in the process also have a significant relation with the entrepreneurial behavior of the respondents.

On the basis of the findings it can be suggested that the department of animal husbandry, extension agencies, Non-governmental organizations who involve in dairy enterprise should involve more actively in the promotion of dairy enterprise. Rural women farmers shall be given more emphasis on education, training and social participation. This makes them aware of day to day technological advancements and the impact of these scientific practices on the enterprise and livelihood. (Table 4) Through campaigns and mass awareness programs on a large scale can make them more knowledgeable and thereby better entrepreneurial behavior among the farmer women. Government and KMF training force, extension agencies should focus more on the contributing factors revealed by the study. They also aim at manipulating these variables to their great advantage for promoting entrepreneurial behavior among the dairy farming rural farmers women. Moreover, local government should actively participate and guide them for adapting scientific method and financial and insurance arrangements by the government can improve the confidence level of farmers. The media shall play important role in persuading more and more rural women, micro finance units should assist timely and adequate consultancy services. With this dedication the rural women farmers adapt scientific method of dairy enterprise and improve their socio-economic status.

REFERENCES

Bhatt R E (1995) Women in dairying in India; Indian Dairyman 39 (2) 157-162.

Fulzele R M and Meena B L (1994) Training needs of dairy tribal women, Indian Journal of Dairy Science 48 (9) 200-202.

Gopalakrishna Rao V 1985 A Prediction analysis of farming performance of farmers through entrepreneurial behavioral factors, PhD thesis, Andhra Pradesh Agricultural University, Hyderabad.

Goswami A, Roy N, Mazumdar A K and Duttagupta R 2000 Factors related with adoption behaviour of the livestock owners about Artificial Insemination; Journal of Interacademia. 4 (2) 304-309.

Goud M P 1990 A study to measure entrepreneurial characteristics among small, medium and big farmers as related to their productivity, M.Sc (Ag)., thesis, Andhra Pradesh Agricultural University, Hyderabad.

Jain V and Verma SK (1992) Nature and extent of involvement of men and women in animal husbandry operations; Indian Dairyman 44 (7) 332-337.

Murthy C S V(2010). Entrepreneurship Development Programme- Himalaya Publishing House Bangalore-3rd Edition

Prakash Singh, Anupam, Mishra B and Singh B 2005 Assessment of women role in animal husbandry : Proceedings of National Seminar on Entrepreneurship on development for livelihood security -Experiences, Prospects and Strategies for Rural India, 68pp, I.V.R.I, Izatnagar, India.

Reddy M S 1995 A study on the management attributes of dairy farmers in relation to farming performance in Chitoor district of A.P. M.V.Sc. thesis, Andhra Pradesh Agricultural University, Hyderabad.

Reddy R V K 1996 A critical analysis of dairy production technologies among the dairy farmers of East Godavari district of Andhra Pradesh, PhD thesis, Andhra Pradesh Agricultural University, Hyderabad.

Viswanathan B 1989 Women in livestock in India. A desk study for FAO regional office for Asia and Pacific, Bangkok, Thailand.

Waghmare S K and Chaudhari N V 1989 Role of tribal women with respect to crop and animal husbandry; Tribal women in agriculture, Metropolitan book Pvt. Ltd, New Delhi.

Table 1: SOCIO-ECONOMIC PROFILE

DEMOGRAPHIC VARIABLES		NUMBER OF CATTLES OWNED & MAINTAINED					
		less than 3		3 TO 5		5 & above	
		Count	%	Count	%	Count	%
AGE IN YEARS	below 25	6	46.20%	5	38.50%	2	15.40%
	25-30	12	52.20%	8	34.80%	3	13.00%
	30-35	10	27.00%	21	56.80%	6	16.20%
	35-40	14	26.40%	34	64.20%	5	9.40%
	40 & above	5	35.70%	6	42.90%	3	21.40%
	Subtotal	**47**	**33.60%**	**74**	**52.90%**	**19**	**13.60%**
EDUCATION	Minimum literacy	10	19.60%	32	62.70%	9	17.60%
	SSLC	28	40.60%	33	47.80%	8	11.60%
	PUC/DEPLOMA	6	35.30%	9	52.90%	2	11.80%
	GRADUATION	3	100.00%	0	0.00%	0	0.00%
	Subtotal	**47**	**33.60%**	**74**	**52.90%**	**19**	**13.60%**
LAND HOLDING	small	23	41.10%	30	53.60%	3	5.40%
	medium	23	35.90%	41	64.10%	0	0.00%
	large	1	5.00%	3	15.00%	16	80.00%
	Subtotal	**47**	**33.60%**	**74**	**52.90%**	**19**	**13.60%**
DAIRY INCOME(P.A)	less than 25000	23	52.30%	21	47.70%	0	0.00%
	25000-50000	24	32.00%	43	57.30%	8	10.70%
	50000- 100000	0	0.00%	6	75.00%	2	25.00%
	above 100000	0	0.00%	4	30.80%	9	69.20%
	Subtotal	**47**	**33.60%**	**74**	**52.90%**	**19**	**13.60%**

(Source: primary data)
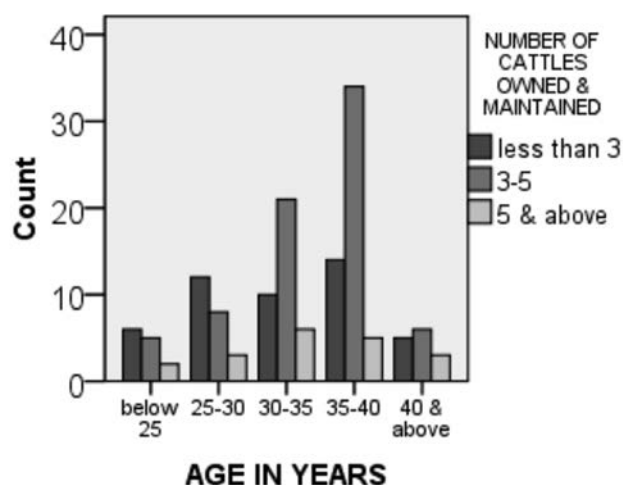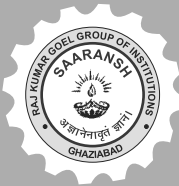
Table 2: Entrepreneurial Traits

Variables		Number of Cattles Owned & Maintained					
		less than 3		3 to 5		5 & above	
		Count	%	Count	%	Count	%
Dairy farming orientation	Traditional method	8	26.70%	19	63.30%	3	10.00%
	Mixed method	24	31.20%	41	53.20%	12	15.60%
	Improved and scientific method	15	**45.50%**	14	42.40%	4	12.10%
	Subtotal	**47**	**33.60%**	**74**	**52.90%**	**19**	**13.60%**
Risk taking behavior	cannot take risk at all	14	29.20%	26	54.20%	8	16.70%
	I move cautiously	22	32.80%	36	53.70%	9	13.40%
	I Am Aggressive	11	44.00%	12	**48.00%**	2	8.00%
	Subtotal	**47**	**33.60%**	**74**	**52.90%**	**19**	**13.60%**
Innovativeness	Not preferred	5	20.80%	15	62.50%	4	16.70%
	Sometimes preferred	18	27.70%	37	56.90%	10	15.40%
	Always preferred	24	**47.10%**	22	43.10%	5	9.80%
	Subtotal	**47**	**33.60%**	**74**	**52.90%**	**19**	**13.60%**
Level of confidence	Cannot say	3	30.00%	7	70.00%	0	0.00%
	Less confidence	17	27.90%	35	57.40%	9	14.80%
	Very much confident	27	39.10%	32	**46.40%**	10	14.50%
	Subtotal	**47**	**33.60%**	**74**	**52.90%**	**19**	**13.60%**
Decision orientation	cannot take decision on my own	13	28.90%	24	53.30%	8	17.80%
	parents/spouse take the decision	26	36.10%	37	51.40%	9	12.50%
	I take my own decision	8	34.80%	13	**56.50%**	2	8.70%
	Subtotal	**47**	**33.60%**	**74**	**52.90%**	**19**	**13.60%**
Achievement motivation	not motivated	5	25.00%	11	55.00%	4	20.00%
	desired	20	29.40%	38	55.90%	10	14.70%
	Greatly motivated	22	42.30%	25	**48.10%**	5	9.60%
	Subtotal	**47**	**33.60%**	**74**	**52.90%**	**19**	**13.60%**
Knowledge of entrepreneurship	no idea	17	31.50%	27	50.00%	10	18.50%
	to minimum extent	12	25.50%	28	59.60%	7	14.90%
	reasonably good	18	46.20%	19	**48.70%**	2	5.10%
	Subtotal	**47**	**33.60%**	**74**	**52.90%**	**19**	**13.60%**
Information seeking behavior	from friends and peers	17	43.60%	18	46.20%	4	10.30%
	From parents	27	29.30%	52	56.50%	13	14.10%
	Official/veterinary department/KMF	3	33.30%	4	**44.40%**	2	22.20%
	Subtotal	**47**	**33.60%**	**74**	**52.90%**	**19**	**13.60%**

Table 3: Psychological Profile

Variables		Number of Cattles Owned & Maintained					
		less than 3		3 to 5		5 & above	
		Count	%	Count	%	Count	%
Experience In Dairy Farming	Below 5 years	12	37.50%	18	56.20%	2	6.20%
	5-10 years	26	32.90%	40	50.60%	13	16.50%
	10 years & above	9	31.00%	16	55.20%	4	13.80%
	Subtotal	**47**	**33.60%**	**74**	**52.90%**	**19**	**13.60%**
Did you adapt any expert dairy farming practices in your occupation	no Idea	36	52.20%	30	43.50%	3	4.30%
	only some times	8	17.00%	38	80.90%	1	2.10%
	always	3	12.50%	6	25.00%	15	62.50%
	Subtotal	**47**	**33.60%**	**74**	**52.90%**	**19**	**13.60%**
Do you utilize any special assistance in your dairy farming activities?	Not preferred	10	26.30%	17	44.70%	11	28.90%
	Sometimes preferred	31	37.30%	44	53.00%	8	9.60%

Always required	6	31.60%	13	68.40%	0	0.00%
Subtotal	**47**	**33.60%**	**74**	**52.90%**	**19**	**13.60%**

Do you track on results of your dairy farming activities?

Not followed	8	40.00%	8	40.00%	4	20.00%
Some times	27	33.30%	42	51.90%	12	14.80%
Always	12	30.80%	24	61.50%	3	7.70%
Subtotal	**47**	**33.60%**	**74**	**52.90%**	**19**	**13.60%**

Have you taken up any Leadership activities in the dairy farming community?

Not taken up	18	32.70%	29	52.70%	8	14.50%
Sometimes taken up	24	35.80%	34	50.70%	9	13.40%
Always taken up	5	27.80%	11	61.10%	2	11.10%
Subtotal	**47**	**33.60%**	**74**	**52.90%**	**19**	**13.60%**

Do you require any managerial assistance?

Not required	17	51.50%	14	42.40%	2	6.10%
Sometimes required	20	25.30%	47	59.50%	12	15.20%
Always required	10	35.70%	13	46.40%	5	17.90%
Subtotal	**47**	**33.60%**	**74**	**52.90%**	**19**	**13.60%**

How do you coordinate your dairy farming and other farming activities in daily life?

Difficult	1	33.30%	2	66.70%	0	0.00%
Manageable	35	38.00%	44	47.80%	13	14.10%
Easy to coordinate	11	24.40%	28	62.20%	6	13.30%
Subtotal	**47**	**33.60%**	**74**	**52.90%**	**19**	**13.60%**

SOURCE: PRIMARY DATA

Table 4: Correlations between Entrepreneurial Behavior and Socio-economic Factors

	AGE	EDU	EXP	Training	Social Participation	Dairy income	Cattles Owned	Land Holding	Expert Practices
AGE	1	-.651**	.411**	.193*	.031	.217*	.101	.039	.096
EDU	-.651**	1	-.247**	-.088	-.222**	-.342**	-.218**	-.074	-.209*
EXP	.411**	-.247**	1	.279**	.104	.048	.073	.019	.044
Training	.193*	-.088	.279**	1	-.054	-.025	-.007	-.055	-.008
Social Participation	.031	-.222**	.104	-.054	1	.440**	.605**	.492**	.466**
Dairy income	.217*	-.342**	.048	-.025	.440**	1	.519**	.354**	.497**
CATTLES OWNED	.101	-.218**	.073	-.007	.605**	.519**	1	.438**	.523**
LAND HOLDING	.039	-.074	.019	-.055	.492**	.354**	.438**	1	.282**
expert practices	.096	-.209*	.044	-.008	.466**	.497**	.523**	.282**	1

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

*Correlation is significant at the 0.05 level (2-tailed)
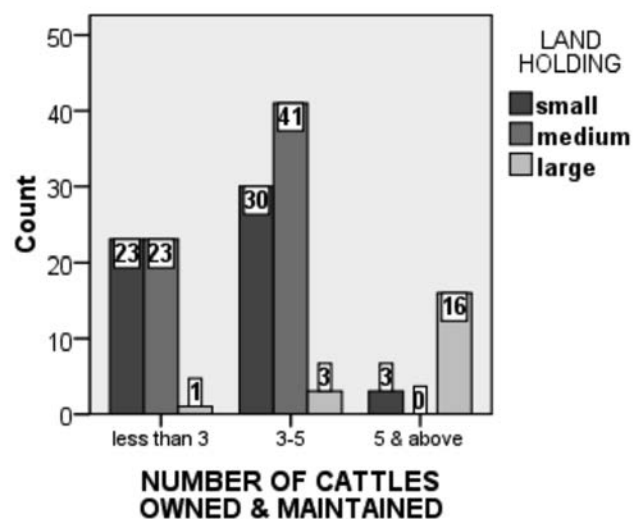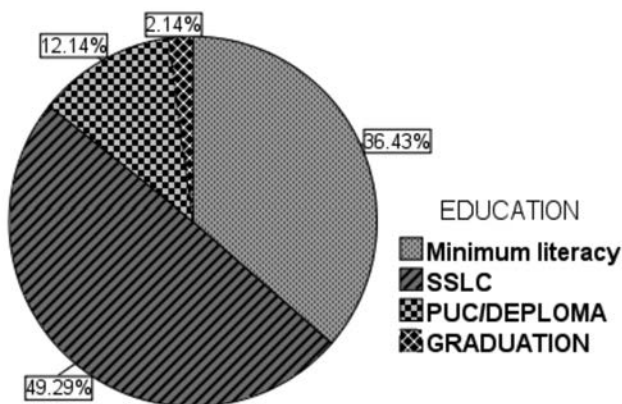
Service Quality of Tourism in Kumaun Uttaranchal

Dr. Beena Narayan*

ABSTRACT

Tourism, a key element in the contemporary society, has developed as a profitable activity of enormous significance. This sector engages substantial number of people directly or indirectly to utilize natural endowments. The Himalayas and particularly Uttaranchal has been long revered as the Land of the divine and the choice of tourists. This study aims to find stay preferences of the tourists and examines the tour intentions in selecting two main tour destinations i.e. Almora and Nainital in Kumaun region. The study utilizes both exploratory and empirical research approaches. A descriptive research design was used to test the hypotheses meant for examining the effects of numerous factors to the tourists visit to different places in Kumaun.

Key Words: Tourism, facilities, development, backward

INTRODUCTION

Tourism is a key element in a contemporary society, which has developed as a profitable activity of enormous significance. Possibly, there is barely any other sector where large number of people are engaged directly or indirectly to utilize natural endowments. Tourism can be considered as one of the major emerging industries across the globe because of high profit generation, job opportunities, investments, foreign exchange earnings, societal and cultural advancements etc., which, in turn helps in the overall growth of the economy. There is a wide and diversified scope of tourism in this region, which has potential to fulfill national and international demand of amusement and leisure tourism, nature tourism, adventure tourism, wildlife tourism and eco-tourism. The rich natural beauty with a unique mountain environment as well as rich historical cultural assets and diverse products has huge potential to develop economy in a sustained manner.

The Himalayas and particularly Uttaranchal has been long revered as the Land of the Divine. "Various types of tourism have been and are practiced in the Himalayas." (Madan Sapana and Rawat Laxmi2000). The focus of travelers to other destinations in the region truly came in with the British rule. The British developed Hill stations as alternate centers of power such as summer capital and cantonments to devise mechanism to translate their aspiration to live in their native environments. There are 13 districts in Uttaranchal State out of which Nainital, Almora, Pithoragarh, Udham Singh Nagar, Champawat and Bageshwar fall in the Kumaun region. Nainital and Udham Singh Nagar have large areas in the plains whereas other four districts comprise the Hill region of the state. The potential of the state in tourism and hospitality has been well recognized.

The tourism economy of Kumaun mainly depends on four types of tourists. First, the migrated residents who visit to Kumaun during summers. They do not contribute much to the local economy. Second, high end tourists, who come on weekends and spend a lot of money on hired taxis but that does not contribute to the local economy. Third, the pilgrims who stay for 10-15 days and the money they spend filters down directly to the economy of Kumaun. Fourth, the tourists who are depending on the facilities provided for the tourism. Although multifaceted problems are causing the frustrating scenario of the Kumaun tourism sector, Kumaun in Uttaranchal has the potential to develop its tourism sector and earn huge foreign currency, generate employment opportunities and development prospects like the other hill areas such as Himachal, Kashmir and even Garhwal region of Uttaranchal who attract substantial number of tourists every year and thus can generate employment.

LITERATURE REVIEW

Rao Nageshwar and Das R.P. (2002) studied how tourism industry can reorient its human resource development strategies to satisfy and delight its

* Professor Economics, IES Management College & Research Centre, Bandra Reclamation Mumbai 400050
  Contact No: (Residence) 02224972801; (M) +919820562653; Email id: beena.tripathi@ies.edu

customers to survive in the global competition. Ahmed Feroz, Azam, M D Shah, Bose and Tarunkanti (2010) mentioned the different preferences of the tourists and examined the tour intentions in selecting different tour destination. Sesser, Stan (2009) studied various dimensions and experiences of service quality in Ladakh. Mazur Kewich, Karen (2004) mentioned specific services provided in resorts of Bhutan to attract tourists. Wilson, Arnie (1998) mentioned the horrific cab journey experiences in Himachal Pradesh. Sadanand Dhume (2002) studied the loosing glory of Kashmir tourism, falling rate of tourists and loss of income. Sarkar Debashis (2013) referred decline in tourist business due to political turmoil. Mallik Aman (2006) stated huge investment and growth scope in Uttaranchal since 2003.JohnSingh, (2006) mentioned the status and conservation of the tigers in Uttaranchal region, which is one of the most important tourist attractions in India. Singh Shalini (2005) studied secular pilgrimages and sacred tourism in the Indian Himalayas. Kandampully Jay (2000) examined the appropriateness of the use of service packaging by tourism organization in their ongoing efforts to match capacity with demand and the quality of services offered with the tourists' expectations. Renuka (2010) covered the role of hotel services in Tamil Nadu to develop tourism. Mohsin, Asad: Lockyer, Tim (2010) assessed the service quality perception of customers staying in hotels and to focus the areas that need attention to meet and exceed customer satisfactions. Agrawal, Madhu; Choudhary, Himanshu; Tripathi; Gaurav (2010) mentioned the main reasons for the lack of promotion of Buddhist tourist sites in India and its impact on local tourism industry. They also compared the awareness about other countries like Japan, Thailand and China aspect. Jadhav, S.J. More, V S (2010)discussed the role of tourism companies in Enhancing lifetime value of tourism customers and developing a relationship with profitable customers has become the central focus of Tourism Company's strategy; Muthoni, Caroline; Muchina, Stephen (2013) determined the tourists' actual experience and evaluation from the stay and the effect on guest satisfaction. Masarrat Ghazal (2012) studied tourist's satisfaction towards tourism products and market in Uttaranchal. S.P. Bansal and Prashant Kumar Gautam (2007) studied the issue of travelling choice of tourists. Vinay Chauhan and Suvidha Khanna (2007) studied the satisfaction of tourists on various infrastructural aspects such as accommodation, transportation, communication, drinking water and civic amenities in Jammu and Kashmir.

OBJECTIVES OF THE STUDY

This study aims at different stay preferences of the tourists and examines the tour intentions in selecting two main tour destinations in Kumaun. The broad purpose of the research was to study the influence of several factors that affect the choices of tourists to select a place. The various factors of tourism were discussed such as tourist's information and guidance, staff member's behaviour at the tourist places and hotels, attitude towards female tourists, attitude of co-tourists, prices of goods at various shops, taxi and bus fair at the visiting spots, Cleanliness and hygiene conditions of roads and streets, hygiene level of food, disturbance by beggars and hawkers' encroachment, availability of internet and communication facilities, money exchange and banking facilities, access and status of medical help, worthiness of tour package, place of accommodation, transportation, food, local conveyance and local goods prices etc., through exploratory and empirical research approaches. The data has been collected through interview with a structured self-administered questionnaire from 142 tourists in Nainital and Almora. Data were statistically analysed to examine the numerous factors of the tourist's intentions where various factors related to service quality in tourism were used.

Keeping the mentioned objectives into consideration, the study is based on the following hypothesis-

H1- Transport and goods available at shops, and money value of the tour package differ in Almora and Nainital.

H2- Basic amenities such as internet, telephone, bank and medical facilities at various locations in both towns differ.

H3- Cost is reasonable at the place of stay at both the towns.

H4- Hygiene at the transport mode used, place of stay, at the temple, street and the food consumed is similar at both the towns.

H5- Tourists are disturbed by the beggars at both the towns.

H6- Hawkers encroachment and lack of cleanliness disturbs the tourists at both the towns.

H7- Staff members are courteous at the information centre and at the place of stay in both the towns.

H8- Attitude of staff members towards female tourists is similar in both the towns.

H9- Attitude and behaviour of co-tourist is similar in both the towns.

H10- Complete tourist information is available at Kathgodam which is the entry point.

H11- Tourist information centres are available in both towns.

H12- Personal guidance is available at tourist spots of both the towns.

H13- There is ease of communication with people in local language in both towns.

METHODOLOGY, RESEARCH DESIGN/ APPROACH

Descriptive research design was used to test the hypotheses meant for examining the effects of various factors on tourists' visit to different places in Kumaun, with data collected from different tourists in Nainital and Almora through a questionnaire. Convenient sampling method was used to select 142 tourists visiting Almora and Nainital in the summer months (April and May), 2015.

FINDINGS OF THE STUDY

The demographic profile of the surveyed tourists (which includes Nainital and Almora town only) indicates that 76.76% respondents were male and 23.23% were female. **(Diagram 1.1)**

The age group of tourists' was 15 to 50 years. 30.28% respondents were in the age group of 20-30 years, 51.42% were in 31-40 years, and 14.78%were in 41-50 and the above age group. **(Diagram 1.2)**

All tourists were educated.40.85% was service class, 45.07% were in business, and remaining 14.08% were either student, retired or non-working-class. **(Diagram 1.3)**

The monthly income status of the tourists in both the town showed that 17.06 % were having Rs 10,000-20,000 monthly income, 27.46% had Rs.

21,000-30,000, 45.77% had Rs. 30,000 50,000, and 9.15% had more than Rs. 50,000 rupees monthly income. **(Diagram 1.4)**

The duration of stay shows that 46.48% tourist comes to stay for 2-3 days, 26.05% stay for 4 6 days, and 27.46% stayed for one day. **(Diagram 1.5)** The data shows that sizeable percentage of tourists stays for 2-3 days at one place. Only 10% respondents stayed for 6 or more days. The preference of stay is higher in Nainital in comparison to Almora. 65% of respondents accepted that their experience of stay in Kumaun was good. 2% had unpleasant experiences during the travelling and 33% refused to comment on their experiences.

Above table indicates difference in money value of numerous services in Almora and Nainital.

Ho: - there is no significant difference (ìa =ìn)

Hi: - there is significant difference (ìa '''ìn)

There is a significant difference in money value of goods available in shop, tour package, and transport between Almora and Nainital. There is no significant difference in accommodation, food and local conveyance services between Almora and Nainital.

Respondents were asked whether the tour package was price worthy. 24% respondents in Nainital &53% in Almora mentioned that the tour was not price worthy. More than 40% Respondents in Nainital & Almora mentioned that the place of accommodation was not price worthy. 48% respondents in Nainital and 37% in Almora mentioned that the cost of transport was not worthy. Only 55% respondents in total accepted that the food provided at the hotel and restaurants was price worthy. 50% respondents in Nainital and 54.9% in Almora accepted that the local conveyance is price worthy. 53% respondents in Nainital and 58% in Almora mentioned that the price was not worth in the goods shops.

90.79% respondents in Nainital and 54.55% in Almora found that the cost of stay is reasonable. 37.88% respondents in Almora and 5.26% in Nainital responded that cost is higher as per the facility.

73.68% in Nainital and 57.58% respondents in Almora mentioned that the cost is reasonable at the tourist spots. 26.32% respondents in Nainital and 54.55 percent respondents in Almora mentioned that the price of goods in shops vary

for the local and tourists. 22.37% respondents in Nainital and 39.39% in Almora mentioned that taxi and bus fares are not same for the local residents and tourists.

Amenities provide such as internet, telephone and bank facilities at various location in both towns differ. (Significant difference P-value < 0.05) while STD/ISD facilities as well as medical facility are same in both cities.The internet connectivity at the place of stay was discussed with the respondents. 85.79% respondents in Nainital confirmed about internet connectivity at the place of stay. In Almora 34.85% confirmed the internet connectivity. At the place of visit also 65.79% respondents accepted the availability of internet connectivity. In Almora 57.58% respondents confirmed that there was no connectivity.92.11% respondents in Nainital and 80.30% confirmed the availability of STD / ISD facility. Money Exchange or banking facility was asked to the respondents. 42.11% respondents in Nainital and 39.39% in Almora told that money exchange facility was available at the station. 39.47% respondents in Nainital and 28.79 in Almora mentioned about availability of money exchange facility at their place of stay.Access to medical help in case of emergency was asked to the respondents. 18% respondents in Nainital and 32% in Almora mentioned that there were no medical facilities available at the time of emergency. Mostly dependence on the government hospital. The doctors were not available at night. The rate of doctors was reasonable.

We interviewed the tourist to discuss the costs of goods and services, cleanliness, hygiene and other issues. **(Table1.3)** All cost afforded by tourist in terms of travel and hygiene differ in both cities at 95% confidence interval while hygiene condition on streets and roads are same.

Cleanliness and hygiene conditions of streets and roads were discussed with the respondents. 45% respondents from Nainital and 64.64% from Almora mentioned that the street and road were clean. 47.37% respondents in Nainital and 59.09% in Almora accepted that the hygiene level of food was good. 53.95% respondents in Nainital mentioned that tourist was disturbed by the beggars. In Almora relatively 12.12% respondents mentioned the appearance of beggars.

It was observed that footpath and open fields are en croached by the hawkers. 42.11% respondents in Nainital and 36.36% in Almora confirmed the inconvenience caused by hawkers.

The hospitality in Almora and Nainital was discussed with the tourists **(Table1.4)**

34.21% respondents in Nainital and 15.15% respondents in Almora did not find courteous staff personnel at the place of entry. 93.42% respondents in Nainital and 83.33 respondents in Almora find courteous staff personnel at the place of entry.

51.32% respondents in Nainital and 7.58% respondents in Almora accepted that the attitude of the hotel staff was very good towards female tourists.

97.37% respondents in Nainital and 81.82% respondents in Almora accepted that the behavior of the tourist was good.

Interpretation: people in both cities think there is ease of communicating people in a familiar language and it is similar experience in both the towns, while other information sources differ in both the towns.

CONCLUSION

Natural beauty of the destination is significant and core factor in attracting tourists but the result is not complementary with the tourist interaction because tourists associate it with cleanliness and hygienic conditions of roads and streets, and with beggars and hawkers' encroachment. The fundamental desire of the tourist is to make amusement with different tourism facilities that begin with availability of tourist information at the starting point. 'Security' emerged as the strongest factor in terms of affecting the tour intentions of respondents in Kumaun. Tourism industry cannot be successful if the tourists does not feel safety in the place. A comparative study of both the towns reveals that the tourist had better information available about Nainital instead of Almora.80.26% respondents in Nainital and 66.67% in Almora responded that their hotels were having complete tourists' information available with them.38.16% respondents in Nainital and 46.97% respondents in Almora told that personal guidance was not available at the tourist spot.34.21% in Nainital and 36.61% respondents in Almora mentioned that they had difficulties in having communication with the local people. The attitude of the staff members toward female tourists was accepted well by

majority of the respondents in both the towns.

The following suggestions were given by the tourists to improve the places of destination:

1. Print and electronic media can play an important role in tourist information. As most of the respondents agreed that they did not see advertisement of Kumaun tourism.

2. Improvement of cleanliness and more shopping areas needed. Tourists were upset with the garbage collection and poor role of municipality.

3. Adequate transport facilities can make tourism more attractive. They mentioned to see other places of Kumaun and return on the same day but easy and safe transport facility is not available.

4. The rates of hotels should be standardized and monitored by the government. Some of the respondents mentioned exorbitant rates during peak season.

5. More information centres needed. Tourist coming from far off areas were not well informed about complete geographical location.

6. Need to improve food quality in restaurants. Excessive use of oil and poor quality of milk were common complaints.

7. Entertainment facility for children to be provided. Tourists mentioned about limited gaming facility for children.

8. Telecommunication network needs improvement. Condition of roads and attitude of local people needs improvement.

The government of Uttaranchal is trying to foster economic development via tourism as it is one of the thrust sectors of the region. The local culture, geographical location, natural beauty is unique but the basic infrastructure such as road and transportation, convenience of banking, medical and communication network needs attention to attract tourists. The concentration of tourists' activities in Nainital and neglect of other neighbouring areas often creates overcrowding of the tourists and more burden on municipality to maintain basic hygiene and cleanliness in the town. In Kumaun, where diverse types of tourism elements and destinations are available, religious places such as Naukuchiatal, Bhimtal, Sattal, Mukteshwar, Baleshwar, Kausani, Jageshwar should be adequately developed for attracting both domestic as well as foreign tourists. The government must provide the infrastructure required for developing the tourism in the area. Besides Nainital and Almora, the vast region of Pithoragarh has extreme potential for tourism. But due to neglect of the government and lack of tourism entrepreneurship the valley has not been able to attract local as well as other tourists. We could not cover Pithoragarh in our study due to inability in collecting data.

The findings of the study show that there is need to build up efforts to improve skilled manpower, supportive entrepreneurial community, robust local self-government, micro enterprises, responsible media and responsive tourism. While talking to respondents we observed that the locals do not contribute a large in the process of tourism. The local products are not marketed significantly, which could provide a substantial source of livelihood. The role of self-help group is meagre in Kumaun and it has been helpful in catering the needs of locals instead of tourists. The agricultural activities have not been utilized to attract tourists. Efforts to protect the environment were successfully implemented such as the polythene bags are completely banned in Nainital. The cleanliness of the lake is well maintained, but garbage dumping is still an issue. The cultural aspect of the region was not noticed in cuisines served in the restaurants and entertainment. Introduction of social responsibility programming tourist industry holders is a much-needed factor to be involved. Preparation of destination map, resource directory and the packages formulation for village like experience to tourists are much needed efforts to improve tourist choice destination.

REFERENCES

1. Agrawal, Madhu; Choudhary, Himanshu; Tripathi, Gaurav.,2010,'Enhancing Buddhist tourism in India: an exploratory study', *Worldwide Hospitality and Tourism Themes*,2.5 477-493.

2. Ahmed, Feroz., Azam, Md. Shah., Bose, Tarun Kanti., 2010, 'Factors Affecting the Selection of Tour Destination in Bangladesh: An Empirical Analysis' *International Journal of Business and Management* 5.3 p.52-61.

3. Chauhan, Vinay and Khanna, Suvidha., 2008, *'Tourism: A Tool for Crafting Peace Process in Kashmir, J&K, India.'* TOURISMOS: An International Multidisciplinary Journal of Tourism, Vol. 4, No. 2 (15. April 2009): pp. 69-89.

4. Jadhav, S J., More, V S., 2010 'Minimum Expectations of Tourists: An Essential Factor of Tourism Companies', *International Journal of Trade, Economics and Finance*1.2 184.

5. Johnsingh, AJT., 2006, 'Status and Conservation of the Tiger in Uttaranchal, Northern India' *Ambio* 135-7.

6. Kandampully, J., 2000, 'The impact of demand fluctuation on the quality of service: A tourism industry example' *Managing Service Quality, 10(1), 10-19.*

7. Malik, Aman., 2006 'All Roads lead to Uttaranchal', *Business Today* 114

8. Masarrat Ghazal., 2012, 'Tourists satisfaction towards tourism products, A case study of Uttaranchal', *International journal of business and information technology*, IJBIT, E-ISSN:2047-0363

9. Mazurkewich, Karen., 2004, 'Himalayan Retreat', *Far Eastern Economic Review* 167.35.

10. Mbuthia, Susan., Muthoni, Caroline., Muchina., Stephen., 2013, 'Hotel service quality: perceptions and satisfaction among domestic guests in Kenya' *Arabian Journal of Business and Management Review* (Oman Chapter), 2.8 22-32.

11. Rao Nageshwar., & Das, R.P., 2002, 'Reorienting HRD Strategies for Tourists Satisfaction'*, Journal of Services Research* 2.1 p.95-105.

12. S.P. Bansal &Prashant Kumar Gautam.,2007, 'Sustainable Tourism Development: A Himalayan Experience', *Indus Publication company associated with IIHS HP University Shimla.*

13. Sadan, & Dhume., 2002, 'Tourism is casualty of Kashmir Crisis', *Wall Street Journal (New York)* A.16.

14. Sapanamadan, &Laxmi Rawat., 2000, 'The impact of tourism on the environment of Mussorie, Garhwal Himalaya, India', *The Environmentalist* 249-254.

15. Sarkar, & Debasis., 2013, 'Post winter tourism business in Darjeeling hills may get affected', *The Economic Times (online New Delhi)*

16. Sesser, &Stan., 2009, 'Trekking: Himalayan Mountain High-Hikers find Ladakh, in India, Low on oxygen but rich in vistas and village hospitality', *Wall Street Journal (New York)*

17. Singh Shalini., 2005, 'Secular pilgrimages and sacred tourism in the Indian Himalayas' *Geo-journal* 215-223.

18. Wilson Arnie., 1998,'The Challenge of Himalayan heli-skiing', *Financial Times (London UK)* 18.

Diagram 1.1 Gender wise classification
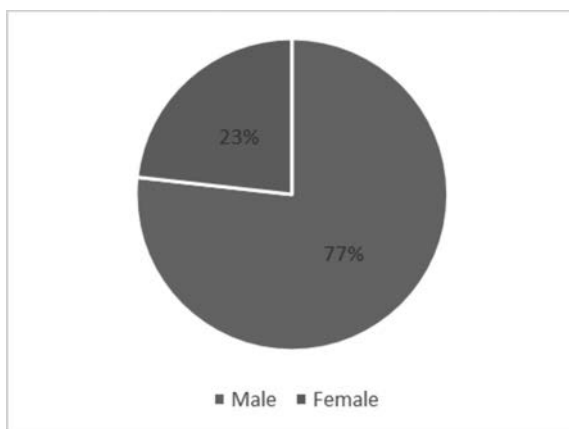
Source: Primary Data

Diagram 1.2 Age Group classification
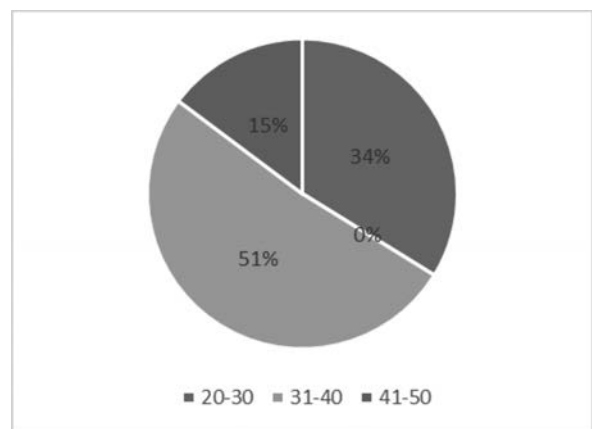
Source: Primary Data

Diagram 1.3 Occupational distributions of respondents
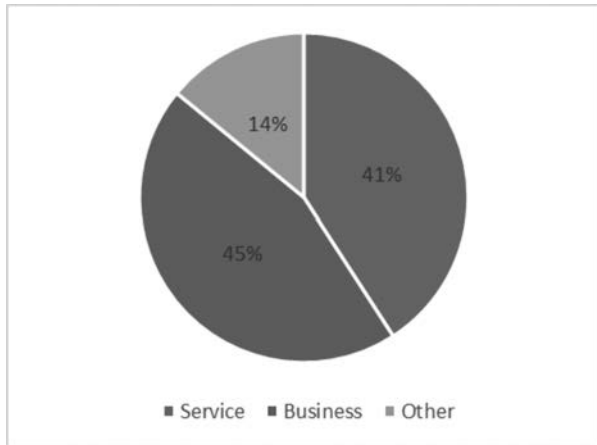
Source: Primary Data

Diagram1.4 Monthly Income
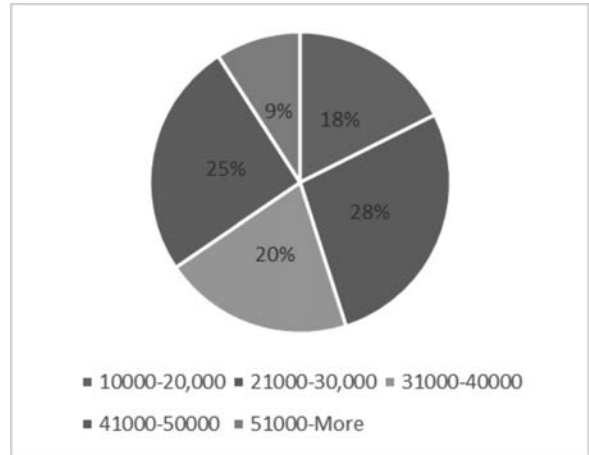
Source: Primary Data

Diagram1.5 Duration of Stay
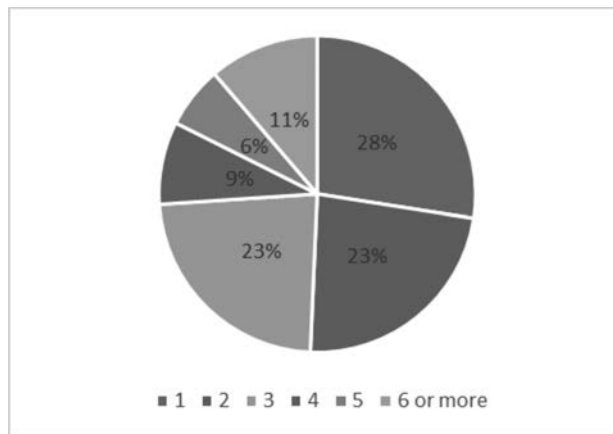
Source: Primary Data

Table 1.1 Price worthiness of goods and services

The results of ANOVA are mentioned in the preceding paragraph.

		Sum of Squares	df	Mean Square	F	Sig.
Price worthy goods available in shops	Between Groups	1.173	1	1.173	4.828	.030
	Within Groups	25.744	106	.243		
	Total	26.917	107			
Price worthy tour package	Between Groups	4.565	1	4.565	30.514	.000
	Within Groups	15.558	104	.150		
	Total	20.123	105			
Price worthy accommodation	Between Groups	.118	1	.118	.485	.488
	Within Groups	26.282	108	.243		
	Total	26.400	109			
Price worthy transport	Between Groups	1.204	1	1.204	5.034	.027
	Within Groups	25.343	106	.239		
	Total	26.546	107			
Price worthy food in hotel and restaurants	Between Groups	.315	1	.315	1.274	.261
	Within Groups	26.928	109	.247		
	Total	27.243	110			
Price worthy local conveyance	Between Groups	.121	1	.121	.486	.487
	Within Groups	26.425	106	.249		
	Total	26.546	107			

Table 2.2: Connectivity with Telecommunication, banking and medical facilities ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Place of stay is connected via internet	Between Groups	5.890	1	5.890	31.332	.000
	Within Groups	20.301	108	.188		
	Total	26.191	109			
Place of Visit is connected via internet	Between Groups	8.333	1	8.333	49.791	.000
	Within Groups	17.741	106	.167		
	Total	26.074	107			
Place of stay has ST/ISD facilities	Between Groups	.153	1	.153	1.542	.217
	Within Groups	11.403	115	.099		
	Total	11.556	116			
telephone facilities while travelling	Between Groups	.465	1	.465	3.947	.049
	Within Groups	13.309	113	.118		
	Total	13.774	114			
exchange or bank facilities at station	Between Groups	.625	1	.625	6.235	.016
	Within Groups	5.515	55	.100		
	Total	6.140	56			
exchange or bank facilities at place of stay	Between Groups	2.501	1	2.501	17.064	.000
	Within Groups	8.061	55	.147		
	Total	10.561	56			
exchange or bank facilities at outside place of stay	Between Groups	1.100	1	1.100	11.463	.001
	Within Groups	10.364	108	.096		
	Total	11.464	109			
Medical help in case of emergency	Between Groups	.106	1	.106	.983	.324
	Within Groups	11.315	105	.108		
	Total	11.421	106			
Rate of medical facility available	Between Groups	.002	1	.002	.005	.946
	Within Groups	36.672	99	.370		
	Total	36.673	100			

Table 1.3: Cost of services /Goods provided to the tourists

ANOVA		Sum of Squares	df	Mean Square	F	Sig.
Cost is Fair/reasonable at the place of stay	Between Groups	4.591	1	4.591	36.029	.000
	Within Groups	14.400	113	.127		
	Total	18.991	114			
Cost is Fair/reasonable at the tourist spot	Between Groups	.761	1	.761	4.013	.048
	Within Groups	20.663	109	.190		
	Total	21.423	110			
Same price of Goods for tourist and locals	Between Groups	6.413	1	6.413	35.332	.000
	Within Groups	20.509	113	.181		
	Total	26.922	114			
Same Fare of bus/taxi for resident and tourist	Between Groups	2.106	1	2.106	10.380	.002
	Within Groups	22.322	110	.203		
	Total	24.429	111			
hygiene at bus and Taxi	Between Groups	1.486	1	1.486	7.371	.008
	Within Groups	20.762	103	.202		
	Total	22.248	104			
hygiene at place of stay	Between Groups	.777	1	.777	10.598	.001
	Within Groups	8.361	114	.073		
	Total	9.138	115			

		Sum of Squares	df	Mean Square	F	Sig.
hygiene at tourist spot	Between Groups	1.842	1	1.842	12.967	.000
	Within Groups	15.912	112	.142		
	Total	17.754	113			
hygiene at temple	Between Groups	.507	1	.507	6.375	.013
	Within Groups	8.584	108	.079		
	Total	9.091	109			
hygiene conditions of street and roads	Between Groups	.335	1	.335	1.948	.166
	Within Groups	18.381	107	.172		
	Total	18.716	108			
hygiene level of food	Between Groups	1.382	1	1.382	8.130	.005
	Within Groups	18.528	109	.170		
	Total	19.910	110			
Disturbed by beggars	Between Groups	8.784	1	8.784	52.734	.000
	Within Groups	18.323	110	.167		
	Total	27.107	111			
Disturbance by hawker encroachment and uncleanliness	Between Groups	2.140	1	2.140	13.911	.000
	Within Groups	9.231	60	.154		
	Total	11.371	61			

Table 1.4: Personnel's attitude towards tourist's

ANOVA		Sum of Squares	df	Mean Square	F	Sig.
Staff member courteous at place of entry	Between Groups	1.841	1	1.841	9.786	.002
	Within Groups	21.255	113	.188		
	Total	23.096	114			
Staff member courteous at place of stay	Between Groups	.130	1	.130	3.858	.052
	Within Groups	3.729	111	.034		
	Total	3.858	112			
Staff member courteous outside place of stay	Between Groups	.505	1	.505	8.162	.005
	Within Groups	6.933	112	.062		
	Total	7.439	113			
Attitude of staff member towards female tourists	Between Groups	.157	1	.157	4.255	.042
	Within Groups	3.686	100	.037		
	Total	3.843	101			
Attitude and behaviour of Co-tourist	Between Groups	.287	1	.287	6.005	.016
	Within Groups	5.400	113	.048		
	Total	5.687	114			

Table 1.5: Information availability to Tourist at various spots (ANOVA)

		Sum of Squares	df	Mean Square	F	Sig.
Tourist information center at Kathgodam	Between Groups	5.371	1	5.371	53.710	.000
	Within Groups	6.000	60	.100		
	Total	11.371	61			
Tourist information centre at your Hotel	Between Groups	1.730	1	1.730	16.395	.000
	Within Groups	11.186	106	.106		
	Total	12.917	107			
Personal Guidance at Tourist bus	Between Groups	2.788	1	2.788	15.640	.000
	Within Groups	17.293	97	.178		
	Total	20.081	98			
Personal Guidance at Tourist Spot	Between Groups	1.723	1	1.723	7.704	.006
	Within Groups	25.057	112	.224		
	Total	26.781	113			
Ease of Communicating with people in a language	Between Groups	.072	1	.072	.309	.579
	Within Groups	26.437	114	.232		
	Total	26.509	115			

Weak Form Efficiency of Sectoral Indices and Crisis: Evidence from Indian Stock Market

*Shalini Singh
**Dr. Anindita Chakraborty

ABSTRACT

The emerging markets like India offer major investments opportunities for a range of cognitive investors over the last decades especially after the global financial crises, which attracted the attention of academic researchers and financial investors towards the market efficiency. This paper is designed to investigate the market efficiency of Indian Sectoral Indexes of NSE. Daily observations are considered for the period of eleven years (April 01, 2005 to March 31, 2016). Descriptive statistics, both parametric (Unit Root {Augmented Dickey Fuller} and Autocorrelation) and non parametric test (Kolmogorov-Smirnov Test and Run Test) are used to analyze the market's informational weak form efficiency. Daily time series is not normally distributed because it is negatively skewed and leptokurtic. All of the tests applied provide sufficient statistical evidence to reject the Random Walk Hypothesis of different sectors.

Keywords: Parametric and Non-Parametric Test.

1. INTRODUCTION

Finance is the major component of an economy. It is believed to be the mirror image of economic growth. Financial world is composed of such elements which are directly or indirectly linked with every segment or sector of the economic world. Countries growth is believed to be depended on how efficiently the financial market performs. Stock market which is the key segment of financial world exhibits the growth and decline of the fund in the market.

India being a developing nation should focus on maximum inflow of fund in the market so as to enhance the growth of the economy. Indian stock market is also termed to be the barometer of the economy to depict the true financial picture of the country's economic status. Health and wealth of nation depends on efficient performance of the stock market as it is the major source of wealth generation. Thus the concept of Efficient market (EMH) is an important tool to understand the functioning of Indian stock market. Louis Bachelier (1900) propounded EMH theoretically and concluded that stock prices fluctuate randomly. Further the idea of efficient market hypothesis was discovered by Eugene Fama in 1960s, who believes that no one can over perform the market as all the information is reflected through the prices

of shares. This has been a very highly controversial disputed theory which has been criticized on different grounds by many renowned authors. Malkiel (2003) attacked that, in the presence of EMH, stock prices are partly predictable. The argument of efficient market has been well explained in the short story of $100 bill lying on ground neither to be grabbed by the professor or amateur investor. Malkeil (2003) believed that market makes egregious mistakes which can be overcome by intellectual judgment to predict the profit as during the period of Internet bubble. Profit from stock market needs long patience as has been rightly stated by Benjamin Graham (1965) that though the short run may be decisive mechanism, but the long run is an impressive and influence mechanism.

Indian stock market has faced many storms and experienced volatile atmosphere since its inception. Indian stock market marked highest close in the history in May-June 2007, it was the best period as the stocks gave unbelievable returns but after that period, market started to drop. The period covered in this study is April 2005-June 2016. Period of 2008 was one of the crisis phase in the history of Indian Stock Market. Market dropped by almost 5500 points which was a major drop. It was called 2008 stock market carnage. Reasons marked were the financial disturbance

---

*   Shalini Singh, Research Scholar, Institute of Management Studies, Banaras Hindu University, Varanasi. Email Id: shalini_dec26@yahoo.co.in

** Dr. Anindita Chakraborty, Assistant Professor, Institute of Management Studies, BHU, Varanasi. Email Id: aninditachakraborty19@gmail.com

in the foreign stock market due to banking liquidity crisis and the labor department reported that the economy lost a whopping 240000 jobs in US.

This dropdown shaked the psychological sentiments and restricted the flow of fund in share market from the normal public in any form. The volatile nature of market poses doubts about the random movement of shares. Thus various studies have been conducted empirically to test the efficiency of market. Indian stock market is an emerging market and is instantly influenced and impacted by slight disturbance in the foreign market as well as by the nation's new policy or reforms or any financial news. Hence, the skeptical view of efficient market hypothesis is studied here. Efficiency of stock market has been a major point of discussion as it is one of the most crucial elements in the market to direct the movement of funds in the financial sector. Emerging markets are coined to be the area of extreme hope with growing returns as the nation is at the developing stage to enhance its economic status. These emerging markets are the main attracters for FII's to inflow their capital and fund in the domestic markets. India being an emerging market pulls the foreign funds within the nation due to policy change and new reforms introduced in the economy to provide the circulation of funds within the country. This study is performed to define whether the Sectors of Indian Stock Market are efficient or not at the weak level. Hence, the weak form of EMH of Sectoral Index of Indian Market is focused to investigate the data for the period of April 2005- June 2016.

The paper is structured as follows: - Section 2 Objective of the study; Section 3 Reviews of previous empirical evidences on the weak form of efficient market hypothesis; Section 4 elaborates the data and methodology adopted; Section 5 Hypothesis of the study; Section 6 extends the empirical results drawn for the study. Finally Section 7 provides the brief discussion and then concludes the study.

2. REVIEW OF LITERATURE

Role of wealth and finance in financial market is to double the investment, as the market runs with the intension to execute the capital and fund to ensure maximum profitable return. Presence of various financial instruments in the market has led the direction of profitable return but the positive return is also followed with negative risk to bear.

This fluctuation in market leads to volatility resulting into the efficiency and inefficiency of market. Efficiency which declares that the information is transparent enough to indicate actual rise in the value of shares and this transparency provides a fixed return to the public without bearing much loss. Researchers have reviewed the efficiency of different markets at different time period with different statistical tools to confirm the presence of different forms of EMH and prove that no one can earn extra return out of the efficient market without framing diversified portfolio.

Poterba and Summers (1986) Fama and French (1988), **Lo and MacKinlay (1988)** reported evidences against EMH. The results indicated that stocks of small firms did not follow random walk but the large firms are hard to be beaten. The study has been argued that rejection of random walk hypothesis were not because of infrequent trading or time varying volatilities, but the rejections were largely due to the behaviour of small stocks.

Poterba and Summers (1986) concluded that at shorter horizons positive serial correlation was indicated and negative serial correlation at long horizons in the United States and 17 other countries. Predictability of returns in the short horizon was inferred through positive autocorrelation whereas negative autocorrelation reflected predictability in the long horizon.

Kim, Nelson and Startz (1991) studied the random walk pattern by using weekly and monthly returns of stock prices in five Pacific-Basin Stock Markets and concluded that all the stock markets except Japanese stock market, which did not followed random walk pattern.

Butler and Malaikah (1992) investigated the weak-form efficiency of the Kuwait and Saudi Arabian stock markets by employing autocorrelation test. Period covered for the study was 1985 to 1989 and the data used was the daily stock returns of two stock markets. Evidence of efficiency was recorded in Kuwait stock market, but Saudi Arabian market was not efficient.

Chan, Gup, and Pan (1992) tested the weak form efficiency of EMH in Hong Kong, South Korea, Singapore, Taiwan, Japan, and the United States by employing parametric and non parametric tests. Analysis indicated that stock prices in these major Asian markets and the United States were efficient in the weak form.

Chang, Fawson, Glover and Fang (1996) studied Taiwan stock exchange from 1967 to 1993 and tested the weak form efficiency by using monthly data and employed Autocorrelation test, Run test and the Unit root test. The results drawn concluded the Taiwan stock market was weak-form efficient.

Liu et.al (1997) tested the daily close prices of the Index of Shanghai and Shenzhen stock exchanges by employing the ADF unit root and cointegration tests for the period from May 21, 1992 to December 18, 1995. Randomness of each stock exchange share price index was tested and cointegration and causality tests were also examined to show the relationship between the two share price indexes. The results concluded that the random walk pattern was accepted for both the Shanghai and Shenzhen, defining that each market was individually efficient.

Karemera et. al. (1999) examined monthly general index data expressed both in U.S. and domestic currencies so as to test the random walk hypothesis and weak-form efficiency in several emerging markets including the ASE. After employing multiple variance ratio and run tests, investigation failed to reject the random walk hypothesis and weak-form efficiency for the ASE.

Abraham et. al (2002) investigated weak-form efficiency by using the variance ratio and runs test for the period of October 1992 to December 1998, for three major Gulf stock markets including Kuwait, Saudi Arabia and Bahrain. The data collected were weekly index values for each of three Gulf stock markets. Analysis of both the tests rejected the random walk hypothesis in all the three gulf markets. Reason for the rejected was traced to be possible infrequent trading in all three markets, hence a correction was applied to the collected index by using decomposition of index returns. After the correction, the study accepted the random walk hypothesis for the Saudi Arabia and Bahrain markets, but not for the Kuwait market.

Pandey (2003) analysed the efficiency level of the popular stock Indices of Indian Stock Market by the access of run test and the autocorrelation function ACF (k) for the period from January 1996 to June 2002. It was found from the result of Autocorrelation and Run test that the time series of stock indices in the Indian Stock Market were biased to random walk hypothesis.

Moustafa (2004) studied the behavioural pattern of prices in the United Arab Emirates (UAE) stock market by using daily prices of 43 stocks, which was included in the UAE market index for the period of October 2, 2001 to September 1, 2003. Analysis stated that the returns of the 43 stocks did not followed normal distribution. However, the results of run test indicated that the returns of 40 stocks out of the 43 were random at 5 per cent level of significance. Although the UAE stock market has been newly developed but still was found to be weak-form efficient.

Gupta and Basu (2007) examined the market efficiency of the Indian stock market from 1991 to 2006. Statistical tool employed were ADF, PP, and KPSS procedures to test for unit roots. The findings of test indicated that Indian Stock Markets did not follow a random walk pattern.

Dima and Milos (2009) tested the efficiency of Romanian Stock Market for a period of 9 years and, found that Romanian stock market was a turbulent market with the evidences of weak form efficiency. Statistical tools applied here were skewness and kurtosis, which revealed that the data was non randomly distributed.

Mammadov and Klang (2009) studied EMH from the perspective of insider trading in Thai stock exchange for the period of 2007. It was found that market was inefficient as the insiders make abnormal profit but evidences proved that there was no possibility for insiders to make abnormal profit in the year 2007, hence the market was efficient according to Efficient Market Hypothesis.

Gimbal (2010) investigated the Weak-form Efficiency of NSE by testing the Normality and Random walk of the return series. Daily and weekly prices of NSE Index were studied and five most traded stocks were also considered. Period of January 2007 to December 2009 was examined for the daily data and from June 2005 to December, 2009 for the weekly data. The empirical findings drawn from the autocorrelation tests rejected the random walk for the market index and four out of the five selected individual stocks. The ultimate results defined that NSE stock market was inefficient in the weak form.

Almujamed et.al. (2011) investigated the efficiency of Kuwait stock exchange and investors' pattern of investment with the use of various technical tools for the period of 2002-2008. Therefore, he suggested that the use of technical

analysis in the emerging markets were much greater than the counterparts in developed countries i.e. in South Africa, and found that technical analysis was used more in that country than in the developed markets of the USA and the UK.

Harper and Jin (2011) tested the weak form efficiency of Indian stock market for 14 years with autocorrelation and run test. It was concluded that the Indian stock market was not efficient in weak form during the testing period. Abnormal profit were possible by predicting the future price movements based on past stock price movement.

Gupta and Yang (2011) investigated the weak form efficiency of Bombay Stock Exchange (BSE) and National Stock Exchange (NSE). Testing was done by employing three different tests namely, ADF, PP and KPSS for the period of 1997 to 2011. The analysis results of market efficiency were mixed. For quarterly data, all three methods supported the weak form efficiency for later sample period of 2007 to 2011, but slight conflict was found in earlier period from 1997 to 2007 as only PP test showed weak form efficiency. Tests of monthly data were consistent on the weak form efficiency for the period of 2007 to 2011 but was not efficient for period of 1997 to 2007. Analysis of daily and weekly data, rejected the weak form efficiency during all sample periods.

Ramaratanm (2011) employed run test for different stock markets of USA, Japan, China, South Korea, Brazil, India, UK, and France for the year 2010 and it was concluded that all stock markets were weak form efficient. However, the result was found to be contradictory as the time period used for the study was only 2010 and only one statistical test was employed, so the power of test can be questioned for the research.

Khan et. al. (2011) casted run test to analyze the daily returns from the BSE Sensex, the S&P CNX Nifty for the period of April 2000 to March 2010. The analysis of run test indicated that both the NSE and BSE did not follow a random walk pattern

Nikunj et.al. (2012) tested the weak form efficiency of four selected stock markets of Asian. The study considered daily close price of stock markets for the period of 11 years from 1stJanuary 2000 to 31stMarch 2011 and employing various tests like Run Test, Unit Root Test, Variance Ratio, Auto Correlation. The results indicated that BSE Sensex and NIKKEI markets were weak form

inefficient whereas HANSENG and SSE Composite were weak form efficient.

Elbarghouthi et.al (2012) examined the weak form efficiency of ASE by employing run test. The empirical results found indicated that the price behaviour of ASE does not follow the random walk model over time. The ASE reflected a high degree of positive temporal dependency patterns, violating the rule of random walk model.

Misra et.al (2012) examined the weak form efficiency of Indian stock market for the period of 2001-2011. The study offered supportive evidence for the rejection of weak form of efficiency in Indian stock market by emphasizing absence of randomness and independence in selected return series. It reflected drifts in market efficiency which offered avenues for devising profitable trading strategies to market participants.

Ramkumar et.al (2012) studied the sectoral indices of BSE to test the market efficiency by employing the Run Test and Autocorrelation Test. The findings of different indices guide the Government and Investors to assess the analysis as reference for future investment. The results indicated that the returns of BSE Automobile Index, BSE Bank Index, BSE Capital Goods Index, BSE Health Care Index, BSE Metal Index, BSE PSU Index and BSE Realty Index were significant at 5% level during the study period.

Kapusuzoglu (2013) enquired to examine whether weak form market efficiency exists or not in Istanbul Stock Exchange (ISE) National 100 index. The study period was 1996 to 2012. Unit root test was casted as it has triggered that the set was stationary at the level (H0 hypothesis was rejected). The findings indicated that ISE National 100 Index was not weak form efficient.

Jethwani and Achuthan (2013) investigated the weak form efficiency of Indian Stock Market. Daily return series of S&P CNX Nifty was considered for the period of 16 years from 1st January 1996 to 31st December 2012. Various parametric and non parametric tests such as Autocorrelation, Variance Ratio test, Kolmogrov Smirnov test and Run test were employed. Efficiency was tested during, before and after Financial Crisis which took place in the year 2002 (Dot Com Bubble) and 2007 (Sub Prime Crisis). The result showed that Indian stock market was not weak form efficient in different periods however after 2002 stock market behaved in more efficient manner.

Hemalatha and Nedunchezian (2015) tested the weak form efficiency of seven sectoral Indices of NSE for the period of 5 years from April 2009-Mar 2014. Daily close price was taken for the study and to test the efficiency, tools employed were Augmented Dickey Fuller test, Phillip Perron test, Run Test and Autocorrelation. T-GARCH was used to test the volatility. Study reflected drifts in market efficiency, which offered an effective diversified pattern of investment to the investors. Analysis results indicated that the sectoral indices were not weak form efficient. Hence, Investors can assess undervalued securities to make excess return by proper judgement of choosing right stocks.

3. OBJECTIVE

- To investigate whether Indian Stock Market is weak form efficient or inefficient in Selected NSE Sectoral Indices.

- To empirically test whether the NSE Sectoral Indices follows random walk or not.

- To examine whether the "Time period Of Crisis" alters the conclusion of efficiency of the stock market.

4. HYPOTHESIS OF THE STUDY

In an attempt to study the weak form efficiency of NSE Sectoral Indices the following hypothesis are framed

- H01: NSE Sectoral Indexes are not weak form efficient.

- H02: NSE Sectoral Indexes are not stationary

- H03: NSE Sectoral Indexes are not random

5. SCOPE OF THE STUDY

The purpose of our research is to investigate the weak form of market efficiency of 12 sectors of National Stock Exchange of India which are actively traded. For our study we took a daily closing price of sector Index from the 1st April 2005 to 30th June 2016 and also divide full sample as in three interval periods, and have applied various parametric and non parametric tests and developed the hypothesis that stock markets under the study are weak form efficient or not.

6. DATA AND METHODOLOGY

The study empirically analyses the daily close price of NSE Sectoral Indices for the period of April 2005-June 2016. This sample period has been considered for the analysis because of major crisis occurred in the history of Indian Stock Market. The study fragments the overall period of study in two sub periods on the basis of financial crisis, which took place in 2008.

That means weak form efficiency of sectoral indices is also checked for different sub period's i.e. before and after financial crisis" It has been observed that in the Crisis like situation even single negative news discounts heavily in the stock market and in bull market situation even a minor positive news leads to unprecedented price rise. The data is collected from the official website of NSE.

Twelve sectors of NSE chosen for the study are: NIFTY AUTO, NIFTY BANK, NIFTY ENERGY, NIFTY FINANCIAL SERVICES, NIFTY FMCG, NIFTY IT, NIFTY MEDIA, NIFTY METAL, NIFTY PHARMA, NIFTY PSU BANK, NIFTY PVT BANK, and NIFTY REALITY. The study employs all the prices of indices to time series data.

The statistical techniques are applied in testing the weak form efficiency for the overall period and two sub periods. Descriptive statistics, both parametric (Unit Root {Augmented Dickey Fuller} and Autocorrelation) and non parametric test (Kolmogorov-Smirnov Test and Run Test) are used in the study.

One of the basic assumptions underlying EMH is normality of data. In normal distribution only two parameters namely mean and variance are used to describe the distribution. A distribution which is not symmetric but has more observation in tail towards any one end that is left or right then it is known as either positively skewed or negatively skewed distribution. Kurtosis is used to test flatness or peakedness of data distribution. Generally either much higher or lower kurtosis indicates extreme Leptokurtic or extreme Platykurtic (Parkinson, 1987). Jarque Bera Test is used to test normality of data. In the data, when Skewness is zero, Kurtosis is three, and JB is zero, then it is perfectly normally distributed.

The analysis for the market efficiency has used a new methodology to test the random walk nature of stock prices that is known by unit root test. This methodology developed by Dickey and Fuller (1981) is used to examine the stationarity of the time series. The unit root test is designed to discover whether the series is difference-

stationary (the null hypothesis) or trend-stationary (the alternative hypothesis) (Campbell et al. 1997). A series with unit root is said to be non-stationary indicating non-random walk. The most commonly used test to examine the existence of a unit root is the Dickey-Fuller test as market efficiency demands randomness (non stationary) in the prices of security and unit root test investigates whether the financial time series is non stationary or not. If the test statistic is more negative or smaller than the critical value (Mackinnon tabulated value) then the null hypotheses will be rejected which means data is not non stationary. Therefore, it is also a test of the weak-form market efficiency.

Auto-correlation test is one of the reliable measures for testing of either dependence or independence of random walk in a series. Kendall (1953) measured the price changes at different lagged 1,2,3,4.... time periods. Later the test was used very popularly (e.g., Laurence, 1986; Poshokwale, 1996). The serial correlation coefficient measured the relationship between the values of a random variable at time t and its value in the previous period. Auto correlation test evidenced whether the correlation coefficients are significantly different from zero.

To validate the normality of distribution non-parametric test is used. To confirm the distribution pattern of the daily close price series Kolmogorov Smirnov Goodness of Fit test is also used which provides further evidence whether the distribution confirms to a normal distribution or not. It compares the observed cumulative distribution function for a variable with a specified theoretical distribution which may be normal, uniform, Poisson, or exponential. It checks whether the observations have come from the specified distribution.

Runs test (Bradley 1968) are used to test the weak form efficiency and random walk hypothesis. Runs test determines if successive price changes are independent. It is a non-parametric test and does not require the returns to be normally distributed. The test observes the sequence of successive price changes with the same sign. The null hypothesis of randomness is determined by the same sign in price changes. The runs test only looks at the number of positive or negative changes and ignores the amount of change from mean. This is one of the major weaknesses of the test.

7. EMPIRICAL RESULTS AND DISSCUSSION

7.1 Descriptive Statistics and Analysis

On the basis of descriptive statistics in **Table: 1A** it shows the Pre crisis period (2005-2008), where the table describes the mean performance of different sectoral indices and there variations (Std.Dev.), upon which the mean value of ENERGY is comparatively more than the other sector which is 6035.025 and Std. Dev of Reality is comparatively lower than others, which is 288.2978, as the observations are lower than other sectors. Out of 12 sectoral indexes for the pre crisis period, 4 sectors have negative skewness, though the values are small, but it indicates the tail is bending to the left side. ENERGY, METAL and PSU BANK are highly skewed. In case of kurtosis Index of IT, MEDIA & PHARMA falls under Platykurtic distribution and remaining Sector Index falls under Leptokurtic distribution. Specifically, high kurtosis values are reported for the BANK, ENERGY, METAL AND PSU BANK with 3.074118, 3.435946, 3.093523 and 3.49543. Hence we can say that distribution of data is not normal. In case of normality of data, the above table are not satisfying the assumption of randomness that is; If Skewness is zero, Kurtosis is three, and Jarque-Bera is zero then the data is normal but the reported Jarque-Bera (JB) statistics and their corresponding *p*-values confirm our initial conclusion of a non-normal distribution (the lowest JB value is 23.60737 for the REALITY Index and the highest is 177.3804 for the PSU BANK Index) as all the values of Jarque-Bera are more than zero. Hence, the descriptive statistics analysis rejects the null hypothesis of random walk for the period of 2005-2008. Therefore, the analysis indicates that pre-crisis period was beneficial to accelerate the return in different sectors as the market was violating the random walk model.

The findings of descriptive statistics in **Table: 1B** it shows the Post crisis period (2008-2016), on which the table describes the mean performance of different sectoral indices and there variations (Std.Dev.), upon which the mean value of FMCG is comparatively more than the other sectors, i.e. 12817.12 and Std. Dev of Reality is comparatively lower than others, which is 176.888. Out of 12 sectoral indexes for the post crisis period, only

Energy has negative skewness, which is moderately skewed. Almost all the sectors are fair on REALITY is highly skewed. In case of kurtosis Index of the entire sector falls under Leptokurtic distribution. Hence we can say that distribution of data is not normal. In case of normality of data, the above table are not satisfying the assumption of randomness that is; Skewness is zero, Kurtosis is three, and Jarque-Bera is zero, which means for Jarque Bera Test, null hypothesis of random walk is rejected for all the sectors during the periods as the value of JB is higher than zero. Since the reported Jarque-Bera (JB) statistics and their corresponding *p*-values confirm our conclusion of a non-normal distribution (the lowest JB value is 12.02011 for the PSU BANK Index and the highest is 4506.587 for the REALITY Index) as all the values of Jarque-Bera are more than zero. As the analysis indicates that the market does not follow random walk hypothesis and it was possible to perform positively in the FMCG, BANK and Energy sectors by judging tactfully their performance

The descriptive statistics in **Table: 1C,** during the period from 1st April 2005 to 31st March 2016 average return market for different sectors were: Auto 3906.997, Bank 9875.65, Energy 7687.603, Financial Services 4028.636, FMCG 10684.61, IT 6450.085, Media 1698.846, Metal 2738.615, Pharma 5357.88, PSU Bank 2781.451, PVT Bank 4544.196, Reality 415.8299 of which FMCG marked the highest return followed with Bank. At the same time Bank, FMCG and Energy are showing good sign of return as the median marked were 9696.825, 8995.46 and 8028.225. Volatility marked was highest is FMCG. Reality, Media, PSU Bank and Metal indicated less volatility.

Out of 12 sectoral indexes for the complete study period, only one sectoral Index (Energy) has negative skewness, and rest has positive distribution. Hence distributions are highly moderately skewed. In case of kurtosis Index of the entire sector falls under Leptokurtic distribution. Since the range of kurtosis is between+3 and -3. Hence we can say that distribution of data is not normal. Since the excess kurtosis statistic is greater than zero, the appearance is that the daily close prices follow a distribution that features leptokurtosis. Researchers have suggested that the leptokurtosis arises from a pattern of volatility in financial markets where periods of high volatility are followed by periods of relative stability. In case of normality of data, the above table are not satisfying the assumption of randomness that is; If Skewness is zero, Kurtosis is three, and Jarque-Bera is zero then the data is normal but in this case Jarque Bera fails the normality test, as all the values of Jarque-Bera exceeds the critical value. Hence, the descriptive statistics analysis rejects the null hypothesis of random walk for the period of 2005-2016. Therefore, the analysis indicates that entire study period which includes the phase of crisis is not efficient. Hence, the variability and volatility of the market during the sample period can be said to have strategic judgement for the long term players.

7.2 Unit Root Test and Analysis

Augmented Dickey-Fuller Test

ADF was proposed by Dickey and Fuller in (1979), the test has been designed with the objective to check the presence of unit root (stationarity) or confirmation of Random Walk Hypothesis. For the estimation of weak form efficiency in Indian Stock Exchange for NSE Sectoral Indexes, the study applied ADF (1979), to the daily prices. The results are reported in **Table: 2** the unit root tests significantly reject the hypothesis of stationarity of the time series at 1%, 5% and 10% significance level. The results revealed that the prices of sectoral Indexes are predictable and do not follow random walk thus investors can explore arbitrage opportunities.

Results of the test for all the three periods in **Table: 2A,B,C** indicates that the p-value at the difference of level including intercept and trend & intercept equation, is higher than our significance level of 0.05. It can be concluded that, the daily close prices of the sectoral Indexes of NSE except Reality for post crisis period has unit root and are nonstationary. But the evidence drawn at 1st degree of difference considering both equations, p-value is zero which indicates that the data for all sectors are stationary and it has no unit root. Further to validate the results autocorrelation test is applied.

7.3 Autocorrelation and Analysis

Table: 3A, B, C presents the Autocorrelation of NSE Sectoral Indices for the three periods defined as Pre-crisis period (2005-2008), Post-crisis period (2008-2016) and Entire period of study

(2005-2016). It is to be distinguished that there were a total of 36 lags during the study period. From the overall analysis of the daily close prices of Sectoral Indices, it is clear that during pre-crisis period almost all the sectors marked the existence of negative autocorrelation, which indicated the weak form efficiency but at the same time positive autocorrelation was marked with major lag point, which confirms the predictability of return in short duration. During post crisis period ENERGY sector showed that there was no autocorrelation and during the entire study period FMCG sector indicated no autocorrelation. Hence, the existence of weak form efficiency was marked in ENERGY Index for the post crisis period and FMCG Index for the complete study period. But there was no weak form efficiency in the prices of other Sectoral Indices during the price crisis period. Therefore analysis indicates that the null hypothesis is accepted.

Overall analysis for all the three periods show that at the lags, the returns cannot be predicted and weak form of efficiency holds. Ljung-Box statistics also provide evidence of possible dependence. The Ljung- Box Q- statistics shows that the null hypothesis is of no autocorrelation (H0: There is no autocorrelation) if p-value is significant at 1 % and 5% (p-value<0.05). So In following indexes the null hypothesis cannot be accepted for all lags except lag 2 to 6 and 26 to 36. It means that returns are auto correlated from lag 2 to 6 and 26 to 36 in almost all the sectors. According to Auto correlation test it is inferred that the Sectoral Index of NSE under the study remained inefficient for some sectors whereas they were efficient for the other sectors. After whole discussion it is worth nothing that the acceptance or rejection of the null hypothesis does not entails that the equity markets are efficient or inefficient respectively, because of the reflection of transparency on the part investors, which further resulted into the situation of overreaction in the value of shares. Moves of Investors benefitted them with unusual return and further due to financial distress in the foreign market, Indian market suffered alot with the drop in the value of Index.

7.4 Kolmogorov-Smirnov Goodness of Fit Test and Analysis

The Kolmogorov Smirnov Goodness of Fit test (K-S test) is a nonparametric test and is used to determine how well a random sample of data fits a particular distribution (normal and uniform). The one sample K-S test compares the cumulative distribution function for a variable with a uniform or normal distribution and test whether the distributions are homogeneous. The study uses both normal and uniform parameters to test the distribution. Results from the **Table: 4** shows p-value < 0.05 at the 1%, 5% and 10% level of significance, clearly indicating that the frequency distribution of the daily close price of Nifty Sectoral Indices for the three periods defined as pre crisis (2005-2008), post crisis (2008-2016) and overall study period (2005-2016) is not normally distributed so the null hypothesis cannot be accepted which means that all sector markets under the study does not follow normal distribution because it provide p-value which is insignificant at the 1% level of significance, the evidence of all the markets under study are similar to findings of Poshakwale (1996) of Indian stock markets, which leads to the non acceptance of the null hypothesis of random walk for these 12 sectors for the three periods. Further to check the validity of K-S result, run test is also applied.

7.5 Runs Test and Analysis

This is a Non Parametric test which is used in testing weak form efficiency of stock market. . Accordingly, it examines whether the prices in emerging market indices are predictable. This test emphasizes on the direction of change (That is sign, whether positive, negative or neutral) and does not consider the change in value. Runs test ignores the type of distribution followed in time series. It is used to check the randomness in time series under consideration. In a given time series there are three possible types of price changes, namely positive, negative and no change. This gives three types of runs. A run is defined as a series of identical signs that are preceded or are followed by a different sign or no sign at all. The run test is performed by comparing actual runs with expected runs on the assumption that price changes are independent. At 5% confidence level, if the observed value of /z/ is 1.96 then we will accept the null hypothesis. As pointed out by Guidi, et.al (2010), when actual number of runs exceed (fall below) the expected runs, a positive or negative Z values is obtained. The positive serial correlation indicates, there is a positive dependence of stock prices, therefore indicating a violation of random walk.

According to the analysis in **Table: 5A &5B** (Pre Crisis Period 2005-2008 and Post crisis Period 2008-2016) at mean and median value, all the sectoral indexes of NSE have insignificant Z value at 5% significance level, its value lies beyond the interval of ±1.96, so null hypothesis of weak form efficiency is rejected.

According to the analysis in **Table: 5C.** The results of run test for the sectoral indexes of NSE market under the study are indicating that, for the full period (2005-2016) the runs test clearly shows the successive returns for all indices because our p-value is less than 0.05 at 5% level of significance. Which indicates the null hypothesis cannot be accepted in any sector, hence all the sectors are inefficient, i.e., they are not weak form efficient for whole period so investor can predict the markets returns.

Hence, the analysis indicates that market is not efficient to reflect all the public information. So the time period before crisis was over performing period for all investors.

Overall analysis drawn indicates that Indian stock market in not weak form efficient. Intellectual observation of market is key to wilful return without losing patience. Long term Investment is strategically good to cover the losses.

8. CONCLUSION

The basic concern in this study was that whether the crisis period effects the conclusion of market efficiency for Indian stock market. Most of the statistical tests confirms that as such the "period of crisis" is not having any significant impact on efficiency of stock market. But the fragmentation of data on the basis of crisis has given a new dimension to the study as this bifurcation has helped in assessing the efficiency of various sectoral Indexes of Indian stock market in more comprehensive manner. There are certain procedural and regulatory changes which ultimately has significant impact on the Efficiency of Stock Market. It was observed that after the involvement of technology the market was regulated more efficiently and there was more transparency and maximum involvement of investors. During the study period many new regulations were introduced like separate trading window for block deals (2005), reporting platform for corporate bonds (2006), trading platform for corporate bonds (2007), direct market access (2008), market access through authorized persons (2009), smart order routing (2010), call auction in pre-open session (2010) etc. All these developments have lead to a gradual functioning of stock market in more efficient manner.

This study investigates the Weak Form Efficiency of Sectoral Indexes of National Stock Exchange of Indian Stock Market. In addition to that, this paper analyses that whether the Crisis period alters the conclusion of efficiency of the Indian stock market. The daily close price of 12 sectoral Index of Nifty (AUTO, BANK, ENERGY, FINANCIAL SERVICES, FMCG, IT, MEDIA, METAL, PHARMA, PSU BANK, PVT BANK and REALITY) for the period of 2005-2016 is taken for the study. The results indicate that NSE in different sectoral Indexes is not weak form efficient in all periods however pre-crisis period exhibited positive signs of trading and generating excess return.

This study also offers vital evidence for uncertainty of stock exchanges. It was discovered that a high degree of volatility emerged during pre and post crisis period. This indicated that a financial crisis can be forecasted based on level of volatility of stock markets. As the analysis implies, Indian market has presently been at the highest level of uncertainty since 2007. It is consequently recommended that the Indian policy makers should immediately execute necessary reforms to depress the volatility level of stock exchange and exceed the Inflow of FII's in the market.

9. SCOPE FOR FUTURE RESEARCH

In our study, only the weak-form of EMH is considered while the other two form of EMH are neglected which could be the concerned for future research. Also, instead of sectoral index price, individual share prices of the market might turn better results in terms of market efficiency with weekly return data or monthly return data. For further research sample of 2 stock exchanges can be taken and various tests can be applied to know its impact on each other which is not applied in our research.

OVERALL RESULTS OF ALL THE TESTS PERFORMED

Period	Descriptive Statistics	Unit Root	Autocor-relation	K-s Test	Run Test	Null Hypothesis
2005-2008	Not Normal	Not Non Stationary	No Auto Correlation	Non- Random	Non- Random	Not accepted
2008-2016	Not Normal	Not Non Stationary	Auto Correlation	Non- Random	Non- Random	Not accepted
2005-2016	Not Normal	Not Non Stationary	No Auto Correlation	Non- Random	Non- Random	Not accepted

REFERENCE

- Abraham, A., Seyyed, Fazal J., and Alsakran, Sulaiman A. (2002) Testing the Random Walk Behavior and Efficiency of the Gulf Stock Markets. *The Financial Review,37*(3), 469-480.

- Almujamed, H. I., Fifield, S., and Power, D. (2011). An investigation of the role of technical analysis in Kuwait. *Qualitative Research in Financial Markets*, *5*(1), 43-64.

- Bradley, J. V. (1968). Distribution-free statistical tests. *The American Statistician*, *31*(4), 147-150.

- Butler, K., and Malaikah, C. (1992) Efficiency and Inefficiency in Thinly Traded Stock Markets: Kuwait and Saudi Arabia. *Journal of Banking and Finance* 16, 197-210.

- Campbell, J.Y., Lo, A.W.C., and Mackinlay, A.C. (1997). The econometrics of Financial Markets. *Princeton University Press.*

- Chan, Kam C., Gup, Benton E., and Pan, Ming-Shiun. (1992) An Empirical Analysis of Stock Prices in Major Asian Markets and the United States. *The Financial Review, 27*(2), 289-307.

- Chang, Tsangyao., Fawson, Chris., Glover, Terry., and Fang, Wenshwo. (1996)The weak-form efficiency of the Taiwan share market. *Applied Economics letters, 3*(10), 663-667.

- Dickey, D. A., and Fuller, W. A. (1979). Distribution of the Estimators for Autoregressive Time Series with a Unit Root. Journal of the American Statistical Association, 74 (366), 427–431.

- Dima, B., and Milos, L. (2009). Testing The Efficiency Market Hypothesis For The Romanian Stock Market. *Annales Universitatis Apulensis Series Oeconomica, 11*(1), 402-415.

- Elbarghouthi., Sameer., Qasim, Amer., and Yassin, Mohammed. (2012) The Use of Runs Test in Amman Stock Exchange. *International Business Research, 5*(2), 159-172.

- Fama, Eugene F. (1970). Efficient capital markets: A review of theory and empirical work. *Journal of Finance 25*(2), *383-417.*

- Fama., E. F., and French., K. R. (1988a). Permanent and Temporary Components of Stock Prices. *Journal of Political Economy 96*, 246–273.

- Fama., E. F., And French., K. R. (1988b) Dividend Yields and Expected Stock Returns, *Journal of Financial Economics 22*, 3 25.

- Chakraborti, G., and Sen, C. (2013) Momentum Trading on Indian Stock Market. *Springer Breifs in Economics.*

- Gimba1, Victor K. (2010) Testing the Weak-form Efficiency Market Hypothesis: Evidence from Nigerian Stock Market. *CBN Journal of Applied Statistics, 3*(1), 117-136.

- Graham, Benjamin. (1965) The Intelligent Investors. *New York, Harper and Row.*

  Retrived on: September 2016 Retrived. from:http://webcontent.harpercollins.com/text/excerpts/pdf/0060583282.pdf

- Guidi, Francesco., Gupta, Rakesh., & Maheshwari, Suneel. (2010). Weak-form market efficiency and calendar anomalies for Eastern Europe equity markets. *Journal of Emerging Market Finance*, *10*(3), 337-389.

- Gupta, R., and Basu, P. (2007). Weak Form Efficiency in Indian Stock Markets. *International Business and Economic Research Journal, 6* (3), 57-64.

- Gupta, R., and Yang, J. (2011). Testing Weak form Efficiency Of Indian Stock Market. *International Research Journal of Finance and Economics, 75,* 108-119.

- Hagin R. (1979) Modern portfolio theory. *Dow Jones-Irwin, Homewood, 11*(13) and 89–91.

- Harper, A., and Jin, Z. (2012). Examining market efficiency in India: An Empirical Analysis of the Random

Walk Hypothesis. *Journal of Finance and Accountancy, 1-6.*

- Hemalatha, K., and Nedunchezian, Dr. V. R. (2015) An Analysis of Weak Form Efficiency in Sectoral Indices: A Study with Reference to National Stock Exchange. *Global Journal for Research Analysis,4*(7), 387-390.

- Huang, B. N. (1995) Do Asian stock markets follow random walks: evidence from the variance ratio test. *Applied Financial Economics, 5*(4), 251-256.

- Hassan, K. M., Al-Sultan, W., and Al-Saleem, J. A. (2003), "Stock market efficiency in the Gulf Cooperation Council Countries (GCC): the case of Kuwait stock exchange", *Scientific Journal of Administrative Development*, Vol. 1, No. 1, pp. 1-21

- Jethwani, Kinjal., and Achuthan, Sarla.(2013). Stock Market Efficiency and Crisis: Evidence from India. *Asia-Pacific Finance and Accounting Review,1*(2), 35-43

- Kapusuzoglu, Ayhan. (2013) Testing Weak Form Market Efficiency on the Istanbul Stock Exchange (ISE). *International Journal of Business Management and Economic Research, 4*(2),700-705.

- Karemera, D., and Ojah, K.(1999) Random Walk and Market Efficiency Tests of Latin American Emerging Equity Markets. *The Financial Review, 34*, 441-468.

- Kendall, M. (1953). The analysis of economic time series, part 1: prices. *Journal of the Royal Statistical Society, 96*(1), 11-25.

- Khan, A., Ikram, S., and Mehtab, M. (2011). Testing Weak Form Efficiency of Indian Capital Market: A case of NSE and BSE. *African Journal of Marketing Management, 3*(6), 115-127.

- Kim, Jig. Myung., Nelson, Charles. R., and Startz, Richard. (1991) Mean Reversion in Stock Prices? A Reappraisal of the Empirical Evidence. *The Review of Economic Studies, 58*(3), 515-528.

- Laurence, M. M., Cai, F., and Qian, S. (1997). Weak-form efficiency and causality tests in Chinese stock markets. *Multinational Finance Journal, 1*(4), 291-307.

- Liu, Xiaming., Song, Haiyan., and Romilly, Peter. (1997)Are Chinese stock markets efficient? A cointegration and causality analysis. *Applied Economics letters, 4*(8), 511-515.

- Lo, A., and Mackinlay, A.C. (1988) An Econometric Analysis of Infrequent Trading. *Journal of Econometrics* 45, 181-211.

- Malkiel, B. G. (2003). The efficient market hypothesis and its critics. *Journal of economic perspectives*, 59-82.

- Mammadov, R., and Klang, M. (2009). Stock Markets from the perspective of Efficient Market Hypothesis. Retrieved on 27th June 2015 from: *http://lup.lub.lu.se/luur/download?func=downloadFileandrecord OId=1474537andfileOId=2435628*

- Misra, Vandna., Mishra, Amit., Kumar, and Rastogi, Sanjay. (2012) Testing Efficient Capital Market Model in Indian Sub-Continent. *GF Journal Management and Research, 5*(2), 1-14 .

- Moustafa, M. A. (2004) Testing the Weak-Form Efficiency of the United Arab Emirates stock market. *International Journal of Business, 29*(3), 310-325.

- Patel, Nikunj R., Radadia, Nitesh and Dhawan, Juhi. (2012) An Empirical Study on Weak-Form of Market Efficiency of Selected Asian Stock Markets. *Journal of Applied Finance & Banking, 2*(2), 99-148.

- Pandey, Anand. (2003) Efficiency of Indian stock market. Retrived from: *http://papers.ssrn.com/sol3/papers.cfm?abstract_id=47492. Retrived on 29th Jan 2017.*

- Poshakwale, S. (1996). Evidence on weak form efficiency and day of the week effect in the Indian stock market. *Finance India, 10*(3), 605-616.

- Poterba, J., & Summers, L. (1988). Mean Reversion in Stock Prices. *Journal of Financial Economics 22* , 27-59.

- Ramaratanm, M., and Jayaraman, R. (2011). A study of EMH with Special reference to selective indices in the global context: An Empirical Approach. *Journal of Arts Science and & Commerce, 2*(1), 17-32.

- Ramkumar, Rajesh, Selvam., R. M. and Indhumathi., G. (2012) An Analysis of Market Efficiency in Sectoral Indices: A Study with a Special Reference to Bombay Stock Exchange in India. *European Journal of Scientific Research, 69*(2), 290-297.

ANNEXURE: 1

TABLE: 1A : DESCRIPTIVE STATISTICS (2005-08)

	MEAN	MEDIAN	MAX	MIN	STD. DEV	SKEW	KURT	J-B	P-value	OBS
AUTO	1881.097	1973.985	2392.41	1043.56	358.3773	-0.89728	2.731997	102.3343	0	746
BANK	5598.478	4992.45	10698.35	3162.21	1811.062	0.9762	3.074118	118.6562	0	746
ENERGY	6035.025	5524.93	12012.26	3386.98	2049.124	1.09416	3.435946	154.7574	0	746
FIN. SER	2246.627	1998.51	4607.18	1137.32	863.8954	0.974592	2.996667	118.0959	0	746
FMCG	4875.936	5086.56	6778.92	2793.48	882.8693	-0.66947	2.689253	58.7272	0	746
IT	4243.452	4307.575	5830.55	2514.1	836.2504	-0.20297	2.016646	35.17933	0	746
MEDIA	1806.914	1824.53	2942.98	939.04	476.9019	0.028698	1.963049	25.12148	0.000004	559
METAL	2227.794	1756.38	5493.95	940.32	1215.552	1.065509	3.093523	141.4288	0	746
PHARMA	2526.249	2645.195	3208	1765.76	331.4143	-0.52736	2.256546	51.75916	0	746
PSU BANK	1899.796	1700.66	3427.25	1135.86	541.861	1.168456	3.49543	177.3804	0	746
PVT BANK	2025.23	1715.615	4457.3	929	877.5458	0.884352	2.783811	98.69108	0	746
REALITY	**1126.276**	**1025.615**	**1878.43**	**682.43**	**288.2978**	**0.662337**	**2.752629**	**23.60737**	**0.000007**	**312**

TABLE 1B: DESCRIPTIVE STATISTICS (2008-16)

	MEAN	MEDIAN	MAX	MIN	STD. DEV	SKEW	KURT	J-B	PROB.	OBS
AUTO	4650.758	4108.365	9099.6	933.07	2274.326	0.43625	2.12583	129.152	0	2032
BANK	11445.91	10883.03	20555.3	3339.7	3963.513	0.27463	2.39523	56.50969	0	2032
ENERGY	8294.308	8318.775	10603.4	4748.8	955.1332	-0.63695	3.93712	211.7515	0	2032
FIN. SER	4682.858	4412.095	8269.25	1382.5	1611.638	0.26608	2.39014	55.46685	0	2032
FMCG	12817.12	11922.8	22295.2	4363	5498.31	0.0656	1.49259	193.8447	0	2032
IT	7260.197	6521.45	12855.9	2002	2807.141	0.19384	2.0711	85.77964	0	2032
MEDIA	1669.117	1666.01	2633.9	610.47	446.2739	0.06194	2.51681	21.06646	0.000027	2032
METAL	2926.15	2772.125	5017.33	1188.8	935.4213	0.36389	2.15361	105.4975	0	2032
PHARMA	6397.446	5070.47	13831.2	1968.7	3250.023	0.69707	2.2054	218.0158	0	2032
PSU BANK	3106.891	3198.55	5375.87	1295.7	781.0285	0.06196	2.64309	12.02011	0.002454	2021
PVT BANK	5468.973	4822.62	10838.6	1129.9	2499.616	0.51129	2.25641	135.3482	0	2032
REALITY	**306.7456**	**239.75**	**1209.22**	**128.25**	**176.888**	**2.18692**	**8.83926**	**4506.587**	**0**	**2032**

TABLE 1C: DESCRIPTIVE STATISTICS (2005-16)

	MEAN	MEDIAN	MAX	MIN	STD. DEV	SKEW	KURT	J-B	PROB.	OBS
AUTO	3906.997	3550.785	9099.6	933.07	2307.555	0.81728	2.50488	337.6358	0	2778
BANK	9875.65	9696.825	20555.3	3162.2	4368.976	0.46419	2.34424	149.5369	0	2778
ENERGY	7687.603	8028.225	12012.3	3387	1672.322	-0.70598	2.94061	231.1694	0	2778
FIN. SER	4028.636	4002.03	8269.25	1137.3	1807.235	0.39406	2.3164	125.987	0	2778
FMCG	10684.61	8995.46	22295.2	2793.5	5891.591	0.48958	1.6897	309.7084	0	2778
IT	6450.085	5969.675	12855.9	2002	2781.916	0.62115	2.33124	230.4049	0	2778
MEDIA	1698.846	1678.15	2942.98	610.47	456.4966	0.07565	2.39926	41.43234	0	2591
METAL	2738.615	2628.8	5493.95	940.32	1064.039	0.37563	2.26686	127.5447	0	2778
PHARMA	5357.88	4466.275	13831.2	1765.8	3270.985	1.03045	2.81666	495.519	0	2778
PSU BANK	2781.451	2853.25	5375.87	1135.9	900.8867	0.18837	2.23802	83.30386	0	2767
PVT BANK	4544.196	4198.265	10838.6	929	2665.81	0.70747	2.52515	257.8362	0	2778
REALITY	415.8299	257.35	1878.43	128.25	340.1276	1.87736	6.04047	2279.772	0	2344

ANNEXURE: 2

Augmented Dickey-Fuller Test

TABLE: 2A

Level		Intercept		Trend & Intercept		
SYMBOL	LAG	ADF	P-VALUE	LAG	ADF	P-VALUE
AUTO	1	-2.26671	0.1832	0	-24.4142	0.0000
BANK	1	-1.4025	0.5821	0	-22.0597	0.0000
ENERGY	1	-1.02872	0.7446	0	-24.2171	0.0000
FIN. SER	1	-1.26171	0.6489	0	-21.5237	0.0000
FMCG	0	-2.13288	0.2319	0	-26.1739	0.0000
IT	0	-1.63656	0.4633	0	-27.1426	0.0000
MEDIA	0	-1.7028	0.4293	0	-22.1874	0.0000
METAL	1	-0.76359	0.8281	0	-24.2834	0.0000
PHARMA	0	-1.91273	0.3265	0	-26.2971	0.0000
PSU BANK	1	-1.44359	0.5618	0	-23.2393	0.0000
PVT BANK	1	-1.16867	0.6896	0	-21.8542	0.0000
REALITY	1	-1.39831	0.5834	0	-14.975	0.0000

1st Diff		Intercept		Trend & Intercept		
SYMBOL	LAG	ADF	P-VALUE	LAG	ADF	P-VALUE
AUTO	0	-24.3501	0.0000	0	-24.4142	0.0000
BANK	0	-22.0693	0.0000	0	-22.0597	0.0000
ENERGY	0	-24.2341	0.0000	0	-24.2171	0.0000
FIN. SER	0	-21.5343	0.0000	0	-21.5237	0.0000
FMCG	0	-26.1662	0.0000	0	-26.1739	0.0000
IT	0	-27.0722	0.0000	0	-27.1426	0.0000
MEDIA	0	-22.1395	0.0000	0	-22.1874	0.0000
METAL	0	-24.2974	0.0000	0	-24.2834	0.0000
PHARMA	0	-26.3085	0.0000	0	-26.2971	0.0000
PSU BANK	0	-23.2543	0.0000	0	-23.2393	0.0000
PVT BANK	0	-21.8649	0.0000	0	-21.8542	0.0000
REALITY	0	-14.988	0.0000	0	-14.975	0.0000

TABLE: 2B

Level		Intercept		Trend & Intercept		
SYMBOL	LAG	ADF	P-VALUE	LAG	ADF	P-VALUE
AUTO	1	-0.01289	0.9563	1	-2.3294	0.4171
BANK	1	-0.91377	0.784347	1	-2.67119	0.248827
ENERGY	0	-2.87779	0.0481	0	-2.92292	0.1553
FIN. SER	1	-0.79405	0.8201	1	-2.74048	0.2202
FMCG	0	-0.27427	0.9262	0	-3.45947	0.0441
IT	0	-0.74017	0.8346	0	-2.21227	0.4819
MEDIA	1	-0.59119	0.8701	1	-2.72422	0.2267
METAL	1	-1.5031	0.5321	1	-1.75696	0.7253
PHARMA	1	-0.26985	0.9268	1	-2.20575	0.4856
PSU BANK	1	-2.1408	0.2287	1	-2.06473	0.5647
PVT BANK	1	-0.25713	0.9286	1	-2.61985	0.2714
REALITY	1	-4.29989	0.0005	1	-4.06479	0.0071

1ST Diff		Intercept			Trend & Intercept	
SYMBOL	LAG	ADF	P-VALUE	LAG	ADF	P-VALUE
AUTO	0	-40.609	0.0000	0	-40.6125	0,0000
BANK	0	-41.0223	0.0000	0	-41.0147	0.0000
ENERGY	0	-43.3266	0,0000	0	-43.3175	0.0000
FIN. SER	0	-41.5168	0.0000	0	-41.5105	0.0000
FMCG	0	-43.4101	0.0000	0	-43.4035	0.0000
IT	0	-43.0472	0.0000	0	-43.0369	0.0000
MEDIA	0	-41.9874	0.0000	0	-42.0342	0.0000
METAL	0	-41.8053	0.0000	0	-41.7951	0.0000
PHARMA	0	-41.2514	0.0000	0	-41.2474	0.0000
PSU BANK	0	-39.9601	0.0000	0	-39.9592	0.0000
PVT BANK	0	-41.3721	0.0000	0	-41.3742	0.0000
REALITY	0	-41.198	0.0000	0	-41.2783	0.0000

TABLE: 2C

Level		Intercept			Trend & Intercept	
SYMBOL	LAG	ADF	P-VALUE	LAG	ADF	P-VALUE
AUTO	1	0.352385	0.9809	1	-1.64328	0.7757
BANK	1	-0.89968	0.7889	1	-2.90659	0.1604
ENERGY	1	-2.78984	0.0598	1	-2.87651	0.1703
FIN. SER	1	-0.90395	0.7875	1	-2.85157	0.1789
FMCG	0	0.007198	0.9581	0	-2.24136	0.4657
IT	0	-0.56573	0.8756	0	-1.96541	0.6194
MEDIA	1	-1.45948	0.5542	1	-1.71999	0.7424
METAL	1	-2.00553	0.2846	1	-1.94036	0.6328
PHARMA	1	0.081025	0.9643	1	-1.78476	0.7122
PSU BANK	1	-2.24658	0.1899	1	-2.24699	0.4626
PVT BANK	1	-0.15725	0.9413	1	-2.29858	0.434
REALITY	11	-1.74908	0.4063	8	-2.31291	0.4262

1st Diff		Intercept			Trend & Intercept	
SYMBOL	LAG	ADF	P-VALUE	LAG	ADF	P-VALUE
AUTO	0	-47.4481	0.0001	0	-47.4629	0.0000
BANK	0	-47.2059	0.0001	0	-47.1992	0.0000
ENERGY	0	-49.5656	0.0001	0	-49.5673	0.0000
FIN. SER	0	-47.4777	0.0001	0	-47.4701	0.0000
FMCG	0	-50.7684	0.0001	0	-50.7679	0.0000
IT	0	-50.6939	0.0001	0	-50.6875	0.0000
MEDIA	0	-47.5491	0.0001	0	-47.5414	0.0000
METAL	0	-48.1468	0.0001	0	-48.1574	0.0000
PHARMA	0	-48.3933	0.0001	0	-48.4005	0.0000
PSU BANK	0	-46.4778	0.0001	0	-46.4788	0.0000
PVT BANK	0	-47.7767	0.0001	0	-47.7787	0.0000
REALITY	10	-14.6436	0.0000	10	-14.6513	0.0000

ANNEXURE: 3

Autocorrelation and Analysis

TABLE 3A

LAGS	AUTO ACF	AUTO LJUNG BOX	BANK ACF	BANK LJUNG BOX	ENERGY ACF	ENERGY LJUNG BOX	FIN SER ACF	FIN SER LJUNG BOX	FMCG ACF	FMCG LJUNG BOX	IT ACF	IT LJUNG BOX
1	0.111*	9.2682	0.199*	29.692	0.11*	2001.8	0.217*	35.133	0.039	1.1392	0.001	0.0014
2	-0.027	9.7999	0.001	29.693	0.048	3969.1	0.015	35.295	-0.027	1.6673	-0.04	1.2085
3	0.004	9.8099	-0.043	31.075	-0.066	5903.7	-0.045	36.819	-0.005	1.6878	-0.008	1.2627
4	0.004	9.822	-0.127**	43.215	-0.071	7807.5	-0.151**	53.906	0.025	2.1506	-0.044	2.7022
5	-0.036	10.815	-0.103**	51.12	-0.096	9680.2	-0.118	64.44	-0.035	3.0937	0.033	3.5008
6	0.002	10.817	-0.07	54.837	-0.03	11523	-0.069	68.011	0.045	4.5883	-0.04	4.6779
7	-0.032	11.613	0.028	55.422	0.129*	13340	0.025	68.498	-0.044	6.078	-0.008	4.7261
8	0.032	12.369	0.145*	71.261	0.096*	15128	0.137*	82.577	0.033	6.9175	-0.024	5.1735
9	0.019	12.631	0.075*	75.5	0.014	16888	0.087*	88.316	0.005	6.9394	-0.025	5.6327
10	0.027	13.18	-0.026	75.996	-0.026	18617	-0.005	88.337	0.039	8.0651	0.057*	8.0849
11	-0.045	14.736	-0.068	79.545	-0.173**	20314	-0.087	94.014	-0.099	15.568	-0.039	9.2175
12	-0.007	14.777	-0.033	80.377	-0.055	21979	-0.03	94.705	-0.009	15.625	0.018	9.4586
13	0.026	15.283	-0.006	80.402	0.01	23613	0.007	94.738	0.023	16.018	0.01	9.5326
14	0.055*	17.604	0.071*	84.226	0.125*	25214	0.088*	100.68	0.058*	18.551	-0.017	9.7604
15	0.019	17.87	0.108*	93.197	0.091*	26779	0.108*	109.57	0.038	19.652	-0.012	9.8678
16	-0.018	18.126	0.089*	99.308	0.094*	28310	0.084*	114.93	0.004	19.663	-0.033	10.682
17	0.077*	22.612	0.057*	101.8	0.001	29806	0.062*	117.85	0.003	19.67	0.088*	16.647
18	0.007	22.648	-0.071	105.63	-0.104**	31267	-0.067	121.27	-0.01	19.749	0.021	16.984
19	-0.087	28.507	-0.1**	113.28	-0.136**	32695	-0.103**	129.47	-0.038	20.87	-0.008	17.034
20	-0.067	31.956	-0.076	117.7	-0.066	34091	-0.088	135.47	-0.053	23.016	-0.081	22.058
21	-0.01	32.039	-0.021	118.05	0.01	35459	-0.019	135.74	-0.068	26.611	-0.014	22.204
22	0.004	32.051	0.089*	124.09	0.034	36797	0.108*	144.65	-0.043	28.006	0.036	23.211
23	0.054*	34.279	0.091*	130.53	0.129*	38109	0.104*	152.94	0.072*	31.975	0.013	23.332
24	0.025	34.758	0.133*	144.23	0.072*	39397	0.135*	166.91	0.01	32.05	-0.064	26.462
25	-0.021	35.098	0.072*	148.19	0.001	40661	0.067*	170.39	-0.045	33.627	0.038	27.598
26	0.046	36.745	-0.037	149.26	-0.04	41902	-0.044	171.87	0.002	33.631	-0.001	27.6
27	-0.081	41.805	-0.057	151.75	-0.086	43119	-0.053	174.07	-0.017	33.843	0.01	27.671
28	-0.026	42.327	-0.035	152.72	0.01	44311	-0.048	175.86	-0.013	33.973	0.023	28.076
29	-0.049	44.214	-0.007	152.76	0.014	45480	-0.004	175.87	0.007	34.015	-0.01	28.154
30	-0.051	46.216	-0.047	154.47	0.059*	46627	-0.026	176.39	-0.028	34.605	-0.047	29.91
31	-0.067	49.718	0.047	156.19	-0.053	47750	0.026	176.9	-0.106**	43.384	-0.108**	38.994
32	0.035	50.647	0.073*	160.38	0.029	48852	0.08*	181.86	0.008	43.431	-0.005	39.012
33	0.017	50.879	0.044	161.87	-0.012	49935	0.033	182.71	0.078*	48.165	-0.04	40.234
34	0.059*	53.65	0.005	161.89	-0.051	50998	0.013	182.85	0.033	49.011	0.075*	44.618
35	-0.019	53.933	-0.036	162.93	-0.072	52039	-0.031	183.59	-0.023	49.412	0.005	44.64
36	0.005	53.952	0.023	163.33	0.016	53061	0.015	183.76	0.008	49.46	-0.005	44.66

*Significant at 1 % level **Significant at 5% level ***Significant at 10% level

LAGS	MEDIA ACF	MEDIA LJUNG BOX	METAL ACF	METAL LJUNG BOX	PHARMA ACF	PHARMA LJUNG BOX	PSU BANK ACF	PSU BANK LJUNG BOX	PVT BANK ACF	PVT BANK LJUNG BOX	REALITY ACF	REALITY LJUNG BOX
1	0.062*	2.1658	0.109*	8.8834	0.034	0.8811	0.153*	17.441	0.206*	31.883	0.151*	7.1718
2	0.042	3.1688	0.046	10.469	0.028	1.4786	-0.058	19.976	0.037	32.895	0.064*	8.4453
3	-0.005	3.1824	-0.006	10.499	0.03	2.1596	-0.03	20.638	-0.048	34.622	-0.055	9.3843
4	0.027	3.5865	-0.117**	20.781	0	2.1596	-0.107**	29.174	-0.13	47.312	-0.116**	13.677
5	-0.045	4.7415	-0.046	22.394	0.028	2.7399	-0.057	31.613	-0.151**	64.493	-0.082	15.805
6	-0.005	4.7565	-0.003	22.402	-0.039	3.8925	-0.023	32.021	-0.069	68.124	0.044	16.426

LAGS	ACF	LJUNG BOX	ACF	LJUNG BOX	ACF	LJUNG BOX	ACF	LJUNG BOX	ACF	LJUNG BOX	ACF	LJUNG BOX
7	-0.031	5.2922	0.044	23.85	0.03	4.5565	0.064*	35.116	0.009	68.178	0.047	17.121
8	0.064*	7.6361	0.071*	27.627	0.028	5.1411	0.116*	45.292	0.166*	89.044	0.192*	28.976
9	0.012	7.7146	-0.021	27.967	-0.005	5.16	0.041	46.555	0.095*	95.832	0.037	29.416
10	0.023	8.024	-0.016	28.166	-0.001	5.1615	-0.037	47.577	-0.013	95.959	-0.027	29.648
11	-0.085	12.158	-0.135**	42.046	-0.083	10.33	-0.062	50.504	-0.088	101.84	-0.147**	36.644
12	-0.028	12.609	0.06	44.736	-0.003	10.335	-0.049	52.354	-0.033	102.67	-0.025	36.848
13	0.105*	18.983	0.052*	46.762	0.071*	14.146	-0.04	53.561	0.001	102.68	-0.044	37.489
14	0.079*	22.526	0.062*	49.718	-0.021	14.479	0.055*	55.9	0.067*	106.11	0.048	38.234
15	0.018	22.721	0.058*	52.279	0.009	14.543	0.12	66.844	0.131*	119.11	0.055*	39.237
16	0.079*	26.314	-0.007	52.314	-0.017	14.775	0.095*	73.77	0.096*	126.13	0.079*	41.278
17	0.012	26.397	0.023	52.726	0.079*	19.584	0.054*	76.04	0.048	127.88	0.045	41.957
18	-0.023	26.716	-0.047	54.438	0.036	20.562	-0.063	79.081	-0.039	129.04	-0.055	42.957
19	-0.044	27.848	-0.085	59.937	-0.032	21.327	-0.088	84.982	-0.104**	137.27	-0.069	44.565
20	-0.051	29.337	-0.014	60.096	-0.044	22.812	-0.064	88.156	-0.096	144.32	-0.055	45.566
21	0.002	29.339	-0.002	60.1	0.001	22.813	-0.009	88.212	-0.019	144.59	-0.048	46.355
22	-0.015	29.475	0.103	68.19	-0.025	23.307	0.054*	90.418	0.082*	149.75	0.047	47.103
23	0.02	29.717	0.046	69.832	-0.021	23.643	0.064*	93.616	0.089*	155.88	0.067*	48.626
24	0.049	31.104	0.038	70.924	-0.007	23.677	0.136*	107.8	0.123*	167.58	0.078*	50.669
25	-0.001	31.105	-0.034	71.823	-0.033	24.517	0.011	107.89	0.103*	175.8	0.029	50.964
26	-0.086	35.424	-0.065	75.075	-0.02	24.817	-0.044	109.36	-0.024	176.25	-0.016	51.047
27	-0.071	38.375	-0.083	80.449	-0.124**	36.721	-0.067	112.82	-0.068	179.79	-0.108**	55.039
28	0.008	38.41	-0.001	80.451	0	36.721	-0.047	114.54	-0.061	182.71	-0.027	55.288
29	-0.036	39.175	0.022	80.842	-0.022	37.084	0.019	114.82	-0.031	183.44	-0.035	55.7
30	0.004	39.184	0.049	82.731	-0.027	37.638	-0.011	114.92	-0.03	184.16	0.002	55.701
31	-0.079	42.868	-0.099	90.414	-0.059	40.394	0.044	116.45	0.019	184.43	-0.004	55.705
32	0.008	42.909	-0.054	92.714	0.005	40.413	0.068*	120.07	0.074*	188.72	0.097*	59.018
33	0.002	42.911	-0.067	96.204	-0.019	40.701	0.015	120.26	0.073*	192.83	0.067*	60.575
34	-0.053	44.577	0.016	96.415	0.018	40.956	-0.018	120.51	0.036	193.85	-0.014	60.646
35	-0.038	45.423	-0.013	96.557	-0.017	41.173	0.026	121.06	-0.092	200.44	-0.147**	68.284
36	0.032	46.019	0.152*	114.73	0.028	41.799	0.02	121.36	0.018	200.71	0.037	68.762

*Significant at 1 % level **Significant at 5% level ***Significant at 10% level

TABLE 3B

	AUTO		BANK		ENERGY		FIN SER		FMCG		IT	
LAGS	ACF	LJUNG BOX	ACF	LJUNG BOX	ACF	LJUNG BOX	ACF	LJUNG BOX	ACF	LJUNG BOX	ACF	LJUNG BOX
1	0.102*	21.207	0.093*	17.489	0.039	3.016	0.081*	13.314	0.036	2.6814	0.045	4.1451
2	-0.014	21.61	-0.03	19.261	-0.021	3.952	-0.041	16.693	-0.008	2.7989	-0.031	6.1635
3	-0.011	21.875	0.004	19.291	-0.022	4.9529	0.006	16.763	-0.026	4.1944	-0.033	8.3723
4	-0.028	23.465	-0.012	19.587	0.004	4.986	-0.007	16.862	-0.055	10.422	-0.01	8.5594
5	-0.05	28.63	-0.058	26.546	-0.017	5.6019	-0.042	20.402	0.022	11.445	0.004	8.5999
6	-0.028	30.269	-0.015	26.979	-0.049	10.438	-0.021	21.306	0.017	12.04	0.004	8.6304
7	0.022	31.235	0.008	27.123	0.02	11.284	0.011	21.575	0.014	12.434	-0.014	9.0256
8	-0.017	31.855	-0.001	27.126	0.021	12.218	0.002	21.583	-0.034	14.732	0.029	10.783
9	-0.003	31.868	0.018	27.819	0.036	14.89	0.017	22.172	0.005	14.776	-0.015	11.257
10	0.013	32.214	0.013	28.187	0.01	15.082	0.001	22.173	-0.045	18.961	-0.023	12.332
11	0.026	33.582	-0.002	28.199	0.005	15.125	-0.011	22.427	-0.032	20.989	-0.011	12.565
12	-0.011	33.824	0.004	28.228	0.011	15.381	0.002	22.433	0.025	22.253	0.015	13.031
13	-0.047	38.312	-0.014	28.626	0.011	15.629	-0.007	22.529	-0.022	23.202	-0.034	15.433
14	0.007	38.41	-0.003	28.639	0.065*	24.352	0.006	22.601	0.017	23.767	0.004	15.472
15	0.02	39.191	0.008	28.761	-0.016	24.881	0.006	22.673	-0.02	24.59	0.019	16.237
16	-0.026	40.576	0.01	28.948	0.012	25.178	0.004	22.712	-0.069	34.425	-0.017	16.864
17	0.042	44.26	0	28.949	0.019	25.903	0.009	22.884	-0.023	35.527	0.011	17.117
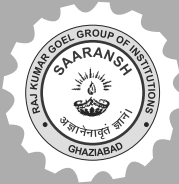
18	-0.002	44.266	0.03	30.775	-0.043	29.678	0.021	23.752	-0.012	35.846	0.018	17.775
19	0.011	44.504	0.025	32.035	-0.007	29.785	0.021	24.69	0.017	36.439	0.04	21.012
20	-0.012	44.781	0	32.035	-0.053	35.554	0.002	24.703	-0.01	36.629	0.007	21.125
21	-0.035	47.253	-0.031	34	0.005	35.596	-0.026	26.124	-0.066	45.497	-0.011	21.383
22	-0.035	49.776	0.026	35.385	-0.025	36.918	0.017	26.723	-0.054	51.437	-0.026	22.741
23	0.025	51.035	-0.037	38.166	-0.061	44.628	-0.035	29.219	-0.043	55.288	0.022	23.769
24	0.028	52.699	-0.019	38.9	-0.001	44.63	-0.024	30.394	0.019	56.002	-0.035	26.331
25	-0.003	52.714	-0.008	39.041	0.016	45.181	0.004	30.43	0.021	56.92	0.004	26.367
26	0.015	53.204	0.051*	44.346	0.021	46.1	0.064*	38.752	0.036	59.619	-0.001	26.369
27	0.013	53.548	-0.009	44.513	0.009	46.253	-0.019	39.465	-0.028	61.249	0.004	26.407
28	-0.027	55.04	0.021	45.381	-0.019	46.988	0.011	39.711	0.014	61.675	0.002	26.416
29	-0.003	55.055	0.009	45.54	-0.02	47.846	0.004	39.752	-0.028	63.32	-0.02	27.238
30	0.042	58.758	0.035	48.017	0.017	48.411	0.027	41.236	0.033	65.591	-0.011	27.494
31	0.015	59.238	-0.004	48.05	-0.015	48.902	-0.003	41.258	0.032	67.706	0.018	28.171
32	-0.012	59.559	-0.007	48.139	-0.048	53.647	-0.013	41.635	-0.027	69.214	0.004	28.208
33	0.008	59.704	0.002	48.148	0.012	53.96	0.011	41.887	-0.027	70.742	0.041	31.743
34	0.046	64.169	0.024	49.349	0.047	58.593	0.025	43.14	0.032	72.807	0.048	36.537
35	-0.015	64.631	-0.051	54.815	-0.048	63.41	-0.06	50.524	-0.026	74.256	-0.009	36.706
36	-0.05	69.892	-0.038	57.747	-0.039	66.532	-0.042	54.226	-0.012	74.544	-0.057	43.445

*Significant at 1 % level **Significant at 5% level ***Significant at 10% level

	MEDIA		METAL		PHARMA		PSU BANK		PVT BANK		REALITY	
LAGS	ACF	LJUNG BOX	ACF	LJUNG BOX	ACF	LJUNG BOX	ACF	LJUNG BOX	ACF	LJUNG BOX	ACF	LJUNG BOX
1	0.069*	9.5603	0.075*	11.309	0.087*	15.538	0.116*	27.41	0.084*	14.278	0.089*	16.028
2	0.023	10.623	0.043	15.128	0.038	18.49	0.027	28.835	-0.05	19.454	0.082*	29.572
3	-0.015	11.082	0.002	15.14	-0.021	19.346	-0.002	28.847	0.012	19.737	0.054*	35.552
4	-0.066	19.896	-0.027	16.649	-0.002	19.356	-0.01	29.066	-0.017	20.313	-0.006	35.633
5	-0.023	20.966	-0.007	16.76	-0.005	19.404	-0.064	37.316	-0.055	26.58	0.005	35.693
6	-0.028	22.576	-0.015	17.199	0.003	19.418	-0.037	40.07	0.004	26.617	-0.034	38.076
7	0.046	26.823	0.027	18.644	-0.005	19.48	0	40.07	0.023	27.742	0.052*	43.499
8	-0.006	26.893	0.055*	24.863	-0.014	19.861	0.024	41.232	-0.007	27.831	0.024	44.65
9	0.031	28.845	0.07	34.965	-0.027	21.311	0.055*	47.467	0.007	27.922	0.086*	59.667
10	0.048	33.555	0.017	35.583	-0.006	21.389	0.021	48.353	0.018	28.58	-0.007	59.772
11	0.033	35.762	-0.025	36.873	0.015	21.872	-0.029	50.036	0.003	28.596	0.004	59.804
12	0.019	36.483	0.034	39.285	-0.029	23.581	-0.007	50.14	0.004	28.628	0.042	63.498
13	-0.021	37.428	-0.013	39.636	0.025	24.88	-0.005	50.198	-0.021	29.565	0.014	63.896
14	0.055*	43.66	0.004	39.676	0.001	24.885	0.01	50.416	-0.008	29.708	0.027	65.41
15	-0.042	47.284	0.006	39.749	-0.089	41.004	0.012	50.717	-0.003	29.727	-0.031	67.343
16	-0.016	47.824	0.006	39.813	-0.057	47.69	0.038	53.721	0	29.728	0.054*	73.33
17	0.016	48.35	0.066*	48.794	-0.029	49.372	0.053*	59.351	-0.021	30.66	0.052*	78.969
18	0.046	52.625	0.009	48.961	-0.039	52.478	0.032	61.434	0.037	33.523	0.043	82.709
19	0.025	53.903	0.029	50.734	0.043	56.335	0.019	62.151	0.033	35.752	0.041	86.116
20	0.023	54.983	0.023	51.854	0.02	57.177	0.024	63.339	-0.008	35.897	0.03	87.909
21	0.012	55.255	0.019	52.606	0.006	57.261	-0.03	65.17	-0.031	37.904	0.027	89.362
22	-0.022	56.258	-0.026	54.048	0.015	57.717	0.01	65.384	0.031	39.888	-0.056	95.786
23	-0.001	56.259	-0.052	59.637	-0.008	57.855	-0.04	68.641	-0.031	41.915	0.011	96.048
24	-0.015	56.725	-0.023	60.717	0.034	60.236	-0.016	69.169	-0.017	42.516	-0.062	103.86
25	0.007	56.819	0.02	61.514	-0.063	68.388	-0.014	69.583	0.004	42.558	-0.027	105.38
26	-0.013	57.144	0.009	61.685	-0.002	68.394	0.022	70.586	0.053*	48.332	0.036	108.03
27	0.021	58.058	-0.044	65.705	-0.073	79.419	-0.016	71.096	0.004	48.359	-0.024	109.18
28	-0.01	58.269	-0.01	65.915	0.042	83.09	0.018	71.759	0.028	49.964	0	109.18
29	-0.01	58.458	-0.007	66.024	-0.041	86.563	0.017	72.357	0.002	49.969	-0.036	111.85
30	0.013	58.803	0.035	68.51	0.08	99.643	0.029	74.079	0.039	53.185	0.016	112.39

LAGS	ACF	LJUNG BOX	ACF	LJUNG BOX	ACF	LJUNG BOX	ACF	LJUNG BOX	ACF	LJUNG BOX	ACF	LJUNG BOX
31	-0.004	58.832	0.005	68.559	-0.015	100.08	0.017	74.652	-0.014	53.604	-0.039	115.58
32	0.002	58.841	0.014	68.984	0.019	100.79	0.006	74.721	-0.022	54.634	0.011	115.81
33	0.004	58.879	0.018	69.622	0.024	101.93	0.014	75.137	0.003	54.658	-0.01	116.01
34	0.033	61.132	0.032	71.716	0.002	101.94	0.002	75.146	0.027	56.17	0.013	116.36
35	-0.087	76.944	-0.044	75.717	-0.017	102.55	-0.051	80.582	-0.046	60.497	-0.026	117.79
36	-0.01	77.159	-0.024	76.904	0.039	105.68	-0.014	80.987	-0.052	66.104	-0.032	119.93

*Significant at 1 % level **Significant at 5% level ***Significant at 10% level

TABLE 3C

	AUTO		BANK		ENERGY		FIN SER		FMCG		IT	
LAGS	ACF	LJUNG BOX	ACF	LJUNG BOX	ACF	LJUNG BOX	ACF	LJUNG BOX	ACF	LJUNG BOX	ACF	LJUNG BOX
1	0.103*	29.569	0.109*	32.825	0.061*	10.202	0.103*	29.51	0.036	3.6733	0.038	4.0414
2	-0.015	30.177	-0.026	34.668	0.004	10.238	-0.033	32.514	-0.009	3.8877	-0.034	7.2234
3	-0.01	30.436	-0.003	34.687	-0.038	14.198	-0.002	32.521	-0.024	5.5449	-0.029	9.5468
4	-0.025	32.196	-0.029	36.975	-0.017	15.017	-0.029	34.859	-0.047	11.753	-0.014	10.102
5	-0.049	38.911	-0.067	49.357	-0.043	20.216	-0.056	43.638	0.017	12.554	0.007	10.251
6	-0.025	40.697	-0.022	50.66	-0.04	24.658	-0.027	45.741	0.02	13.66	-0.001	10.254
7	0.018	41.561	0.01	50.954	0.057*	33.718	0.012	46.175	0.009	13.892	-0.012	10.662
8	-0.013	42.066	0.02	52.084	0.044	39.218	0.023	47.636	-0.028	16.015	0.02	11.815
9	0	42.066	0.028	54.248	0.029	41.608	0.029	50.046	0.005	16.085	-0.016	12.496
10	0.014	42.617	0.007	54.392	-0.002	41.62	-0.001	50.051	-0.037	19.951	-0.012	12.921
11	0.021	43.843	-0.01	54.68	-0.054	49.687	-0.021	51.259	-0.038	24.033	-0.015	13.568
12	-0.01	44.129	-0.003	54.713	-0.006	49.801	-0.005	51.325	0.023	25.458	0.015	14.179
13	-0.041	48.804	-0.017	55.492	0.01	50.07	-0.009	51.56	-0.019	26.424	-0.028	16.323
14	0.011	49.166	0.01	55.754	0.092*	73.946	0.02	52.73	0.021	27.645	0.005	16.392
15	0.02	50.273	0.021	56.989	0.015	74.586	0.021	53.95	-0.015	28.247	0.013	16.891
16	-0.025	52.019	0.023	58.457	0.041	79.388	0.019	54.973	-0.063	39.18	-0.017	17.734
17	0.046	57.838	0.009	58.69	0.009	79.639	0.018	55.862	-0.021	40.373	0.025	19.433
18	0	57.838	0.017	59.51	-0.062	90.386	0.01	56.133	-0.012	40.797	0.017	20.202
19	0.003	57.864	0.003	59.533	-0.054	98.507	-0.004	56.168	0.012	41.208	0.029	22.507
20	-0.016	58.569	-0.013	59.997	-0.056	107.22	-0.014	56.683	-0.013	41.688	-0.008	22.694
21	-0.033	61.539	-0.032	62.784	0.008	107.38	-0.026	58.539	-0.066	53.905	-0.013	23.195
22	-0.032	64.383	0.033	65.841	-0.004	107.42	0.03	61.026	-0.053	61.754	-0.016	23.876
23	0.027	66.458	-0.017	66.663	0.005	107.49	-0.011	61.353	-0.032	64.623	0.02	24.953
24	0.029	68.742	0.002	66.671	0.019	108.53	-0.001	61.356	0.017	65.453	-0.038	28.967
25	-0.004	68.78	0.006	66.782	0.013	108.97	0.016	62.081	0.016	66.2	0.012	29.364
26	0.018	69.693	0.039	70.957	0	108.97	0.047	68.37	0.033	69.254	-0.001	29.37
27	0.005	69.776	-0.02	72.095	-0.031	111.65	-0.03	70.879	-0.028	71.394	0.005	29.442
28	-0.027	71.802	0.011	72.457	-0.006	111.77	0.001	70.882	0.012	71.794	0.006	29.542
29	-0.007	71.929	0	72.457	-0.009	112.02	-0.004	70.917	-0.024	73.476	-0.024	31.215
30	0.035	75.38	0.018	73.347	0.031	114.77	0.012	71.322	0.027	75.547	-0.018	32.158
31	0.009	75.604	0.002	73.356	-0.025	116.53	-0.001	71.328	0.019	76.608	-0.002	32.171
32	-0.008	75.807	0.007	73.484	-0.021	117.77	0.003	71.35	-0.023	78.11	0.003	32.193
33	0.009	76.055	0.009	73.734	-0.002	117.78	0.017	72.148	-0.018	79.028	0.028	34.36
34	0.048	82.504	0.024	75.322	0.022	119.1	0.026	74.003	0.032	81.947	0.055*	43.018
35	-0.015	83.119	-0.047	81.618	-0.062	129.91	-0.054	82.14	-0.027	83.937	-0.006	43.119
36	-0.045	88.865	-0.028	83.88	-0.015	130.55	-0.031	84.8	-0.01	84.199	-0.048	49.568

*Significant at 1 % level **Significant at 5% level ***Significant at 10% level

	MEDIA		METAL		PHARMA		PSU BANK		PVT BANK		REALITY	
LAGS	ACF	LJUNG BOX	ACF	LJUNG BOX	ACF	LJUNG BOX	ACF	LJUNG BOX	ACF	LJUNG BOX	ACF	LJUNG BOX
1	0.066*	11.442	0.089*	22.265	0.084*	19.782	0.122*	41.498	0.096*	25.817	0.131*	40.252
2	0.03	13.791	0.045	28.005	0.038	23.706	0.012	41.898	-0.042	30.744	0.068*	51.241
3	-0.011	14.114	-0.001	28.008	-0.017	24.525	-0.007	42.018	0.006	30.859	-0.017	51.95
4	-0.031	16.56	-0.059	37.619	-0.002	24.533	-0.026	43.894	-0.028	33.022	-0.077	65.823
5	-0.033	19.401	-0.024	39.223	-0.003	24.556	-0.064	55.165	-0.066	45.251	-0.057	73.548
6	-0.019	20.333	-0.008	39.387	0	24.557	-0.033	58.128	-0.003	45.277	0.021	74.62
7	0.016	20.99	0.033	42.333	-0.003	24.579	0.01	58.407	0.021	46.497	0.05*	80.452
8	0.021	22.106	0.061*	52.544	-0.011	24.919	0.038	62.487	0.011	46.82	0.131*	120.6
9	0.026	23.827	0.041	57.335	-0.025	26.626	0.053*	70.367	0.017	47.639	0.058*	128.43
10	0.04	27.929	0.004	57.38	-0.006	26.737	0.012	70.743	0.015	48.24	-0.026	129.99
11	-0.01	28.214	-0.062	68.19	0.01	27.011	-0.033	73.747	-0.005	48.297	-0.096	151.62
12	0.003	28.237	0.046	74.001	-0.027	29.016	-0.016	74.43	-0.002	48.307	-0.003	151.63
13	0.028	30.322	0.01	74.281	0.027	31.065	-0.013	74.892	-0.023	49.757	-0.028	153.47
14	0.065*	41.424	0.031	77.019	0.001	31.069	0.019	75.941	0	49.757	0.052*	159.8
15	-0.019	42.333	0.024	78.693	-0.083	50.172	0.029	78.286	0.01	50.015	0.024	161.17
16	0.021	43.524	0.006	78.805	-0.054	58.372	0.047	84.495	0.012	50.43	0.078*	175.46
17	0.015	44.087	0.048	85.299	-0.022	59.693	0.053*	92.204	-0.013	50.928	0.053*	182.13
18	0.022	45.301	-0.008	85.466	-0.035	63.054	0.018	93.068	0.032	53.83	-0.019	182.96
19	0.001	45.303	-0.016	86.201	0.039	67.32	-0.002	93.076	0.017	54.638	-0.037	186.22
20	-0.005	45.375	0.009	86.424	0.016	68.061	0.009	93.306	-0.02	55.72	-0.026	187.8
21	0.011	45.697	0.013	86.895	0.006	68.149	-0.027	95.376	-0.032	58.654	-0.019	188.65
22	-0.016	46.408	0.012	87.312	0.013	68.634	0.015	96.012	0.035	62.059	0.008	188.81
23	0.007	46.531	-0.016	87.994	-0.009	68.879	-0.022	97.321	-0.019	63.061	0.064*	198.51
24	0.01	46.809	-0.003	88.024	0.032	71.766	0.007	97.458	-0.004	63.1	0.026	200.14
25	0.005	46.872	-0.005	88.097	-0.061	82.068	-0.008	97.647	0.017	63.933	0.008	200.29
26	-0.043	51.7	-0.013	88.582	-0.003	82.089	0.011	97.98	0.047	70.111	0.003	200.31
27	-0.016	52.385	-0.066	100.68	-0.077	98.664	-0.027	99.956	-0.007	70.263	-0.102**	225.01
28	-0.003	52.41	-0.009	100.92	0.039	102.96	0.006	100.07	0.016	71.017	-0.023	226.25
29	-0.023	53.85	-0.002	100.93	-0.039	107.23	0.014	100.59	-0.008	71.208	-0.062	235.27
30	0.008	54.014	0.032	103.73	0.073*	122.12	0.02	101.75	0.028	73.373	-0.001	235.27
31	-0.03	56.411	-0.033	106.73	-0.016	122.86	0.021	103	-0.012	73.795	-0.014	235.72
32	0.002	56.422	-0.007	106.88	0.018	123.78	0.016	103.75	-0.011	74.166	0.065*	245.73
33	0.009	56.625	-0.007	107.01	0.022	125.16	0.014	104.28	0.014	74.699	0.048	251.11
34	0.007	56.746	0.033	110.04	0.004	125.21	0	104.28	0.032	77.54	0.008	251.24
35	-0.071	70.078	-0.027	112.06	-0.017	126.02	-0.035	107.7	-0.051	84.862	-0.122**	286.97
36	0.01	70.339	0.048	118.59	0.039	130.26	-0.009	107.94	-0.045	90.452	0.005	287.03

*Significant at 1 % level **Significant at 5% level ***Significant at 10% level

ANNEXURE: 4

Kolmogorov-Smirnov Goodness of Fit Test and Analysis

TABLE 4

TIME PERIOD	SYMBOLS	PARAMETERS	OBS.	ABSOLUTE	POSITIVE	NEGATIVE	K-S-Z	P VALUE
2005-2008	NIFTY AUTO	NORMAL	746	0.149	0.084	-0.149	4.069	.000
		UNIFORM	746	0.276	0.026	-0.276	7.529	.000
2008-2016		NORMAL	2032	0.135	0.135	-0.108	6.091	.000
		UNIFORM	2032	0.187	0.187	-0.045	8.425	.000
2005-2016		NORMAL	2778	0.133	0.133	-0.101	7.028	.000
		UNIFORM	2778	0.279	0.279	-0.006	14.685	.000
2005-2008	NIFTY BANK	NORMAL	746	0.151	0.151	-0.099	4.12	.000
		UNIFORM	746	0.315	0.315	-0.016	8.617	.000
2008-2016		NORMAL	2032	0.1	0.1	-0.064	4.506	.000
		UNIFORM	2032	0.175	0.175	-0.108	7.872	.000
2005-2016		NORMAL	2778	0.067	0.067	-0.065	3.516	.000
		UNIFORM	2778	0.244	0.244	-0.008	12.877	.000
2005-2008	NIFTY ENERGY	NORMAL	746	0.154	0.154	-0.1	4.206	.000
		UNIFORM	746	0.372	0.372	-0.003	10.173	.000
2008-2016		NORMAL	2032	0.063	0.035	-0.063	2.819	.000
		UNIFORM	2032	0.343	0.098	-0.343	15.439	.000
2005-2016		NORMAL	2778	0.132	0.051	-0.132	6.932	.000
		UNIFORM	2778	0.204	0.204	-0.169	10.775	.000
2005-2008	NIFTY FINANCIAL SERVICES	NORMAL	746	0.154	0.154	-0.102	4.215	.000
		UNIFORM	746	0.314	0.314	-0.006	8.589	.000
2008-2016		NORMAL	2032	0.105	0.105	-0.067	4.722	.000
		UNIFORM	2032	0.164	0.164	-0.108	7.412	.000
2005-2016		NORMAL	2778	0.068	0.068	-0.06	3.563	.000
		UNIFORM	2778	0.225	0.225	-0.009	11.84	.000
2005-2008	NIFTY FMCG	NORMAL	746	0.128	0.057	-0.128	3.503	.000
		UNIFORM	746	0.166	0.144	-0.166	4.537	.000
2008-2016		NORMAL	2032	0.13	0.13	-0.124	5.867	.000
		UNIFORM	2032	0.126	0.126	-0.052	5.67	.000
2005-2016		NORMAL	2778	0.162	0.162	-0.113	8.532	.000
		UNIFORM	2778	0.215	0.215	-0.014	11.319	.000
2005-2008	NIFTY IT	NORMAL	746	0.069	0.057	-0.069	1.888	.000
		UNIFORM	746	0.106	0.078	-0.106	2.901	.000
2008-2016		NORMAL	2032	0.15	0.15	-0.105	6.762	.000
		UNIFORM	2032	0.147	0.147	-0.11	6.623	.000
2005-2016		NORMAL	2778	0.144	0.144	-0.094	7.564	.000
		UNIFORM	2778	0.255	0.255	-0.021	13.445	.000
2005-2008	NIFTY MEDIA	NORMAL	559	0.096	0.096	-0.086	2.278	.000
		UNIFORM	559	0.2	0.2	-0.038	4.726	.000
2008-2016		NORMAL	2032	0.057	0.057	-0.057	2.591	.000
		UNIFORM	2032	0.171	0.098	-0.171	7.711	.000
2005-2016		NORMAL	2591	0.054	0.043	-0.054	2.752	.000
		UNIFORM	2591	0.171	0.171	-0.138	8.727	.000
2005-2008	NIFTY METAL	NORMAL	746	0.155	0.155	-0.145	4.244	.000
		UNIFORM	746	0.359	0.359	-0.001	9.812	.000
2008-2016		NORMAL	2032	0.077	0.077	-0.074	3.473	.000
		UNIFORM	2032	0.152	0.152	-0.059	6.852	.000
2005-2016		NORMAL	2778	0.065	0.065	-0.064	3.404	.000
		UNIFORM	2778	0.216	0.216	-0.004	11.405	.000

2005-2008	NIFTY PHARMA	NORMAL	746	0.145	0.083	-0.145	3.959	.000
		UNIFORM	746	0.149	0.143	-0.149	4.071	.000
2008-2016		NORMAL	2032	0.16	0.16	-0.108	7.224	.000
		UNIFORM	2032	0.258	0.258	-0.001	11.645	.000
2005-2016		NORMAL	2778	0.17	0.17	-0.136	8.947	.000
		UNIFORM	2778	0.362	0.362	0.000	19.063	.000
2005-2008	NIFTY PSU BANK	NORMAL	746	0.162	0.162	-0.093	4.432	.000
		UNIFORM	746	0.331	0.331	-0.025	9.036	.000
2008-2016		NORMAL	2021	0.055	0.035	-0.055	2.468	.000
		UNIFORM	2021	0.223	0.223	-0.086	10.037	.000
2005-2016		NORMAL	2767	0.065	0.065	-0.06	3.418	.000
		UNIFORM	2767	0.248	0.248	-0.028	13.061	.000
2005-2008	NIFTY PVT BANK	NORMAL	746	0.155	0.155	-0.106	4.236	.000
		UNIFORM	746	0.307	0.307	-0.001	8.389	.000
2008-2016		NORMAL	2032	0.118	0.118	-0.088	5.32	.000
		UNIFORM	2032	0.193	0.193	-0.045	8.711	.000
2005-2016		NORMAL	2778	0.099	0.099	-0.088	5.205	.000
		UNIFORM	2778	0.264	0.264	-0.001	13.892	.000
2005-2008	NIFTY REALITY	NORMAL	312	0.144	0.144	-0.062	2.543	..000
		UNIFORM	312	0.244	0.244	-0.003	4.318	.000
2008-2016		NORMAL	2032	0.216	0.216	-0.173	9.756	.000
		UNIFORM	2032	0.541	0.541	-0.008	24.377	.000
2005-2016		NORMAL	2344	0.239	0.239	-0.206	11.577	.000
		UNIFORM	2344	0.563	0.563	-0.003	27.242	.000

ANNEXURE: 5

Runs Test and Analysis

TABLE 5A

MEAN

Symbols	Test Value	Cases< Test Value	Cases>= Test Value	Total Cases	Number of Runs	Z	P Value
AUTO	1881.0972	266	480	746	25	-25.418	0
BANK	5598.4778	437	309	746	12	-26.502	0
ENERGY	6035.0247	481	265	746	14	-26.295	0
FIN. SER.	2246.627	434	312	746	8	-26.805	0
FMCG	6035.0247	481	265	746	14	-26.295	0
IT	4243.452	360	386	746	13	-26.451	0
MEDIA	1806.914	274	285	559	12	-22.733	0
METAL	2227.7945	447	299	746	12	-26.494	0
PHARMA	2526.2486	284	462	746	18	-26.013	0
PSU BANK	1899.7963	485	261	746	14	-26.288	0
PVT BANK	2025.2295	414	332	746	10	-26.664	0
REALITY	1126.2762	189	123	312	9	-16.745	0

MEDIAN

Symbols	Test Value	Cases< Test Value	Cases>= Test Value	Total Cases	Number of Runs	Z	P Value
AUTO	1973.99	373	373	746	35	-24.84	0
BANK	4992.45	373	373	746	8	-26.818	0
ENERGY	5524.93	373	373	746	16	-26.232	0
FIN. SER	1998.51	373	373	746	4	-27.112	0
FMCG	5524.93	373	373	746	16	-26.232	0

Symbols	Test Value	Cases< Test Value	Cases>= Test Value	Total Cases	Number of Runs	Z	P Value
IT	4307.58	373	373	746	19	-26.012	0
MEDIA	1824.53	279	280	559	10	-22.902	0
METAL	1756.38	373	373	746	8	-26.818	0
PHARMA	2645.2	373	373	746	34	-24.913	0
PSU BANK	1700.66	373	373	746	22	-25.793	0
PVT BANK	1715.62	373	373	746	6	-26.965	0
REALITY	1025.62	156	156	312	18	-15.764	0

Notes: if the Z-statistic is greater than or equal to ± 1.96, then we cannot be accepted null hypothesis at 5% level of significance.

TABLE 5B

MEAN

Symbols	Test Value	Cases< Test Value	Cases>= Test Value	Total Cases	Number of Runs	Z	P Value
AUTO	4650.758	1289	743	2032	12	-44.564	0
BANK	11445.91	1203	829	2032	40	-43.298	0
ENERGY	8294.3076	997	1035	2032	69	-42.07	0
FIN. SER	4682.858	1186	846	2032	50	-42.852	0
FMCG	8294.308	997	1035	2032	69	-42.07	0
IT	7260.1974	1275	757	2032	18	-44.283	0
MEDIA	1669.117	1028	1004	2032	63	-42.337	0
METAL	2926.15	1157	875	2032	32	-43.686	0
PHARMA	6397.446	1248	784	2032	2	-45.043	0
PSU BANK	3106.8913	900	1121	2021	49	-42.805	0
PVT BANK	5468.9734	1228	804	2032	26	-43.93	0
REALITY	306.7456	1431	601	2032	18	-44.188	0

MEDIAN

Symbols	Test Value	Cases< Test Value	Cases>= Test Value	Total Cases	Number of Runs	Z	P Value
AUTO	4108.37	1016	1016	2032	32	-43.713	0
BANK	10883.03	1016	1016	2032	48	-43.003	0
ENERGY	8318.78	1016	1016	2032	73	-41.894	0
FIN. SER.	4412.1	1016	1016	2032	30	-43.802	0
FMCG	8318.78	1016	1016	2032	73	-41.894	0
IT	6521.45	1016	1016	2032	38	-43.447	0
MEDIA	1666.01	1016	1016	2032	57	-42.604	0
METAL	2772.13	1016	1016	2032	60	-42.47	0
PHARMA	5070.47	1016	1016	2032	12	-44.601	0
PSU BANK	3198.55	1010	1011	2021	61	-42.297	0
PVT BANK	4822.62	1016	1016	2032	34	-43.624	0
REALITY	239.75	1016	1016	2032	56	-42.648	0

Notes: if the Z-statistic is greater than or equal to ± 1.96, then we cannot be accepted null hypothesis at 5% level of significance

TABLE 5C

MEAN

Symbols	Test Value	Cases< Test Value	Cases>= Test Value	Total Cases	Number of Runs	Z	P Value
AUTO	3906.998	1642	1136	2778	30	-51.578	0
BANK	9875.65	1439	1339	2778	32	-51.538	0
ENERGY	7687.603	1076	1702	2778	92	-49.079	0
FIN. SER.	4028.636	1408	1370	2778	34	-51.464	0
FMCG	7687.603	1076	1702	2778	92	-49.079	0
IT	6450.085	1729	1049	2778	26	-51.708	0
MEDIA	1698.846	1357	1234	2591	56	-48.745	0
METAL	2738.615	1518	1260	2778	55	-50.649	0
PHARMA	5357.88	1814	964	2778	2	-52.676	0
PSU BANK	2781.451	1357	1410	2767	17	-52.003	0
PVT BANK	4544.196	1585	1193	2778	34	-51.439	0
REALITY	415.8299	1569	775	2344	20	-47.541	0

MEDIAN

Symbols	Test Value	Cases< Test Value	Cases>= Test Value	Total Cases	Number of Runs	Z	P Value
AUTO	3550.79	1389	1389	2778	28	-51.692	0
BANK	9696.83	1389	1389	2778	44	-51.084	0
ENERGY	8028.23	1389	1389	2778	68	-50.173	0
FIN. SER	4002.03	1389	1389	2778	44	-51.084	0
FMCG	8028.23	1389	1389	2778	68	-50.173	0
IT	5969.67	1389	1389	2778	48	-50.932	0
MEDIA	1678.15	1294	1297	2591	72	-48.121	0
METAL	2628.8	1389	1389	2778	29	-51.654	0
PHARMA	4466.28	1389	1389	2778	20	-51.995	0
PSU BANK	2853.25	1383	1384	2767	23	-51.775	0
PVT BANK	4198.27	1389	1389	2778	26	-51.767	0
REALITY	257.35	1170	1174	2344	34	-47.062	0

Notes: if the Z-statistic is greater than or equal to ± 1.96, then we cannot be accepted null hypothesis at 5% level of significance

Green Marketing in India –
A Step Towards A Safer World

Dr. Ruchi Gupta*

ABSTRACT

There has been increasing awareness in the society regarding the natural environment and the business organizations have been quick enough to catch up with the society's new concern and address it. Some business organizations have accepted environmental management systems and waste minimization, and have integrated environmental issues into all organizational activities. "*Green Marketing*" and "*Environmental Marketing*" are steps towards addressing environmental issues. "*Green marketing*" refers to holistic marketing concept wherein the production, marketing, consumption and disposal of products and services happen in a manner that is less detrimental to the environment. Over the years it has been realized by majority of consumers that their behavior had a direct impact on environment.

The objective of this paper is to study the implementation of Green Marketing initiatives by the Indian organizations and the challenges that lie before the green marketing initiators.

KEYWORD: Green Marketing, Green Products, Business organizations, Environment, Eco- friendly

INTRODUCTION

Attracting the customers, retaining and maintaining the environment is a herculean task of the marketers in the current global scenario. The consumers all over the world are concerned with the natural environment and the business organizations have begun to change their behavior in an attempt to address the new concern of the people by producing green products and emphasizing on Green Marketing. Green marketing speaks for growing market for sustainable and socially responsible products and services. This new concept truly follows the basic principle of Economics which states that "Economics is the study of how people use their limited resources to try to satisfy unlimited wants."

According to American Marketing Association (AMA), Green marketing is the marketing of products that are presumed to be environmentally safe. It refers to holistic marketing concept wherein the production, marketing, consumption and disposal of products and services happen in a manner that is less detrimental to the environment. Over the year's majority of consumers have realized that there is a direct impact of their behavior on environment. It has been observed that there has been a significant shift of preferences of the customers from traditional products to green products.

Green Marketing is the study of all efforts to consume, produce, distribute, promote, package, and reclaim products in a manner that is sensitive or responsive to ecological concerns. It is not limited to government or non-government organizations, nor is it solely an activity undertaken by consumers. Manufacturers, wholesalers, retailers, and services firms each one oftial role to play in the field of green marketing. Green marketing management is a process of planning and executing the marketing mix components in a manner that is sensitive or responsive to ecological concerns. Initially, the companies effort were focused on the recycling of products as a step towards green marketing but overtime the corporate sector have begun to consider ways to *modify inputs* to production that limit the influence of the products on the environment. The firms are now more conscience of the fact that output from the production process should be scrutinized so as to minimize the negative impact of it on climate change. Product, by-product or wastes are the outcome of the production process.

Green product have been defined by Simon (1995) as products made with reduced amounts of material, highly recyclable material, non-toxic material, do not involve animal testing, do not

* Assistant Professor, Department of Commerce, S.S.Khanna Girls' Degree College, (*a constituent college of University of Allahabad*) 179-Attarsuiya, Allahabad, Contact no: 9415021580, Email id: dr_ruchi72@rediffmail.com

73

adversely affect protected species, require less energy during production or use, or have minimal or no packaging. Nimse (2007) defined green products as those that use recyclable materials, minimises wastages, and reduce the use of water. It saves energy, have minimal packaging, and emit less toxic substances thereby contributing less towards pollution. Compared with other products, green products bring less harm to humankind and offer more long-term practical development opportunities from a social and economic perspective.

"*Green products* are recognized nationally or internationally through certification and eco-labeling. For example, the United States Environmental Protection Agency provides *Energy Star* labels for electronics and appliances which are environmentally friendly. Firms also are viewing by-products of production in novel ways. Green products are environmentally friendly products and green marketing initiatives contribute to the environment by incorporating green marketing strategies into superior value propositions for consumers.

REVIEW OF LITERATURE

According to the authors - Ottaman, (1993) and Ken Peattie, (1993) concept of green marketing is the latest buzz word and the concept of conventional marketing is out. In their research work- Azhagaiah and Ilangovan (2006), found out that the environmental issues have a significant impact on the modern society and observed the impact of green marketing and the environment protection. Thakur (2009) "Customer awareness with reference to green marketing of automobiles" an empirical research carried at Indore, concluded that in automobiles people prefer green products both in urban and rural area.. This clearly indicates that the preferences of the people are shifting to the eco-friendly products which have a positive impact on the natural environment rather than traditional products. Welling & Chavan (2010) "Analyzing the feasibility of Green Marketing in Small & Medium Enterprises", in an empirical study collected data from 114 respondents in (Suburban Mumbai) , the main purpose of their study was to find out whether the Small & Medium Enterprises believed in implementing green culture practices in the manufacturing and marketing of green products. The outcome of the study was that both the State and Central governments should take necessary steps to encourage the SME's to manufacture green products that give value to customers. Ramakrishna (2012) "Green Marketing in India: Some Eco-Issues", the researcher analyzed the Eco-issues in Green Marketing through the 4p's of green marketing mix and concluded that awareness to be created among the people about green marketing benefits and eco-friendly products and also concluded that the firms need to give more attention towards the green culture in order to survive in the tough market.

OPPORTUNITIES FOR GREEN MARKETING IN INDIAN MARKET

India is a developing economy where the dependence of the economy on agriculture still exists. Exposure to droughts, floods and other natural calamity place our in a position that restricts economic development and quality of life. Various other factors like climate change which has a direct impact on the agricultural productivity, increase water stress contribute towards raised sea level and at the same time has a negative effect on ecosystem as well as human health. Green marketing is a step towards minimizing the effect of climate change saving not only the environment but human life on earth.

Today's consumers are more sensitive towards the environment and prefer products that lessen the damage to the climate. The marketer sees this an opportunity to achieve dual object of safeguarding the environment as well as generating profits by serving the customers with the environment-friendly green products.

- **Consciousness of the customers towards environment friendly products-**

Green products, green label are the buzz word in the Indian durable market. The consumers now prefer green products to traditional products as a step towards minimizing the harm to the environment. The marketers have contributed by providing products with green label and wining a competitive edge over the non green products. The effective use of promotional tools like audio-visual aid have resulted in integrating the firms profit as well as the environmental message which in turn has enhanced the market share and the profit of the firms.

- **Regulatory requirements**

The Government has framed various regulations to safeguard the interest of the consumers and the society at large. The Laws protect the individuals against any false claim by the marketer and steps are taken against the production of harmful products and by-products which harm the environment as a whole. Various environmental licenses restrict the consumption and production of harmful goods and develop a sense of responsibility among the masses towards environment friendly products and their usage.

- **Fulfilling corporate social responsibility**

The corporate houses have to be ethical in their approach and have to contribute towards enhancing the quality of life of the people. To achieve this they have integrated their business objectives with the environmental objectives. Recycling and reuse of packaging is a step towards safeguarding the environment.

- NDTV, in partnership with car maker Toyota Kirloskar Mo-tor Pvt. Ltd launched Greenathon a 24-hour live televi-sion event to create responsiveness about environmental issues.

- Panasonic Corp. is spreading awareness about global warming with its interactive campaign a go-to-schools

- Nokia India Pvt. Ltd has encouraged consumers to dump old mobile phones and accessories, by their recycle elec-tronic waste campaign.

- **Peer pressure**

Green marketing initiatives by some niche companies have compelled the mainline competitors to adapt themselves with the changing trend of going green. Many companies take up green marketing to enhance their market share some go for having a competitive edge, which would consolidate their leadership position and their market position in the long run. For example Xerox's ‾Revive 100% Re-cycled paper was introduced a few years ago to address the introduction of recycled photocopier paper.

- **High profit and low cost of production**

An awareness and keenness to protect the environment the consumers prefer organic products. For an organic product which is environment friendly the consumers are willing to pay high prices. The firm in an attempt to minimize the waste, through technological advancement process lowers the overall cost of production. Thus, low cost of production per unit maximizes the profit margin of the firms.

INITIATIVES BY THE INDIAN COMPANIES TOWARDS IMPLEMENTING GREEN MARKETING

The business organizations in India have taken initiative towards delivering eco-friendly products and services in the last few years and are still continuing to do so. Some of the efforts taken by them are as follows:

Bharti Airtel has decided to reduce the use of diesel and grid based electricity. More over the company An-nouncement of time-bound carbon emission reduction target and renewable energy target for 2020 by end of the financial year 2012. Appointment of senior manage-ment functionary at Airtel to continue the dialogue with Greenpeace. Airtel and Greenpeace to lobby and ad-vocate for 20 % renewable energy generation target by 2020.

Century Metal Recycling Pvt Ltd (CMR) situated in Hary-ana, and it is the largest manufacturer of liquid aluminum alloys and ingots India is an organization with a large heart and is continuously looking for ways to cut down on energy consumption and carbon emissions to protect the environment.

Eco-friendly notebooks launched by HCL are HCL ME 40. HCL claims that this was India's first PVC free and eco-friendly notebook till date.

Maruti-Greening of Supply Chain-The company has remained ahead of regulatory requirements in pursuit of environment protection and energy conservation at its manufacturing facilities, and in development of products that use fewer natural resources and are environment friendly. The company's ‘Just-in-Time' philosophy adopted was the prime reason that helped the employees o excel in this direction. The company has been promoting 3R since its inception. As a result the company has not only been able to recycle 100% of treated waste water but also reduced fresh water consumption. The company has implemented rain water harvesting to recharge the aquifers. Also, recyclable packing for bought out components is being actively promoted. The company has been facilitating Environment

Management System (EMS) for its suppliers. Regular training programs are conducted for all the suppliers on EMS. Surveys are conducted to assess the vendors who need more guidance. The systems and the environmental performance of suppliers are audited.

Voltas stated the 'Green' range of air-conditioners, following which the government made it mandatory for home appliances to have energy star ratings.

The other company to launch wide range of eco-friendly desktops is **Wipro**. These products aimed to cut down e-waste in the environment. Going green–**TATA**'s new mantra -India's oldest industrial house, TATA is stepping up efforts to reduce its carbon footprint across the value chain — from manufacturing processes to distribution networks to eco-friendly consumer products. Tata Steel aims to reduce carbon dioxide emissions at its Jamshedpur plant from the current 1.8 tonne to 1.7 tonne per tonne of liquid steel made by 2012.

Tata Motors is setting up an eco-friendly showroom using natural building material for its flooring and energy- ef-ficient lights.

The **Taj** chains have created rooms which I have energy- efficient mini bars, organic bed linen and napkins made from recycled paper. But there won't be any carpets since chemicals are used to clean those. And when it comes to illumination, the rooms will have CFLs or LEDs. About 5% of the total rooms at a Taj hotel would sport a chic eco-room design. Taj Green Cove in Kovalam, which uses the waste generated at the hotel to meet its cooking requirements.

Another eco-friendly consumer product that is in the works is Indica EV, an electric car that will run on poly-mer lithium ion batteries. **Tata Motors** plans to introduce the Indica EV in select European markets this year.

IndusInd Bank- opened the country's first solar-powered ATM and has pioneered an eco-savvy change in the Indian banking sector.

Kansai Nerolac Paints Ltd., has always been committed to the welfare of society and the environment. Kansai Nerolac has worked on removing hazardous heavy metals from their paints. Lead in paints especially poses danger to human health where it can cause damage to Central Nervous System, kidney and reproductive system. Children are more prone to lead poisoning leading to lower intelligence levels and memory loss.

Philips India- Energy saving light, Medical equipments, house hold equipments.

Mahedra Reva-Electric Vehicle-"e20"-Earth friendly tractor specially designed for the farmers.

Wipro Technologies - Sustainable IT products and solutions, which help customers, achieve high productivity in energy, space and asset management through the lifecycle, Recycled plastic, Launched Green ware ranges of desktops are not only 100% recyclable, but also toxin-free.

Infosys Technologies Ltd. -Focused on green buildings, water harvesting and conservation, better transport management by encouraging car pool for its employees and increasing bio-diversity in its campuses.

HCL manufactures products that are environment friendly in all respects and are free from the use of hazardous chemicals..

ITC has been 'Carbon Positive' three years in a row (sequestering/storing twice the amount of CO_2 than the Company emits). 'Water Positive' six years in a row (creating three times more Rainwater Harvesting potential than ITC's net consumption), Close to 100% solid waste recycling.

India ranked on top of the chart depicting the countries adopting green marketing followed by U.K. and U.S. The Indian business organizations have contributed towards green marketing by designing, manufacturing green products which have minimal negative impact on the environment as a whole. The research and development department of the business organizations are continuously involved in designing new improved, eco-friendly products at reduce cost for the masses.

The moral responsibility of safeguarding our planet lies with each and every individual. It is not only the responsibility of the business houses but the consumers and the potential customers contribute by initiating the purchase of green products designed and developed by the corporate houses. They should value the green products as they are benefited and they contribute towards reducing the pollution. The corporate houses showing consciousness for the environment and producing eco-friendly green products enhance their image among the consumers, employees, investors, insurers and public

CHALLENGES FACED BY THE BUSINESS ORGANISATIONS

Though the marketers are taking every possible step to transform traditional products to green products but they face many challenges which hinder the path of smooth transformation from traditional to green products. Few challenges are as follows:

- Lack of awareness on the part of the customers as to the existence of green products is one of the biggest challenge which the corporate houses face. The customers mostly prefer the products that they have been using. Above all they are not aware about the usage of such products and the beneficial aspects.

- The materials required for the production of green products are expensive as compared to other products as they are recyclable and renewable. This limits the use of such raw materials by the business firms as this add up to their cost.

- People have a notion that green products are expensive as compared to traditional products. As a result they shy away from using them. The customers are willing to pay the premium price.

- Green products are technology driven which calls for continuous research and development. This process requires heavy amount of investment. The corporate houses sometimes find it difficult to incur such heavy expenses.

SUGGESTIONS FOR IMPLEMENT-ING GREEN MARKETING

➢ There is a need to change the mindset of the Indian customers. Along with the efforts to create awareness about green products the marketers need to educate the people regarding the benefits of using those products.

➢ A sense of responsibility had to be aroused among the people towards natural environment and the future generation.

➢ The people should be involved in the campaign towards promoting green products to the masses.

➢ The government should take initiative to make available the recycling booths within the reach of the people. An easy picking system for quick disposal for recycling

➢ The packaging should clearly specify whether it can be recycled or nor

➢ The Green Products should be made available at subsidized rates.

➢ The business organization going for Green Products should be motivated and financially promoted by the government.

Green Marketing should not be seen just as a new concept to marketing but need to be pursued with great vigor, as it has environmental and social dimensions to it. It should not overrule the economic aspect to marketing. Customers are willing to go for green products but it is the responsibility of the business organizations to enhance the products performance and gain customers loyalty even at a premium price. The role of creating awareness and imparting knowledge to the customers regarding benefits of green products lies wholly with the marketers and the government. Sooner or later, the marketers through research and development will fully explore the potential of green marketing and overcome the challenges it faces now.

REFERENCES

- Azhagaiah R.Ilangovan A. (2006), "Green Marketing and Environment Protection", Indian Journal of Marketing, Vol.XXXVI.

- Chad Holliday(2001), "Sustainable Growth, the DuPont Way", Harvard Business Review,No. 8,pp129-132.

- Chrissy Kadleck, Calif(2007), "Vineyard Cuts Environmental Impact", Waste News, August 6,2007.

- Colleen Taylor(2006), EPA Revises Energy Star, Electronic News 52, No. 44.

- H.Ramakrishna (2012),"Green Marketing in India: Some Eco-Issues", Journal Of Marketing,Vol-42,No-11, pp.11-14.

- Kotler, Philip ,Green Marketing: A Theoretical Perspective. Journal of Marketing Management, 14(6), July, pp. 641-656. |. Marketing Management - The Millennium Edition Prentice Hall of India Private Limited, New Delhi.

- Kumar Ashu (March 2012)- "Green Marketing: Opportunities and Challenges" Volume – II , (ISSN : 2250 – 1630)

- Manjunath Gundupagi- July (2013),"Green Marketing and its implementation in Indian business Organisations" –Asia Pacific Journal of Marketing & Management Review (ISSN 2319-2836)

- Modi Jatin K; Jan 2014-" Green Marketing and Sustainable Development Challenges and Opportunities"- Volume : 4- ISSN - 2249-555X

- Sanjay K. Jain & Gurmeet kaur (2004), Green Marketing: An Attitudinal and Behavioral Analysis of Indian Consumers, Global Business Review, Vol.5 no. 2 187-205. Unruh, G. And Ettenson, R. (2010, June)

- Thakur Girish and Joshi Nitin M. (2009), "An Investigation Of Customers Awareness With Reference To Green Marketing Of Automobiles", Indian Journal Of Marketing, Vol:XXXIX.

- Welling & Chavan Anupam .S. (2010), "Analyzing the Feasibility of Green Marketing in SME s", Asia-Pacific Journal of Research in Business Management, Vol-1, Issue-2.

- www.google.co

- www.greenmarketing.net/stratergic.html

- www.greenpeace.org/international

Awareness of Green Marketing and Its Influence on Buying Behavior of Consumers: Special Reference to Durable Goods

Dr. Simranjit Singh*
Prof Soniya**

ABSTRACT

Global warming, pollution and climate change are some of the problems that have become increasingly concerning issue internationally. Environmental deterioration has led to businesses changing the way in which they conduct themselves, leading to the emergence of green marketing. This Rising concern for global warming & corresponding increase in energy costs are causing consumer's to look for those products which are environment friendly. There has been a change in consumer attitudes towards lifestyle. Today most of the consumers have become environment conscious and the main challenge is to find a way how marketing can fulfill the needs of the most of the world's population for a better standard of living. To grasp the new emerging opportunities and to ensure better standard of living, the new concept –Green Marketing has emerged. Green Marketing promotes marketing of such products which are safer for the planet & people. This changing attitude of buying behaviour is forcing many firms to incorporate green processes. In this small research serve it is revealed that Indian consumers' pro-environmental concerns, knowledge of environmental issues, awareness of eco-friendly products, and educational levels affect on green buying behavior.

Keywords: Consumer Attitude; Customer's Belief and Trust; Consumer's awareness; Consumer Buying Behavior; Green Campaigns; green marketing mix; Green Brands.

INTRODUCTION

"Marketing products and services based on environmental factors or awareness. Companies involved in green marketing make decisions relating to the entire process of the company's products, such as methods of processing, packaging and distribution." (Surya & Banu, 2014)

The concept of green marketing was developed in the late 1980s and early 1990s. Green Marketing includes all those activities which generate and facilitate any exchanges intended to satisfy human wants or needs, so that the satisfaction of such wants and needs occurs, with minimum harmful impact on the natural environment. Today Consumers are more worried about environmental debasement and harmful impact of their uses of product and services on environment. The reason for such worries can be atmospheric changes, global warming and increasing air and water pollution. (Rani, Aravind & Prasad, 2014).

GREEN MARKETING

Green Marketing means manufacturing and marketing of products and services which are manufactured through green processes. According to the **American Marketing Association**, green marketing is the marketing of products that are presumed to be environmentally safe. Thus green marketing incorporates a broad range of activities, including product modification, changes to the production process, packaging changes, as well as modifying advertising. Other terms use for Green Marketing is Environmental Marketing and Ecological Marketing. Today we all face a lot of environmental problems, one of the reasons why the green marketing emerged.

Green marketing has now evolved as one of the major area of interest for marketers as it may provide competitive advantage. Green marketing will be successful only if the marketer understands the consumer behaviour. Hence it is essential to conduct a study on attitude and awareness of

* Associate Professor, DIPS Institute of Management, Jalandher. Contact No: 9815617060
** Assistant Professor,Doaba College, Jalandher and Research Scholar, I.K.G Punjab Technical University, Distt:Kapurthala. Contact No: 9988291216

customers towards green products and factors influencing the buying behaviour of customers.

ORIGIN OF GREEN MARKETING

The term Green marketing came into prominence in the late 1980s and early 1990s. The American Marketing Association (AMA) held the first workshop on " Ecological Marketing" in 1975. The proceedings of this workshops resulted in one of the first books on green marketing entitled "Ecological Marketing". The first wave of Green Marketing occurred in the 1980s. Corporate Social Responsibility (CSR) Reports started with the ice cream seller Ben & Jerry's where the financial report was supplemented by a greater view on the company's environmental impact. In 1987a document prepared by the World Commission on Environment and Development defined sustainable development as meeting " the needs of the present without compromising the ability of future generations to meet their own need", this became known as the Brundtland Report and was another step towards widespread thinking on sustainability in everyday activity. Two tangible milestones for wave 1 of green marketing came in the form of published books, both of which were called Green Marketing. They were by Ken Peattie (1992) in the United Kingdom and by Jacquelyn Ottman (1993) in the United States of America.

REVIEW OF LITERATURE

Jain & Kaur (2004) In their study make an effort to know the level of environmental awareness among Indian consumers. Indian consumers are highly concerned about environment so they take part in green communication campaigns and have information about green products. They are willing to know how the environment can be make pollution free.

Pandurangarao, Basha & Satyakumar (2011) observed that there is negative impact of manufacturing, marking, storing, and marketing of product, to the environment, by the companies and business houses. The data is collected from 200 respondents in Andhra Pradesh, which reveals that if the manufacturer of green product offer products which are eco-friendly i.e. makes no harm to environment at low rates with high quality as compare to Non Green products, consumer definitely shift to green products and sale of green products will increase.

Cherian & Jacob (2012) studied that consumer is also aware about green products and willing to give their contribution to make environment safe. Consumers from their side are trying to minimize the hazards to the environment. Knowing this fact companies and manufacturers are trying to take benefit of these potential green market industries.

Akter (2012) studied the trend in Bangladesh, the country like Bangladesh has set a good example of taking climate change benefit by adopting customer's attitude towards green products. There are several factors which attract consumers towards green market products. These are global warming, environment safety, loyalty about green product, awareness about green products, price of product and its quality. The study found that the consumer loyalty is main factor which makes consumer ready to buy green products.

Bhatia & Jain (2013) found that the companies started giving more attention to green products as the consumers also prefer green marketing products because these are eco-friendly. For example lead free paints, organic pulses, recyclable paper etc. a survey is taken on 106 respondents by making questionnaire to know the view point of consumers regarding green product. At last it concluded that there is a positive relation between the promotions

Irfan, Sumangala & D'Souza (2014) examined that the concept of green marketing is Taken differently by different companies where some companies are more responsible because they follow various types of eco-friendly process like green supply chain management, green IT, green marketing and so on. A survey is taken on 15 marketing professionals who belong to two wheelers and four wheeler manufacturing companies. It was found that product related GMMS (Green Marketing Mix Strategies) played a vital role than other GMMS, specifically with regard to price and place related GMMS.

Maheswari (2014) said that the purpose of this paper is to found that consumer beliefs and attitude on environment protection and their purchasing behavior of eco-friendly products. The study was carried out in Madhya Pradesh (India). It was found that consumer's were not aware about green products and there is a need of marketing and brands promotion to sell environment friendly products.

Diglel & Yazdanifard (2014) presents a report

that consumers are told about the fact of harmfulness of traditional products they are using and their long term use effect on environment. After knowing effects of traditional of traditional products they are convened to change to Green products. So this research aims at findings the reasons why consumers view point charging towards Green products, why companies are taking the concepts of green marketing and how it is implemented.

OBECTIVES OF THE STUDY

The following are the objectives to conduct this study:

1) To determine the extent of awareness about Green Marketing practices among the consumers of durable goods.

2) To determine the variables affecting the awareness about Green Marketing practices among the consumers of durable goods.

RESEARCH METHODOLOGY

In this paper, the study is based on secondary data which is collected from various websites, online journals and research papers from various authors.

GREEN MARKETING VARIABLES

The following are the green marketing variables and their effect on consumer buying behaviour is reviewed.

1. Eco-labeling*: Eco-labels are one of the important variables of green marketing. They are a part of packaging and they can be in the form of a piece of paper or any diagram. Labels provide knowledge about the brand product and many more information.

2. Eco-labels: are very useful for consumers as they provide knowledge about how the product is made and so consumers can take a decision whether to buy the product or not. It helps consumers to identify environment friendly products. In a study done by Daria and Sara, they found that 43% of respondents believe that eco-labelled products are good for the environment and the same percentage of respondents think that they are good for health and environment both. Only for 2% of respondents eco-labels means nothing to them. This shows that eco-labels are effective in influencing consumers. And in the same study, 56% of respondents are even willing to pay more for such products. A large number of 73% respondents believe in the credibility of eco-labeled products.

3. Eco-brands: A brand can be defined as "a name, term, sign, symbol, or design or the combination of them, intended to identify the goods and services of one seller or group of sellers and to differentiate them from those of a competitor" by American Marketing Association. A research done in western countries like USA and Germany, it is found that people are more positive towards the brands which are eco-branded.

4. Environmental Advertising: Marketers are moving towards advertising either through media or newspaper to make consumers aware about their green products or services. Growing movements for green worldwide and consumers increasing concern for environment making the marketers opt for environmental advertising. The objective of it is to influence consumers to buy the products that are harmless to the environment. Bing Zhu found in his research (done in Shanghai) that there is a need for well planned and organized design is required to carry out a green campaign. He also found that credibility plays an important role when launching the green advertisement to influence consumers to buy green products (Zhu, 2013).

5. Environmental awareness: consumers with environmental awareness can measure the cost of use and the effect of it on the society and the environment as well (Babaogul and Ozgun, 2008). India needs to raise the awareness level of consumers. Manufacturers in India have to put in extra efforts to raise the current low levels of awareness among consumers about green products (Maheshwari, 2014). Majority of respondents said that it is difficult for them to recognize the green products on the shelves and this shows the gap between efforts put to increase environmental awareness.

6. Green Product: companies innovate their products according to the needs and preferences of their consumers usually consumers tend to be concerned about the environment, so therefore companies prefer to produce products that are less harmful towards the environment. Environment friendly products tend to save money, water and other natural resources. As the products can be manufactured from reused materials or products

81

that has been used before. The marketer's role in product management includes providing product designers with market-driven trends and customer requests for green product attributes such as energy saving, organic, green chemicals, local sourcing, etc., For example, Nike is the first among the shoe companies to market itself as green. It is marketing its Air Jordan shoes as environment-friendly, as it has significantly reduced the usage of harmful glue adhesives. It has designed this variety of shoes to emphasize that it has reduced wastage and used environment-friendly materials (Dua, 2013).

7. Green Price: Among the entire green marketing mix price" is a standout, it is considered to be the factor in the green marketing mix that is most imperative and critical compared to the rest of the other factors in the green marketing mix. Not to mention that consumers are very sensitive to price changes and it easily affect consumers purchasing decision (Morel & Kwakye, 2012). Most purchasers might be willing to pay extra value if there is a self-impression of additional item value. Green marketing ought to look into visual appeal, taste, design, and performance while charging a premium price from the clients (Sharma, 2011). According to Dua,(2013) Green marketing contemplates the profit, individuals and planet in a manner that deals with the strength of workers and groups and guarantees proficient productivity.

8. Green Place: This is related to distribution gates use that deal with green products, which are proper for customers, as far as encouraging their conveyance, and to secure cycling methods leading inside natural conditions and prerequisites (N. Hashem, 2011). According to K. Sudha lakshmi & Chinnadorai, (2014) green distribution consists of two different aspects which are defined as "inner and outer", by inner viewpoint, we mean the internal environment of the company that must be a spot in which supervisors and representatives have a feeling of peacefulness other than watching the natural issues in inward techniques of the corporation and the proportionality between the inside space and the planned item (Hashem & IRifai, 2011). Because of the agreeable and acceptable behavior of the employees, consumers seem to be gravitated by it. And on the other side outer aspect is defined as the place where environmentally-friendly goods and services are placed for sale.

9. Green Promotion: There are numerous concerns among the buyers about environmental advertisement. Companies should give it a critical thought before they advertise their products, it's very important for companies to list the functions, design or uses of their products before they advertise them, this will help to avoid any misleading information about the products. According to Dua, (2012) designing the tools of promotion is what the green promotion includes. For instance, web sites, signage, material for marketing and white papers by keeping planet and individuals in mind as their main aim is to make profit. According to Sharma, (2011) green advertisement is categorized into three sorts:

- Advertisements that push a green way of life by highlighting either a service or product.
- Advertisement that present a relationship between two variables (goods and environment).
- An advertisement that addresses a corporate image of environmental obligation satisfied with them.

10. Demographics: Various researches in the past have established a relationship between demographics and green buying behaviour of consumers. It helps the green marketers to segment the market and cash the green behaviour of consumers. According to the study by Dimantopoulos and others in 2003, demographic variables were not sufficient to determine the profile of green consumers. But in the same study, it was found that women are more inclined towards the environment and they are more likely to show pro-environmental behaviours. Married ones display more pro-environmental behaviour while there is a negative relationship between pro-environmental behaviour and age (Dimantopoulos et al., 2003).

GREEN MARKETING: RULES FOR SUCCESS

In an article, Ottman (2008) described the five simple rules for green marketing which the marketer should consider for the success of their green products:

- Knowing The Customer: To sell green products to consumers, the marketer must make sure that the consumers are aware and are concerned about the issues which are attempting to address (for e.g., consumers

would not pay the premium prices for the CFC –free refrigerators until they did not know what CFC actually is and its impact on the environment). Hence, if consumers are not aware about the issue, the need to be informed about the issue first.

- Empower Consumers: Make sure that consumers feel that their buying behavior can make a difference; this is one of the main reasons why consumers buy green products.

- Be Genuine and Transparent: Marketers should be genuine and transparent about the specific environment friendly/green claims they make about their products and services. No false claims should be made about products and services.

- Buyer Assurance: Consumers need to believe that products which are bring Claimed as green products by the marketers must be able to meet the needs of consumers along with environmental benefits. Products and services claimed environmental benefits without meeting consumers' expectation may lead to failure.

- Consider Your Pricing: While charging premium prices for green products and services, the marketers need to make sure that consumer can afford the premium prices charged by them. The consumers need to feel that paying that much of a premium is worthy, as price is an important concern for employees.

SUGGESTIONS

Green marketing is still in its infancy and a lot of research is to be done on green marketing to fully explore its potential. There are some suggestion that an organizations should implement for catering challenges of green marketing and successful exploitation of green marketing.

- Consumer needs to be made more aware about the merits of Green products. The consumer needs to be educated and made aware of the environmental threats.

- Environment friendly behaviour is far and difficult to attain. Hence environmental awareness and attitudes should be created in the minds of consumers during their childhood days itself.

- It requires rigorous efforts at school level to create an attitude of environment sustainability.

- Eco clubs play an important role in creating environmental awareness amongst the future generation. So eco clubs should be there in all schools and colleges.

- Expand the consumer awareness of green products by creating effective green marketing campaigns or environmental related activities. The companies should try to more focus on the green features of the product in their marketing activities.

- Price is the attribute that consumers reflect on when making a green purchasing decision. Consumers are less likely to purchase green products if they are more expensive. So price should be reduced for the eco-friendly products.

- Companies should create ads that are more focused on green, eco-friendly image that will influence their customers purchasing decision.

Green marketing is very low on the agenda of most businesses and therefore it's still an under Therefore, effective green marketing targeted at the right audience will make a difference.

CONCLUSION

Environment can damage the way of life of human being. They have the responsibility to protect nature and environment. Usage of green product will help them to change their life style into a green one. But the awareness level on the usage of green products among the people is very limited. There is a need to educate the people on the usage of green products and on identifying the green attributes of products they use. This would help to protect the environment for the future generation.

It can be suggested that prices of the green products should be kept at an economical levels so that even an average income earner can also afford them. The biggest barrier in the purchase of green products is high prices. There is also a need to spread awareness about the labels and brands of eco-friendly products. It is required to make them aware of the eco-labels and eco-brands as they find it difficult to identify the eco-labels and eco-brands among other non green products. Environmental advertising should be done in such a way as not to disguise the consumers about the concept of green.

REFERENCES

Anvar, M. (2014). Attitudes and Purchase Behaviour of Green Products among Generation Y Consumers in South Africa. Mediterranean Journal of Social Sciences. http://doi.org/ 10.5901/mjss.2014.v5n21p183A Study of the Impact of Green Marketing Practices-309.pdf. (n.d.).

Avez, S. K. (2014). Consumer awareness on green marketing and environmental safety. ZENITH Akter, J. (2012). Consumer Attitude towards Green Marketing in Bangladesh. ASA University Review, 6(1), 158–166.International Journal of Business Economics & Management Research, 4(12), 117–126.

Bhatia, M., & Jain, A. (2013). Green marketing: A study of consumer perception and preferences in India. Electronic Green Journal, 1(36). Retrieved from https://escholarship.org /uc/item/5mc39217

Cherian, J., & Jacob, J. (2012). Green Marketing: A Study of Consumers Attitude towards Environment Friendly Products. Asian Social Science, 8(12). http://doi.org/10.5539/ ass.v8n12p117

Diglel, R. Y., & others. (2014a). Green Marketing: It s Influence on Buying .Behavior and Attitudes of the Purchasers towards Eco-Friendly Products. Global Journal of Management And Business Research, 14(7). Retrieved from http://journalofbusiness.org/index.php/ GJMBR/article/view/1562.

Gan, C., Wee, H. Y., Ozanne, L., & Kao, T.-H. (2008). Consumers purchasing behavior towards green products in New Zealand. Innovative Marketing, 4(1), 93–102.

Henion, K. E., Kinnear, T. C., & American Marketing Association (Eds.). (1976). Ecological marketing. Chicago: American Marketing Association.

Irfan, M., Sumangala, C., & Souza, L. D . (2014). Green Marketing Mix Strategies of Consumer Durables with Reference to Automobile Sector. International Journal sof Emerging Research in Management & Technology, 3(6). Retrieved from http://ermt.net/docs/papers/ Volume_3/6_June2014/V3N6-139.pdf

Jain, S. K. (2004). Green Marketing: An Attitudinal and Behavioural Analysis of Indian Consumers. Global Business Review, 5(2), 187–205. http://doi.org/10.1177/ 097215090400500203.

Pradhan/publication/275634630_FACE_DETECTION_IN_NIGHT_VISION_IMAGES_AN_APPLICATION_OF_ BPDFHE_METHODOLOGY/links/554096790cf2736761c27ed1.pdf

Rani, A. N., Aravind, J., & Prasad, T. (2014). GREEN MARKETING AND ITS IMPACT. British Journal of Marketing Studies, 2(8), 45–48.

Rath, S. P. (2012). Future Challenges of HRM In Corporations of UK In The Global Village Context.

Sen, R. A. (2014). A Study of the Impact of Green Marketing Practices on Consumer Buying Behaviour in Kolkata. International Journal of Management and Commerce Innovations ISSN 2348-7585 (Online), pp: (61-70).

Tiwari, S., Tripathi, D. M., Srivastava, U., & Yadav, P. K. (2011). Green marketing-emerging dimensions. Journal of Business Excellence, 2(1), 18.

Wadhwa, B., & Vashisht, A. (2013a). Study on Awareness Level of Retailers as Well as Consumers Towards Green Marketing. Available at SSRN 2207232. Retrieved from http://papers.ssrn.com/sol3/papers.cfm? abstract_id=2207232

Welling & Chavan Anupam. S. (2010), ˉAnalyzing the Feasibility of Green Marketing in SME s , Asia-Pacific Journal of Research in Business Management, Vol-1, Issue-2.

Websites:

https://www.academia.edu/3705206/Green_Marketing_FMCG_products

http://www.indianmba.com/Faculty_Column/FC1071/fc1071.html

New Foreign Trade Policy (2015-2020): Reviving and Stimulating India's Exports

Pratibha Giri*

ABSTRACT

The role of foreign trade is significant in the Indian economy now a days because of increasing globalisation. At the same time, the growing merchandise trade deficit, resulting in a persistently high current account deficit, has set alarm bells ringing. In the wake of declining exports, the government of the country took various measures to enhance exports in the Union Budget 2015-16. The new Foreign Trade Policy (FTP), for the period 2015-20, announced on 1 April 2015 focuses on supporting both manufacturing and services exports and improving ease of doing business. The aim of the FTP to increase India's exports to US$900 billion by 2019-20. It also provides the road map by the government to align it with the 'Make in India' and 'Digital India' programmes and to ease trade. The New FTP is significant to slice out a place for India in the global commercial world.

The paper discusses the considerations of new FTP and the current exports scenario in India. The paper also examines the mechanism for trade advancement and infrastructure adopted in the New FTP for reviving and stimulating India's Exports.

Keywords: Foreign Trade Policy (2015-20), Globalisation, India's Exports.

INTRODUCTION

Today Foreign trade plays a major part in India's economy, so much so that foreign trade policy deserves a special focus and dedicated attention as a key constituent of India's economic policies. India adopted an external placement in 1991. The steady process of liberalization has been instigated in foreign trade policy during the last twenty four years. At the beginning of the 2015-16 Fiscal Year, the Government of India released the Foreign Trade Policy (FTP) that will run till March 31, 2020. The new policy calls for the "improvement of the entire trade structure" in India. The focus of the policy will be on promotion of exports of high value products which have a strong domestic manufacturing base, including engineering goods, electronics, drugs and pharmaceuticals. It also addresses the challenges postured to the pharmaceuticals sector by NTBs in Japan and regulatory hurdles in China. A roadway policy for all exports of medicinal products will be effective from 1 April 2015. A combined programme for advancement of healthcare products and services will be shown in various regions to showcase and market India's unique strengths.

SIGNIFICANT FEATURES OF THE FOREIGN TRADE POLICY 2015-2020

The Foreign Trade Policy is largely focused on stimulating exports. This is pursued to be realised through numerous schemes intended to exempt and remit indirect taxes on inputs physically combined in the export product, import capital goods at concessional duty, accelerate services exports and emphasis on specific markets and products. The new policy attempts to combine these schemes with the specific market access openings that India has achieved through negotiations with its trading partners for various bilateral and regional trading arrangements.

- India to be made a significant participant in world trade by 2020.

- Two new schemes are announced by the Commerce Minister in Foreign Trade Policy 2015-2020. The new policy introduces two new schemes, namely "Merchandise Exports from India Scheme (MEIS)" and "Services Exports from India Scheme (SEIS)". These schemes (MEIS and SEIS) replace multiple schemes earlier in place, each with different conditions for eligibility and usage.

* Research Scholar, Department of Management Studies, Sunrise University, Alwar, Rajasthan, (India)

- Merchandize exports from India (MEIS) to promote specific services for specific Markets Foreign Trade Policy

- The 'Services Export from India Scheme' (SEIS), will benefit all services exporters in India.

- FTP would reduce export duties by 25% and give increase to domestic manufacturing.

- MEIS & SEIS incentives are to be available for SEZs also. FTP benefits from both MEIS & SEIS will be extended to units located in SEZs. MEIS and SEIS firms and service providers can now get subsidized office spaces in SEZ (Special Economic Zones), along with other benefits. With a view to enhance the Special Economic Zones, The Government has decided to extend both the incentive schemes for the promotion of goods and services to units in SEZs.

- e-Commerce of handicrafts, handlooms, books etc., eligible for benefits of MEIS. The exports under this category are eligible to get SFIS benefits. up to Rs. 25000 per consignment.

- The Exports from e-Commerce are eligible For Services Exports From India Scheme. As a measure of Digital India vision, mobile apps would be created to comfort filing of taxes and stamp duty, automatic money transfer using Internet Banking have been proposed. The procedure to upload digitally signed document by Chartered Accountant/Company Secretary/ Cost Accountant is to be developed online.

- Under MEIS, the agricultural and village industry products are to be supported across the globe at rates of 3% and 5%. Higher level of backing to be provided to processed and packaged agricultural and food items under MEIS.

- The products belonging to industries are to be supported in major markets at rates ranging from 2% to 3%.

- Under SEIS the Branding campaigns planned to promote Business services, hotel and restaurants to get rewards scrips at 3% and other specified services at 5%.

- Duty credit scrips to be freely transferable and usable for payment of customs duty, excise duty and service tax.

- Debits against scrips would be eligible for CENVAT credit or drawback also.

- The Terminology of Export House, Star Export House, Trading House, Premier Trading House certificate is changed to 1,2,3,4,5 Star Export House. Some major revamping of nomenclature and identifying have been done. For instance, Export House, Star Export House, Trading House, Star Trading House, Premier Trading House certificate has been changed to One, Two, Three, Four, Five Star Export House. The allocation of the status will now be based on US dollars, instead of Indian Rupees

- The criteria for export performance for recognition of status holder have been changed from Rupees to US dollar earnings. A new position called 'Status Holder' have been formulated, which will identify and reward those entrepreneurs who have helped India to become a major export player.

- Manufacturers who are also status holders will be enabled to self-certify their manufactured goods as originating from India. To boost Make in India vision Tax and duty on Indian manufacturers have been reduced.

- Reduced Export Obligation (EO) (75%) for domestic procurement under EPCG scheme.

- For issue of various licences Inter-ministerial consultations are to be held online now.

- There is no need to repeatedly submit physical copies of documents available on Exporter Importer Profile.

- The period of validity of SCOMET export authorisation extended from present 12 months to 24 months.

INDIA'S TRADE PERFORMANCE IN THE GLOBAL CONTEXT

Economic Outlook: World and India

The world economic outlook continues to be shrouded in uncertainty. The World Economic Outlook (WEO) of IMF, published in January 2017 indicated that world output growth is projected to grow by 3.4 per cent and 3.6 per cent respectively for 2017 and 2018 (**Table-1**).

The emerging and developing Asia which is the most dynamic in the global economy has also been affected by the global developments. In Asia,

India and China continue to be the major growth drivers. India with a growth rate of 7.6 per cent in 2015 has overtaken China's growth of 6.9 per cent. Though it is marginally lower in 2016, growth projections of India for 2017 and 2018 are noticeably higher than that of China (Figure 1). Thus, the economy of India is one bright spot of becoming one of the fastest-growing big emerging market economies in the world.

MERCHANDISE TRADE ENVIRONMENT: WORLD AND INDIA

Trade and GDP Growths: India and World

The global merchandise trade value which was growing at 8.5 per cent compound annual growth rate (CAGR) from 1990 to 2007 which was more than twice as fast as world real income, fell in 2009 as the result of the 2008 global financial crisis, rebounding sharply in 2010, basically due to the low base effect. However, since then, it has weakened and slipped to negative territory in 2015 falling by 13 percent over 2014 to US $ 16.0 trillion mainly due to fall in export prices by 15 per cent. The global trade growth was at the lowest level in 2015 since the global financial crisis, when it had fallen by 22.3 per cent in 2009 to US$ 12.6 trillion. In value terms in the first two quarters of 2016 there is a slight recovery in world trade growth though it is still in negative territory, while in the case of India greater stimulation in export growth can be seen, with 2016Q3 export growth being only marginally negative. **(Figure 2)**

The major reasons for global trade slowdown include submissive global growth which reflects lower demand; slowdown and rebalancing in China; weaker commodity prices with world energy prices dropping by 45 % in 2015 (as per the World Trade Statistical Review 2016), slowdown in investment and declining capital flows to emerging market and developing economies, rising protective measures in major markets and disturbance in growth of global value chains.

World merchandise trade volume growth which plunged sharply into negative territory in 2009 has only slowed down in 2015, but continued to be in positive territory. However India's export volume growth which also plunged into negative territory in 2008-09 has dipped marginally to negative territory in 2012 and 2015. India's trade volume growth has been generally above that of world trade growth except in one or two years **(Figure 3)**.

As per the World Bank data, the share of world merchandise trade to GDP which was 51.9 per cent in 2008 fell sharply in 2009 to 42.3 per cent following the economic crisis but bounced back quickly to 46.9 per cent in 2010 and 50.6 per cent in 2011. It declined slightly between 2012-14, before falling significantly in 2015 to 44.9 per cent. The IMF data, in 2015 shows the growth in volume of world merchandise trade at 2.7 per cent was lower than the world GDP growth of 3.2 per cent, while in 2016 the former was only 1.9 per cent compared to the 3.1 per cent of the latter.

Prospects of World Trade

As per WTO press release (September 2016) world trade volume (merchandise) is expected to grow by just 1.7 percent in 2016 which is well below its April forecast of 2.8 per cent and the lowest growth since the 2009 financial crisis. The WTO has however pointed out that certain trade related indicators have improved, including export orders and container port throughput, but overall momentum in trade remains weak. In 2017, trade volume is expected to grow by around 1.8 per cent to 3.1 per cent. According to IMF's WEO Update, January 2017, world trade (goods & services) volume growth is projected at 3.8 per cent in 2017 and the projection for 2018 is still better at 4.1 per cent. **(Table 2)**

Composition and Sectoral Performance of Exports

The composition of India's exports has changed significantly over time with the share of petroleum products in India's export basket increasing dramatically from about 2 per cent in 1993 to as high as 18 percent in 2010 with the growth of private sector oil refineries. With the fall in international crude oil prices, the exports of petroleum & petroleum products fell by 46.2 per cent to US$ 30.6 billion in 2015-16 resulting in a fall in the share of this sector to 11.7 per cent from the 18.3 per cent in 2014-15. Engineering goods is the topmost sector of India's exports with 22.4 per cent share in total exports of India followed by gems & jewellery (15.0%), textiles & allied products (13.7%), chemicals & related products (12.3%), petroleum crude & products (11.7%) and Agri & allied products (9.9%). The share of these

six top exports constitutes 85 per cent of India's total exports in 2015-16.

Many export items/sectors have moved from negative export growth zone in 2015-16 to positive export growth zone in 2016-17 (April-December). Some major export sectors/ products of India which registered positive growth in 2016-17 (April-December) are Gems and jewellery (12.9%), marine products (21.0%) chemicals and related products (1.7%), electronic goods (1.5%), ores and minerals (37.7%) and Engineering goods (2.8%) **(Table-4)**.

Direction of Exports

There has been significant market diversification in India's exports. Region-wise, while India's exports to Europe and America have declined, its exports to Asia and Africa have increased. India is better placed in the diversification of export destinations in 2015 as concentration of exports to its top ten export destinations is 50.6% as compared to top ten leading export countries of World like Hong Kong (81.2%), Japan (70.6%), Netherlands (68.0%), Republic of Korea (66.8%), UK (64.5%), USA (63.6%), Germany (59.8%), China (59.1%), France (60.0%) and Italy (57.3%).

The share of developing market economies in India's exports increased from 43 per cent in 2008 to 48 per cent in 2015 with the share of developed market economies declining from 56 per cent to 52 per cent. However there were variations in the composition of India's exports within developed and developing regions. The export share of Europe in India's total exports which was at 21.5 per cent in 2009-10 declined to 19.2 per cent in 2015-16 and the share of America increased to 20.1 per cent in 2015-16 from 15.0 per cent in 2009-10. The share of the USA increased from 10.9 per cent to 15.4 per cent in the above period. The share of India's exports to African countries increased from 7.5 per cent in 2009-10 to 9.5 per cent in 2015-16. However, the share of Asia has declined from 52.2 per cent in 2009-10 to 48.7 per cent in 2015-16. In Asia, the share of West Asia declined from 20.2 per cent in 2009-10 to 18.9 per cent in 2015- 16, whereas the share of North East Asia declined from 16.2 per cent to 11.8 per cent mainly due to China's share in total exports of India declining from 6.5 per cent to 3.4 per cent. The share of ASEAN declined marginally from 10.1 per cent to 9.6 per cent in the above mentioned period **(Figure 4)**.

In 2015-16, India's exports declined to all major regions due to fall in international commodity prices and weak global demand. While growth of total exports fell by 15.6 per cent in 2015-16 as compared to 1.3 per cent in 2014-15, India's exports to major regions like Europe, Africa, America and Asia declined by 10.4 per cent, 23.7 per cent,

10.4 per cent and 17.2 per cent respectively in 2015-16. Exports to African markets suffered the most. This also resulted in a 9.8 per cent fall in its share in 2015-16 over 2014-15. **(Figure 5)**

MECHANISMS FOR TRADE PROMOTION AND INFRASTRUCTURE IN INDIA

The Government is committed to transmuting India into a developed and exporting hub. This is possible only if India's products are world class and of a standard acceptable in the most judicious markets.

Various instruments and schemes are used for trade advancement such as schemes providing financial assistance for market access and development through buyer-seller meets, trade fairs, agreements and seminars. In addition there are a number of export promotion councils responsible for the promotion and development of the country's exports.

The MAI & MDA Schemes

The Market Access Initiative (MAI) scheme is an umbrella instrument for supporting trade promotion initiatives. The scheme, which was launched in 2003, has been revised from time to time. The activities which are supported under the scheme broadly include the organization of exhibitions, buyer seller meets, seminars, conferences and conventions; supporting participation in established exhibitions; supporting brochures, catalogues and other such literature; supporting registration and specific requirements in some sectors such as the pharmaceutical sector; and supporting studies with the specific objective of facilitating a better understanding of commodities and markets. The present allocation for the MAI scheme is inadequate for the enormous opportunities which exist and the promotional efforts that are required. Therefore, efforts will be required towards augmenting resources both within and outside the

Government.

The financial assistance is provided for a range of export promotion activities implemented by Export Promotion Councils and Trade Promotion Organizations under the Market Development Assistance (MDA) Scheme. The scheme will continue for the duration of this policy.

MICE

The meetings, incentives, conventions, exhibitions (MICE) space has emerged as a major opportunity for a fast emerging economy like India. In an estimated business of USD 300 billion in this area, India occupies only 1.2 percent of the global convention business and is ranked 25th in delegate attendance. While there could be several reasons for such poor participation in MICE activities, the lack of convention infrastructure is one of the major bottlenecks. Convention tourism clearly aligns with India's focus on improving its tourism footfalls. Under this policy efforts will be made to support convention infrastructure in all major tier 1 and tier 2 States in a graduated manner over a period of time. A major convention-cum-exhibition centre will be developed at the iconic Pragati Maidan in Delhi replacing the present infrastructure.

The India Trade Promotion Organisation (ITPO) is making a significant contribution both in terms of providing an exposure to Indian industry and business on new opportunities and offering a better ecosystem for international exhibitions and conferences. ITPO s annual work plan will have to align with the priorities of this policy e.g. by devising new opportunities for priority sectors and markets through differentiated mechanisms if required and tailoring participation in external fairs in accordance with the new priorities.

It is essential for India to develop a coordinated national response and strategy to meet the challenges of standards and conformity assessment and promote its presence in the international market. **The way forward in this direction must address the following aspects:**

(i) Legislative and institutional reforms:

    a) To enable a range of options for regulators for conformity assessment procedures to provide for use of independent, third party Conformity Assessment Bodies (CABs) (inspection bodies, certification bodies and laboratories) for the purpose of administering the regulations.

    b) For low risk items there should be provision for conformity assessment through Supplier s Declaration of Conformity (SDoC) procedure.

    c) SDoC works well in combination with a strong Product Liability Law and market surveillance both of which are weak in India. A new legal framework on Product Liability is required.

(ii) Each ministry should review its technical regulations/ standards for various products to identify the gaps vis-à-vis the international standards and lay down realistic time frames for bridging these gaps and evolving good regulatory practices.

(iii) The internationally accepted system is "Certified Once, Accepted Everywhere" through accreditation, which recognizes the competence of testing and calibration laboratories, product certification bodies, quality system certification bodies and inspection bodies. This will result in minimising re-testing and re-certification thereby reducing costs and market access delays and eliminating non-tariff barriers to trade. A policy must be evolved in this regard.

(iv) Promoting awareness about standards, regulations and conformity assessment procedures of India's trading partners and gaps with reference to global benchmarks is necessary.

(v) Participation of agencies and industry in international standard setting processes can ensure that international standards reflect country-specific production and trade interests and this should be promoted by providing the requisite funding.

(vi) Funding will also be required for enhancing the attractiveness of Indian enterprises especially SMEs through quality and output improvements and supporting the growth of mechanisms to assist them in accessing global subcontracting and supply chains and networks.

CONCLUSION

Today, nations, businesses and people are competing for the same global share of trade, investment, business and tourism in the backdrop of a rapidly changing global context, fragile global

economic recovery and newer and faster technologies. Many countries are allocating huge resources for brand promotion.

The new foreign trade policy is no doubt a unique attempt to boost India's external sector and increase its share in world exports to 3.5 per cent by 2020 from 2 per cent in 2013-14. It also targets to increase India's exports to $900 billion by 2020

from $312 billion in 2013-14. Another key feature of the policy is that it will not be re-examined annually and will be reviewed only after two and half years to provide a steady policy framework for exporters. Thus, the new Export Import policy not only provides the much-needed boost to Indian exporters but also re-affirms the fact that trade policy reforms constitutes the core of the country's economic reforms.

BIBLIOGRAPHY

Anwer, M.S. and Sampath, R.K. (2000): Exports and Economic Growth, Indian Economic Journal, vol. 47, pp. 79-88.

Bergsten, Fred C. (2015) 'India's Rise: A Strategy for Trade led growth', Trade and investment Policy watch, Petersons institute for International Economics, PIIE Briefing 15-4, September.

Bhat, S.K. (1995): Export and Economic Growth in India, Artha Vijana, vol. 37, pp. 350-58.

Bhat, T.P (2011) Structural Changes in India's Foreign Trade, Institute for Studies in Industrial Development, A Study Prepared as a Part of a Research Programme Sponsored by Indian Council of Social Science Research (ICSSR) New Delhi

Balassa, B. 1978. 'Exports and economic growth: Further evidence' Journal of Development Economics 5(2):181-89.

Balassa, B. 1985. 'Exports, policy choices, and economic growth in developing countries after the 1973 oil shock' Journal of Development Economics 4 (1):23-35.

CARE (2015) India's Foreign Trade Reports, CARE Ratings

Dean, J.M., Desai, S. and Riedel, J. (1994): Trade Policy Reforms in Developing Countries since 1985: A Review of the Evidence', World Bank Discussion Papers 267.

DIPP (2016), Quarterly Fact Sheet Fact Sheet on Foreign Direct Investment (FDI) From April, 2000 to September, 2016. http://dipp.nic.in/English/Publications/FDI_ Statistics/2016/FDI_FactSheet_April_Sep_2016.pdf

Dr. H.A.C. Prasad (2012), Emerging Global Economic Situation: Its impact on India's Trade and some Policy Issues, Working Paper 12/2012-DEA. http://dea.gov.in/sites/ default/files/EGES_impact_indiatrade_ policyissue.pdf

Dr. H. A. C. Prasad, Dr. R. Sathish, and S.S.Singh (2014), India's Merchandise Exports: Some Important Issues and Policy Suggestions, Working Paper 03/2014-DEA. http:// dea.gov.in/sites/default/files/Working%20Paper%20on%20Trade%2028082014.pdf

Giri Pratibha (2017) "Contribution of Foreign Trade Policy (2015-2020) in enhancing India's export competitiveness" *International Journal of Trade and Global Business Perspectives* (A Referred Quarterly Journal) April- June, 2017 ISSN: 2319-9059 (PRINT) ISSN: 2319-9067 (ONLINE).

Giri Pratibha (2017) "Implications of foreign trade policy (2015-2020) in boosting India's Exports: A boost to make in India Initiative" 2nd International Conference on Recent Innovations in Management & Engineering (ICRIME-17) at IIMT College of Engineering Greater Noida ISBN-978-93-86171-50-4

Gupta, Reeti (2011) An Exploratory Study of India's Foreign Trade Policy Dynamics Since 1991, HSB Research Review. 1(1), 10-19, January-June 2011

Verma Reeva and Giri Pratibha (2015)"Exim bank: Aggrandizing Bilateral Trade relations with ECOWAS countries" International Journal of Trade & Global Business perspectives (A Referred Quarterly Journal) July-Sept, 2015 issue Volume 4 no3 pp (1887-1894)

Giri Pratibha , Reeva Verma and Prithvi Karinje (2014)"EXIM Bank initiatives in facilitating International Trade in India(A study with special reference to SAARC Countries)" in International Conference of Management & Behavioural Sciences ISSN(P)2277-3177,ISSN(O) 2319-9067 2014,Vol 4 No.3.

IMF, (2016) World Economic Outlook (WEO), October 2016 Edition. (http://www.imf. org/external/pubs/ft/weo/2016/02/)

Ministry of Finance (2003), Report of Task Force on Project Exports submitted to Prime

Minister's Office, January 2003. (http://finmin.nic.in/reports/ProExport.pdf)

Ministry of Finance (2014), Economic Survey 2013-14. http://indiabudget.nic.in/

budget2014-2015/es2013-14/echap-07.pdf (accessed on March 18, 2017)

Verma Reeva and Giri Pratibha (2013) "Exim Bank: An Exertion for Improving Inclusion for Finance to Women-Owned Business" in a book on Women Empowerment and Gender Equality Development published by New Generation Press, New Delhi(ISBN 978-93-80310-78-7).

https://www.ibef.org/economy/trade-and-external-sector(accessed on May18, 2017)

http://www.indiainfoline.com/article/print/news-top-story/economics-for-everyone-indias-foreign-trade-policy-ftp-exim-115052500326_1.html(accessed on April 28, 2017)

http://www.exim-policy.com/(accessed on April 18, 2017)

http://iksa.in/gs3/economic-survey-2016-highlights-and-pdf-download/3972/f (accessed on December 19, 2016)

http://www.indiainfoline.com/article/news-top-story/economics-for-everyone-indias-foreign-trade-policy-ftp-exim-115052500326_1.html http://www.ipekpp.com/admin/upload_files/Report_3_54_The_2552084041.pdf"India Budget -2014-15, "International Trade".

http://indiabudget.nic.in/budget2014- 2015/es2013-14/echap-07.pdf (accessed on December 20, 2016)

Institute of Chartered Accountant, India (2008), Handbook of Foreign Trade Policy and Guide to Export and Import, Sahitya Bhawan Publications: Agra http://nbaindia.org/uploaded/Biodiversityindia/Legal/6.%20Import%20and%20Export% 20(Control)%20Act,%201947.pdf (accessed on December 19, 2016)

http://indiainbusiness.nic.in/newdesign/index.php?param=industryservices_landing/367/2 (accessed on March 18, 2017)

Government of India, Ministry of Finance, Press Information Bureau, February 1, 2017. http://pib.nic.in/newsite/PrintRelease.aspx?relid=157859 (accessed on February 28, 2017)

http://dgft.gov.in/exim/2000/policy/ftp-plcontent-1011.htm 8. Indian Institute of Foreign Trade (2011) Foreign Trade Review, Vol. Xlvi July September 2011 No. 2. 9. Kaur, A. (2012) Pattern Of India's Foreign Trade In Pre And Post Reform Era: An Empirical Investigation, International Journal of Advancements in Research and Technology, Volume 1, Issue 5, ISSN 2278-7763

http://dgft.gov.in/exim/2000/policy/ftp-plcontent-1011.htm (accessed on September 18, 2017)

http://www.drishtiias.com/upsc-exam-gs-resources-Foreign-Trade-Policy-2015-2020(accessed on October 28, 2017)

http://www.smetimes.in/smetimes/news/top-stories/2015/Apr/07/new-foreign-trade-policy-and-india-s-competitiveness632100.html(accessed on November 18, 2017)

http://www.orfonline.org/research/new-foreign-trade-policy-going-for-the-big-push/ (accessed on March 18, 2017)

Table 1. Overview of the World Economic Outlook Projections

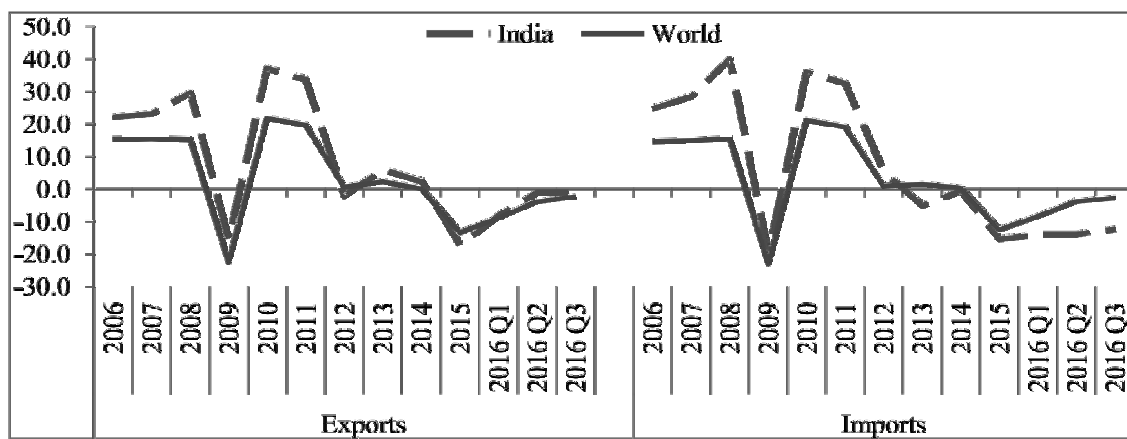|	Actuals		Projections		Diff. from Oct 2016	
	2015	2016	2017	2018		
World Output	3.2	3.1	3.4	3.6	0.0	0.0
Advanced Economies	2.1	1.6	1.9	2.0	0.1	0.2
United States	2.6	1.6	2.3	2.5	0.1	0.4
Euro Area	2.0	1.7	1.6	1.6	0.1	0.0
Emerging Mkt. and DevelopingEconomies (EMDEs)	4.1	4.1	4.5	4.8	-0.1	0.0
Emerging and Developing Asia	6.7	6.3	6.4	6.3	0.1	0.0
China	6.9	6.7	6.5	6.0	0.3	0.0
India	7.6	6.6	7.2	7.7	-0.4	0.0

Source: IMF, World Economic Outlook Update, January 2017.

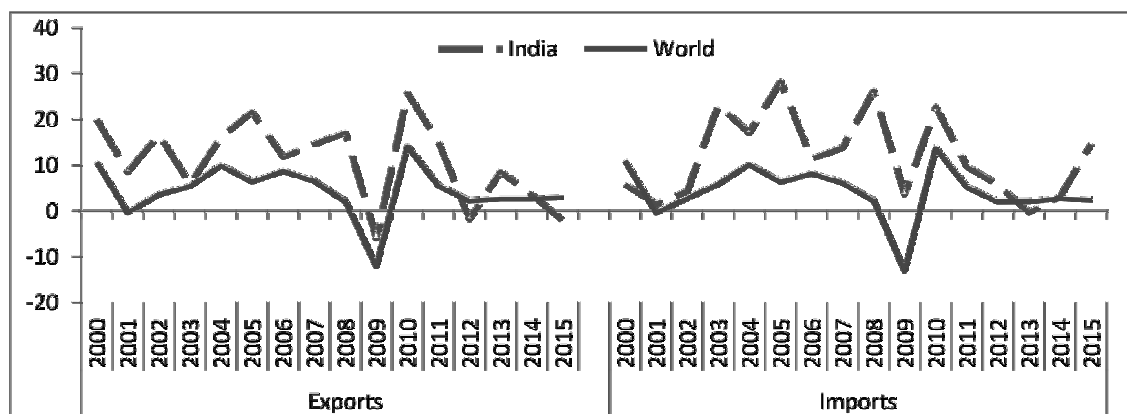**Figure 1: India, China and World GDP Growth Rate since 1991 (per cent)**
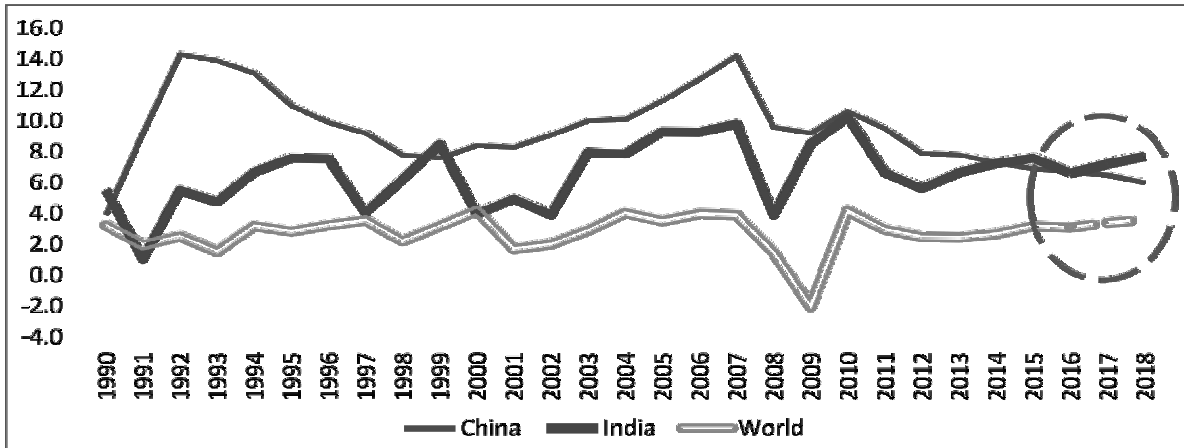
Source: Based on IMF's WEO January 2017 data; Note: 2017 onwards are Projections

Figure 2: World and India: Export and Import Value Growth -2006 to 2015

Source: Based on WTO data

Figure 3: World and India: Merchandise Export and Import Volume Growth (%)

Source: Based on WTO data

Table 2. Overview of the World Trade (Goods & Services) Projections

	Actuals		Projections		Diff. from Oct 2016	
	2015	2016	2017	2018	2017	2018
World Trade Volume	2.7	1.9	3.8	4.1	0.0	-0.1
Advanced Economies	4.0	2.0	3.6	3.8	-0.1	-0.3
EMDEs	0.3	1.9	4.0	4.7	0.1	0.4

Source: IMF, World Economic Outlook Update January 2017. Note: EMDEs-Emerging Markets and Developing Economies.

Table 3: Share in Total Exports

Rank	Group/Items	2010-11	2014-15	2015-16
1	Engineering goods	19.6	22.9	22.4
2	Gems & jewellery	17.0	13.3	15.0
3	Textiles & allied products	11.5	12.0	13.7
4	Chemicals & related Products	8.3	10.2	12.3
5	Petroleum crude & products	14.6	18.3	11.7
6	Agri & allied products incl. Plantations	7.7	10.2	9.9
7	Plastic & rubber articles	1.9	2.1	2.4
8	Electronics items	3.3	1.9	2.2
9	Leather & leather manufactures	1.6	2.0	2.1
10	Marine products	1.0	1.8	1.8
11	Ceramic products & glassware	1.0	1.3	1.5
12	Ores & minerals	2.8	0.8	0.8

Source: D/oCommerce,M/oCommerce&Industry

Table 4: Exports: Sectoral Performance of Some Important Items

|	2015-16	2016-17 (Apr-Dec) (P)
Positive Growth	Chemicals & Related Products {1.3}	Marine products {21.0}Ores and minerals {37.7} Gems and Jewellery {12.9} Electronics Items {1.5} Chemicals and related products {1.7} Engineering goods {2.8}
Negative Growth	Textiles & Allied Products {-2.4}Gems & Jewellery {-4.4} Electronics Items {-5.2} Leather & Leather Manufactures {-10.4} Marine Products {-13.6} Engineering Goods {-16.8} Ores & Minerals {-18.1} Agriculture & Allied Products {-18.4} Petroleum Crude & Products {-46.4}	Textiles & Allied Products {-4.7}Leather & Leather Manufactures {-4.6} Agriculture and allied products {-4.0} Petroleum Crude & Products {-7.7}

Source: DGCI&S data. Note: Figures in bracket { } indicates growth rate y-o-y;
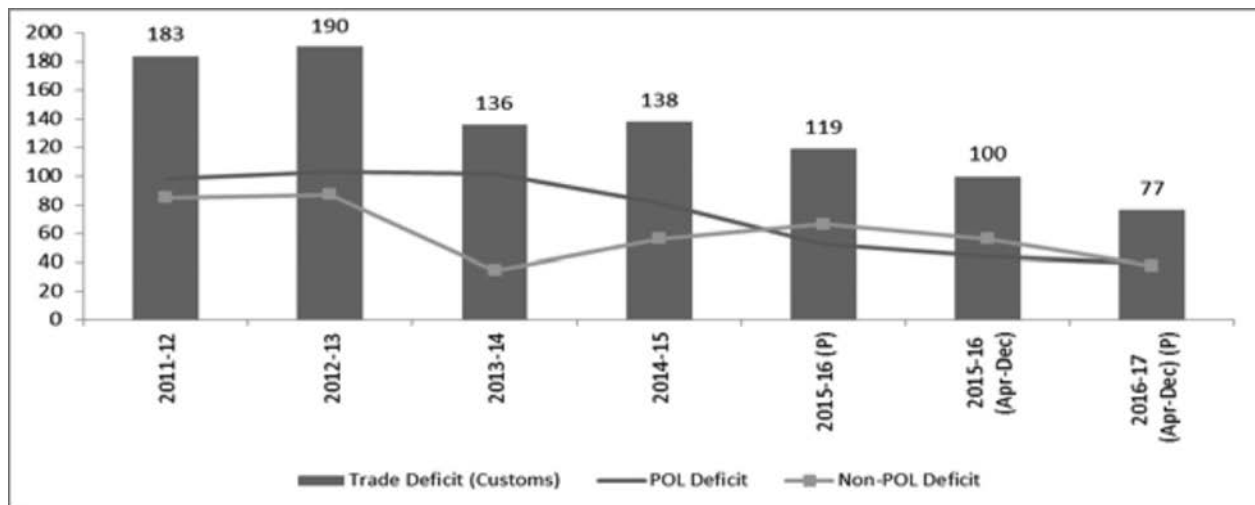
Figure 4: Share in India's Exports by Region (Y-oY)
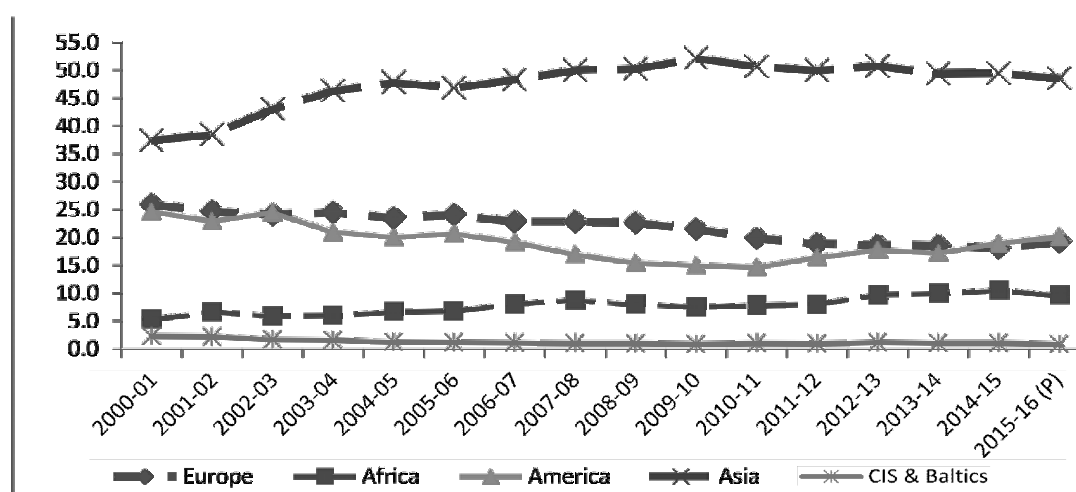
Source: Based on DGCI&S data

Figure 5: Region-wise Growth rate of Exports of India
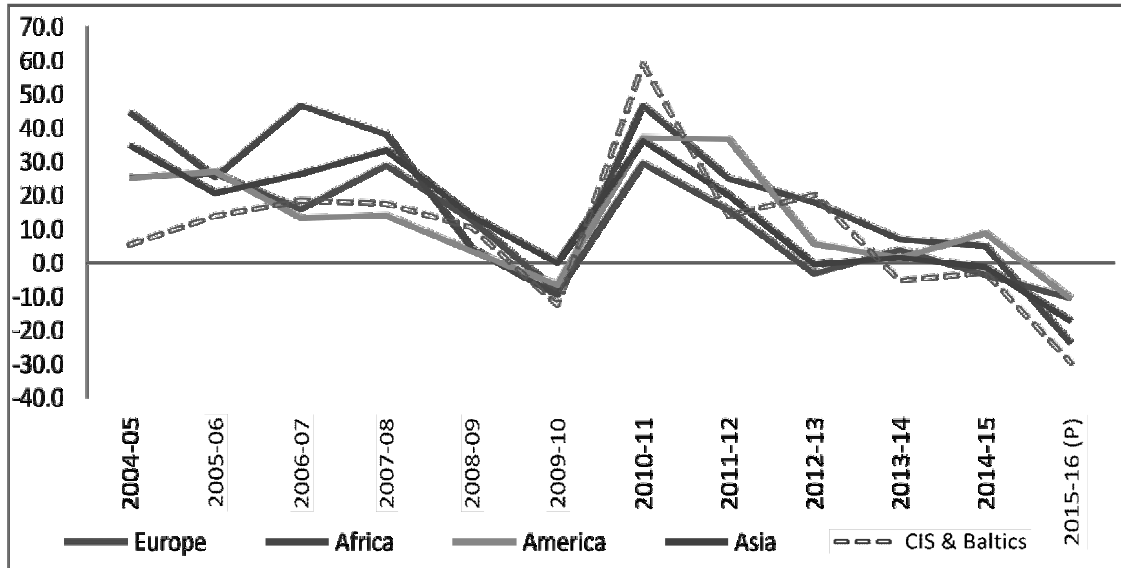
Source: Based on DGCI&S data

Figure 6: India's Trade Deficit (US$ billion)

Source: Based on data of DGCI&S

Table 7: India's bilateral trade deficit (US $ million)

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
USA	5245	11365	10956	16653	20650	18558
UAE	1069	-843	-2822	1501	6888	10844
Hong Kong	905	2515	4372	5410	8028	6041
UK	1915	1498	2356	3777	4336	3665
Singapore	2686	8518	6133	5749	2685	412
China	-29273	-36570	-38669	-36168	-48456	-52693
Switzerland	-24111	-34146	-31048	-17514	-21064	-18322
Saudi Arab	-15701	-26424	-24212	-24185	-16945	-13927
Indonesia	-4218	-8161	-9548	-9898	-10961	-10312
Iraq	-8330	-18155	-17969	-17603	-13418	-9833
Total trade deficit	-119954	-183356	-190336	-135794	-137695	-118717

Source: Based on DGCI&S Data

Financial Inclusion – Present Status in Preview of PMJDY

Mr. Mukesh Kumar Sharma*
Mr. Sanjeev Kumar**

ABSTRACT

India got independence in 1947 but poverty, unemployment and exclusion is continuously dominating and hampering India's economic growth. A vast majority of the population, especially in rural areas is excluded from the easy access to finance. Access to safe, easy and affordable credit and other financial services by the poor, vulnerable groups, disadvantaged areas and lagging sectors is recognized as a precondition for accelerating growth, reducing income disparities and poverty. The Government of India and the Reserve Bank of India (RBI) have been making concentrated efforts periodically to overcome such vicious problems by promoting Financial Inclusion, being one of the important national objectives of the country. Since first phase of nationalization (1969) GOI continuously promoting financial inclusion through self-help groups, no frills account, simplification of KYC, Business correspondents etc., but no palpable effect could be seen in the plight of these financially vulnerable people. To mitigate this long drawn financial sufferings, Prime Minister Narendra Modi announced a new scheme in his Independence Day speech on 15th Aug 2014 called Pradhan Mantri Jan Dhan Yojana (PMJDY). Mission of PMJDY is to ensure easy access of financial services for the excluded section i.e. weaker section and the low income group. This effort will certainly go a long way in promoting economic growth and reducing poverty, while mitigating systematic risk and maintaining financial stability .This article focuses on the RBI, GoI initiatives, current status and future prospects of financial inclusion in India on the basis of facts and data provided by various secondary sources. It is concluded that financial inclusion shows positive and valuable changes because of PMJDY.

Key words: PMJDY, Financial Inclusion, Narendra Modi, KYC, RBI, Financial Services

INTRODUCTION

India is among the world's most efficient financial markets in terms of fundamentals, technology, regulation and systems. It also has one of the highest saving rates in the world. Despite of it, Poverty and exclusion continue to dominate socio-economic and political discourse in India. A vast majority of the population, especially in rural areas is excluded from the easy access to finance. Access to safe, easy and affordable credit and other financial services by the poor, vulnerable groups, disadvantaged areas and lagging sectors is recognized as a precondition for accelerating growth, reducing income disparities and poverty. Access to a well-functioning financial system by creating equal opportunities, enables economically and socially excluded people to integrate better into the mainstream and actively contribute to development and protects themselves against economic shocks crisis .The Government of India and the Reserve Bank of India have been making concentrated efforts periodically to overcome such vicious problems by promoting Financial Inclusion, being one of the important national objectives of the country. Some of the major efforts have been taken in the past six decades such as: Nationalization of banks (1969and1980), Building up of Robust Branch Network of Scheduled Commercial Banks, Co-operatives and Regional Rural Banks (RRBs-1975-76), Introduction of Mandated Priority Sector Lending Targets, Lead Bank Schemes (1969), Formation of SHGs (1989-90), and Permitting BCs, no frills account, etc. The fundamental objective of all these initiatives is to reach to those sections of Indian population who have been financially excluded.

To mitigate this long drawn financial sufferings, Prime Minister Narendra Modi announced a new scheme in his Independence Day speech on 15th Aug 2014 called Pradhan Mantri Jan Dhan Yojana (PMJDY). Mission of PMJDY is to ensure easy access of financial services for the excluded section i.e. weaker section and the low income

---

* Assistant Professor, Department of Business Management & Commerce, Mandsaur University
** Research Scholar, Raffles University, Neemrana.

group. This effort will certainly go a long way in promoting economic growth and reducing poverty, while mitigating systematic risk and maintaining financial stability
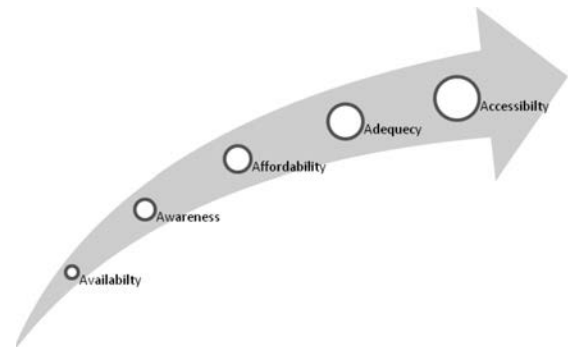
WHY FINANCIAL INCLUSION

Nowadays, enhancement of financial inclusion is the main objective of every country's financial policy. India has adopted inclusive growth as part of its economic planning. It was in fact that the 11th five year plan (2007-2012) which emphasized on inclusive growth and enables the vulnerable groups of the society to actively participate in the economic development of the country. This could be made possible through successful implementation of financial inclusion which involves the delivery of financial services at an affordable cost to the vast segments of low income and disadvantaged groups. The objective is to develop a model of an inclusive financial system which will support full participation of the neglected and unprivileged section of the society in the financial system.

Financial Inclusion has become a subject of considerable interest among policy makers, researchers and other stakeholders in recent times. The importance of financial inclusion for economic as well as social development has been well recognized across the nations by both economically rich and fiscally poor countries. It has also been recognized that access to financial services and education has a critical role in reducing abject poverty, boosting shared prosperity, supporting inclusive and sustainable development. It is therefore, there is no surprise that governments around the world are interested in finding effective approaches to improve the level of financial literacy amongst their population and that many are in the process of creating and implementing a national strategy for financial education to provide learning opportunities throughout a person's life.

Financial Inclusion is a great weapon to overcome the financial backwardness as well as the establishment of good governance .It broadens the resource base of the financial system by developing a culture of savings among large segment of rural population and plays an essential role in the process of economic development and furthermore, by bringing low income groups within the parameter of formal banking sector. It protects

their financial wealth and other resources in difficult circumstances. Financial Inclusion also mitigates the exploitation of vulnerable sections by the usurious money- lenders by facilitating easy access to formal credit. The objectives of financial inclusion can be achieved through 5 A's which are:

OBJECTIVES

● To observe the dynamics of financial inclusion in India.

● To study the changing trends in financial inclusion with special reference to Pradhan Mantri Jan Dhan Yojana.

SOURCES OF DATA COLLECTION

The study is based on secondary data which was collected from the Govt. web sources, RBI reports, NABARD reports, SEBI, IBA Bulletin, PMJDY websites, journals, magazines, banks web sources.

Pradhan Mantri Jan Dhan Yojana (PMJDY)

PMJDYis a scheme for comprehensive Financial Inclusion launched by the Prime Minister of India, Narendra Modi on 28 August 2014' announced on his first Independence Day speech on 15 August 2014, (PMJDY) is to be run by Department of Financial Services, Ministry of Finance.

The objective of "Pradhan Mantri Jan-Dhan Yojana (PMJDY)" is ensuring access to various financial services like availability of basic savings bank account, access to need based credit, remittances facility, insurance and pension to the excluded sections i.e. weaker sections & low income groups.

PMJDY is a National Mission on Financial Inclusion encompassing an integrated approach to bring about comprehensive financial inclusion of all the households in the country. The plan envisages universal access to banking facilities

with at least one basic bank account for every household, a strong financial literacy drive, access to credit, insurance and pension facility. In addition to this, the beneficiaries would get Ru Pay Debit card having inbuilt accident insurance cover of Rs.100000/-. The plan also envisages channeling all Government benefits (from Centre / State / Local Body) to the bank accounts of the beneficiaries and pushing the Direct Benefits Transfer (DBT) scheme of the Union Government. The technological issues like poor connectivity, on-line transactions will be addressed. Mobile transactions through telecom operators and their established centres as Cash Out Points are also planned to be used for Financial Inclusion under the Scheme. An effort is also being made to reach out to the youth of this country to participate in this Mission Mode Programme. The main objectives pillars of this scheme include:

- To achieve universal access to banking facilities.
- Providing basic bank accounts with overdraft facility and RuPay Debit card to all households. A robust financial literacy programme.
- Creation of a credit guarantee fund to cover the defaults on the overdraft accounts.
- To provide micro- insurance to all willing and eligible persons.
- To provide for a way to implement unorganized sector pension schemes.

Special Benefits under PMJDY Scheme

- Interest on deposit.
- Accidental insurance cover of Rs.1.00 lacks
- No minimum balance required.
- Life insurance cover of Rs.30,000/-
- Easy Transfer of money across India
- Beneficiaries of Government Schemes will get Direct Benefit Transfer in their accounts.
- After satisfactory operation of the account for 6 months, an overdraft facility will be permitted
- Access to Pension, insurance products.
- Accidental Insurance Cover, Ru Pay Debit Card must be used at least once in 45 days.

Action Plan for PMJDY

There are two phases of this scheme in which the objective of financial inclusion of the poor People

are to be achieved.

Phase-I of PMJDY

The first phase of this scheme starts from August 15, 2014 to August 14, 2015 which envisages the following:

- All households across the country have access to banking facilities with at least one Basic Bank Accounts with a bank branch or a fixed point Business Correspondent (BC).
- All households have Ru Pay Debit Card with Rs. 1 lakh inbuilt accident insurance coverage.
- If bank account is operated satisfactorily for 6 months, Rs. 5000 overdraft facility will be granted to only Adhaar enabled accounts.
- Direct Benefit Transfer facility of various government schemes will be provided through bank accounts to the beneficiaries.
- The existing Kisan Credit Card is proposed to be issued as RuPay Kisan Card to the farmers.
- Financial literacy programme under the scheme will be implemented up to village level.

Phase-II of PMJDY

The period of Phase II is August 15, 2015 to August 14, 2018 which focuses on the following:

- Micro insurance will be provided to the people.
- Swavlamban-an unorganized sector pension scheme is to be proposed through the Business
- Correspondents.
- Households in hilly, tribal and difficult areas will be covered in this phase.
- This phase would also cover the remaining adults and students in households.

OVERVIEW AND PROGRESS OF FINANCIAL INCLUSION IN INDIA

According to the Finance Ministry, Goa and Kerala became the first states in the country to achieve 100 percent Financial Inclusion under Pradhan Mantri Jan Dhan Yojana (PMJDY). Also, three Union Territories namely Chandigarh, Pondicherry and Lakshadweep achieved 100 percent financial inclusion. According to the data three districts of Gujarat- Porbandar, Mehasana, Gandhinagar have been declared as 100 per cent saturated in terms of coverage of all households with at least

one bank account.

Bank Group and Population Group wise Number of Functioning Branches from 2013 to March 31, 2015 a highlighted in the table 1.1 which clearly indicate that progress in last three years is in increasing trend. Similarly table 1.2Shows that the populations per office is decreasing trends year after year continually since 2008 – 2013, It was 15000 population per office in the year 2008,but in the year 2013, it shows that only 12000 populations per office.The scheme PMJDY also playing a vital role in the development of financial inclusion in the country. Total number of bank account opened till 24-02-2016 is 21 crores which is a benchmark in the financial inclusion.

The above table -3- shows that the populations per office is decreasing trends year after year

Continually since 2008 – 2013, It was 15000 population per office in the year 2008, but in the year 2013, it shows that only 12000 populations per office.

CONCLUSION

It is rightly observed from the analysis of the study that financial inclusion in the country is progressive and dynamic. The impact of PMJDY in promoting financial inclusion is seems to be positive. The widely acknowledged & successful launch of this PMJDY scheme also strengthens the resolve that when coordination, dedication, opportunism, commitment, formalization, dependence, trust, satisfaction, cooperation and continuity is provided by all the constituents and stakeholders, a framework of construct is created which acts as a dominant force for accomplishment of the mission.

Road towards 100% financial inclusion is yet to complete. Financial inclusion is not a onetime effort, it is an ongoing process. If this is to be achieved, it requires the passionate involvement, dedication and commitment of all stakeholders. There must be change in the mindset of every individual involved – banker, bureaucrat, regulator, proper monitoring and persuasion by RBI and Government et al, and creating awareness at all levels. At the same time, the role of technology in the whole scenario cannot be undermined either. It has to be admitted that today and more than even before, technology plays a vital role in bringing about integration in society of all social and economic classes. Accessibility, affordability, appropriateness and benefits determine how deep financial inclusion penetrates the social fabric of the village. Financial inclusion can empower even the poorest person and can bring an effective change in his fate.

REFERENCES

1. Annanmali C. and Vijayarani K. (2014), "Awareness of financial inclusion on tribal people in the Dharmapuri district, *Asia Pacific Journal of research,* Vol: I Issue XVII, September 2014, Tamilnadu (accessed on 10 October, 2015 from SSRN)

2. Das and Sharma(2013)Financial Inclusion, Self-Help Groups (Shgs) And Women,Neha Publishers & Distributors

3. Gloukoviezoff, G. (2007). From Financial Exclusion to Overindebtedness: The Paradox of Difficulties for People on Low Incomes? In L. Anderloni, M. D. Braga and E. M. Carluccio, Eds. (2007). New Frontiers in Banking Services: Emerging Needs and Tailored Products for Untapped Markets. *Hamburg, Springer:* 213-243.

4. Kunthia R; "Pradhan Mantri Jan Dhan Yojana (PMJDY): A new drive towards financial inclusion in India", *ZENITH International Journal of Business Economics & Management Research*, Volume 4, No.11, November 2014; p -10-17

5. Sharma M. and Singh P K (2016), Financial Inclusion In TSP Region of Southern Rajasthan (An Empirical Study Of Dungarpur District), *Inspira-Journal of Commerce, Economics & Computer Science,* 1(4), 109-118.

6. Srikanth R. (2013)" A study of Financial Inclusion role of Indian banks in reaching out to unbanked and backward areas." *International journal of applies research and studies".*2(9), 1-10

7. Shreekutan S. (2014),"Impact of Financial Inclusion Drive through cooperative banks –A study with special reference to Chavara block".

8. Singh P K and Sharma M. (2015) Financial Literacy: "An Essential tool for inclusive growth of india", *Indian journal of Public Enterprise*, 54, 31-37.

**Table 1.1: Bank Group and Population Group wise Number of Functioning Branches
from 2013 to March 31, 2015**

Bank Group	Rural			Semi Urban			Urban			Metropolitan			Total		
	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015
Public sector Banks	23286	28907	29634	18854	22961	23549	14649	16967	17387	13632	15008	15325	70421	83843	85895
Private Sector Banks	1937	4082	4302	5128	6155	6457	3722	4320	4521	3797	4429	4698	14584	18986	19978
Foreign Banks	8	8	8	9	12	12	65	57	57	249	245	247	331	322	324
Regional Rural Banks	12722	14281	14613	3228	3628	3748	891	1029	1071	166	205	228	17007	19143	19660
Total	37953	47278	48557	27219	32756	33766	19327	22373	23036	17844	19887	20498	102343	122294	125857

Source: Department of financial services, Government of India-2015 and Financial Inclusion in India (RBI Publications 2013)

Table 1.2: Populations Per Bank Branch

No of villages as per population	2008	2009	2010	2011	2012	2013
Average population per bank branch (APBB) as on 31.03.2013	15 000	15000	14000	13000	13000	12,000

Source: Statistics relating to commercial banks at a glance RBI

The present status and progress of PMJDY scheme exhibited as under

Pradhan Mantri Jan - Dhan Yojana (Accounts Opened as on 24.02.2016)

(Figures in Crores)

Bank Name	Rural	Urban	Total	No of Ru-pay debit cards	Aadhar seeded
Public sector Banks	13.26	11.50	24.76	11.52	7.82
Private Sector Banks	..60	.39	.99	.92	.25
Regional Rural Banks	4.17	.76	4.94	3.63	1.10
Total	18.03	12.66	30.69	23.08	9.17

Source: PMJDY Government of India {http://www.pmjdy.gov.in/account}

Case Study On Tie-up Between IRCTC & Food Panda: The Unique Blend

Ms Parul Marwah*

INTRODUCTION

About IRCTC:

Indian Railway Catering and Tourism Corporation Ltd. (IRCTC) were set up by the Ministry of Railways with the basic objective of providing catering facilities and tourism facilities to the customers at large. IRCTC is a professional body consisting of one of the largest workforce worldwide to serve the customers with delightment. IRCTC believes in continuous up gradation of its facilities through which the requirements can be levied with outmost comforts throughout their journey.

In hospitality industry, IRCTC plays a vital role. It has collaborated with a large number of organizations to provide timely comforts to its huge customer base. IRCTC is operational in all the states of India (including its territories) and is continuously thriving for more improvements in its operational processes. IRCTC have formulated many strategic alliances with big market giants and associated with public agencies and private agencies (with tour operators and promoters) through which the customer satisfaction index can be improved. With dynamic marketing strategy, IRCTC has widened its reach to customers and prospective customers. IRCTC has a huge customer base including approx. 13 million passengers daily boarding its train.

Indian railways have shown significant growth in last few decades. Start from its inception period, Indian railways have shown tremendous growth and in parallel to the same it offers exclusive tours with highly convenient amount packages for its customers. The website of Indian railways is made in such a manner that it can be easily understood by all sections of the society and is easily accessible. For tourism purpose, IRCTC arranges for full train charters and coaches with which tours across India can be planned for huge customer base simultaneously with regular services.

About Food Panda:

In year 2012, the concept of Food Panda was forwarded by Benjamin Bauer and Ralf Wenzel. It is headquartered in Berlin, Germany with currently operating in 12 countries worldwide. By the current time, Food Panda has raised $310M in funding; including last round of funding (in May 2015) by Goldman Sachs having raised whooping amount of $100M. Food Panda is a Gurugram (Gurgaon) based organization is a popular online food delivery firm operating in various cities of India and abroad. Food Panda has started with the idea of coupons and Offers over meals through which in a very short duration of time period it has succeeded to achieve new heights and maintain respectable customer base.

Food Panda has list of exclusive restaurants and hotels through which exotic menus can be chosen by the customers and order of the same can be placed with the company through website or mobile application. The company has partnered with over 27,095 restaurants in 193 cities and works with over 15,733 delivery riders. In year 2016, December the group was acquired by the German competitor Delivery Hero (being founded by Niklas Östberg, Kolja Hebenstreit, Markus Fuhrmann and Lukasz Gadowski in May 2011 and currently operational in 40+ countries worldwide).

In India, Food Panda is operational in more than 100 cities and show widest reach in comparison to its competitors. In Delhi alone (Capital of India) Food Panda lists at more than 232 restaurants. It provides the facility for Payment on delivery for convenience of its customers.

The Tie up Association

IRCTC and Food Panda have joint hands for serving the customers of long distance. This tie up has given the customers of Indian Railway a reason to rejoice as after incessant complaints about the quality of meals this tie-up has come as joyful settlement of nearly all food related

* Assistant Professor, Department of Management Studies, Raj Kumar Goel Institute of Technology, Ghaziabad

grievances. Food Panda being a Rocket Internet-owned food ordering marketplace has tied up with railways to deliver meals at railway stations. To make the ordering system simple, the customer can give the order online via. IRCTC website or through Food Panda Website and the meals would be delivered at the station of choice.

Prior to the tie-up between IRCTC and Food Panda, Indian Railways have also associated with Travelkhana.com and hellocurry.com for providing quality food stuffs to its passengers. IRCTC have also linked up with big food giants including Switz Foods, McDonald's, Haldiram, Nirualas, Sagar Ratna, KFC, Dominos, Wimpy, TFS, Jan Aahar, Bikanerwala, Ratna Cafe, Mio Amore, Pizza Hut etc for providing quality food stuff to passengers passing through stations.

By words of Saurabh Kochhar (CEO of Food Panda) this association between Indian Railways and their company will transform the e-catering business for the railway passengers. It will set a new version of how the Indians have meals while travelling through trains. According to officials of Food Panda the first pilot project will be open at New Delhi Railway Station and later will be extended to cities including Mumbai, Chennai, Bangalore and Pune. Food Panda didn't offer a specific timeline for the rollout of the facility.

Earlier this year Food Panda has tied up with Tastykhana.in & JustEat.in through which it can deliver services more promptly and faster to its customers. This tie-up of Food Panda will add more promptness to deliver food stuffs to larger customer base of Indian Railways (IRCTC).

According to Robin Kalita, Director (Catering Services) Indian Railway Catering and Tourism Corporation (IRCTC), the tie up is made with the aim of providing large number of (wider) choice of food stuff to its valuable customers. Once the pilot project become successful, the service of tie-up will be expanded to other locations in short span of time.

RN Kalita, director of catering at Indian Railway Catering and Tourism Corporation said that the reason for tie-up with Food Panda is to provide satisfaction to customers through ensured food quality service and hygienic conditions. Mr. Kalita said that nearly all documentation is completed and only final due diligence is pending. He has also added that the tie-up is in no manner forcing the customers to purchase from its associated whereas the customer is free to choose from non IRCTC (sources) options also as per their liking and convenience.

The Tie-up has been initiated with the pilot experiment in the month of October at 45 railway stations. The tie-up is an initiative to promote the expansion services of e-catering business which was planned and announced during 2015-16 railway budget. The service was framed as 'Food on Track' service through which the passenger will be able to get the food delivered on the berth while traveling through train. The service requires the customers to choose the meal and place order at least two hours before the arrival or departure of train.

In opinion of Indian Railway Catering and Tourism Corporation's Chairman and Managing Director A.K. Manocha, the tie up between both the parties will be grounded by December'17 and with initial startup at New Delhi will be shortly opened at other locations (including metros and cities across the countries) also.

Indian Railway Catering and Tourism Corporation (IRCTC) will offer the facility through *www.ecatering.irctc.co.in* or by making a phone call to 0120-2383892-99 or the toll-free number at 1800-1034-139. Passengers can also choose to do so through an SMS to 139 by giving details of their PNR and seat number. The service will be open throughout the day for all class of passengers. Soon, IRCTC (together with Food Panda) is planning a launching of toll-free number 1323 to place order(s) related to order food stuff during train transit.
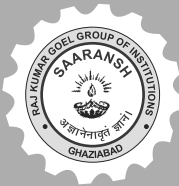
Advantages of Tie–up:

i. To Food Panda:

➢ They will get an edge over competitors by getting access to large database of Indian Railways.

➢ Food Panda can serve to millions of travelers throughout India thus expand its reach and enjoy more stable repute.

➢ Food Panda can scale its business aggressively and earn more revenue with this tie-up.

➢ Food Panda will get access to huge customer base daily (estimated with 5.5 to 6 lakh e-ticketing bookings daily, on an average) through which the traffic on the website can be increased and large customer portfolio can be maintained by the company.

ii. To IRCTC:

➢ IRCTC can settle with the complaints of customers regarding quality of food stuff being available during travel through railways.

➢ IRCTC through this tie-up can lead to mark a positive image in front of customers regarding its initiative for food delivery with quality maintenance.

➢ IRCTC will face less grievances related to food stuff and with positive response from customers can enrich the scheme 'Food on Track' more with passing time tenure.

➢ As Indian Railways has decided to gradually phase out pantry cars from all trains, they will push for e-catering service, dial-a-meal options and takeaways from railway stations on the way of the train route and this can be made easy with tie-up like with Food Panda to be practically implemented.

➢ With reduced dependency on private caterers, IRCTC will be able to maintain its reputation in front of customers.

iii. To Passengers:

➢ Passengers can have access to more variety of cuisines.

➢ Passengers can be ensured of quality and hygiene related issues in respect of ordered food stuff.

➢ Passengers need not to locate for quality food at any station and will get the quality food at their respective berth in railway coach.

➢ Passengers can enjoy either the payment options viz. Advance payment for the cuisine or payment on Delivery.

➢ Passengers can set the time of intake of food stuff as per their choice and convenience and order two hours in advance accordingly.

➢ Passengers can also avail special discounts been available on the website and earn points or discounts on food stuff being ordered.

➢ Passengers can opt from a large pool of food stuffs including vegetarian, non vegetarian and mix as per their choice. Food Panda will offer food stuff from 12,000 restaurants showing their presence in more than 200 cities across the country.

SALIENT FEATURES OF TIE-UP:

➢ Tie up will be initiated at New Delhi Railway Station initially as a pilot project.

➢ This newly launched e-catering service has approval of Ministry of Railways by which railways is looking forward to satisfy the prolonged requirement of good food stuff at their berth with both quality and hygiene intact.

➢ At least two hours time need to be there (by arrival or departure) for placing the order to Food Panda.

➢ The service falls under the 'Food on Track' e-catering service by IRCTC to provide quality food to its valuable customers at their respective berth in railway coach.

➢ For convenience of customers, Food Panda also offers the facility of cash on delivery. Through cash on delivery option the customer can pay for the meal when it will be served on their berth.

➢ Food Panda will feature location specific listing of restaurants on its website through which customers can choose from wide range of food stuffs.

➢ Food Panda's aggregator model will lead to provide its customers a chance to choose from wide variety of cuisines available at their website.

➢ As per the arrival time of the train the delivery can be aligned and payment can made in advance as per the convenience of the customer.

CONCLUSIVE REMARKS:

The tie-up between Food Panda and IRCTC has shown a positive light to the customers travelling through railways for better food and associative services. Food Panda & IRCTC both will be benefitted from the deal as customer delightment (and satisfaction) with increased revenue is a win-win situation for both the parties. The services introduced by Railways in recent years have initiated to promote a positive image in front of customers and Food Panda tie up is no exception.

This unique blend will not only provide quality food stuff with hygiene to customers but at the same time will lead to bring standardization to the catering operations of railways. The epic decision of IRCTC to shut down its catering coach and become independent with tie-ups with big food giants is a welcome approach. This will give customers more choice to choose from variety of food stuffs in accordance to their preference and budget.

Food Panda and IRCTC together are showing a ray of change which in future can turn out as huge transformation in catering service, leading to happier customers and rejoiced corporations. With overall bonding between parties it can be seen clearly that small changes of digitalization is bringing big changes in life styles and preferences of the customers.

BIBLIOGRAPHY

➢ http://www.bgr.in/news/foodpanda-ties-up-with-irctc-to-deliver-food-to-your-train-seat/

➢ http://www.businesstoday.in/current/corporate/foodpanda-irctc-partner-to-offer-meals-during-train-journey/story/226357.html

➢ http://www.domainb.com/companies/companies_I/Indian_Railways/20151125_foodpanda.html

➢ https://www.foodpanda.in/contents/about.htm

➢ http://www.fssairegistration.in/blog/indian-railways-tie-up-with-food-panda-and-70-odd-food-vendors/

➢ http://www.hospitalitybizindia.com/detailNews.aspx?aid=22412&sid=23

➢ https://inc42.com/flash-feed/foodpanda-ties-up-with-irctc/

➢ http://www.irctc.com/aboutUs_En.jsp

➢ https://www.maddycoupons.in/blog/irctc-adding-cuisines-railway-food-foodpanda-tie/

➢ https://www.medianama.com/2012/06/223-exclusive-rocket-internet-launches-foodpanda-in-india/

➢ https://www.medianama.com/2016/05/223-irctc-zoopindia-tieup/

➢ https://www.nextbigwhat.com/foodpanda-railways-297/

➢ http://nternet.in/irctc-ties-up-with-foodpanda-for-meals-delivery-at-railway-stations/amp

➢ http://techcircle.vccircle.com/2015/11/24/irctc-ties-up-with-foodpanda-for-meals-delivery-at-railway-stations/

➢ https://www.owler.com/iaApp/361849/foodpanda-company-profile

➢ https://en.wikipedia.org/wiki/Foodpanda

QUESTIONS FOR DISCUSSION:

Q1. According to you, what is the main reason of tie-up between IRCTC and Food Panda?

Q2. How will Food Panda (having the widest range in India) contribute in creating a positive image of IRCTC in minds of its customers?

Q3.What problems can be faced by Food Panda in near future due to its association with IRCTC?

Q4. What additional changes should be done by IRCTC to make its passengers more comfortable throughout the journey?

Q5. What changes can be made by Food Panda in its business model to suit the requirements of Indian Railways?

Q6. Do you think that the decision of Indian Government regarding closure of catering coaches and initiation of tie ups with food delivery firms (including big giants) is a good option? Comment.

The Future of Indian Economy: Past Reforms and Challenges Ahead-Review

Manoj Kumar Meet*

THE
FUTURE
OF
INDIAN
ECONOMY
PAST REFORMS AND CHALLENGES AHEAD
Edited by
YASHWANT SINHA
VINAY K. SRIVASTAVA

Former Finance Minister Yashwant Sinha and Vinay K. Srivastava, Dean and Associate Professor, Raffles University, Neemrana, have come out with their recent edited book "The Future of Indian Economy: Past Reforms and Challenges Ahead". The events of liberalization in the history of Indian economic development is well compiled and documented in the historical book. The book talks about the pre and post-liberalization period in Indian. The renowned politicians,policy makers, economists, journalists expert from industry and academia like Yashwant Sinha, C. Rangarajan, Sanjaya Baru, N. K. Singh, U. K. Sinha, Mani Shankar Aiyar, Yoginder K. Alagh, U. K. Sinha, Vinay K Srivastava have contributed their chapters for the book.

The book highlights that "economists say that if India won its political independence in 1947, it won its economic independence in 1991". However, there is no consensus on economic reforms in the country. Thus the economic reforms have completed twenty-five years and this book debates on the achievements and failures of the policies framed for the economic reform of 1991. It draws upon the research insights and opinions of politicians/policy makers and economists, academicians, scholars and practicing managers who, apart from the analysis, also offer their views on the corrective measures needed.

Mr. Yaswant Sinha and Dr. Vinay K Srivastava in their introduction write "Chandra Sekhar was a pragmatic leader, and, today many experts are of the view that history has not judged him rightly. Despite leading a caretaker government, he had saved India from defaulting on payment of external debts by mortgaging gold reserves to raise funds." Twenty metric tonnes of confiscated gold worth $ 200 million was made available by the RBI to the

*   Assistant Professor, ASOM, Raffles University, Neemrana, Rajasthan-301705.

State Bank of India for sale, with a repurchase option, to the Union Bank of Switzerland. Yashwant Sinha was then a finance minister in the Chandra Sekhar government. It was done to avoid default and ensure its external payment obligations were met.

Mr. Sinha lists four possible explanations why economic reforms have not been accepted in India. At the top of his list is the colonial hangover. "The East India Company's experience is deeply rooted in the Indian psyche. So all foreign enterprises and foreign investments are looked upon with suspicion. Anyone who pleads for them, collaborates with them is also looked upon with suspicion," he says. Equating reforms with foreign investment is precisely where some proponents of reforms go wrong. The much-needed factor market reforms or, for that matter, improving the ease of doing business are not needed to line foreigners' pockets but to improve the productivity of indigenous firms and make them more competitive.

Second is the party in power does something opposite to what they used to tell the people of the country when they were in the opposition. It applies to both BJP and Congress. The BJP espoused the cause of economic reforms when they were in power between 1998 and 2004 but opposed after they lost elections in 2004. The Congress, now in opposition, is criticizing the economic reforms promoted by Narendra Modi led government. The word "economic reforms" is still seen with some suspicious. BJP led National Democratic Alliance (NDA) lost 2004 elections and one of the major reason was their overemphasis on the metro cities and slogans like "shining India". The pro-economic reforms constituency is still small but it is highly influential. It is gradually increasing and plays an important role in shaping the public opinion.

Mr Sinha says pro-reformers have damaged the cause of reforms by always identifying economic reforms with foreign investment. He is guilty of doing the same. Another popular explanation is that reforms have failed to impact the lives of the poor. "Twenty-five years of economic reforms have made very little difference to their lives. If it does not touch the lives of the vast majority of people, they will have little interest in economic reforms," he writes. As a former finance minister, Mr Sinha must know that reforms over the past decades have helped lift millions above the poverty line. In fact, the pace of poverty decline has accelerated in the past decade. Yet he chooses to ignore facts that are visible even to the ordinary Indian.

Mr Sinha also argues, and perhaps rightfully so, that "the constituency for reforms is limited to the government of the day, economic commentators, the corporate and the English newspapers." Perhaps it should be seen more as a failure to communicate the benefits from reforms down the line.

Thus he is critical of socialist era approach for neglecting rural areas and he has same complaint against liberalization era. Our present government which has shown us dream of good governance, sab ka Vikash, etc and has taken many big steps like Jan Dhan Yojana, Demonetizations, GST, also has not indicated any sign of improvement regarding the issues complained by Mr. Sinha.

Deepak Nayyar, in his foreword, warns," Twenty-five years later, it is clear that all is not well with the economy as a whole. Three persistent crises manifest in jobless growth, persisting poverty and rising inequality are described in his article. Growth rate of India is gradually slowing down in some recent years. It was 5.7% in quarter one of 2017-18, may be taken as concern to Nayyar's indication towards persistent crises.

U K Sinha in his article "Twenty-five years of securities market reforms: issues and challenges" describe evolution of capital market. He says," Capital market activity expanded rapidly in the 1980s and the market capitalization of companies registered in the BSE rose from 5% of GDP in 1980 to 13% in 1990."

N. K. Singh has focused his article on Fiscal policies describing FRBM Act. Mani Shankar Aiyar highlight the importance of Panchayati Raj System for the well and equal development of India.

Indeed this book may be considered as a documental evidence of happening of economic reform in India because most of the contributors and associated persons are those who played vital role in saving India from the economic crises of 1991. Also this book is highlighting the challenges which the Indian economy is facing bitterly. The contributors have suggested the remedial steps also. In this book there are a lot for the new politicians, academicians and competitive examination aspirants.

Journal Subscription Form

I wish to subscribe to the **"SAARANSH-RKG JOURNAL OF MANAGEMENT"** for the period of:

One Year ☐   Two Years ☐   Three Years ☐

I am enclosing Demand Draft/Cheque number ....

dated .... drawn in favour of 'Raj Kumar Goel Institute of Technology' for

Rs. .... payable at Ghaziabad.

1.   Name ....

2.   Name of the Organization ....

      ....

3.   Mailing Address ....

4.   City .... State .... Pin Code ....

5.   Phone .... Mobile ....

6.   E-mail ....

7.   Current Subscription No. (For renewal orders only) ....

8.   Subscription Rate

	One Year	Two Years	Three Years
Individual	Rs. 500	Rs. 900	Rs. 1200
Institutional	Rs. 1000	Rs. 1800	Rs. 2500
Individual (Overseas)	US $ 50	US $ 90	US$ 120
Institution (Overseas)	US $ 75	US $ 100	US $ 125

Rs. 50/- should be added of outstation cheques in India.

Mail to:

Dr. Ashish Kr. Singh

Editor 'SAARANSH'

Raj Kumar Goel Institute of Technology

5 km Stone. Delhi-Meerut Road, Ghaziabad (U.P.) 201003, INDIA

Tel.: 0120-2788273, 6517163, 2788409, Fax: 0120-2788350/447, 9811276227, 8588831328

Email: saaransh@rkgit.edu.in Website: http://www.rkgit.edu.in

Guidelines For Contributors

The author should follow the following instructions while preparing the manuscript.

- The paper should be about 8000-10000 words in length. The author(s) should submit two copies of the manuscript, typed in two space on A4 size bond paper allowing 1-inch margin on all sides, should be submitted with a soft copy in CD in PC compatible MS-word document format. CD is not required if the manuscript is e-mailed at saaransh@rkgit.edu.in however, in this case two hard copies of manuscripts have to be sent separately.

- The author should provide confirmation that– The article is the original work of the author(s). It has not been earlier published and has not been sent for publication elsewhere.

- The paper should begin with an Abstract of not more than 100-150 words, which encapsulate the principle topics covered by the paper. Abstracts should be informative, giving a clear indication of the nature and range of results contained in the paper. Do not include any reference in your abstract.

- Figures, charts, tables and diagrams– All figures, diagrams, charts and tables should be on separate papers and numbered in a single sequence in the order in which they are referred to in the paper. Please mention their number at appropriate places within the text.

- References must be kept to a bare minimum. The references must be quoted in the text using American psychological style of referencing. You must make sure that all references which appear in the text are given in full. Where there is more than one reference to the same author for the same year, they should be listed as 2009a, 2009b etc. The references section should be a continuous alphabetical list. Do not divide the list into different sections.

  Books The order of information should be as in the following examle:

  Srivastava, V (2011), Marketing Research Theory & Concept, New Delhi, ABP Publication.

  Journal papers and book chapters The order for reference to articles/chapters of books should be as in these examples:

  Prakash. J. (ed), Privatization of Public Enterprises in India, Mumbai, Himalya Publishing House, p 212.

- All manuscripts received for publication in SAARANSH are acknowledged by the Editor. This helps authors know the status of their paper from time to time.

- The Editors reserve the right to accept or refuse the paper for publication, and they are under no obligation to assign reasons for their decision. Authors will receive a complimentary copy of the journal in which their articles are published.

- The works published in the journal should not be reproduced or reprinted in any form, without the prior permission from the editor.

Research Paper Selection Process

Authors can send their paper up to October and April for the issue of January and July respectively. When a manuscript is received, the editor first completes a preliminary screening of the manuscript. For the initial review, the editor assigns two reviewers to each manuscript. The editor makes publication decisions about it. However, these decisions are made in conjuction with recommendations given by members of the Editorial Board or other qualified reviewers. **All submissions will be blind reviewed**.

RKGIT

RAJ KUMAR GOEL INSTITUTE OF TECHNOLOGY

ISO 9001:2015 Certified Institution

17th year of technological excellence

A sprawling campus of more than 27 acres has been aesthetically designed in a pollution free environment as an entirely self contained academic township. RKGIT is approved by AICTE, New Delhi and affiliated to Dr A P J Abdul Kalam Technical University, Uttar Pradesh, Lucknow.

The Academic Programs:
RKGIT offers the followings professional courses:

Bachelor of Technology (B. Tech)
  (Four-Year degree course)
- Civil Engineering
- Computer Science & Engineering
- Electrical and Electronics Engineering
- Electronics & Communication Engineering
- Information Technology
- Mechanical Engineering

Bachelor of Pharmacy (B. Pharm.)

Master of Business Administration (MBA)
(Two years Post Graduation Course)

Master of Pharmacy (Pharmaceuticals)

Master of Pharmacy (Drug Regulatory Affair)

M Tech (Electronics & Comm. Engineering)

IBM ACADEMIC INITIATIVE MEMBER

Member aws educate Program

PTC ThingWorx IoT Academic Program

campus connect an Infosys initiative

QA InfoTech Your Software Testing Partner Centre for excellence

For Cloud Computing, Big Data and Internet of Things (IoT)

RAJ KUMAR GOEL INSTITUTE OF TECHNOLOGY

5 km Stone, Delhi-Meerut Road, Ghaziabad-201003 (UP) INDIA.
Phones : 0120-2788273, 2784224, 6517163 Fax : 0120-2788350 Website : www.rkgit.edu.in