

INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT & MANAGEMENT

I
J
R
C
M



A Monthly Double-Blind Peer Reviewed (Refereed/Juried) Open Access International e-Journal - Included in the International Serial Directories

Indexed & Listed at:

Ulrich's Periodicals Directory ©, ProQuest, U.S.A., EBSCO Publishing, U.S.A., Cabell's Directories of Publishing Opportunities, U.S.A.

Open J-Gate, India [link of the same is duly available at Inlibnet of University Grants Commission (U.G.C.)],

Index Copernicus Publishers Panel, Poland with IC Value of 5.09 & number of libraries all around the world.

Circulated all over the world & Google has verified that scholars of more than 2592 Cities in 161 countries/territories are visiting our journal on regular basis.

Ground Floor, Building No. 1041-C-1, Devi Bhawan Bazar, JAGADHRI – 135 003, Yamunanagar, Haryana, INDIA

<http://ijrcm.org.in/>

CONTENTS

Sr. No.	TITLE & NAME OF THE AUTHOR (S)	Page No.
1.	STANDARDIZING GOVERNMENT HOSPITAL LIBRARIES: WHERE ARE WE NOW? <i>DR. MA. LINDIE D. MASALINTO, DR. ESTRELLA ALMEDA SAN JUAN & DR. LAZARO E. AVELINO</i>	1
2.	CHALLENGES IN APPLICATION OF SIX SIGMA TECHNIQUES IN HR DOMAIN <i>NAGARAJ SHENOY & DR. KALYANI RANGARAJAN</i>	6
3.	COMPETITIVENESS IN NIGERIAN TELECOMMUNICATION INDUSTRY: MARKETING STRATEGY <i>FALANO, TOLULOPE & POPOOLA F. CORNELIUS</i>	9
4.	MANPOWER PLANNING IN HIGHER EDUCATION: A CASE STUDY IN DAKSHINA KANNADA DISTRICT IN KARNATAKA <i>DR. WAJEEDA BANO</i>	15
5.	IP TRACEBACK OF DOS ATTACKS <i>S. THILAGAVATHI. & DR. A. SARADHA</i>	21
6.	BEHAVIOURAL CONSEQUENCES OF FACEBOOK USAGE AMONGST GENERATION Y OF MUMBAI CITY <i>DR. ANKUSH SHARMA & KRATIKA SHRIVASTAVA</i>	24
7.	COMPARATIVE STUDY OF CRM (PUBLIC SECTOR BANKS Vs. PRIVATE SECTOR BANKS) IN DELHI REGION <i>R. C. BHATNAGAR, RAJESH VERMA & ADITI GOEL</i>	33
8.	FIRM, FINANCIAL SYSTEMS AND FINANCIAL DEREGULATIONS: A SURVEY OF LITERATURE <i>NEMIRAJA JADIYAPPA & DR. V. NAGI REDDY</i>	39
9.	PREFERENCES AND SIGNIFICANCE OF DEMOGRAPHICS ON THE FACTORS INFLUENCING INVESTMENT DECISIONS: A STUDY OF INVESTORS IN THANE CITY, MAHARASHTRA, INDIA <i>DINESH GABHANE & DR. S. B. KISHOR</i>	44
10.	DETERMINANTS OF LEVERAGE: AN EMPIRICAL STUDY ON INDIAN TEXTILE SECTOR <i>D. VIJAYALAKSHMI & DR. PADMAJA MANOHARAN</i>	49
11.	CUSTOMER SATISFACTION & AWARENESS REGARDING INSURANCE POLICIES <i>DR. MEGHA SHARMA</i>	53
12.	RISK-ADJUSTED PERFORMANCE EVALUATION OF INFRASTRUCTURE FUNDS IN INDIA <i>G. ARUNA</i>	59
13.	EMPOWERMENT OF RURAL WOMEN THROUGH ENTREPRENEURSHIP IN SMALL BUSINESS: A EMPIRICAL STUDY IN KHAMMAM DISTRICT OF A.P <i>DR. S. RADHAKRISHNA & DR. T. GOPI</i>	63
14.	THE ETERNAL FIGHT: SMALL TRADITIONAL STORES Vs. SUPERMARKETS <i>DR. FAYAZ AHMAD NIKA & ARIF HASAN</i>	68
15.	A STUDY ON CUSTOMER SATISFACTION TOWARDS MARKETING STRATEGY OF BANKING LOANS ADOPTED BY SCHEDULED COMMERCIAL BANKS WITH SPECIAL REFERENCE TO COIMBATORE DISTRICT <i>G. SANGEETHA & DR. R. UMARANI</i>	72
16.	KNOWLEDGE CAPTURE SYSTEMS IN SOFTWARE MAINTENANCE PROJECTS <i>SARFARAZ NAWAZ</i>	79
17.	SELF-MANAGING COMPUTING <i>K. M. PARTHIBAN, M. UDHAYAMOORTHY, A. SANTHOSH KUMAR & KONSAM CHANU BARSANI</i>	82
18.	A STUDY ON PERFORMANCE OF DISTRICT CONSUMER DISPUTES REDRESSAL FORUMS IN INDIA <i>GURLEEN KAUR</i>	87
19.	TEA INDUSTRY IN INDIA: STATE WISE ANALYSIS <i>DR. R. SIVANESAN</i>	89
20.	THE ROLE OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IN ENHANCING THE QUALITY EDUCATION OF ETHIOPIAN UNIVERSITIES: A REVIEW OF LITERATURE <i>DR. BIRHANU MOGES</i>	94
21.	PROBLEMS & PROSPECTS OF WOMEN ENTREPRENEURS IN INDIA <i>JAINENDRA KUMAR VERMA</i>	102
22.	CAPITAL STRUCTURE AND PROFITABILITY: A STUDY ON SELECTED CEMENT COMPANIES <i>DR. BRAJABALLAV PAL & SILPI GUHA</i>	105
23.	MUTUAL FUND INDUSTRY IN INDIA: RECENT TRENDS AND PROGRESS <i>BHARGAV PANDYA</i>	114
24.	CHALLENGE OF ATTRITION: A CASE STUDY OF BPO INDUSTRY IN CHANDIGARH REGION <i>MANJIT KOUR</i>	120
25.	GOOD GOVERNANCE IN INDIA: NEED FOR INNOVATIVE APPROACHES <i>PARDEEP KUMAR CHAUHAN</i>	122
26.	RESPONSE OF PEASANT FARMERS TO SUPPLY INCENTIVES: AN INTER-REGIONAL ANALYSIS OF COTTON CROP IN SINDH, PAKISTAN <i>DR. MOHAMMAD PERVEZ WASIM</i>	126
27.	EFFECTS OF INTEREST RATE DEREGULATION ON DEPOSIT MOBILIZATION IN THE NIGERIAN BANKING INDUSTRY <i>SAMUEL, KEHINDE OLUWATOYIN & OKE, MARGARET ADEBIPE</i>	137
28.	AN E-3 VALUE MODEL FOR ASSESSING e-COMMERCE PARTNERSHIP PROFITABILITY TO SMEs IN GHANA <i>AMANKWA, ERIC & KEVOR MARK-OLIVER</i>	147
29.	A STUDY ON PERFORMANCE OF CONSUMER DISPUTES REDRESSAL AGENCIES IN STATE OF HIMACHAL PRADESH <i>GURLEEN KAUR</i>	154
30.	A STUDY OF SELECTED ENTREPRENEURIAL DIMENSIONS IN INDIA: AN EXPLORATORY STUDY <i>JAINENDRA KUMAR VERMA</i>	156
	REQUEST FOR FEEDBACK	159

CHIEF PATRON

PROF. K. K. AGGARWAL

Chairman, Malaviya National Institute of Technology, Jaipur
(An institute of National Importance & fully funded by Ministry of Human Resource Development, Government of India)
Chancellor, K. R. Mangalam University, Gurgaon
Chancellor, Lingaya's University, Faridabad
Founder Vice-Chancellor (1998-2008), Guru Gobind Singh Indraprastha University, Delhi
Ex. Pro Vice-Chancellor, Guru Jambheshwar University, Hisar

FOUNDER PATRON

LATE SH. RAM BHAJAN AGGARWAL

Former State Minister for Home & Tourism, Government of Haryana
Former Vice-President, Dadri Education Society, Charkhi Dadri
Former President, Chinar Syntex Ltd. (Textile Mills), Bhiwani

CO-ORDINATOR

AMITA

Faculty, Government M. S., Mohali

ADVISORS

DR. PRIYA RANJAN TRIVEDI

Chancellor, The Global Open University, Nagaland

PROF. M. S. SENAM RAJU

Director A. C. D., School of Management Studies, I.G.N.O.U., New Delhi

PROF. M. N. SHARMA

Chairman, M.B.A., Haryana College of Technology & Management, Kaithal

PROF. S. L. MAHANDRU

Principal (Retd.), Maharaja Agrasen College, Jagadhri

EDITOR

PROF. R. K. SHARMA

Professor, Bharti Vidyapeeth University Institute of Management & Research, New Delhi

CO-EDITOR

DR. BHAVET

Faculty, Shree Ram Institute of Business & Management, Urjani

EDITORIAL ADVISORY BOARD

DR. RAJESH MODI

Faculty, Yanbu Industrial College, Kingdom of Saudi Arabia

PROF. SANJIV MITTAL

University School of Management Studies, Guru Gobind Singh I. P. University, Delhi

PROF. ANIL K. SAINI

Chairperson (CRC), Guru Gobind Singh I. P. University, Delhi

DR. SAMBHAVNA

Faculty, I.I.T.M., Delhi

DR. MOHENDER KUMAR GUPTA

Associate Professor, P. J. L. N. Government College, Faridabad

DR. SHIVAKUMAR DEENE

Asst. Professor, Dept. of Commerce, School of Business Studies, Central University of Karnataka, Gulbarga

ASSOCIATE EDITORS

PROF. NAWAB ALI KHAN

Department of Commerce, Aligarh Muslim University, Aligarh, U.P.

PROF. ABHAY BANSAL

Head, Department of Information Technology, Amity School of Engineering & Technology, Amity University, Noida

PROF. A. SURYANARAYANA

Department of Business Management, Osmania University, Hyderabad

DR. SAMBHAV GARG

Faculty, Shree Ram Institute of Business & Management, Urjani

PROF. V. SELVAM

SSL, VIT University, Vellore

DR. PARDEEP AHLAWAT

Associate Professor, Institute of Management Studies & Research, Maharshi Dayanand University, Rohtak

DR. S. TABASSUM SULTANA

Associate Professor, Department of Business Management, Matrusri Institute of P.G. Studies, Hyderabad

SURJEET SINGH

Asst. Professor, Department of Computer Science, G. M. N. (P.G.) College, Ambala Cantt.

TECHNICAL ADVISOR

AMITA

Faculty, Government M. S., Mohali

FINANCIAL ADVISORS

DICKIN GOYAL

Advocate & Tax Adviser, Panchkula

NEENA

Investment Consultant, Chambaghat, Solan, Himachal Pradesh

LEGAL ADVISORS

JITENDER S. CHAHAL

Advocate, Punjab & Haryana High Court, Chandigarh U.T.

CHANDER BHUSHAN SHARMA

Advocate & Consultant, District Courts, Yamunanagar at Jagadhri

SUPERINTENDENT

SURENDER KUMAR POONIA

CALL FOR MANUSCRIPTS

We invite unpublished novel, original, empirical and high quality research work pertaining to recent developments & practices in the areas of Computer Science & Applications; Commerce; Business; Finance; Marketing; Human Resource Management; General Management; Banking; Economics; Tourism Administration & Management; Education; Law; Library & Information Science; Defence & Strategic Studies; Electronic Science; Corporate Governance; Industrial Relations; and emerging paradigms in allied subjects like Accounting; Accounting Information Systems; Accounting Theory & Practice; Auditing; Behavioral Accounting; Behavioral Economics; Corporate Finance; Cost Accounting; Econometrics; Economic Development; Economic History; Financial Institutions & Markets; Financial Services; Fiscal Policy; Government & Non Profit Accounting; Industrial Organization; International Economics & Trade; International Finance; Macro Economics; Micro Economics; Rural Economics; Co-operation; Demography; Development Planning; Development Studies; Applied Economics; Development Economics; Business Economics; Monetary Policy; Public Policy Economics; Real Estate; Regional Economics; Political Science; Continuing Education; Labour Welfare; Philosophy; Psychology; Sociology; Tax Accounting; Advertising & Promotion Management; Management Information Systems (MIS); Business Law; Public Responsibility & Ethics; Communication; Direct Marketing; E-Commerce; Global Business; Health Care Administration; Labour Relations & Human Resource Management; Marketing Research; Marketing Theory & Applications; Non-Profit Organizations; Office Administration/Management; Operations Research/Statistics; Organizational Behavior & Theory; Organizational Development; Production/Operations; International Relations; Human Rights & Duties; Public Administration; Population Studies; Purchasing/Materials Management; Retailing; Sales/Selling; Services; Small Business Entrepreneurship; Strategic Management Policy; Technology/Innovation; Tourism & Hospitality; Transportation Distribution; Algorithms; Artificial Intelligence; Compilers & Translation; Computer Aided Design (CAD); Computer Aided Manufacturing; Computer Graphics; Computer Organization & Architecture; Database Structures & Systems; Discrete Structures; Internet; Management Information Systems; Modeling & Simulation; Neural Systems/Neural Networks; Numerical Analysis/Scientific Computing; Object Oriented Programming; Operating Systems; Programming Languages; Robotics; Symbolic & Formal Logic; Web Design and emerging paradigms in allied subjects.

Anybody can submit the **soft copy** of unpublished novel; original; empirical and high quality **research work/manuscript anytime** in ***M.S. Word format*** after preparing the same as per our **GUIDELINES FOR SUBMISSION**; at our email address i.e. infoijrcm@gmail.com or online by clicking the link **online submission** as given on our website ([FOR ONLINE SUBMISSION, CLICK HERE](#)).

GUIDELINES FOR SUBMISSION OF MANUSCRIPT

1. **COVERING LETTER FOR SUBMISSION:**

DATED: _____

THE EDITOR
IJRCM

Subject: SUBMISSION OF MANUSCRIPT IN THE AREA OF.

(e.g. Finance/Marketing/HRM/General Management/Economics/Psychology/Law/Computer/IT/Engineering/Mathematics/other, please specify)

DEAR SIR/MADAM

Please find my submission of manuscript entitled ' _____ ' for possible publication in your journals.

I hereby affirm that the contents of this manuscript are original. Furthermore, it has neither been published elsewhere in any language fully or partly, nor is it under review for publication elsewhere.

I affirm that all the author (s) have seen and agreed to the submitted version of the manuscript and their inclusion of name (s) as co-author (s).

Also, if my/our manuscript is accepted, I/We agree to comply with the formalities as given on the website of the journal & you are free to publish our contribution in any of your journals.

NAME OF CORRESPONDING AUTHOR:

Designation:
Affiliation with full address, contact numbers & Pin Code:
Residential address with Pin Code:
Mobile Number (s):
Landline Number (s):
E-mail Address:
Alternate E-mail Address:

NOTES:

- a) The whole manuscript is required to be in **ONE MS WORD FILE** only (pdf. version is liable to be rejected without any consideration), which will start from the covering letter, inside the manuscript.
- b) The sender is required to mention the following in the **SUBJECT COLUMN** of the mail:
New Manuscript for Review in the area of (Finance/Marketing/HRM/General Management/Economics/Psychology/Law/Computer/IT/Engineering/Mathematics/other, please specify)
- c) There is no need to give any text in the body of mail, except the cases where the author wishes to give any specific message w.r.t. to the manuscript.
- d) The total size of the file containing the manuscript is required to be below **500 KB**.
- e) Abstract alone will not be considered for review, and the author is required to submit the complete manuscript in the first instance.
- f) The journal gives acknowledgement w.r.t. the receipt of every email and in case of non-receipt of acknowledgment from the journal, w.r.t. the submission of manuscript, within two days of submission, the corresponding author is required to demand for the same by sending separate mail to the journal.

2. **MANUSCRIPT TITLE:** The title of the paper should be in a 12 point Calibri Font. It should be bold typed, centered and fully capitalised.

3. **AUTHOR NAME (S) & AFFILIATIONS:** The author (s) **full name, designation, affiliation (s), address, mobile/landline numbers, and email/alternate email address** should be in italic & 11-point Calibri Font. It must be centered underneath the title.

4. **ABSTRACT:** Abstract should be in fully italicized text, not exceeding 250 words. The abstract must be informative and explain the background, aims, methods, results & conclusion in a single para. Abbreviations must be mentioned in full.

5. **KEYWORDS:** Abstract must be followed by a list of keywords, subject to the maximum of five. These should be arranged in alphabetic order separated by commas and full stops at the end.
6. **MANUSCRIPT:** Manuscript must be in **BRITISH ENGLISH** prepared on a standard A4 size **PORTRAIT SETTING PAPER**. It must be prepared on a single space and single column with 1" margin set for top, bottom, left and right. It should be typed in 8 point Calibri Font with page numbers at the bottom and centre of every page. It should be free from grammatical, spelling and punctuation errors and must be thoroughly edited.
7. **HEADINGS:** All the headings should be in a 10 point Calibri Font. These must be bold-faced, aligned left and fully capitalised. Leave a blank line before each heading.
8. **SUB-HEADINGS:** All the sub-headings should be in a 8 point Calibri Font. These must be bold-faced, aligned left and fully capitalised.
9. **MAIN TEXT:** The main text should follow the following sequence:

INTRODUCTION**REVIEW OF LITERATURE****NEED/IMPORTANCE OF THE STUDY****STATEMENT OF THE PROBLEM****OBJECTIVES****HYPOTHESES****RESEARCH METHODOLOGY****RESULTS & DISCUSSION****FINDINGS****RECOMMENDATIONS/SUGGESTIONS****CONCLUSIONS****SCOPE FOR FURTHER RESEARCH****ACKNOWLEDGMENTS****REFERENCES****APPENDIX/ANNEXURE**

It should be in a 8 point Calibri Font, single spaced and justified. The manuscript should preferably not exceed **5000 WORDS**.

10. **FIGURES & TABLES:** These should be simple, crystal clear, centered, separately numbered & self explained, and **titles must be above the table/figure. Sources of data should be mentioned below the table/figure.** It should be ensured that the tables/figures are referred to from the main text.
11. **EQUATIONS:** These should be consecutively numbered in parentheses, horizontally centered with equation number placed at the right.
12. **REFERENCES:** The list of all references should be alphabetically arranged. The author (s) should mention only the actually utilised references in the preparation of manuscript and they are supposed to follow **Harvard Style of Referencing**. The author (s) are supposed to follow the references as per the following:
 - All works cited in the text (including sources for tables and figures) should be listed alphabetically.
 - Use (ed.) for one editor, and (ed.s) for multiple editors.
 - When listing two or more works by one author, use --- (20xx), such as after Kohl (1997), use --- (2001), etc, in chronologically ascending order.
 - Indicate (opening and closing) page numbers for articles in journals and for chapters in books.
 - The title of books and journals should be in italics. Double quotation marks are used for titles of journal articles, book chapters, dissertations, reports, working papers, unpublished material, etc.
 - For titles in a language other than English, provide an English translation in parentheses.
 - The location of endnotes within the text should be indicated by superscript numbers.

PLEASE USE THE FOLLOWING FOR STYLE AND PUNCTUATION IN REFERENCES:**BOOKS**

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

CONTRIBUTIONS TO BOOKS

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

JOURNAL AND OTHER ARTICLES

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

CONFERENCE PAPERS

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

UNPUBLISHED DISSERTATIONS AND THESES

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

ONLINE RESOURCES

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

WEBSITES

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

STANDARDIZING GOVERNMENT HOSPITAL LIBRARIES: WHERE ARE WE NOW?

DR. MA. LINDIE D. MASALINTO
CHIEF LIBRARIAN & PART TIME PROFESSOR
UNIVERSITY OF PERPETUAL HELP - DJGTMU
STO.NINO

DR. ESTRELLA ALMEDA SAN JUAN
DEAN
COLLEGE OF NURSING
UNIVERSITY OF PERPETUAL HELP - DJGTMU
STO.NINO

DR. LAZARO E. AVELINO
HEAD – GENERAL EDUCATION
UNIVERSITY OF PERPETUAL HELP - DJGTMU
STO.NINO

ABSTRACT

Standards are increasingly important in the practice of all library fields. Hospital libraries are considered to be the basic unit of the medical information system. Hospital librarians provide the right information at the right time to enhance medical staff effectiveness, optimize patient care, and improve patient outcomes. They save clinicians time, thereby saving the institution money. They provide an excellent return on investment for the hospital, playing a vital role on the health care team from a patient's diagnosis to recovery. Their services are also a valuable employee and community benefit, building staff satisfaction with their jobs and patient and family satisfaction with the health care they receive. A hospital libraries in order to survive, their existence must be validated and their contributions must be shown to be consistent with the overall goals of the hospitals they serve. The purpose of this study was to describe and evaluate government hospital libraries by observing and interviewing librarians and library users as key participants. Overall aim of this study is to identify needs and gaps, and make recommendations for further development of a government hospital library standard. This study used a framework and perspectives from which to view these government hospital libraries function and would be within or below the standards. Throughout this study a number of factors regarding the assessment of hospital libraries were examined. Finally, it was anticipated that based on the findings of this study, government hospital libraries would be standardized with competent full time professional librarians, sufficient and well-balanced collections, adequate facilities and with excellent library services. The study followed a qualitative research approach, involving the use of the unstructured in-depth interview, observations and other related documents as the primary methods and tools in gathering the data. It involved a preliminary descriptive examination of the services, collections, facilities and management of government hospital libraries. It was limited to no more than 5 government hospital libraries because of the time constraints involved in interviewing and subsequent data analysis. The person interviewed was the head / chief librarian of each institution knowledgeable enough and with authority to manage the library and must be in the field of medical and health / government hospital library. The study was conducted at five (5) prominent government hospital libraries namely; Department of Health Libraries (San Lazaro Manila), Jose Reyes Memorial Medical Center Library (San Lazaro, Manila), RITM (Alabang), Heart Center Library (Quezon City) Lung Center of the Philippines (Quezon City). Based on the results the following conclusions were formulated; 1. The administration of government hospital library's objectives was based on their mission/vision and the types of institution they serve; library's not directly administered by a president or director of the institution, and their concept of an ideal library should have the library staff or personnel that are qualified for the job (professional librarian); hiring of employees shall be vested on the library administrator or director who shall be directly responsible for the appropriate hierarchy of the governing body of the institution they serve and should be clearly defined in the organizational set-up of the institution. 2. Government hospital library is under staff since it is manned by a one-man professional librarian only. 3. Government hospital libraries lack budget thus affecting collection development policy also resulting to obsolete and insufficient library collection. 4. Librarians rendered basic library services with intervening factors due to limited library staff. 5. Government hospital library is not centrally located and not conveniently accessible; as to equipment and furniture they showed fair and within the minimum standard as compared to other kinds of libraries.

KEYWORDS

Library standards, Government Hospital Library, Library Evaluation, Library Assessment, Hospital Library Research,

INTRODUCTION

Standards are increasingly important in the practice of all library fields. Hospital libraries are considered to be the basic unit of the medical information system. Efficient and timely access to evidence-based health literature is an important element in the provision of safe patient care. Given the complexity and time constraints involved in care delivery, locating the right information at the right time is increasingly difficult for many health practitioners. A strong Library and Information Service creates the bridge between the evidence and patient care decisions. (Funk, 2008)

The rapid changes in health care have presented the medical community with a number of challenges. Some national organizations have recommended actions to address these challenges, including training for the healthcare workforce, adoption of new technologies, focusing on patient-centered care, and changes in hospital design. The roles of hospital librarians have evolved to meet the needs of this changing environment and to help hospitals keep their competitive edge.

Hospital librarians provide the right information at the right time to enhance medical staff effectiveness, optimize patient care, and improve patient outcomes. They save clinicians time, thereby saving the institution's money. They provide an excellent return on investment for the hospital, playing a vital role on the health care team from a patient's diagnosis to recovery. Their services are also a valuable employee and community benefit, building staff satisfaction with their jobs and patient and family satisfaction with the health care they receive.

A hospital libraries in order to survive, their existence must be validated and their contributions must be shown to be consistent with the overall goals of the hospitals they serve. The librarian is rightly called the friend, the philosopher and the guide but the person must be well-read and well-acquainted with the tools of his trade. The library consists of books, the readers and the librarian. The librarian is properly called the matchmaker of the beautiful bride-the book and the curious bridegroom- the reader, with the help of Laws of Library Science by Ranganathan. (Khan, 2006) Meanwhile, the Code of Ethics for Registered Librarians in the Philippines states in its Preamble:

"Librarians are imbued with lofty ideals of service to people through books and other records of knowledge, a service they believe is their best way to serve humanity, enrich people's lives and attain self-actualization. Through the years the profession of librarianship has developed and a codification of ideal practices and relationship has become necessary to guide the practitioner in maintaining standards of ethical behavior in his relation with state and society, with clients, with profession and colleagues, with agency and with oneself." (mahlap/services/ethics-code.php. January 31, 2012)

Presently there are several international hospital library standards. In the Philippines the government hospital libraries lead by the Department of Health Librarians has no specific library standard as to this date. Although PHILHEALTH conducted hospital accreditation no specific guidelines was given as for the use, maintenance, collections, and sustainability of the library. Navarro (2011) in her presentation last March 2, 2011 at Dumaguete City, Philippines she emphasized that MAHLAP (Medical and Health Librarians Association of the Philippines) is in the best position to assist in developing the standards for hospital, medical and health libraries. Most hospitals and medical and health institutions are now conscious of the importance of clarifying point in the development of standards the most important characteristics of which is that they consider the needs and interest of stakeholders and customers.

This study used a framework and perspectives from which to view these government hospital libraries function and would be within or below the standards. Throughout this study a number of factors regarding the assessment of hospital libraries were examined. Finally, it was anticipated that based on the findings of this study, government hospital libraries would be standardized with competent full time professional librarians, sufficient and well-balanced collections, adequate facilities and with excellent library services.

METHODOLOGY

The intent of the proposed study was to evaluate the Government Hospital Libraries through series of unstructured in-depth interviews, observations and other relevant documents available as basis for the development of an ideal library set-up in terms of; administration, staffing, collection, services, and physical facilities/ information technology. The study followed a qualitative research approach, involving the use of the unstructured in-depth interview, observations and other related documents as the primary methods and tools in gathering the data. It involved a preliminary descriptive examination of the services, collections, facilities and management of government hospital libraries. It was limited to no more than 5 government hospital libraries because of the time constraints involved in interviewing and subsequent data analysis. The person interviewed was the head / chief librarian of each institution knowledgeable enough and with authority to manage the library and must be in the field of medical and health / government hospital library.

The study was conducted at five (5) prominent government hospital libraries namely; Department of Health Libraries (San Lazaro Manila), Jose Reyes Memorial Medical Center Library (San Lazaro, Manila), RITM (Alabang), Heart Center Library (Quezon City) Lung Center of the Philippines (Quezon City). The goal of this study is to evaluate the Government Hospital Libraries and to develop library standard. A purposive sample of no more than 5 libraries will be obtained in which particular settings, persons, or events are selected deliberately in order to provide important information that cannot be obtained as well from other choices. Purposive because there is set of criteria in selecting the library as well as the persons to be interviewed must be the head / chief librarian of the institution from medical / hospital libraries, knowledgeable enough and with pertinent qualifications set by RA 9246.

Prior to the interview process permission was sought from the Management of every participating institution. The participants were informed also in the facilitation of data gathering. Upon management's approval interview process using (unstructured questions) was conducted; follow-up clarifying interviews was also observed by the researcher. All interviews were tape-recorded and, were based on four pilot interviews already conducted, were expected to vary in length from 20 minutes to 45 minutes. The interviews were informal and open-ended, and were carried out in a conversational style. The researcher anticipated that ongoing data analysis took place throughout the study. All of the taped interviews, memoranda, and field notes was entered into computer files as basis for reporting and analysis. After analyzing and reporting, the researcher then proceeded at conceptualizing the development of library standard for government hospital libraries.

RESULTS

ADMINISTRATION (OBJECTIVES OF THE LIBRARY/DEPARTMENT THAT ADMINISTERS THE LIBRARY)

As regard my interview conducted about administration (objectives of the library) these are the answers of the following participants; participant A enumerated the following objectives of her library; to serve the community in terms of their educational and research needs and assist medical practitioner in their research, on the other hand, participants B and C stated the objectives of their library as; to provide timely, accurate information and materials as well as support and facilitate research, learning, teaching and administrative activities of the institution. Participant D however, cheerfully stated the objectives of her library that is; to equip hospital staff with medical and health reading materials to support hospitals mission and vision and provide quality health care and lastly, participant E proudly stated to strengthen the research program, provide and maintain library collection with an updated infectious disease as the objectives of her library. As to the department that administers the libraries, participants A, B, C and D were under the Research Division / Office (DETR) while participant E directly reported to Department of Epidemiology & Biostatistics, in general majority of the libraries were managed by the Education Department, Training and Research.

ADMINISTRATION (CONCEPT OF AN IDEAL ORGANIZATIONAL SET-UP OF THE LIBRARY)

Based on my interview conducted two (2) of the participants stated that a library should be clearly indicating a separate department align with other support departments and should be clearly drawn in the organizational set-up. On the other hand participant C had this idea that a library be structured, evaluated and analyzed to deliver services efficiently and effectively and should perform its mandate accordingly. Another two (2) participants laid down their idea that a library must be on direct supervision of the Presidents/Director and should be under the administrative division. Based on their ideas librarian simply wants recognition as independent entity with direct supervision from President / Director. The ideal library should have the library staff /personnel that are qualified for the job; hiring of employees shall be vested on the library administrator or director who shall be directly responsible to the appropriate hierarchy of the governing body of the institution they serve. The library administrator / director in collaboration with the management or appropriate committee whichever is applicable shall have the authority to select and recommend reference materials to be purchased. To safeguard the library collections same should ensure librarians by the responsible institutions to secure the collections. The library collections should also be insured against natural disaster, grave theft, losses, etc.

ADMINISTRATION (WHY THERE IS A NEED FOR PROFESSIONAL LIBRARIAN)

In this category all of the participants had almost the same answers on why there is a need for professional librarian and here are their justifications; compliance with RA 9246 and PRC requirements aside from the variety of reasons like; can operate the library efficiently and effectively, right person that goes with changing phase, equipped and well-trained in running the library; to have fully functional services; equipped with knowledge on proper classification of library materials and they are expert on information retrieval and library evaluation as well as authoritative when it comes to library matters.

STAFFING / PERSONNEL (IDEAL NUMBER, QUALIFICATIONS AND ADVANTAGES)

As to staffing /personnel according to participants they unanimously agreed that 2 to 3 staff would be ideal number of staff for every government hospital library including clerical staff so that there should be a smooth flow of library services if ever 1 staff would be absent or doing other task assigned by higher authorities or doing other intervening tasks. As for qualifications, needed when hiring a librarian all of them had synchronized idea in saying that licensed with master's degree or units is a must; educational attainment, training, work experience and personality, good communication skills both oral and written and a graduate of accredited LIS school with good standing records. In the criteria of advantages the participants had enumerated the following reasons; according to participant A "professional librarian can accurately evaluate library collections, be able to identify the strength and weaknesses of the library and can do recommendations to higher management". Participants B and C similarly agreed that " library materials be kept and maximized and made easily accessible to users aside from performing his/her task effectively. Participant D however, seemingly limit her answer to " functional services and recognized libraries". On the other hand participant E emphasized the importance of " there is division of labor and staff management, can meet regulatory requirements, cost reduction by

subscribing and purchasing appropriate books and journals." A professional librarian has earned a Master's degree from a program that is accredited or is recognized by CHED or PRC an appropriate national body.

COLLECTION

With regard to their collection, the participants were one in saying they had books, journals (printed and online) magazines and online databases. As to their budget allocation, two (2) of the participants indicated in their budget allocation they were given annual budget though not fixed in terms of amount, two (2) also bluntly said that they had NO budget allocation instead they had to make an approval request from time to time whenever they need to purchase library materials; and one (1) participant had flexible budget allocation that is subject to availability of hospital funds. Based on the result only 2 out of 5 had definite library budget.

SERVICES (KIND OF SERVICES AND OTHER EXTRA SERVICES/ NUMBER OF HOURS)

Based on the data gathered majority of the participants 4 out of 5 answered circulation services ,internet ,reference services, photocopying, information retrieval, referral/ interlibrary loan and printing as their basic library services, 1 respondent aside from the basic does the MESH Training for their resident doctors this training orient and allow doctors to familiarize themselves proper way to search medical articles and publications. They also had something in common when it comes to extra services they rendered that is " searching articles not available to other libraries, requesting full text to other libraries or referral service, they even go beyond by giving minimal assistance in the technical writing aspect, reviews bibliographic data and responding to email inquiries and correspond to authors of their references if there are more data required. As for the number of hours they served in the library majority served at least 8 hours a day or beyond and there is one who served the library for 2 to 3 hours a day only because she was always given other task by the management.

PHYSICAL FACILITIES (LOCATION AND MINIMUM SEATING CAPACITY)

As to the result , in terms of Physical Facilities specifically on location and minimum seating capacity, all of the participants claimed that their library was not centrally located and it seemed hard to reach on 2nd, 3rd, 4th, 6th and 7th floors respectively. As to their minimum seating capacity all of them also had an average of 30 simultaneously.

(AREAS PROVIDED, EQUIPMENT AND FURNITURE AND INFORMATION TECHNOLOGY MAINTAINED)

In terms of areas provided all of them again had the relaxing pantry, viewing room, small working area, circulation and internet area. Participant C however, aside from those that were enumerated had an additional round-table discussion and individual study area. Computers, LCD, printer scanner, TV ,bookshelves, standard tables and chairs and magazine rack were equipment and furniture provided for the participants A , B and C, on the other hand participant D aside from standard tables and chairs and bookshelves had printer fax machine, desktop and camera. Participant E had compactor aside from standard tables and chairs and bookshelves. As for Information Technology 4 out of 5 have ATHENA (Library Information software) while participant E had internet provision only.

SPECIFIC PROBLEMS OF YOUR LIBRARY THAT NEED IMMEDIATE ACTION

When I asked them of the specific problems of their library that needs immediate action, they had all this to say " hiring additional staff and to have fixed library budget; provision of yearly subscription to journals print and online; procurement of online databases; definite budget, additional staff and additional ventilation of the library for conducive learning atmosphere.

DISCUSSION/ CONCLUSIONS / RECOMMENDATIONS

ADMINISTRATION

Based on my series of interviews the government hospital libraries objective varies depending on their mission / vision and generally they had these as to their objectives; to serve the community in terms of their educational and research needs and assist medical practitioner in their research ; to provide timely, accurate information and materials as well as support and facilitate research, learning, teaching and administrative activities of the institution; to equip hospital staff with medical and health reading materials to support hospitals mission and vision and provide quality health care and to strengthen research program , provide and maintain library collection with an updated infectious disease. Government hospital is administered by a sub unit of an institution and not the administrator or the President of the said institution.

The library administrator / director in collaboration with the management or appropriate committee whichever is applicable shall have the authority to select and recommend reference materials to be purchased. To safeguard the library collections same should ensure librarians by the responsible institutions to secure the collections. The library collections should also be insured against natural disaster, grave theft, losses, etc. As an independent unit of the organization it serve, libraries shall be administered and managed by a librarian possessing the required expertise, subject specialization, education, experience and other qualifications provided for under R.A. 9246 other wise known as "Philippine Librarianship Act of 2003" to ensure effective, efficient and productive operation of library at all times.

Based on the results, generally the government hospital library in terms of administration had definite objectives based on their mission/vision, not directly administered by a president or director of the institution, and their concept of an ideal library should have the library staff /personnel that are qualified for the job; hiring of employees shall be vested on the library administrator or director who shall be directly responsible to the appropriate hierarchy of the governing body of the institution they serve and should be clearly defined in the organizational set-up of the institution.

STAFFING/PERSONNEL

Recruitment and selection depends on the recruitment policy of the office or institution and the prevailing Philippine laws, the number of staff in a government hospital library shall depend on the population served and the size of the collection, mission /vision of the library and government plantilla as approved by Civil Service Commission/Department of Budget and Management. The government hospital library shall be manned by qualified and professionally trained librarians and shall be supported by support services staff. The head of the government hospital library should be a professional Librarian. The non-professional staff should conform to existing laws and government regulations. The number of the library staff is dependent on the following; mission vision of the library, type of library and government – plantilla as approved by Civil Service Commission/Department of Budget and Management. Generally speaking the government hospital library is being manned by a one –man professional librarian and when compared to other libraries government hospital library is under staff.

COLLECTION

The total library budget shall cover the personnel, operating and other necessary capital expenditures required to sustain an effective professional library service. The library shall prepare an annual budget. Collection development is dependent on the following: Scope is dependent on mission/vision, function and type of library service for each institution. Size is likewise dependent on the same criteria. Growth of the collection is dependent on the budget allotment or fund allocation of the institution. The library shall be provided with adequate and continuing budgetary support as a separate item from the budget of the office of which it is a unit. The library budget shall be dependent on its program/projects for the ensuing year. Based on the results majority of the government hospital libraries had no fixed budget allocation and thus collection development was also affected resulting to obsolete and insufficient library collection.

SERVICES

In general, the library should provide information services pertinent to the institution's information requirements. The specialized library must provide materials and services appropriate to the organization's goal, size, number of staff and institutional responsibilities taking into consideration availability of other information resources.

Accessibility to the library services shall be during regular office hours and may be rendered beyond regular hours as the need arises.

PHYSICAL FACILITIES/ INFORMATION TECHNOLOGY

Generally, the library shall be centrally and conveniently accessible to the institution it serves. Physical arrangement is dependent on the following: research needs of its primary users, space available for the library, classification scheme use, the space allocation should be ; reading Area ; technical services area, stock and other shelf areas and other areas as may be needed as required.

The library shall provide adequate standard furniture and equipment for the needs of the users, collections and library staff and must encourage resource sharing to enrich their collections subject to existing policies of institutions and government rules and regulations.

Typically government hospital libraries based on this study were not centrally located and not conveniently accessible, as to equipment and furniture they showed fair and within the minimum standard as compared to other kinds of libraries.

CONCLUSIONS

Based on the results the following conclusions were formulated;

1. The administration of government hospital library's objectives was based on their mission/vision and the types of institution they serve; library's not directly administered by a president or director of the institution, and their concept of an ideal library should have the library staff or personnel that are qualified for the job (professional librarian) ; hiring of employees shall be vested on the library administrator or director who shall be directly responsible for the appropriate hierarchy of the governing body of the institution they serve and should be clearly defined in the organizational set-up of the institution.
2. Government hospital library is under staff since it is manned by a one –man professional librarian only.
3. Government hospital libraries lack budget thus affecting collection development policy also resulting to obsolete and insufficient library collection.
4. Librarians rendered basic library services with intervening factors due to limited library staff .
5. Government hospital library is not centrally located and not conveniently accessible; as to equipment and furniture they showed fair and within the minimum standard as compared to other kinds of libraries.

RECOMMENDATIONS

Based on the findings, the proposed library standard for government hospital libraries may be used and implemented for them to have guidelines in the daily operations of the library in terms of administration, staffing, collection, services, physical facilities and networking. In addition to Department of Health hospital libraries must be prioritize in order to sustain their existence and their contribution in health information dissemination.

PROPOSED LIBRARY STANDARD FOR GOVERNMENT HOSPITAL LIBRARIES (PHILIPPINES)

INTRODUCTION

Hospital libraries are considered to be the basic unit of the medical information system. Efficient and timely access to evidence-based health literature is an important element in the provision of safe patient care. A hospital libraries in order to survive, their existence must be validated and their contributions must be shown to be consistent with the overall goals of the hospitals they serve. In the Philippines the government hospital libraries lead by the Department of Health Librarians have no specific library standards as to this date. Although PHILHEALTH conducted hospital accreditation no specific guidelines were given as for the use, maintenance , collections, and sustainability of the library. Objectives: Based on the results of the study, the researcher aimed to provide guidelines /standards for government hospital libraries in terms of; Administration, Staffing,Collection ,Services, Physical Facilities and Networking.

ADMINISTRATION

1. The Government hospital library shall be a line department of the institution responsible to the administration, and its relationships with other hospital units shall be reflected in the overall hospital organizational plan.
2. As an independent unit of the organization it serve, government libraries shall be administered and managed by a librarian possessing the required expertise, subject specialization, education, experience and other qualifications provided for under R.A. 9246 otherwise known as Philippine Librarianship Act."
3. To ensure that library staff /personnel are qualified for the job, hiring of employees shall be vested on the library administrator or director who shall be directly responsible to the appropriate hierarchy of the governing body of the institution they serve.
4. The library administrator / director in collaboration with the management or appropriate committee whichever is applicable shall have the authority to select and recommend reference materials to be purchased.

STAFFING/PERSONNEL

A. Recruitment and Selection - depends on the recruitment policy of the office or institution and the prevailing Philippine laws.

1. QUALIFICATIONS

Professional staff – The minimum requirement is one (1) professional staff equipped with the subject specialization of said library (medical)

Para-professional staff –Should be college degree holder with knowledge of Information technology; or in government agencies or institutions, civil service eligibility is required.

2. **NUMBER OF THE LIBRARY STAFF** – the number of the library staff is dependent on the following: mission vision of the library, type of medical library and plantilla as approved by Civil Service Commission /Department of Budget and Management.

COLLECTION

A. **Collection Development is dependent on the following:**

1. Scope is dependent on the mission/vision, function and type of library service for each institution
2. Size is likewise dependent on the same criteria
3. Growth of the collection is dependent on the budget allotment or fund allocation of the institution.

B. Organization

1. Collection must be systematically organized according to generally accepted standard classification, e.g. Dewey Decimal Classification (DDC), Library of Congress (LC), and other recognized classification scheme.
2. Indexing should be observed.

C. Budget

The library shall prepare an annual budget. The government medical library shall be provided with adequate and continuing budgetary support as a separate item from the budget of the office of which it is a unit. The library budget shall be dependent on its program/projects for the ensuing year. The total library budget shall cover the personnel, operating and other necessary capital expenditures required.

SERVICES

A. General – the library should provide information services pertinent to the institution's information requirements.

B. Special – the specialized library must provide materials and services appropriate to the organization's goal, size, number of staff and institutional responsibilities taking into consideration availability of other information resources

C. Library hours/Guidelines – accessibility to the library services shall be during regular office hours and may be rendered beyond regular hours as the need arises.

D. Technical Services – Acquisitions, Cataloging and classification; Indexing

E. Reader Services – Circulation, Reference, Periodicals, Audiovisual, Interlibrary loan/Resource sharing and Photocopying

PHYSICAL FACILITIES

The government hospital library shall be in one location convenient to the hospital staff including physicians, nurses, students, and other health professionals, and provide access for the handicapped. Library space shall be adequate for the needs of users, collections, services, and library staff, and shall be reserved for library use.

Furniture and Equipment. The library shall provide adequate standard furniture and equipment for the needs of the users, collections and library staff.

NETWORKING/COMPUTER FACILITIES

The government hospital library shall develop relationships with other libraries cooperating in the development of specialized collections and sharing resources for mutual benefit, consistent with any legal restrictions. The government library shall have facilities for information technology and communication services. Government medical libraries must encourage resource sharing to enrich their collections subject to existing policies of institutions and government rules and regulations.

REFERENCES**BOOKS**

1. Bandy, M. et al (2008). Standards for hospital libraries 2007. Journal of the Medical Library Association. CA: Sage April: 96 (2) 162-169
2. Bernard, H. R. (2000). Social research methods: Qualitative and quantitative approaches. Thousand Oaks, CA: Sage.
3. Chapman, Allan (2010) Abraham Maslow Hierarchy of Needs. New York: McGrawHill,
4. Creswell, J. W. (1998). Qualitative inquiry and research design: Choosing among five traditions. Thousand Oaks, CA: Sage.
5. Funk, C. (2008). Using standards to make your case: Examples from the medical library community. New Library World, 109(5/6), 251-257.
6. Khan, R. (2006). Introduction to Library Science. New Delhi: SBS Publishers & Distributors Pvt.Ltd.
7. Merriam, S. B. (2009). Qualitative Research: A Guide to Design and Implementation. San Francisco, CA: John Wiley & Sons.

CONFERENCE PROCEEDINGS

8. Batiancila, M. (2010) Library and information professional competency continuum. Keynote Address. PLAI Library Association. November 2010.
9. Garcia, P.(2006) Innovative Services & Challenges for Libraries. A presentation in PAARL seminar-workshop on the theme, Library & Information Services: New Paradigm for the Digital Age St. Paul Retreat House, Pico, La Trinidad, Benguet.
10. Navarro, R. (2011) Understanding Accreditation Standards as a Means for Improvement and Excellence. 23rd MAHLAP Congress, Dumaguete City. March 2, 2011.

WEBSITE CONTENT AND ADDRESS

11. Cowen, J. (2007). Research vignette. Available online:http://www.mlanet.org/research/policy/policy_08.html (accessed on 8 January 2013)
12. Fischer KS(2005) Doody's Core Titles in the Health Sciences. J Med Library Association Jul; 93 (3) :409. <<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=11758>. (accessed on 4 February 2013)
13. Maine Public Library Standards (2007). Striving for excellence. Available online:<http://www.maine.gov/msl/libraries/standards/index.htm> (accessed on 31 January 2013)

CHALLENGES IN APPLICATION OF SIX SIGMA TECHNIQUES IN HR DOMAIN

NAGARAJ SHENOY
PROFESSOR
DEPARTMENT OF M.B.A.
PES INSTITUTE OF TECHNOLOGY
BANGALORE

DR. KALYANI RANGARAJAN
DIRECTOR
VIT BUSINESS SCHOOL
CHENNAI

ABSTRACT

Six Sigma, which started as process improvement tool to enhance quality perception of customers towards products and services, has transformed into a management philosophy for many organizations. Human Resource (HR) department plays a pivotal role in the successful execution of Six Sigma projects. But when it comes to implementing the Six Sigma techniques to the processes of HR domain itself, many impediments are posing problems. They range from the questions of feasibility to measurability to applicability. There is a widespread belief that Six Sigma techniques cannot be applied to HR processes. But the biggest challenge is the perception of HR professionals towards Six Sigma methodology. Apprehensions and disagreements about the measurability and quantifiability of HR processes among HR professionals are impeding the application of Six Sigma. There is a need to meet these challenges by the concerted efforts of all HR professionals.

KEYWORDS

HR Applicability, HR Measurability, Human Resource Management (HRM), Quality, Six Sigma.

INTRODUCTION

Perfection is an endless dream. Man's quest for flawless performance in all his work is taking him to the pursuit of constant improvement. Defects are dangerous, they have consequences much worse than earlier they use to. So, modern times have compelled the business world to explore the ways to improve their processes and works to ensure as defect-free as possible, their end products and services. This exploration led them to the discovery of many methods to improve the quality of their work.

Six Sigma is one such revolutionary concept that has transformed the manufacturing industry in the quality and excellence aspect. It changed the paradigm of excellence in every process and activity an industry is performing. Most importantly, it converted the qualitative parameter of 'Quality', a 'measurable' variable.

WHAT IS SIX SIGMA?

Six Sigma was first conceptualized at Motorola around 1986, when it was reeling under huge losses and was unable to face the competition. The word sigma (a Greek alphabet written as ' σ ') is derived from statistics where it is used denote 'standard deviation', which is a measure of deviation from the mean of the population. In organizational context this was used as measure of deviations from the 'perfection'. Lesser the deviations, more towards perfection.

The deviations in terms of sigma can be expressed in terms of defects per million opportunities (DPMO). In this concept Six Sigma allows only 3.4 defects per million opportunities. The DPMO values for 2, 3, 4, and 5 sigma levels are 308537, 66807, 6210, and 233 respectively. Six Sigma is influenced by the quality movements of its preceding time. Notable ones are quality control, Total Quality Management, and Zero Defects which are outcomes of the works of Shewhart, Deming, Juran, Ishikawa, Taguchi and others.

Six Sigma is statistical concept that measures a process in terms of defects. Six Sigma is a problem solving technology that uses an organization's human assets, data, measurements, and statistics to identify the vital few factors to decrease waste and defects while increasing customer satisfaction, profit, and shareholder value (Brue, 2002). Six Sigma focuses on establishing world-class business-performance benchmarks and on providing an organizational structure and road-map by which these can be realized. Although particularly relevant to the enhancing of value of products and services from a customer perspective, Six Sigma is also directly applicable to improving the efficiency and effectiveness of all processes, tasks and transactions of any organization. (Truscott, 2009).

Many companies have not understood how the poor quality impacts their bottom line. As the poor quality compels the companies to rework on designs, larger wastes in the form of scrap materials, resend the products, warranty claims, and of late recalling the products and facing court cases. 'In tracking companies from industries across the board, researchers have found that the cost of poor quality is in the range of 20 to 30 percent of total operating costs. A company engaged in Six Sigma can expect to cut that in half over three years' (Defoe, 2000).

In its methodology, begins with the Cost-Of-Poor-Quality (COPQ) that can trigger the movement of quality in an organization. Six Sigma focuses on customer satisfaction as its topmost priority. It identifies Critical-To-Quality (CTQ) elements in a business process or product that is what matters most for your customers. It leads to an effort to improve quality from customer's perspective. Six Sigma helps to set benchmarks to compare the progress made in the process.

Comparisons are inevitable. The way quality and performance levels of an organization are compared with others in same segment of business, the techniques of Six Sigma are also compared with other previous quality improvement movements. Most prominent among all these is its comparison with TQM. Well known quality guru *Joseph Juran* found nothing new in Six Sigma. He also criticized Six Sigma as "a basic version of quality improvement". But Six Sigma camp has its justification for the doubts raised by opponents. They feel Six Sigma is revealing a potential for success that goes beyond the levels of improvement achieved through the many TQM efforts (Pande, Neuman, & Cavanage, 2004). The following table is summarized comparisons between TQM and Six Sigma.

TABLE 1: SIX SIGMA VERSUS TQM

Sl. No.	TQM Pitfall	Six Sigma Solution
1	Lack of Integration	Links to the Business and Personal "Bottom Line"
2	Leadership Apathy	Leadership at the Vanguard
3	A Fuzzy Concept	A Consistently Repeated Simple Message
4	An Unclear Goal	Setting a No-Nonsense, Ambitious Goal
5	Purist Attitude And Technical Zealotry	Adapting Tools and Degree of Rigor to the Circumstances
6	Failure To Breakdown Internal Barriers	Priority on Cross Functional Process Management
7	Incremental vs. Exponential Change	Incremental Exponential Change
8	Ineffective Training	Blackbelts, Greenbelts, Master Blackbelts
9	Focus on Product Quality	Attention to All Business Processes

Information Source: Pande Peter S. et al, (2004), The Six Sigma Way, Tata McGraw Hill Publishing Company Limited, New Delhi, Page 42-48

The financial benefits of the implementation of Six Sigma are measured in many organizations and they are highly impressive. The global corporate giants like Motorola, Texas Instruments, IBM, Allied Signal, and most importantly General Electric, have implemented Six Sigma and saved literally billions of dollars. Later other companies like Ford, Dupont, Dow Chemical, Microsoft, and American Express followed the suit and reported similar benefits.

But Six Sigma is not only about money. It is more of a management philosophy, method of thinking, way of working, and above all commitment of an organization. In many top organizations like Dow Chemical, that are committed to Six Sigma, key managerial slots including HR managers, require Six Sigma certification. Jack Welch, considered as one among the greatest CEOs, initiated Six Sigma practices in General Electric, quoted as saying "Six Sigma is the most important initiative General Electric has ever taken. It is part of the genetic code of our future leadership".

As Six Sigma spreads its wings into other fields, it found its way into the areas. The activities which so far considered 'immeasurable' were brought into the folds of Six Sigma. In a study (Brewer, 2004), one company in US, Amdell Inc., turns to Six Sigma to find the answer to the issue of making employees feel more accountable for results. Six Sigma methodology helped this company discover that a culture of accountability, first and foremost, is a function of strategically aligned employee expectations and an effective system of rewards and consequences.

Seemingly similar work groups in organizations will have lot of performance variations. By managing such variability, an organization can raise overall performance by orders of magnitude and can create organic growth. A study by Fleming, Coffman, & Harter, attempts to address this issue and create a measure to quantify the concepts of employee engagement and customer engagement, which they called 'Human Sigma Score' (Fleming, Coffman, & Harter, 2005). This measure, they claim, a single measure of effectiveness for the employee-customer encounter and this measure has a high correlation with financial performance.

Realizing the impact of Six Sigma in all processes and functions of an organization, companies moved to the concept of making the whole organization a 'six sigma organization'. But there are some hitches. Whenever an organization is termed as 'six sigma organization' an obvious question raised is whether all critical processes are at Six Sigma level. If not, how an organization has been termed as 'six sigma organization'. An attempt is made in this direction by (Ravichandran, 2006) by assigning weights to all critical processes of an organization based on their relative importance.

WHY IN HRM?

The participation of HR in the successful implementation of any Six Sigma project is indispensable. Six sigma increases HR participation in employee, company, and customer development by integrating its function into management decisions, company strategy, as well as employee development. (Defoe, 2000). But when this comes to applying Six Sigma to HR functions per se, the answer is not encouraging.

Some larger corporations have integrated Six Sigma so well into the corporate culture that it can be considered the DNA of the company. However, even in such companies, the human resources department has been practically untouched by Six Sigma. (Gupta, 2005). Some questions rose in this issue were 'how can HR be measured?', 'How can you apply 3.4 defects per million opportunity rule to HR when no organization would have a million employees?'

But this perception that Six Sigma cannot be applied to HR processes - for whatsoever reasons - is not shared by all. "Applying Six Sigma to HR is really no different than applying it anywhere else in the organization," says Jackie Nelson, HR master black belt for GE Consumer Finance, Americas. "The key is, 'What are the gaps? Once you understand what the problem is, it's like a mathematical problem you apply the right formula to solve.'" (Heuring, 2004).

So the real problem lies in the perception of an individual HR professional. If HR wants to remain in the supporting role in Six Sigma projects of other functions of the organization or take up some projects for its own domain, it is for the HR professionals to take the call.

THE HR CHALLENGE OF SIX SIGMA

Six Sigma is basically a data driven approach to eliminate defects to improve the processes and products. Hence it is obvious that any process to be subjected to Six Sigma analysis should produce data in its operations. That is, its processes must be 'measurable'. When we think of applying the Six Sigma techniques to HRM, an inevitable question is to what an extent all the processes of HRM are measurable.

'Measuring a process' in manufacturing is very easy, whereas the same in HR functions is very difficult. In manufacturing one can measure so many parameters of a process relatively with ease compared to the processes of HRM wherein the measurability of a process depends on the perception of an individual HR person. That is, for a same process some feel that it is measurable while others feel that the same is not measurable. There is disagreement on the degree of measurability of the process as well. There is no unanimity among HR fraternity about the mode of measurement of HR processes. Unless there is unanimity about the mode of measurement we cannot compare the performance levels of the processes among different organizations.

Another limitation of HR is that it is not considered as a major line function in many organizations. By the nature of work, HR is only considered as a staff function. This is due to the fact of not realizing the significance of HR. HR acts as undercurrent in smooth functioning of all processes of organization. But unfortunately it goes unrecognized. This is mainly due to the non-measurable nature of HR processes. Success is credited to those who demonstrate their performance in measurable numbers, who show the financial benefits to the company in terms of tangible moolah. There are other pragmatic opinions on this issue. 'It must be understood that HR isn't a huge part of any business, but it has a huge effect on every business. Human resources should be considered as human capital. HR must ensure that there's good return on investment in human capital' (Gupta, 2005).

Yet, we need to find ways to measure HR processes. If we cannot measure a process, we cannot control it. And if we cannot control it, we can neither improve it nor can we manage it. In the absence of all these, especially in case of HR, we cannot show the importance of the function, demonstrate financial gains to the organization, and gain the due recognition it deserves. As a first step in this direction an attempt is made in this research to analyze and understand the perceptions of HR persons working in software industry.

HR APPLICATIONS

Six Sigma is considered as management philosophy along with being quality improvement methodology. Carey finds Six Sigma is synonymous with good HR practice in a number of well-known companies. Done well and widely, Six Sigma can dramatically and often radically change the culture of an organization. According to Wandke and Garth Rymer, Motorola University's representative in Australia, the most successful and long-lived Six Sigma implementations (GE, Dow Chemical and Motorola are in their second or third decade of Six Sigma) have the upfront involvement and active participation of the finance and HR functions. HR is centrally involved in Six Sigma people policy development, then in the selection, recruitment, training, mentoring and development of these key people. (Carey, 2005a)

Overcoming all the obstacles there are many Six Sigma projects have been accomplished in many organizations. Examples of Six Sigma projects that companies' HR departments have completed include reduction in overtime, reduction in time and cost to hire an employee, reduction in employee retention or turnover, reduction in safety violations, reduction in cost of employee separation, and HR response to internal inquiries for benefits, payroll, promotion and fairness (Gupta, 2005). In addition, many organizations are using Six Sigma to reduce costs in everyday HR functions. Six Sigma is also being used in improving the hiring process; enhancing employee satisfaction, increasing the effectiveness of training and development programs, pay fixation, etc.

Some typical projects within HR include modeling the hire versus overtime dilemma. This is done by balancing the cost of entry point wages and salaries and the cost of induction and learning, against the cost of overtime, taking into account burnout, fatigue and additional allowances and breaks. (Carey, 2005b)

There is a high expectation from customers for every organization. To meet this expectation it has become imperative on the part of every department to perform to the best of its potential. The HR cannot afford to be an exception. Hence HR cannot afford to keep off from using Six Sigma tools and techniques to improve the processes of its own department.

CONCLUSIONS

Application of Six Sigma tools and techniques to HR processes and functions is complicated compared to its application in other functional areas. It is mainly due to the abstract nature of function of HR processes. But in view of the highly competitive market conditions, an organization can ill-afford to exclude HR from the purview of constant process improvement. The questions on the quantifiability and measurability of HR processes notwithstanding, the HR fraternity needs to think of going Six Sigma way to improve their functional ability.

REFERENCES

1. Brewer, P. C. (2004). Six Sigma Helps A Company Create A Culture Of Accountability. *Journal of Organizational Excellence* .
2. Brue, G. (2002). *Six Sigma for Managers*. New Delhi: Tata McGraw Hill Publishing Company Ltd.
3. Carey, P. (2005a, February 22). What on earth has Six Sigma got to do with HR? - Part One. Retrieved July 02, 2008, from Human Resources Magazine Website: <http://www.humanresourcesmagazine.com.au/articles/F9/0C02CBF9.asp?Type=60&Category=903>
4. Carey, P. (2005b, March 8). What on earth has Six Sigma got to do with HR? - Part Two. Retrieved July 02, 2008, from Human Resources Magazine Website: <http://www.humanresourcesmagazine.com.au/articles/C9/0C02CCC9.asp?Type=60&Category=903>
5. Defoe, J. A. (2000, Summer). Six Sigma: New Opportunities for HR, New Career Growth for Employees. *Employment Relations Today* .
6. Fleming, J. H., Coffman, C., & Harter, J. K. (2005, July - August 2005). Manage your Human Sigma. *Harvard Business Review* , 106-114.
7. Gupta, P. (2005). Six Sigma in Human Resources. *Quality Digest* .
8. Heuring, L. (2004, March). Six Sigma in Sight. *HR Magazine*, published by the Society for Human Resource Management .
9. Pande, P. S., Neuman, R. P., & Cavanage, R. R. (2004). *The Six Sigma Way*. New Delhi: Tata McGraw Hill Company Limited.
10. Ravichandran, J. (2006). Six-Sigma Milestone: An Overall Sigma Level of an Organization. *Total Quality Management & Business Excellence* , 973 - 980.
11. Truscott, W. (2009). *Six Sigma: Continual Improvement for Businesses*. Burlington: Butterworth-Heinemann - An imprint of Elsevier.

COMPETITIVENESS IN NIGERIAN TELECOMMUNICATION INDUSTRY: MARKETING STRATEGY**FALANO, TOLUOPE****ALUMNI****DEPARTMENT OF ENGINEERING & KNOWLEDGE MANAGEMENT****FACULTY OF ENGINEERING & COMPUTING****COVENTRY****POPOOLA F. CORNELIUS****RESEARCH DIRECTOR****POTAB INT'L RESEARCH & CONSULTING****IBADAN****ABSTRACT**

This study has examined competitiveness in Nigeria telecommunication industry. Due to momentous increase in competition between mobile telecoms companies, customers persistently faced the choice of deciding which service provider is more preferable and economical to them. This study investigated the effect of marketing strategies on customers' satisfaction, loyalty and retention. A cross-sectional survey research design was adopted for the study. 280 staffs were randomly selected from five mobile telecoms companies in Ibadan metropolis. Data generated were analysed using multiple regression (R^2) at 0.05 alpha level. The findings of the study revealed that promotion strategies adopted by mobile telecoms companies significantly affect customer's satisfaction, loyalty and retention. Finding also revealed that competitiveness has negative impact on Nigerian telecommunication growth ($t=-1.98, p>.05$) while promotional strategies have positive impact on Nigerian telecommunication growth ($t=4.15, p<.05$). Based on the findings, it is recommended that Nigerian telecommunication industry should engage more professionals into the industry that would put a touch in the telecommunication growth. Professionals should take account of the benefit of adopting effective marketing strategies so as to withstand the rigid competition within the national and international telecommunication market. Finally, regulators of Nigerian telecommunication industry should embark on market monitoring activities to aid the quality of services delivered by telecommunication companies.

KEYWORDS

Competitiveness, Marketing strategy, Promotion and Telecommunication.

INTRODUCTION

In the midst of peak rising telecommunication marketplace in African, Nigeria has been recognize to one because the number of mobile line subscriber is accounted to be less than two hundred and sixty-six thousand four hundred and sixty-one while the mobile digital lines are about 1.3 million subscribers (Nigeria Communication Commission, 2011). These momentum transformations is likely to persist at a more rapidly speed. Nigeria telecommunication industry has witnessed the foremost change in terms of development, market formation and technological advancement over the last decade. This was as a result of institutional reforms and policy in the industry. This reform shown the way to the liberalization of Nigerian telecommunication industry and as a result, the industry has experienced momentous increase in competition.

The occurrence of this powerful competition in Nigeria telecommunication industry has made customers to persistently face with the choice of deciding which service provider is more preferable and economical to them. As a result of this, customers become more trying and frequently mix to swamp from one mobile network to another because of service charge and benefits. In addition, the propensity of competition in Nigerian telecommunication sector is as a result of simplicity and speed of products and services repetition in the sector (Oyeniya, Abiodun and Osibanjo, 2011).

Nigeria network providers see customer retention more important than customer attainment. By and large, the service providers make one of their business plans to center on retaining highly profitable customers. Consequently, customers' long-standing relationship then becomes an important strategy for mobile network providers. This enables them to pursue additional conventional source of profits and consecutive profits flows.

Furthermore, service providers face a hostile business environment which includes high operating costs, the constant threat of vandalism to their equipment and a reduction in the Average Revenue Per User (ARPU). Besides, the challenges of integrating new market strategies, that is, to market their products and services to their prospective customers, and also to generate the highest level of revenue and strengthen their customer loyalty were traumatic situation facing the telecommunication companies. Though, there is a discrepancy on the market strategy implemented by most of these mobile companies, therefore, it is on this premises that this study hereby examined the competitiveness in Nigerian telecommunication sectors based on the extent of their market strategies.

PROBLEM STATEMENT

The overture of deregulation exercise in Nigeria telecommunication industry has driven many players into this sector. Many local and foreign investors of different sizes and strength seize the advantages of this opportunity to create a position for themselves in the sector. This therefore brought about crucial increase in the level of activities of Nigerian mobile companies which lead the business environment to be more competitive than before. Despite the rivalry among the telecom companies, some still keep on expanding their business and coverage both locally and internationally while some find it difficulty to compete with long reputable international players. Then, this study investigated the market strategies implemented by major giants companies among telecommunication sector in Nigeria.

OBJECTIVES OF THE STUDY

The objectives of this study were:

- (i) To discover the competitive nature of telecommunication sector in Nigeria
- (ii) To discover the issues that enhanced the growth of Nigeria telecommunications sectors
- (iii) To examine the factors affecting the growth of the telecommunication sector in Nigeria.

LITERATURE REVIEW**COMPETITIVENESS**

Competitiveness is an elaborate concept. It is used in highly varied ways and is itself multi-dimensional. Competitiveness by definition measures the relative performance of a firm but there are often deviations in meaning. The word is often used to assert that a firm can cut costs, improve production or increase the efficiency of one of its activities by means of telecommunications. Therefore, competition is generally defined as the ability of a company to provide products and services more effectively and efficiently than the relevant competitors (Stigler, 2008).

Competitiveness is based on a combination of economic, social and political elements. The economic aspects, focus mainly on the comparative advantages and disadvantages of particular locations, together with their labor forces, skills' levels and other advantages. The social dimensions are more concerned about the distributional aspects and the means to reduce differences between different population segments, which is a clear contrast to what the economic aspects of competitiveness deals with (Organization for Economic Cooperation and Development, 1999).

The definition of competitiveness is varies across firm, industry and national level. Competitiveness can be explain at the firm level as the ability of a firm to make products and services available to both existing and prospective customers in an effective and efficient way than the related firm contestant (OECD, 1999). The level of competitiveness of a firm also comprises their persistent achievement in both the national and international market without subvention. The intensity of competitiveness in firm can be measure with their profits, cost and quality, export, foreign sales, and also the level of their regional and global market share. In addition, firm competitiveness can also be measure by their level of performance in the international market (Gartner, 2010).

On the other hand, competitiveness at industry level can be explained as the competence of country's firm to attain achievement in opposition to foreign competitors without financial backing (Merriam Webster Online, 2011). The strength of competitiveness at industry level can be determine through the following: cost and quality of industry level, overall profitability of the firms in the sector, trade balance of the sector, balance of outbound and inbound FDI i.e. foreign direct investment (Ahonen, 2010).

In the case of national level, competitiveness signifies the capacity of a country to accomplish high and uncompromisingly increasing of standard of living. The living standard of country dwellers in the majority of the countries are always been determined by the productivity, the position of national resources in addition with the output of economy per unit labour (Wilcox, 2010). The standard of living in all nationwide can only be continue when there is incessant improvement of higher productivity in business. Therefore, competitiveness in national level can be measure by high level of business productivity.

MARKETING

Globally, marketing was looked upon as a set of activities used by business firms to stimulate demand and to search for buyers or customers so as to create profit. Many organisations equate marketing with selling, while some organisations not only look at marketing as business activities but as being concerned with only those activities that take place between when the goods or services have been produced or rendered to customers (Nwokoye, 2004). Therefore, there is a need to look at definition and even the marketing mix been utilized by organisations in both Nigeria and abroad. The following comprehensive definitions of marketing are suggested as being more appropriate for this study. Although there are some other many good definitions, but the following is considered for the purpose of this study.

Marketing is broadly defined as a process by which companies create customer interest in products or services. It generates the strategy that underlines sales techniques, business communication, and business development (Nwokoye, 2004). It is an integrated process through which companies build strong customer relationships and create value for their customers and themselves. Marketing is used to identify the customer, to keep the customer, and to satisfy the customer. Definition of marketing differs primarily in terms of macro and micro point of view. In macro point of view, marketing is related to society while in micro point of view, it is restricted to the business activities of a firm and to the object of exchange to economic goods and service (Nwokoye, 2004). American Marketing Association defines marketing as "the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods, and services to create exchanges that satisfy individual and organisational objectives" (AMA, 1985 cited in AMA, 2008).

This definition, which replaced a narrower interpretation adopted in 1960, was arrived at above definition after AMA councils and committees had studied over twenty-five definitions. The word 'conception' in the definition means 'devising' or 'putting together' what is to be marketed, and the objects of exchange in marketing involve not only tangible goods, but also services (such as construction services) and ideas (such as safe driving on our highways).

In addition, Markin (1979) defines marketing as "the set of activities by which the demand structure for goods and services as managed in order to facilitate the exchange process satisfactorily". Akinniyi and Ogunmola (2007) describes it as any inter-personal or inter-organisational relationship involving exchange in order to satisfy human needs or wants. Kotler (1984) defines marketing as "a social and managerial process by which individual and group obtain what they need and want through creating and exchanging products and value with others".

The three definitions above are quite similar as they are all saying the same thing. All the three taken together, they recognise the fact that marketing consists of many activities. Hence, marketing activities are performed to be satisfied by providing goods, services and ideas through the exchange process. Marketing is the process of planning and executing the conception, pricing, promotion and distribution four Ps, goods and services to create exchanges with customers that satisfy individual and organizational objectives. McCarthy (1960) advances the four Ps of marketing, which are discussed below:

Product: Product refers to the goods and services offered by the organisation. In the case of physical products, it refers to any services or conveniences that are part of the offering. Product decisions include aspects such as function, appearance, packaging, service, warranty, etc (McCarthy, 1960).

Price: This is refers to the amount of fee levy for a particular service or product. It is one of the important components to be achieved by organisation before a service is rendered or before product is decided to be sold. There are many factors that determine the price of a particular product or service amongst are: demand, cost, ability of customer to pay, competitor price charged on the same products or service, price control by government and so on (McCarthy, 1960). Akinniyi and Ogunmola (2007) also supported that price is one of the important part that enhance decision making in an organisation.

Place: This is refers to a designated spot where goods or services are been sold to consumers. According to Akinniyi and Ogunmola (2007), a place is explained as area where finished product can be easily be purchased by the consumers. So, it is necessary that the product is available at place for buyers to have convenient access to it. This involves a chain of individuals and institutions like distributors, wholesalers and retailers who constitute firm's distribution channel. The distribution system performs transactional, logistical, and facilitating functions. Distribution decisions include market coverage, channel member selection, logistics, and levels of service.

Promotion: As one of the important element of marketing, promotion is a procedure or method involved in telling the consumers about a product or service so as to make choice of purchasing product or patronising a service (Akinniyi and Ogunmola, 2007). In promoting a product or service, this is achieved through different means such as advertising, publicity, sales promotion and even personal selling (McCarthy, 1960). Organisations make use of promotion to make available information regarding their product or service to both the existing and future consumers. During this promotion exercises, information regarding the uniqueness of the product, accessibility of the product and how to use the product are things to be explain to the consumers. This technique, therefore, stimulates the interest of the consumer in purchasing a product or makes a comparison of a product to other competitors' product.

HISTORY OF TELECOMMUNICATIONS SECTOR IN NIGERIA

Modern telecommunications technology was introduced to Nigeria in the 19th century, with telegraph and telephone services (Adeyinka, 1997). Up till 1950, government and large business concerns were the primary users of these services. They were probably the only users who could afford the services as per capital gross national product was then rather low. However, the oil boom of the seventies changed the economic scene. With increase in personal incomes, economic activities became more complex, modern, and started to take on an international dimension. Both private and commercial demand for telecommunications increased rapidly with the need for reliable, round-the-clock services.

With the rising demand in telephone service requirements, it became obvious that the installed telecommunications infrastructure needed to be expanded. The development of telecommunications then was funded entirely from government sources. This is the entity that provides the internal services being a Government department, that is, the Posts and Telecommunications Department, while another delivering external service was also a fully owned government limited liability company known as Nigerian External Telecommunications (Adeyinka, 1997).

The Federal Government took a significant step in the third and fourth National Development Plans in 1975-1958 by allocating a total of about 5.5 billion naira for the modernization and expansion of public telephone system (Adeyinka, 1997). The modernization and expansion of telecommunications as indicated in the two development plans were however, only partially fulfilled. This was due to the fact that the government failed to meet the planned target and was therefore unable to provide more than 60 per cent of the funds allocated for the programme (Adeyinka, 1997).

With the planned expansion missed, the gap between supply and demand for telecommunications service has continued to widen thus putting a strain on the existing facilities, and the quality of service.

Formerly, Nigeria Telecommunication (NITEL) was the body responsible for telecommunications in Nigeria. Like many of its counterparts in developing countries, NITEL embarked on the adoption of digital technology in order to expand telecommunications system and improve its services network. Then, NITEL embarked on what it regarded as a process of deep-going technological changes by which it hoped to redeem its public service image (Adeyinka, 1997). But, between the periods of 1987 to 1992, the performance of NITEL was so poor to the extent that no notable improvement can be pointed to. The demands of consumers were unmet. It is on this premises that the military administration of General Ibrahim Babangida, the former President of Federal Republic of Nigeria go on board to market reform by means of transforming Nigeria telecommunication industry.

In 1992, a pronouncement was made known to the public on the Nigerian Communication Commission Decree (NCCD). This Decree turned out to be the foremost legislation in leading the telecommunication industry (Oyejide and Bankole, 2001). During this period, NCCD untied a variety of activities in telecommunications and these comprises the fitting of terminals, provision and operation of both public mobile network, community telephones, service of value-added network and private network (Nduwke, 2003). Among the activities of NCCD is the repair and maintenance of the cable and facility of telecoms.

The NCCD introduced Nigerian Communication Commission as a regulatory agency to control the telecommunication sector. This Commission is supervised by Federal Ministry of Communication. It is this Commission that has the power to issued license to any private telecoms operators. One of the responsibilities of this Commission is to oversee the affairs of the telecommunication industry and at the same prepare policies that will draw up technical standard for telecoms providers.

NCC licensed mobile network providers in 1996 after each of them have paid a fixed licensed fee for the type of service they rendered to the public. The duration of licensed for the telecoms operators was ranged between the periods of 5 to 10 years (Nduwke, 2003). In 1999, another enthusiastic interest was also shown by the government, especially in the area of liberalization of Nigeria telecommunication industry. The full liberalization process therefore opened up to competition for the telecoms operators in the sector till date.

OVERVIEW OF NIGERIA TELECOMMUNICATION MARKET

The state of market performance of Nigeria telecoms operators has been identified by through key indicator of subscriber numbers. This indicator provides a gauge for measuring the market situation of the telecommunication industry. The illustration in Table 1 below shows the market ranking of Nigeria mobile companies. It was deduced that MTN has the highest number of subscribers followed by Globacom, Airtel, Etisalat, Visafone, Multilinks, Telkom and Starcoms while Reltel was reported to be the last on the market ranking. In addition, out of 88,348,026 nation's active phone lines recorded by Nigerian Communications Commission, MTN was declared to be the first market leader with 38,683,520 lines and with a growth rate of 6.37 in the year 2011 (NCC, 2011).

TABLE 1: MARKET RANKING OF NIGERIA MOBILE COMPANIES

S/N	Operators	Number of Subscribers	Ranking of Market Leader
1	MTN	38,683,520	1 ST
2	GLOBACOM	19,627,415	2 ND
3	AIRTEL	15,834,243	3 RD
4	ETISALAT	6,791,986	4 TH
5	VISAFONE	2,558,867	5 TH
6	MULTILINKS TELKOM	1,454,704	6 TH
7	STARCOMS	1,149,380	7 TH
8	RELTEL	939,145	8 TH

Source: NCC (2011)

The record indicates that Globacom emerged to be the number two operator among the five family of GSM operators in Nigeria. The number of subscribers was recorded to 19,627,415 which were 3,793,172 lines more than Airtel Nigeria with 15,834,243. Though, it was earlier belief that the appearance of Airtel into the Nigeria market will whip up vivacious competition. Additionally, Etisalat was also recorded to be the fourth market leaders of 6,791,986 lines. But, Etisalat demonstrated up apparently disadvantaged position with an impressive growth rate of 25.37% followed by GLO with 11.48%. Also, MTN Nigeria was recorded a growth rate of 5.89% while Airtel growth appreciated by only 1.81% within 2011.

In addition, the Nigerian telecommunications market terrain is majorly controlled by GSM operators. The GSM operators have control of 92% market share, while the remaining 8% were shared by mobile CDMA and fixed wireless operators. The mobile CDMA has 6.91% market share while fixed wireless operators have 1.19% market share. Furthermore, within the CDMA market Visafone accounts for 2,558,867 active lines while Multilinks Telkom who was owned by South Africa's Tekom accounts for 2,558,867 active lines. Besides, Starcoms follows with 1,149,380 active lines against. Also, Reltel is accounts for 939,145 lines.

Therefore, Multilinks Telkom indicated its aim to survive in the Nigeria CDMA market on account of loses finally accounted for the most buoyant growth of 15.36% while 9.82% and 1.52% was accounted for Starcomms and Visafone respectively. In the first quarters of 2011, Visafone became a clear dominant CDMA operator in Nigeria. But, in the fixed wireless market, Starcomms leads with 575,417 lines while Multilinks Telkom with 121,834 lines and Reltel with 104,367.

COMPETITIVE TRENDS IN NIGERIA TELECOMS NETWORK PROVIDERS

Competition has been identified as one of major factors that force changes in many organisations, especially among telecoms network providers (Obasan and Soyeb, 2012). Obasan and his colleague also observed that competition is a critical factor in marketing management and it consists of both actual and potential rival offerings and substitutes that a buyer might consider.

Recently, telecoms industry has experienced considerable competitive increase. This was largely cause by deregulation policy of government and the arrival of telecoms mobile providers. The simplicity and rate at which Nigerian telecoms reproduce their products and service can be submits as another problematical dimension to the trend of competitive. Mendzela (1999) supports that, this trend promotes a situation of incessant struggle for customers' share and at the same increase the need of telecoms companies to build customer's loyalty, satisfaction and retention through marketing strategies.

Customer retention

Customer retention is generally expressed as a way of restraining existing consumers from leaving to other competitor of the same business (Ramakrishnan, 2006). It is the act of enabling the customers to stick actively with a firm and involved in the most favorable share of market possessions (Kotelnikov, 2006).

The retention of customer has an effect on income and expenditure of an organisation especially when calculating the profit. As it is general known, profitability can be determined when expenditure is less from income. Therefore, increase in sales increase incomes while the lesser cost in marketing cause cost to be lower (Anonymous, 2006).

Ho1 : Promotion strategies have no significant effect on customer retention

Customer loyalty

Customer loyalty signifies that customers are always committed to buying a particular product or seeking a service from a specific firm (Brink and Berndt, 2004). Customer loyalty resists the actions of other companies that are attempting to create a center attention for customer's patronage (Paswan, et al., 2007). The loyalty of customer is a relationship that involves both the company and purchaser. This relationship, at times, is supported by positive and optimistic feeling that customer has on the business.

Behavior dimension is distinguished by momentous actions resulting from loyalty, while attitudinal dimension refers to formative behavior as commitment i.e. a desire to maintain a valued relationship. More importantly, the consumer’s attitude toward a particular product or service including attitudinal preference and commitment has a greater impact on forming loyalty.

Ho2 : Promotion strategies has no significant effect customer loyalty

Customer satisfaction

The general aim and objectives of every business is to ensure that their customers are satisfied with their product(s) or service(s). The satisfaction of customer is the amount at which the performance of product/service is corresponds with the hope of the consumer. So, if the product/service performance is more than the expectation of customer, then the customer will be satisfy but if the performance of a product or services is below customer’s expectation then the customer will be dissatisfied with the product or service of the firm which he/she intend to patronized (Brink and Berndt, 2004). From marketing perspectives, the object of customer satisfaction may be varied and can be related to different dimensions of multiple experiences with product/service provider (Surenshchandar et al. 2002 cited in Satari, 2007). While most definitions expect relate customer satisfaction to quality of a product or service offering (Kotler and Keller, 2006), satisfaction can also be associated with other non-quality dimensions (Singh 1991; Garland and Westbrook. 1989).

The performance of telecoms companies can be rate to high competitive if their customers are satisfied with their expectations from the telecommunication companies but if customers are not satisfy, and then the competitive performance of the telecoms companies will be low. Also, if customers’ hope on a mobile network service goes beyond the apparent competitive performance, then customer will maintain high level of satisfaction. The explanation of this instance only spotlight on the cause of satisfaction that transpire throughout the process of service delivery, but this illustration has noting to do with the satisfaction itself (Vavra, 1997).

Ho3 : Promotion strategies has no significant effect on customer satisfaction

Ho4 : Competitiveness and promotion strategies have no significant impact on Telecommunication Growth

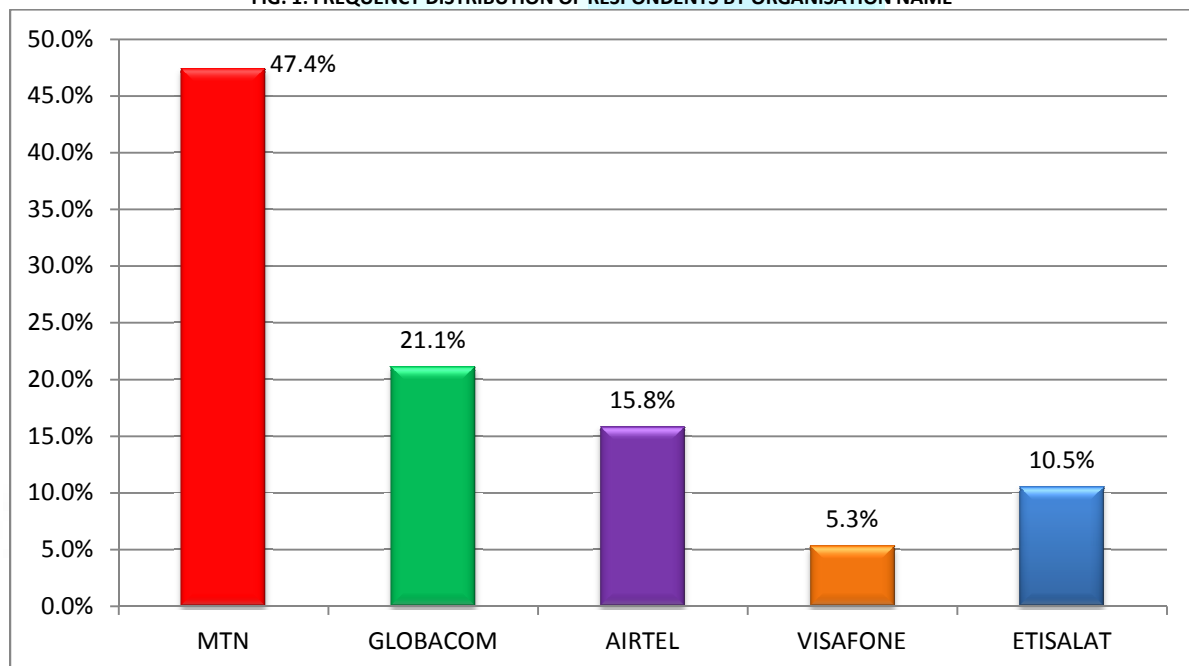
METHODOLOGY

Cross-sectional survey was used for this study which was appropriate characterizing the random sampled subjects of different promotion strategies from selected telecommunication network providers. Five giant mobile network providers were selected, namely: MTN, Globacom, Airtel, Visafone and Etisalat. Two hundred and twenty-eight copies of questionnaire were administered to staffs of sampled mobile network providers using random sampling techniques. The survey instruments is self-administered with 17 items measured on 5-point Likert scale ranging from strongly disagree (5) to strongly agree (1). The data set for this study was subjected to SPSS 15 software. The hypotheses were tested with the use of multiple regression (R^2) analysis. Regression models were used to verify the impact of promotion strategies on telecommunication growth and the extent at which promotional strategies (i.e. low tariff, free sms, recharge bonus, free call, free sim, free phone and free mode) affect customer’s satisfaction, loyalty and retention. Cronbach Alpha was used to test for the internal consistency of the data and item-by-item reliability test ranges between 0.68 – 0.74 which suggests the adequacy of the measurement.

RESULTS OF THE STUDY

Descriptive and regression analysis were used in the data analysis of this study. The study shows that majority of the staff sampled for the study were drawn from MTN Telecom Company for the reason, they form the highest frequency of 47.4 percent, followed by 21.1 percent of staff from Globacom telecom. 15.8 percent and 10.5 percent of staff revealed to be working for Airtel Nigeria and Etisalat respectively while only 5.3 percent staffs were contacted in Visafone Telecom Company (see Fig. 1).

FIG. 1: FREQUENCY DISTRIBUTION OF RESPONDENTS BY ORGANISATION NAME



HYPOTHESES TESTING

Ho1 : Promotion strategies have no significant effect on customer retention

TABLE 2: ESTIMATED REGRESSION RESULT OF PROMOTION STRATEGIES ON CUSTOMER RETENTION

	Mtn	Globacom	Airtel	Visafone	Etisalat
Mean	14.6250	9.500	9.6667	12.8333	12.5556
Std.D	5.7734	6.12633	2.66190	2.94906	5.74065
R ²	.179	.397	.785	.145	.134
Adj. R ²	.171	.384	.778	.137	.130
F	20.546	30.263	123.996	14.428	33.101
Sig.	.000	.000	.000	.000	.000

Evaluation equation in Table 2 provides the means and standard deviations for the five telecoms network providers. The value of regression square (R^2) of .179, .397, .785, .145 and .134 are accounted for Mtn, Globacom, Airtel, Visafone and Etisalat respectively. The coefficient of multiple determinations (R^2) shows that, promotion strategies can predict 77.8 per cent movement of customer's retention for Airtel, while over 38 percent and 17 percent can predict movement of customer's retention for Globacom and MTN. In case of Visafone and Etisalat, promotion strategies can only envisage 14.5 percent and over 13 per cent movement of customer's retention for the two companies. Similarly, the F-statistics and the probability value of the companies indicate that the model has a good fit. So, the value of R^2 change in the companies shows that promotion strategies contributed significantly to customer's retention.

Ho2 : Promotion strategies has no significant effect customer loyalty

TABLE 3: ESTIMATED REGRESSION OF PROMOTION STRATEGIES ON CUSTOMER LOYALTY

	Mtn	Globacom	Airtel	Visafone	Etisalat
Mean	15.6250	14.300	17.3333	12.4167	20.000
Std.D	8.91982	2.08337	8.29458	1.88092	3.06452
R^2	.068	.137	.820	.431	.327
Adj. R^2	.064	.118	.815	.374	.317
F	15.729	10.897	155.380	12.336	15.961
Sig.	.000	.000	.000	.000	.000

The value of regression square of Mtn, Globacom, Airtel, Visafone, and Etisalat are 0.068, 0.137, 0.820, 0.431 and 0.327 respectively. The result reveals that, promotion strategies can predict 81.5 per cent movement of customer's loyalty for Airtel and over 37 percent for Visafone and 32 percent for Etisalat. But, in case of Globacom and MTN, promotion strategies can only envisage 12 percent and 6 percent of movement of the customer's loyalty. The value of R^2 change in the companies signifies that promotion strategies contributed significantly to customer's loyalty (see Table 3).

Ho3 : Promotion strategies has no significant effect on customer satisfaction

TABLE 4: ESTIMATED MULTIPLE REGRESSION OF PROMOTION STRATEGIES ON CUSTOMER SATISFACTION

	Mtn	Globacom	Airtel	Visafone	Etisalat
Mean	7.7500	8.7500	5.3333	8.3333	16.7083
Std.D	3.0052	2.89166	.47809	1.82574	6.88084
R^2	.327	.172	.115	.285	.182
Adj. R^2	.321	.164	.114	.271	.175
F	14.431	11.571	3.966	12.813	9.101
Sig.	.000	.000	.001	.000	.000

The estimated regression of promotion strategies on customer satisfaction of Nigerian telecoms mobile networks is shown in Table 4. The R^2 value indicates 0.327, 0.285, 0.182, 0.172 and 0.115 accounted for MTN, Visafone, Etisalat, Globacom and Airtel. Statistically, the result shows that, promotion strategies can predict over 32 percent and 27 percent movement of customer's satisfaction for MTN and Visafone. In addition, the promotion strategies can envisage of 18 percent with over 16 percent and 11 percent movement of customer's satisfaction for Etisalat, Globacom and Airtel respectively. As a result of this, the value of R^2 change in the companies signifies that promotion strategies contributed significantly to customer's satisfaction.

Ho4 : Competitiveness and promotion strategies have no significant impact on Telecommunication Growth

TABLE 5: ESTIMATED REGRESSION RESULTS OF TELECOMMUNICATION GROWTH (USING ORDINARY LEAST SQUARES TECHNIQUES)

Dependent Variable: Telecommunication Growth (TelcomGT)

Variable	Coefficient	T-statistics	Probability
Constant	0.788332	5.700749	0.0000
Independent Variable:	-	-	-
COMPTNS	-2.394664	-1.979965	0.0604
PROMSTG	4.766432	4.146626	0.0004
Adjusted R-Squared	0.60385	-	-
Durbin Watson Statistics	1.88531	-	-
F-statistics	-	10.90790	0.0005

The result of the ordinary least square techniques tests the impact of competitiveness and promotional strategies on Nigerian telecommunication growth. The coefficient result of the independent variables signifies negative result of -2.4 for competitiveness (COMPTNS) while positive coefficient result of 4.77 accounted for promotion strategies (PROMSTG). The F-statistics and the probability indicate that the model has a good fit. As a result of this, the value of R^2 change indicates that the independent variables (COMPTNS and PROMSTG) have significant impact on Nigerian telecommunication growth. Remarkably, it was deduced that independent variables (COMPTNS and PROMSTG) can predict over 60.0 percent variations in the dependent variable (TelcomGT). Therefore, with respect to statistical significance of the coefficients of the explanatory variables, the result indicates that the coefficients of variable PROMTSG and COMPTNS are statistically significant at levels less than five percent.

SUMMARY OF FINDINGS AND CONCLUSIONS

This study sought to assess competitive nature of Nigerian telecommunication sector and analysed the significant impact of promotion strategies on customer's satisfaction, loyalty and retention. The study found that the percentage of looking forward to customers satisfaction, loyalty and retention across the five telecommunication companies were varies. Airtel and Visafone envisage more satisfaction for more customers than other companies. This was caused by the share of the market that other companies like MTN, Globacom and Etisalat have dominated. The findings revealed that mobile subscribers have more loyalty for the service of MTN and Globacom, but the percentage of Globacom customers' loyalty is lesser to that of MTN. The findings also figured out that MTN anticipated more customers' retention than other mobile companies in order to withholding their customers. In conclusion, the findings revealed that promotion strategies have positive impact on telecommunication growth while competitiveness produces significant negative impact on same. This therefore indicates that in the case of Nigeria, the result is consistent with the theoretical expectation that promotion strategies promote telecommunication growth.

RECOMMENDATIONS

Based on the findings, it is recommended that Nigerian telecommunication industry should engage more professionals into the industry that would put a touch in the telecommunication growth. Professionals should take account of the benefit of adopting effective marketing strategies so as to withstand the rigid competition within the national and international telecommunication market. Finally, regulators of Nigerian telecommunication industry should embark on market monitoring activities this will aid in assessing the quality of services delivered by telecommunication companies.

REFERENCES

1. Adeyinka, F.M. (1997) Evaluation of NITEL's digitalization programme. Nigerian Institute of Social and Economic Research (NISER) Monograph Series No. 8

2. Ahonen, T. (2010) Obituary for OPK: Wall Street is a Cruel Mistress - Nokia searching for CEO, Communities dominate brands –blog. Retrieved from: <http://communities-dominate.blogs.com/brands/2010/07/obituary-for-opk-wall-street-isa-cruel-mistress-nokia-searching-for-ceo.html>, Accessed on 15th August, 2012.
3. Akinniyi, J.A. and Ogunmola, J.O. (2007). Introduction to Business. Nigeria: Akure, Stecom Publishers.
4. AMA, (2008) The AMA releases new definition for marketing. Retrieved from: <http://www.marketingpower.com/aboutama/documents/american%20marketing%20association%20releases%20new%20definition%20for%20marketing.pdf> Accessed on 19th July 2012.
5. Anonymous, (2006). Hypothesis testing. [online] Retrieved from: www.caslanacs.ac.uk/glossary_v1.1/hyptest.html, Accessed on 15th July 2012.
6. Brink, A. and Berndt, A., (2004). Customer Relationship Management and Customer Service. Lansdowne: Juta & Co. Ltd.
7. Garland, B.C. and Westbrook, R.A. (1989) An exploration of client satisfaction in a non-profit context. *Journal of Academy of Marketing Science*, 17, Pp. 297-303.
8. Gartner, (2010) Gartner Says Worldwide Mobile Phone Sales Grew 17 Per Cent in First Quarter 2010, Gartner press release 19.5.2010. Retrieved from: <http://www.gartner.com/it/page.jsp?id=1372013>, Accessed on 17th July 2012.
9. Kotelnikov, V. (2006). 'Benefits of Customer Retention. Retrieved from: http://www.1000ventures.com/business_guide/crosscuttings/customer_retention.html, Accessed on 10th July, 2012.
10. Kotler, P. (1984). *Marketing Management: Analysis, Planning, Implementation and Control*. New Jersey: Eaglewood Cliff.
11. Kotler, P. and Keller, K.L. (2006) *Marketing Management*. New Jersey. Upper Saddle River, Prentice Hall Int.
12. Mccarthy, E.J. (1960) *Basic Marketing: A Managerial Approach*. Homewood, IL: Irwin.
13. Mendzela, E. (1999). 'Managing Customer Risk'. *The CPA Journal*. Vol. 6: 69.
14. Merriam Webster Online, (2011) Competition. Retrieved from: <http://www.merriamwebster.com/dictionary/competition>, Accessed 13th August 2012.
15. NCC, (2011) Trends in Telecommunications Markets in Nigeria 2003-2004. Abuja: Nigerian Communications Commission.
16. Ndukwe, E.C.A. (2003) An overview of evolution of the telecommunication industry in Nigeria and challenges ahead (1999-2003). [online] Retrieved from <<http://www.ncc.gov.nig/speeches-presentations/EVC's%20Presentation/overview%20of%20Telecom%20>> [28 August 2012]
17. Nwokoye, N.G. (2004) *Modern marketing for Nigeria: principle and practice*. Nigeria: Port Harcourt, Africana-First Publishers Limited.
18. Obasan, K.A. and Soyeb, Y.A., (2012) Assessing the Effectiveness of Promotion as a Marketing Management Tool in the Nigerian Telecommunication Industry. *Journal of Emerging Trends in Economics and Management Sciences (JETEMS)*, Vol. 3(1), Pp 1-6.
19. OECD (1999), *Glossary of Industrial Organisation Economics and Competition Law*, Organisation for Economic Co-operation and Development. Retrieved from: <http://www.oecd.org/dataoecd/8/61/2376087.pdf>. Accessed on 17th July, 2012.
20. Oyeniyi, O., Abiodun, A.J. and Osibanjo, A. O. (2011) Sales Promotion and Consumer Loyalty: A Study of Nigerian Telecommunication Industry. *Journal of Competitiveness*, Vol. 3 (4), Pp 66-77.
21. Paswan, A.K., Spears, N. and Ganesh, G. (2007). 'The effects of obtaining one's preferred service brand on consumer satisfaction and brand loyalty'. *J. Serv. Mark.* Vol. 21(2), Pp 75-87.
22. Ramakrishnan, K. (2006). Customer Retention: They Key to Business Performance. Retrieved from: <http://www.estrategicmarketing.com/smNov-Dec2/art11.html>, Accessed on 22nd July, 2012.
23. Satari, S. (2007) "Application of Disconfirmation Theory on Customer Satisfaction Determination Model – Case of Prepaid Mobiles in Iran", Master's Thesis, LTU, Sweden.
24. Singh, J. and Goyal, B. (1991) Mobile Handset Buying Behavior of Different Age and Gender Groups. *International Journal of Business and Management*, Vol. 4 (5).
25. Stigler, G. (2008) 'A Theory of Oligopoly'. *Journal of Political Economy*, Pp. 44-61.
26. Vavra, T.G. (1997) *Improving your measurement of customer satisfaction: A Guide to Creating, Conducting, Analyzing, and Reporting Customer Satisfaction Measurement Programs*. ASQ Quality Press.
27. Wilcox, J. (2010), Of course media bias favors Apple, Betanews Inc., Retrieved from: <http://www.betanews.com/joewilcox/article/Of-course-media-bias-favors-Apple/1269622231>. Accessed on 17th August, 2012.

MANPOWER PLANNING IN HIGHER EDUCATION: A CASE STUDY IN DAKSHINA KANNADA DISTRICT IN KARNATAKA

DR. WAJEEDA BANO
PRINCIPAL
P. A. FIRST GRADE COLLEGE
MANGALORE

ABSTRACT

Higher education plays an important role in supporting a nation's R & D efforts. It provides skilled human resources for the R & D system. It is often the lead player in public research arena. Academic research through universities forms an important component of the technological base of a country. The purpose of this paper is to evaluate the manpower planning in higher education in India. In this study entitled "manpower planning in higher education", an attempt is made to study the prevailing quality and nature of manpower in higher education. The study covers faculty in both private and Government Colleges / Universities in Dakshina kannada district only.

KEYWORDS

higher education, manpower planning, strategy.

INTRODUCTION

Emphasis on higher education in India can be understood by the number of universities currently present in India and the quality of education they provide. Today, there are a total of 568 universities in India out of which 41 are central universities, 285 state universities, 130 Deemed universities, and 113 private universities. The Ministry of human resource development (MHRD) is responsible for supervising the functioning of all the universities in India through its chief regulatory body - University Grant Commission (UGC). The other government organizations whose contribution for the upliftment of Indian educational scenario is worth mentioning are All India Council for Technical Education (AICTE) and the National Assessment and Accreditation Council (NAAC).

ACADEMIC STRUCTURE

Higher education in India covers all post-secondary education beyond class twelve in different subject areas including all professional streams such as engineering and technology, medical, agriculture etc. It comprises three levels of qualifications - Bachelor's or undergraduate degree programmes, Master's or post graduate degree programmes and the pre-doctoral and doctoral programmes [Master of Philosophy (M.Phil.) and Doctor of Philosophy (PhD)]. Normally, a bachelor's programme in India requires three years of education after twelve years of school education. In some places honours and special courses are also available. These are not necessarily longer in duration but indicate a greater depth of study. The bachelor's degree in professional field of study in Agriculture, Dentistry, Engineering, Pharmacy, Technology and Veterinary medicine generally takes four years, while for Architecture and Medicine, a bachelor's degree takes five and five and a half years respectively. There are other bachelor's degrees in education, journalism and librarianship that are treated as second degrees. A bachelor's degree in law can either be taken as an integrated degree programme lasting five years or a three-year programme as a second degree. The growth of higher education in India can be divided into three phases. The first phase was from 1947 to 1980 followed by second phase from 1980 to 2000. The third phase is from the year 2000 onwards. The three phases are discussed below.

GROWTH OF HIGHER EDUCATION TILL 1980

Till about 1980 the growth of higher education was largely confined to arts, science and commerce. The government not only supported higher education by setting up universities and colleges, but also took over the responsibility of running the institutions set up through private sector. These came to be known as grant-in-aid (GIA) institutions or private aided institutions. In such institutions, though the private sector financed a major part of the capital costs, public subsidies were provided to them to meet a part of the recurrent costs and occasionally for some capital works. Public funding was accompanied with considerable regulation of private institutions by the government (World Bank, 2003). Over the years, several private institutions have set high academic standards for themselves. With government regulations, their autonomy was compromised and standards went down. In effect, this led to the de facto nationalization of private higher education and gave serious blow to the community-led private initiatives in higher education in the country.

GROWTH OF HIGHER EDUCATION FROM 1980 TO 2000

In the 1980s, there was an unprecedented demand for quality higher education relevant to the needs of business and industry, putting considerable stress on governmental resources. Also, there was a substantial increase in the population in the middle and higher income groups, which could afford to pay higher tuition fees. This made the non-subsidized higher education a viable enterprise. Faced with such a situation, the state was left with no alternative but to allow the entry of private enterprise in the area of higher education. Economic reforms in early 1990s saw the middle class grow bigger, younger and richer. These reforms also saw a rise in entrepreneurship in the country. The rising demand of higher education from the growing middle classes and the growing culture of entrepreneurship together accelerated the pace of growth of private higher education in the country. During this period, very few universities and colleges were set up by the government sector and fewer still were also brought within the ambit of government funding. In a way, this period was marked the near withdrawal of the government from taking over of additional responsibility for higher education in the country.

GROWTH OF HIGHER EDUCATION FROM 2000 ONWARDS

Till the late 1990s, the expansion of higher education largely took place through affiliated colleges. By then, many promoters of private unaided colleges began to realize that the regulatory mechanisms of the affiliating university and state governments were inhibiting their growth and did not allow them to fully exploit their market potential. The promoters were not able to make money from their educational enterprises. Such institutions explored the possibilities of wriggling out of the control of the state governments and the affiliating universities. Some of the institutions took the deemed to be university route to get the degree granting powers. Though, universities in the country are either set up by an Act of Parliament or State Legislature, however, certain institutions are also given the status of a deemed to be university in terms of section 3 of the UGC Act, 1956. Earlier this provision was used sparingly to declare premier institutions offering programmes at advanced level in a particular field or specialization as a deemed to be university to enable it to award degrees. Indian Institute of Science at Bangalore and Indian Agricultural Research Institute at Delhi were the first two institutions to be declared as deemed to be universities in 1958 for education and research at advanced level in the field of basic sciences and agriculture respectively.

DISTANCE EDUCATION PROVIDERS

Over the last five years, there has been sudden jump in the number of deemed. In the early years, this privilege was extended only to the government / government aided institutions. Manipal Academy for Higher Education (MAHE) – a pioneer in private higher education became the first totally self-financed

institution to be declared as a deemed to be university in 1976. After 2000, when the provision for conferring the deemed to be university status to a de novo institution was introduced, there was sudden spurt in the growth of deemed to be universities in the private sector. Between 2000 and 2005, 26 private-sponsored institutions got the deemed university status. Though the deemed to be universities do not have affiliating powers, many of them have a number of campuses spread throughout the country. In this way, the new entities were able to wriggle out of the oversight mechanism of the affiliating universities. They were also able to overcome the service area restrictions associated with an affiliating university. This intensified the competition in higher education in the country. Meanwhile, many state governments realized that education was on the concurrent list of the Constitution and that they could establish private universities through legislation. By early 2005, seven private universities set up in different states were recognized by the UGC.

EMERGENCE OF NEW TYPES OF PROVIDERS

The post-1980 period saw the emergence of new types of providers of higher education in India. During this period, the private institutions proliferated, the distance education programmes gained wider acceptance, the public universities and colleges started self-financing programmes, and foreign institutions started offering programmes either by themselves or in partnership with Indian institutions and the non-university sector grew rapid.

PRIVATE INSTITUTIONS

In the post-1980 period, a few institutions were set up by religious and charitable trusts of repute for philanthropic purposes. Most other higher education institutions were set up by individuals or family groups. These were not financially dependent on the government and came to be known as private unaided institutions. According to Altbach (2005b) such family-style higher education institutions are a part of a worldwide trend. In such institutions, the family members remain directly involved in the administration, governance, financial control and direct and / or indirect ownership of the institution. These are *de jure* not-for-profit institutions; however, most of such institutions in India exhibit several characteristics of the private-for-profit institutions as elsewhere in the world. Such institutions are often referred to as self-financing institutions. For the sake of convenience, we shall call these as '*private*' institutions as distinct from '*public*' institutions that would include both government as well as private aided institutions.

Distance education in India had its genesis in the early 1960s. It started as correspondence education -- a supplementary method of education to meet the growing demand for higher education. Since then it has expanded rapidly, particularly over the last two decades. The emergence of distance education has been a major development over the last two decades. There are diverse types of providers offering a variety of programmes. The regulatory bodies have little control over them. They operate in different ways and sometimes at cross purposes with each other. The growth has been haphazard and the quality is both unsatisfactory and uneven (NIEPA, 2006). Also, there is an anomaly of the major provider - IGNOU being the regulator. The regulator for distance education – the Distance Education Commission (DEC) is a part of IGNOU. This results in conflict of interest with IGNOU getting a preferential treatment over the other distance education providers from the regulator. Nowadays, the boundaries between distance education and on-campus education are in a continuous process of convergence, and it is likely that the future interrelations between them will be marked both by a growing competition and a growing cooperation (Sarah, 1999).

SELF-FINANCING COURSES IN PUBLIC INSTITUTIONS

Since the 1990s, there has been an acute resource constraint in public financing of the higher institutions. This had put a brake on the expansion of the public university system. Enterprising public institutions had no option but to start self-financing courses to meet the student demand. Higher education institutions charge the students tuition fees not only to cover the operating costs, but even generate surplus from self-financing courses. The courses were obviously offered in subjects having a demand in the market, such as engineering and technology, medicine, teacher education at the undergraduate level, computer applications and management at the postgraduate level. The fee structure in conventional courses in public institutions continues to be low. The revenue from fees is often adjusted from government grants. As a result, the revenues from self-financing courses along with distance education courses form the main source of revenue for most public universities and colleges.

FOREIGN EDUCATION PROVIDERS

There is a craze for foreign education evident from the trend of a large number of Indian students going abroad for studies. Sensing a huge unmet demand for professional education, a number of small operations have sprung up in different parts of the country. As per a study conducted by NIEPA, 131 foreign education providers were identified to be operating in India in 2005 enrolling around a few thousand students in the country. The study found that the majority of the foreign education providers offer vocational or technical programmes. These were mainly from the USA or the UK. These were twinning arrangements or programme-based collaborations. There is no major foreign education provider operating in India through its offshore campus or branch campus. Vast majority of students enrolled in programmes offered by foreign providers were financed from personal funding sources. A little more than a quarter also took education loans. The fee levels were usually very high (Bhushan, 2006). Though, in terms of its size and impact, the foreign education provision is small in the country, yet necessity to regulate foreign providers and due to serious concerns about its quality, there has been focus on foreign providers for over a decade now.

NON-UNIVERSITY SECTOR

The post-1980s saw the growth of the non-university sector to meet the immediate demand of skills from a growing economy. There was rapid expansion of polytechnics and industrial training institutes for the training of supervisors in industrial setting training of workers in various skills, respectively. The capacity addition in these two categories of institutions was largely through private sector. In addition, private for-profit training providers emerged to meet the growing demand for usable training.

ANALYSIS OF GROWTH PATTERN

At the time of India's independence, the capacity of higher education system in India was small. It catered to a small elite group only. With the expansion of higher education, we now have a system that caters to a much larger number. The expansion has also democratized higher education. A large number of students from the lower socioeconomic strata constitute a sizeable proportion of the total enrolments in the country comprising about thirty to forty per cent of the enrolments. The enrolment of women students has seen a consistent upward trend from 10 percent in 1950/51 to 40 percent in 2003/04. Though participation of women students and students from scheduled castes, scheduled tribes, and the minorities is rising over the years, it is uneven across disciplines. Their participation in technical and professional programmes is pretty low (NIEPA, 2006). Despite the enrolment in higher education for the country as a whole increasing over the years, it varies widely across different states in India. These differences are not only linked to variation in government expenditure on higher education, but also to the per capita income, percentage of people below poverty line and the extent of urbanization in different states. Generally, states with a higher enrolment in universities and colleges are those with higher ratio of urban population and a lower percentage of population below poverty line. (Anandakrishnan 2004).

OBJECTIVES

Higher education plays an important role in supporting a nation's R & D efforts. It provides skilled human resources for the R & D system. It is often the lead player in public research arena. Academic research through universities forms an important component of the technological base of a country. With this background the purpose of this paper is to evaluate the manpower planning in higher education in India. The specific objectives are:

1. To evaluate the strength and weakness of manpower planning among the college teachers.

2. To highlight the existing practices of manpower planning (motivation, training, and encouragement) in higher education.
3. To reveal the manpower planning strategies prevailing in higher education system.
4. To find out level of satisfaction among the faculties in delivering services.
5. To diagnose the manpower problems existing in higher education institution and finally to suggest measures to improve manpower planning in higher education.

HYPOTHESIS

1. Faculty in private colleges is better qualified.
2. Private institutions are encouraging their faculty for academic improvement.

METHODOLOGY

In this study an attempt is made to analyze the manpower planning in higher education institutions. Considering, various variables such as proportion of permanent/ temporary teachers, teacher/ student ratio qualification and extra training and other academic achievement of the teachers (publications, conferences and workshops etc.).

The study is empirical as well as analytical in nature. A comprehensive and structured questionnaire is used to collect the primary data and information from the sample. Samples of 150, faculty members from different college/ university of Dakshina Kannada are selected for the study.

SCOPE OF THE STUDY

In this study entitled "manpower planning in higher education", an attempt is made to study the prevailing quality and nature of manpower in higher education. The study covers faculties in both private and Government College / University in Dakshina kannada district only.

RESULTS AND DISCUSSION

I.GENERAL INFORMATION: An attempt is being made to analyze the data collected through questionnaire. Table No 1 provides information about the demographic characteristics of the sample. The table shows that majority (47.0 per cent) of the respondent belong to the age group of 36-45, followed by the respondent in the age group of 46-55(33.0 per cent). This shows our sample consist of senior as well very senior faculties more.

TABLE-1: DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS

Age in years	Number of respondents	Percentage
25-35	30	20.0
36-45	70	47.0
46-55	50	33.0
Total	150	100

Source: Field Survey

It is clear from just 20.0 percent belong to the age group 25-35 who is young and newly joined teacher.

TABLE-2: SEX OF THE RESPONDENTS

Sex of the respondents	Number of respondents	Percentage
Male	90	60.0
Female	60	40.0

Source: Field Survey

Table-2 shows that 60.0 per cent of the respondents are male and 40.0 per cent of the respondents are female. This shows that in higher education still participation of women is less.

EDUCATIONAL QUALIFICATION is an important variable influencing manpower planning. In educational institutions teachers are involved in dissemination of knowledge to the younger generation. They should be highly qualified with updated knowledge which is nothing but involving themselves in research activities. Therefore in addition to minimum qualification to be a teacher, the added qualification he/ she acquire by involving in research work is important. In the present study the educational qualification and research activities of the faculty members are indicated in table.No-3.

TABLE-3: EDUCATION LEVEL OF THE RESPONDENTS

Education	Number of the respondents	Percentage
Post graduates	120	80.0
PhD/research	30	20.0

Source: Field Survey

80.0 percent of the sample faculties are having minimum qualification i.e. Post graduation, only 20.0 per cent respondents have done higher studies (PhD) and some of them are involved in post PhD research works. This shows that majority of teacher in higher education are not involved in research which is very important in bringing quality improvement.

II. EMPLOYMENT CONDITIONS

Manpower utilization in many profession depends on the working conditions, the nature of the job i.e. permanent/temporary, teaching experience, attachment to the institution, nature of the institution and number of teaching hours in a week extra.

TABLE-4: NATURE OF THE JOB OF THE SAMPLE TEACHERS

Nature of the job	Number of respondents	percentage
Permanent	80	53.0
Temporary	70	47.0

Source: Field Survey

Table-4 shows that 53.0 percent of sampled faculties have job which is permanent in nature. And 47.0 per cent of the sample is working on temporary basis. In recent years share of private sector in higher education is increasing. In Dashina Kannada district under Mangalore University there are 190 degree college providing degree in arts, commerce and science. Of which 5 are autonomous, 34 are government run degree colleges, 150 are private colleges of which around 20 are aided colleges and remaining unaided colleges.

TABLE-5: NATURE OF THE INSTITUTION WHERE SAMPLE TEACHERS' WORKS

Institution	Number of respondents	Percentage
Government college	50	33.0
Private college	100	67.0

Source: Field Survey

Table-5 shows that majority of the respondents i.e. 67.0 percent are working in unaided private college whereas 33.0 per cent are in engaged in government job.

TABLE-6: PROFESSIONAL EXPERIENCE

Years of experience	Number of respondents	Percentage
0-5	56	37.0
5-10	40	27.0
10-15	34	23.0
15-20	10	6.0
Above 20	10	6.0

Source: Field Survey

From table- 6 it is clear that round 50.0 percent of the respondents have work experience of 5-15 years, and 37.0 per cent of the respondents work experience is less than 5 years. 46.7 percent of them have more than 5 year experience in present institutions.

TABLE-7: SERVICE IN THE PRESENT INSTITUTION BY SAMPLE TEACHERS

Service in present institution	Number of respondents	Percentage
0-5	70	46.7
5-10	30	20.0
10-15	40	26.7
15-20	6	4.0
Above 20	4	2.7
Total	150	100

Source: Field Survey

Table-7 shows that 46.7 per cent of the sample faculty was having less than 5 year services in the present institutions. This is because faculties turn over in private unaided college is very high. 26.0 per cent of the sample were having service between 10-15 years in the present institution, followed by 20.0 per cent sample having service between 5-10 years. Only 4.0 per were having up to 15 years and just 2.7 per cent were having above 20 years of services.

TABLE-8: COURSES OFFERED IN YOUR INSTITUTION

Courses offered	Respondents	Percentage
Graduate	90	60.0
Post-graduate	60	40.0
Total	150	100

Source: Field Survey

The above table-8 shows that 60.0 percent of the institutions are offering graduate courses in arts, commerce, management and science and only 40.0 percent of the institution have post graduate courses.

III. MANPOWER STRENGTH

Manpower strength is mainly determined by academic achievements and job satisfaction. Teachers being involved in education industry there is need for involving in academic achievement which will help them to improve their knowledge and update themselves. There is lot of scope for the faculties to achieve academically by participating in seminars, conference, workshops and publications etc. The sample faculties in the study area have involved themselves in the academic activities to improve their qualification and details of which is given in table -9.

TABLE-9: ACADEMIC INFORMATION OF THE RESPONDENTS

Options	Attended	Not attended	Total
Orientation/refresher courses	60/10 (40.0)/(6.7)	80 (53.0)	150 (100.0)
Seminar/conferences/workshops	20/40/20 (13.0)/(26.7)/(13.0)	70 (46.7)	150 (100.0)
Publication	70(46.7)	80(53.0)	150(100.0)
Other academic achievement	10(6.7)	140(93.3)	150(100.0)

Source: Field Survey

The table-9 shows that only 47.0 per cent of the respondents have attended orientation/refresher courses. Around 52.0 per cent of the respondents have attendee seminar/conferences/workshops and very few i.e. 46.7 per cent of them have some publication and just 6.7 per cent have other academic achievement.

TABLE-10: NUMBER OF HOURS ENGAGED WEEKLY

No of hours	Respondents	Percentage
0-15	80	53.3
16-25	20	13.3
26-35	30	20.0
36-45	20	13.3

Source: Field Survey

Table -10: shows that majority of the faculties i.e. 53.3 per cent are engaging 15 hours teaching weekly. Around 20.0 percent of the respondents are engaging 30 hours and around 13.3 per cent are teaching 20 hours weekly. Those who are engaging more than 16 hours are either science faculties.

IV JOB SATISFACTION

It is very important that faculties should have job satisfaction otherwise by simply over burdening them we may not able to get better results and retain their interest in job.

TABLE -11: SHOWS THE LEVEL OF JOB SATISFACTION OF THE SAMPLE TEACHERS

Variables	Very much 3	Much 2	Somewhat 1	Not at all 0	Average Scores
Job satisfaction	120 (80.0)	30(20.0)	-	-	2.8
Salary increment	-	60(40.0)	40 (27.0)	50(33.0)	1.06
Working condition	-	80(53.3)	50(33.3)	20(13.3)	1.4
Curricular	-	80(53.0)	70(47.0)	-	1.53
Work other than teaching	-	-	30(20.0)	120(80.0)	0.2
Students response	120(80.0)	30(20.0)	-	-	2.8

Source: Field Survey

To capture the Job satisfactions among the faculties Likert Five point range technique is used and opinion survey of the member respondents on various parameters of job satisfaction were collected in a range of five level score (very much, much, somewhat and not at all) the scores assigned by the sample members for different variable are analyzed using the following formula.

$$\text{Formula used: } \frac{x_1s_1+x_2s_2+x_3s_3+x_4s_4}{N}$$

Where x1, x2, and x3 ... are visible variables responses and s1, s2, and s3 ...are response scores and N is total number of respondents.

Table -11 shows that majority of the respondents i.e. 80.0 percent have are very much satisfied with their job and another 20.0 also experience job satisfaction much.

Regarding salary increment just 40.0 per cent of the respondents are satisfied much, 27.0 per cent said somewhat and 33.0 per cent are not at all. It means regarding salary increments faculties responses are not satisfactory.

53.3 per cent of respondents are much satisfied with their working conditions, around 33.3 per cent said somewhat and 13.3 per cent said that they are not at all satisfied with working condition.

As far as Curriculum is concerned 53.0 per cent of the sample respondents are much satisfied and 47.0 per cent are not at all satisfied with the existing curricular activities.

In private educational institutions faculties have to help in other activities other than teaching. Only 20.0 per cent are satisfied somewhat with extra work, remaining 80.0 per cent are not at all satisfied. 80.0 per cent of the respondents are satisfied very much, and 20.0 per cent are satisfied much with students' satisfaction.

TABLE -12: ENCOURAGEMENT AND SUPPORT BY THE INSTITUTION FOR THE FACULTY

Management encouragement to academic activities	Very much 3	Much 2	Some what 1	Not at all 0	Average Scores
Conference/publication	30(20.0)	40(27.0)	50(33.0)	30(20.0)	1.46
Regular training/workshop	10(6.7)	20(13.3)	120(80.0)	-	1.27
Extracurricular activities	-	40(27.0)	50(33.0)	60(40.0)	0.87
Sponsorship for higher education	02(1.3)	08(5.3)	-	140(93.3)	0.14

Source: Field Survey

For improving the condition of manpower in higher education management encouragement, support is necessary. Our finding shows that 20.0 per cent of respondents said that they are very much encouraged by their management to attend conferences, 27.0 said that they get much encouragement, 33.0 per cent of respondents said they get some what support and 20.0 per cent of respondent said that they don't get any support at all. Very few sample faculties i.e. 20.0 per cent said that regular training /workshop for faculty improvement are conducted by institution and around 80.0 per cent said that not regularly conducted. Only 6.0 per cent of sample respondent could get encouragement from their institutions for pursuing higher education. Thus it's clear that majority of the institutions providing higher education are neither encouraging faculties for higher education/research which is necessary for overall quality improvement nor encouraging faculty improvement programmes.

FINDINGS

From present study it is clear that Majority of the faculties in private college are just P G holder .there is no much en couragement from the management of institutions for faculties for research as result their knowledge is very limited. Even faculties teaching PG courses are having a post graduate degree only. This disproves our first hypothesis (H1) that faculty in private college is better qualified. As we know Teachers being involved in education industry there is need for involving in academic achievement which will help them to improve their knowledge and update themselves. There is lot of scope for the faculties to achieve academically by participating in seminars, conference, workshops and publications etc. But our observation tells that in unaided private college there is no provision for the faculties either to improve their knowledge nor any encouragement for those have involved in research because they are paid consolidated salary just considering basic qualification i.e. P.G degree even NET/SLET which is necessary condition for faculties in degree and post graduation courses is not considered. As a result Faculties are not motivated for higher qualification. In some institution even though management encourages participation in academic activities due to the heavy work load burden of teaching and extracurricular activities teacher are left with no time for their personal academic growth. Private colleges are affiliated to universities, as we know every year universities renew their affiliation after their LIC committees visit. During these visits rarely they see beyond infrastructure and their affiliation fees. Even if they notice and give warning it does not serve any purpose because, these universities committees are toothless. So our second hypothesis (H2) that private institution encourages faculty improvement disproves.

SUGGESTIONS

The deterioration of quality is most glaring in general, and at the undergraduate level in affiliated colleges in particular. Conventional postgraduate education is also facing crisis and performs extended "babysitting" function because of lack of job opportunities for the graduates. Within one academic year, a good teacher can move a typical student up at least four percentiles in overall distribution (equal to a change of 0.12 standard deviation of student achievement). It is clear that having a series of good teachers can dramatically affect the achievement of any student. In fact, they erase the deficits associated with poor preparation at the previous levels. In spite of strong empirical evidence and also commonly held belief that teacher quality is most critical in student achievement, there is a crisis of teacher quality the world over. This is perhaps the weakest link in the education systems worldwide. Hiring good teachers is not easy. Teaching ability is also not loosely related to training or experience. Unfortunately, the prevailing salary structures also do not target particularly high quality teachers.

Existing evidence suggests that improvement in teacher quality is more likely to come from selecting and retaining better teachers. The strategy to attract and retain good teachers is not easy. First, the academic profession has suffered a serious downgrading. Teachers no more earn the same kind of high esteem in society as they used to get a few decades ago. In those times, teachers used to be revered by the society. Even though the economic rewards are inadequate, this has sufficiently compensated and attracted people of a high intellect to academic profession. Second, with the advent of knowledge-led economy, students who are better prepared academically have other lucrative alternatives now. Academically, the bright students opt for professional courses at the first degree level itself, with fewer students moving on to post-graduation and doctoral level – a qualification required for academic profession. The total enrolment at the post-graduate and doctoral level in India is less than ten per cent. As a consequence of bright students not opting for post-graduate and doctoral education, the

overall standards of these degrees in the country are abysmally low. This call for interventions to improve the standards of post-graduate and doctoral education in the country on one hand and re-look at the salary structure and career opportunities of teachers on the other.

Teachers and their associations have often blamed inadequate salaries and unattractive service conditions for the deterioration in the status of academic profession. The pay revisions in recent years have given relief to faculties in public sector but these recommendations are rarely implemented by affiliate colleges and deemed institutions. Universities providing affiliation are either overlooking the issue or turning blind eye to it. As a result qualified people working under private colleges are de motivated and demoralized and losing interest in academic Excellency. The ad hoc appointees and part-time teachers out-number the permanent academic staff in many higher education institutions. The ad hoc appointees, being temporary with little possibility of permanent absorption, have no incentive to perform. Permanent appointments being few and far in between are subject to intense pressure that is not always fair.

Just by privatization of education and by creating autonomous college and deemed universities we can't expect improvement in quality of higher education, unless we implement all quality assurances criteria along with condition of faculties in these institutions. Universities who are having affiliating power should assure that qualified teacher should be paid as far UGC pay scale and should try to stop exploitation of qualified teacher at the hands of private institutions. For this UGC should empower universities with power to disaffiliate private institution who are not implementing conditions of qualification for the appointment of faculties.

REFERENCES

1. Altbach, P.G. (2005), "Higher Education in India", the Hindu, April 12, 2005.
2. Anandkrishnan. m. (2004), "Higher Education in Regional development: Some key points, Indo-UK collaboration on Higher Education", Policy forum Workshop, 12-13 February 2004.
3. Consolidated working group report of the department of higher education for XII five year plan on higher education and PPP in higher education, dept of higher education Ministry of HRD 2012
4. GOI(2002), " National Human Development Report 2001", New Delhi: Ministry of Human Development.
5. GOK(2005), "Karnataka Human Development Report 2005 (p.11)", Karnataka: Planning and statistics department, Government of Karnataka.
6. Jha, A.K.(1991)., "Education for Human Resource Development (pp.305-313)", New Delhi: Anmol Publications.
7. Kaul, Rekha. (2001, Jan 13-19), "Accessing primary education: Going Beyond the Classroom", Economic and Political Weekly, 36(2), 155-162.
8. N.Somashekar And 2 Vinodh Kumar G. C(2012), " Globalization and Its Dimensions of Education Inequalities: With Special Reference to Karnataka", JuniorIOSR Journal Of Humanities And Social Science (JHSS) Volume 4, Issue 6 (Nov. - Dec. 2012), PP 11-17
9. NIEP (2000) Report of the National Seminar on, "Privatization and Commercialization of Higher Education", on May 2, 2006, National Institute of Education Planning and Administration" New Delhi.
10. Palanithurai, G. (2004)., "Rural Transformation and People's Entitlements", New Delhi: Concept Publishing.
11. Premakumara, G.S. (2006)., "Status of Women Employment in India", Journal of Development and Social Change.4 (1/2), 326-340.
12. PROGRAMME REPORT (2011), "Colloquium on Higher Education in 12th Five Year Plan" Organized By Centre for Educational and Social Studies and Karnataka State Higher Education Council.
13. Rampal, Anitha.(2000), " Education for human development in South Asia", Kuruksheetra, May, 2002. Regional
14. Sen.Amartya (1970), "The Crisis in Indian Education", Lal Bhadur Shastri Memorial Lecture, 10-11 march 1970.
15. Singh A. (2004), "Challenges in Higher education", Economic and Political Weekly, 22 may Pg 2155-2158.
16. UNISCO (2008), EFA-Global Monitoring Report, Education for all by 2015, will we make it?

IP TRACEBACK OF DOS ATTACKS

S.THILAGAVATHI.
RESEARCH SCHOLAR
DEPARTMENT OF COMPUTER SCIENCE
BHARATHIAR UNIVERSITY
COIMBATORE

DR. A. SARADHA
HEAD
DEPARTMENT OF CSE
IRTT COLLEGE OF ENGINEERING
ERODE

ABSTRACT

IP trace back means the capability of identifying the actual source of any packet sent across the Internet. Because of the vulnerability of the original design of the Internet, It may not be able to find the actual hackers at present. In fact, IP trace back schemes are considered successful if it identify the zombies from which the DDoS attack packets entered the Internet. The efforts on IP trace back are limited. This System proposes a IP trace back using information theoretical parameters, and there is no packet marking in the proposed strategy; therefore, can avoid the inherited shortcomings of the packet marking mechanisms. The packets are categorized; that are passing through a router into flows, which are defined by the upstream router where a packet came from, and the destination address of the packet. During non attack periods, routers are required to observe and record entropy variations of local flows. In this paper flow entropy variation or entropy variation is used interchangeably.

KEYWORDS

Distributed Denial-of-Service, Entropy Variation, Forwarding packets from sender to receiver, Measuring link loss rate.

1. INTRODUCTION

IP trace back methods should be independent of packet pollution and various attack patterns. The new approach compares the packet number distributions of packet flows, which are out of the control of attackers once the attack is launched, and it is found that the similarity of attack flows is much higher than the similarity among legitimate flows, e.g., flash crowds.

Once a DDoS attack has been identified, the victim initiates the following pushback process to identify the locations of zombies: the victim first identifies which of its upstream routers are in the attack tree based on the flow entropy variations it has accumulated, and then submits requests to the related immediate upstream routers. The upstream routers identify where the attack flows came from based on their local entropy variations have monitored.[2][3]

2. DISTRIBUTED –DENIAL OF SERVICE ATTACK

A distributed denial of service attack (DDoS) occurs when multiple systems flood the bandwidth or resources of a targeted system, usually one or more web servers. These systems are compromised by attackers using a variety of methods.

It is important to note the difference between a DDoS and DoS attack. If an attacker mounts an attack from a single host it would be classified as a DoS attack. In fact, any attack against availability would be classed as a Denial of Service attack[1]

3. DRAWBACK OF EXISTING SYSTEM

The existing system has following disadvantages,

- Priority Inference is applied based on packet types.
- Port based load sharing is not discussed.
- Speed reduction in high speed packet sending application is not possible.
- Theoretical discussion only available and lack of implementation.

4. SCOPE OF THE SYSTEM

- Minimize the packet loss rate.
- To create a topology that sends the packets between two nodes without failure.
- Create a communication method that updates the failure nodes offline status to all the dependent nodes immediately.
- To improve the routing table configuration information to network administrators.
- To update the upcoming nodes status to all the nodes in the network immediately so as to make automatic routing configuration
- Assists in regulation of malicious packet sending nodes.
- Alert sending to affecting router.
- The proposed strategy can trace back fast in larger scale attack networks

4.1. FORWARDING PACKETS FROM SENDER TO RECEIVER

The router metric such as incoming bit rate of normal TCP nodes, high speed torrent like application's port's incoming bit rate and time to live in queue are stored first. The client application sends packets to server application which acts as router, The packets if arrived has reached the maximum limit of router then it will be added in queue. The packets remain there up to their time to live. If the traffic is less enough, then the packets are routed to destination nodes otherwise if time exceeds it will be simply dropped.[4]

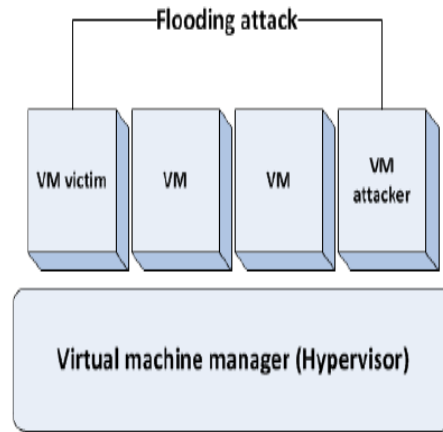
4.2. MEASURING LINK LOSS RATE

The packets lost details are logged in a database table to measure the loss rate. The details are analyzed whether the high speed port applications cause the more loss rate. Packet dropping start time and end time are kept in log so as to measure the loss rate.

4.3 CHANGE QUEUE PRIORITY BASED ON PORT BASED LOAD SHARING

The packets lost details are measured and queue priority is maintained between normal queue and high speed port's queue. Details are gathered such that the incoming packets arrived quickly from high speed port's application are responsible for packet loss in normal traffic.

FIGURE 1: CHANGE QUEUE PRIORITY BASED ON PORT BASED LOAD SHARING



4.4 ALERTING NODES WHICH SEND MORE PACKETS

The link loss rate is measured and decided whether the high speed ports are responsible for that loss. If the condition is met, then the loss amount as well as rate is calculated and nodes that containing high speed torrent applications are notified to reduce the packet sending speed.

The new approach includes maximum throughput algorithm to serve the nodes better. Maximum throughput scheduling is a procedure for scheduling data packets in a packet-switched best-effort communications network, typically a wireless network, in view to maximize the total throughput of the network, or the system spectral efficiency in a wireless network. This is achieved by giving scheduling priority to the least "expensive" data flows in terms of consumed network resources per transferred amount of information.

4.5 ENTROPY PROCESS

Network traffic for a router may dynamically change a lot from peak to off-peak service times. However, this kind of change lasts for a relatively long time interval, e.g., at least at the level of minutes.

If it break down these changes into seconds, the change of traffic is quite smooth in the context. The number of attack packets is at least an order of magnitude higher than that of normal flows[6][11]

5. PROPOSED SYSTEM

The proposed system is required to analyze the loss rate and change queue priority. Hence a system with efficient algorithm is required to minimize the loss rate by normal nodes. An effective and efficient IP trace back scheme against DDoS attacks based on entropy variations. It is a fundamentally different trace back mechanism from the currently adopted packet marking strategies. Many of the available work on IP trace back depend on packet marking, either probabilistic packet marking or deterministic packet marking.

The proposed system keeps log the packet queues and drop details. The continuous packet drops are easily notified and alerting procedure is invoked to reduce the loss rate. The new approach helps in efficient packet forwarding in the router. The new system uses maximum throughput scheduling algorithm so as to serve high speed as well as normal TCP packets to flow efficiently. In proposed system it contains the several algorithms as such local flow monitoring algorithm mainly contribute the trace out the path while transferring the data with less degradation of data loss. In entropy variation during the specified time period client send the data from one system to another system. Ingress and outgress router of the path tracing can be carried out in a less period time. Capturing router can prevent packet loss with the respective known able IP address.

On the other hand, the proposed method can work independently as an additional module on routers for monitoring and recording flow information, and communicating with its upstream and downstream routers when the pushback procedure is carried out.

6. ADVANTAGES OF THE PROPOSED SYSTEM

The proposed system has following advantages,

- Statistical analysis of packets received, queued and dropped are possible with more information.
- Less time consuming in analyzing the packets.
- Minimize the packet loss rate.
- Assists in regulation of malicious packet sending nodes.
- Alert sending to affecting router.
- The proposed strategy can trace back fast in larger scale attack networks

7. FURTHER ENHANCEMENTS

Trace back mechanism from the currently adopted packet marking strategies. Many of the available work on IP trace back depend on packet marking, either probabilistic packet marking or deterministic packet marking. Because of the vulnerability of the Internet, the packet marking mechanism suffers a number of serious drawbacks: lack of scalability; vulnerability to packet pollution from hackers and extra ordinary challenge on storage space at victims or intermediate routers. On the other hand, the proposed method needs no marking on packets, and therefore, avoids the inherent shortcomings of packet marking mechanisms. It employs the features that are out of the control of hackers to conduct IP trace back.

Some of the further enhancements that can be made in this system are as follows:

- The metric for DDoS attack flows could be further explored. The proposed method deals with the packet flooding type of attacks perfectly. However, for the attacks with small number attack packet rates, e.g., if the attack strength is less than seven times of the strength of non attack flows, then the current metric cannot discriminate it. Therefore, a metric of finer granularity is required to deal with such situations.
- Location estimation of attackers with partial information when the attack strength is less than seven times of the normal flow packet rate, the proposed method cannot succeed at the moment. However, it can detect the attack with the information that have accumulated so far using traditional methods.
- Differentiation of the DDoS attacks and flash crowds
- In this system, it did not consider this issue the proposed method may treat flash crowd as a DDoS attack, and therefore, resulting in false positive alarms

8. CONCLUSION

In this proposed an effective and efficient IP trace back scheme against DDoS attacks based on entropy variations. It is a fundamentally different trace back mechanism from the currently adopted packet marking strategies. Many of the available work on IP trace back depend on packet marking, either probabilistic packet marking or deterministic packet marking.

Because of the vulnerability of the Internet, the packet marking mechanism suffers a number of serious drawbacks: lack of scalability; vulnerability to packet pollution from hackers and extraordinary challenge on storage space at victims or intermediate routers.

On the other hand, the proposed method needs no marking on packets, and therefore, avoids the inherent shortcomings of packet marking mechanisms. It employs the features that are out of the control of hackers to conduct IP trace back. It observes and store short-term information of flow entropy variations at routers. Once a DDoS attack has been identified by the victim via detection algorithms, the victim then initiates the pushback tracing procedure.

The trace back algorithm first identifies its upstream routers where the attack lows came from, and then submits the trace back requests to the related upstream routers. This procedure continues until the most far away zombies are identified or when it reaches the discrimination limitation of DDoS attack flows.

REFERENCES

1. Anubama Mishra, B.B.Gupta, R.C. Joshi " A Comparative study of Distributed Denial of Service Attacks, Intrusion Tolerance and Mitigation technique".
2. T. Peng, C. Leckie, and K. Ramamohanarao, "Survey of Network-Based Defense Mechanisms Countering the DoS and DDoS Problems," ACM Computing Surveys, vol. 39, no. 1, p. 3, 2007.
3. CLARK, D. D. 1988 "The design philosophy of the DARPA Internet protocols". In Proceedings of SIGCOMM (Stanford, CA). 106–114.
4. GLIGOR, V. D. 1984. "A note on denial-of-service in operating systems". IEEE Trans. Softw. Eng. 10, 3, 320–324.
5. N, R. M. 1994. "Denial of service: an example" Commun. ACM 37, 11, 42–46.
6. Carnegie Mellon Univ., Pittsburgh, PA Perrig,A. ; DawnSong 24,,Issue:10
7. GARBER, L. 2000. "Denial-of-service attacks rip the Internet" IEEE Comput. 33, 4 (Apr.), 12–17.
8. CHANG, R. K. C. 2002. "Defending against flooding-based distributed denial of- service attacks: A tutorial". IEEE Commun. Mag. 40, 10 (Oct.), 42–51.
9. MIRKOVIC,J. AND REIHER, P. 2004. "A taxonomy of DDoS attack and DDoS defense mechanisms". ACM SIG-COMM Comput. Commun. Rev. 34, 2, 39–53.
10. Y. Kim et al., "PacketScore: A Statistics-Based Packet Filtering Scheme against Distributed Denial-of-Service Attacks," IEEE Trans. Dependable and Secure Computing, vol. 3, no. 2, pp. 141-155, Apr.-June 2006.
11. D. Moore, G.M. Voelker, and S. Savage, "Inferring Internet Denial-of-Service Activity," Proc. 10th USENIX Security Symp., Aug. 2001.
12. L. Garber, "Denial-of-Service Attacks Rip the Internet," Computer, pp. 12-17, Apr. 2000.
13. P. Ferguson and D. Senie, "Network Ingress Filtering: Defeating Denial of Service Attacks which Employ IP Source Address Spoofing," RFC 2827, 2000.

BEHAVIOURAL CONSEQUENCES OF FACEBOOK USAGE AMONGST GENERATION Y OF MUMBAI CITY**DR. ANKUSH SHARMA****HEAD****MMS DEPARTMENT****VIDYALANKAR INSTITUTE OF TECHNOLOGY****VIDYALANKAR CAMPUS****MUMBAI****KRATIKA SHRIVASTAVA****RESEARCH SCHOLAR****INSTITUTE OF MANAGEMENT STUDIES****DEVI AHILYA VISHWAVIDYALAYA****INDORE****ABSTRACT**

This study investigates subtle impact of using facebook on social behaviour of generation Y of Mumbai City. Currently, there are 51201580 Facebook users in the India, which makes it at 3rd position in the ranking of all facebook statistics by Country. It grew by more than 7703600 in the last 6 months. According to India Facebook demographics the largest age group is currently 18 - 24 with total of 24 064 743 users, followed by the users in the age of 25 - 34. This growing popularity of facebook has driven the interests of researchers to study its impact on social behaviour of this segment. This study investigates cause & effects of various kinds of psychological changes after prolonged use of facebook which results in behavioural changes amongst youngsters of Mumbai city. This research incorporates both qualitative & quantitative techniques for precise analysis of data. Survey method was carried out for the Quantitative research whereas Focus group interview was used for the Qualitative research.

KEYWORDS

Generation Y, pshycological changes ,social behaviour.

INTRODUCTION

Facebook is a social networking website intended to connect friends, family, and business associates. Facebook creates a virtual world where one can get connected to others on real time basis. The zeal of the people for this "real time" feature has made facebook even more popular. There are various kind of behavioural and psychological changes happening in the facebook users due to its regular usage. Facebook has affected the social life and activity of people in various ways. And its availability and easy accessibility has made it even more addictive for the people who want to get connected to their family and friends on a real time basis.

LITERATURE REVIEW

Facebook, enables its users to present themselves in an online profile, accumulate "friends" who can post comments on each other's pages, and view each other's profiles. Facebook members can also join virtual groups based on common interests, see what classes they have in common, and learn each others' hobbies, interests, musical tastes, and romantic relationship status through the profiles. The original incarnation of Facebook was similar to the wired Toronto neighbourhood studied by Hampton and Wellman (e.g., Hampton, 2002; Hampton & Wellman, 2003), who suggest that information technology may enhance place-based community and facilitate the generation of social capital. The social network platform Facebook was not only larger in terms of population than most of the world's nations, by early 2010 it was second only to the search engine Google in number of daily hits, and users spent much more time on it. Generation Y (those born in 1976 and up to 1999) is now using Facebook extensively. In February 2010, while Google got 154 million people for an hour, according to A.C. Nielsen research, 118 million people spent 6.5 hours each on Facebook (Arlington, 2010), making Facebook a much "stickier" (i.e., where people spent the most time) site than Google. This research aims at studying cause & effects of all those psychological changes which happens during and due to it usage of facebook amongst its young users at Mumbai city. Psychology is the key to understand the implications of technology and Facebook now a days changing people's psychology. The fact is that hundreds of millions of individuals use Facebook as a part-time activity. And, the advance of technology in the form of everywhere and every-time connectivity has further facilitated its use and this makes this study even more important.

Facebook's impact on society goes far beyond meeting new friends and sharing music videos. The social impact facebook has made in society can clearly be seen in almost every major social group in the world. In coffee shops college students sit on their laptops and surf facebook between classes, during work people post status updates so their friends know when they'll be off, and hate groups continue to spread bigotry through the electronic community.

While the network does offer opportunities for meaningful social interactions and self-esteem boosts, it also opens a Pandora's Box of options for spying, stalking and other insecurity- and jealousy-driven actions between lovers.

According to neuroscientists social network sites risk infantilizing the mid-21st century mind, leaving it characterized by short attention spans, sensationalism, inability to empathize and a shaky sense of identity. Social networking sites can provide a "constant reassurance – that you are listened to, recognized, and important". This was coupled with a distancing from the stress of face-to-face, real-life conversation, which was "far more perilous, with no opportunity to think up clever or witty responses".¹ Researchers have found that humans consistently overestimate how much fun others are having and underestimate their unhappiness. And where better is that mirrored than on Facebook. Some people are hungry for admiration. They post their family trips' photographs, their celebration etc. only in order to get attention. And when they don't get the attention they get restless. However there is a set of people who only post you tube videos and wish their friends on their birthday. Study says "The more time users spent clicking through joyful announcements and photos depicting happy events, the worse they felt about their own lives."²

Previous researches shows that people consistently underestimate how often other people have negative emotions, while overestimating how often they have positive ones, it's not surprising, given that when things aren't going well, people try to keep their negative thoughts inside — no one wants to be a downer. That's why, for instance, people's Facebook status updates are happy and self-promoting; very few people report on their latest failure. But although we all know that we hide our own negative feelings from others, we don't realize how just how often our friends and families are doing exactly the same thing.³

¹ Patrick Wintour, political editor, guardian.co.uk, 24 February 2009

² Journal Personality and Social Psychiatry Bulletin , march 10th 2011

³ Personality and Social Psychology Bulletin, September 4, 2010

Jealousy among relationships, depression, negative effects due to cyber bullying, depression, anxiety and “virtual empathy” are the psychological impacts of facebook.

Narcissism, a pervasive pattern of grandiosity, need for admiration and an exaggerated sense of self-importance is condensing as a major implication of using facebook. It’s a controversial statement that “facebook causes Narcissism” but according to a survey conducted by a researcher at York University in Toronto, Canada the results showed "significant positive correlations between narcissism and self-promotional content in the following areas: Main Photo, View Photos , Status Updates and Notes."

People who scored higher on the study's narcissism test also spent more time on Facebook and checked it more times each day than their less narcissistic counterparts.

RESEARCH OBJECTIVE

This research aims at studying behavioural changes due to facebook usage. The target group is generation Y of Mumbai city (India). This research is focused on following main objective:

1. Facebook & problems in an adult relationship.
2. Reasons behind using facebook on a regular basis.
3. Attitude of generation Y of Mumbai city towards this social networking site.

RESEARCH METHODOLOGY

This is an exploratory research which incorporates survey technique as quantitative analysis & focus group interviews for quantitative analysis to study the behavioural consequences of using facebook amongst generation Y of Mumbai City.

SAMPLE

For survey total 103 respondents amongst generation Y were selected on the basis of stratified random sampling. For Focus group interviews 10 people (7 Males & 3 Females) with the age group between 18-28 of different areas were selected to participate in a group discussion.

MEMBERS PROFILE OF FOCUS GROUP INTERVIEWEES

Males:

- FB1:Management student in a relationship and a facebook user since 2007.
- FB2:Management student and facebook user since 2006 and in a virtual relationship with a girl (a facebook user overseas)
- FB3:Management student and facebook user since 2008 and is single
- FB4:Working professional and a facebook user since 2007 and in a relationship
- FB5:Working professional in a relationship and a fake facebook user since 2010.
- FB6:Working professional and a facebook user since 2009 and in a relationship
- FB7:A management student in a relationship and a facebook user having one fake account of opposite sex.

Females:

- FB 8:A management student in a relationship and facebook user since 2007
- FB9:A single working professional and a facebook user since 2009.
- FB10:An engineering student in a relationship and facebook student since 2008.

Sample Coding: The members are given code to identify they point they raise, from FB10 to FB10

DATA COLLECTION

The primary data for the research was collected by a questionnaire. A total of 10 questions were formulated into one single questionnaire to analyse the objective of the case. Since the target group which was selected was from generation Y it was made sure that the questions are suitable for them as well as satisfy the demand of the research topic. The individual responses were kept confidential in order to encourage openness and disclosure. General instructions at the top of the instrument and specific instructions were given at the beginning of the questions.

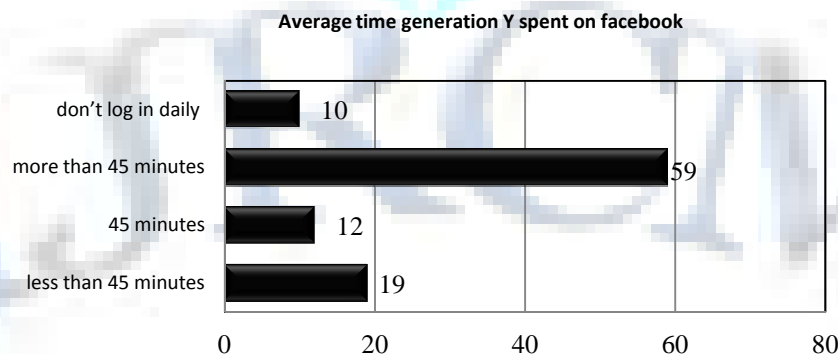
Other than this Qualitative research was also carried out with the help of Focus group interview in which a focus group of 10 people from generation Y were made to participate in a Group discussion where they were made aware of the topic and the instructor gave them the directions for Group Discussion. This Group Discussion was conducted for 15 minutes where the views of participants were recorded in a recorder and the main highlights were noted down.

DATA ANALYSIS

The questionnaire was pre -tested using responses from 20 people (to ensure questionnaire readability) and then data was collected from (103) respondents using a structured questionnaire. The questionnaire contained questions relating to respondents' feedback towards the topic. The instrument was tested for appropriate words, sequence of sentences and ease of response format.

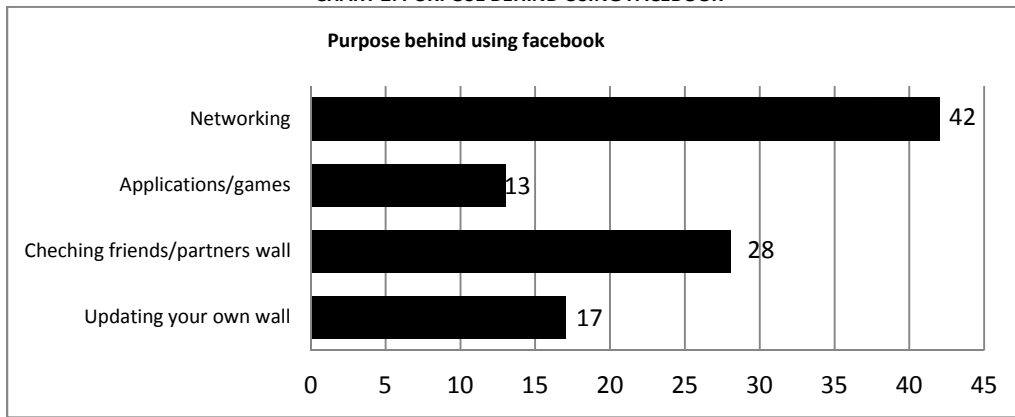
The findings of the research are as follows:

CHART 1: AVERAGE TIME GENERATION Y SPENT ON FACEBOOK



Out of the 103 people surveyed 59% spend more than 45 minutes on facebook daily. This means that a major group is addicted to facebook for a time span which is enough for mental involvement making psychological changes.

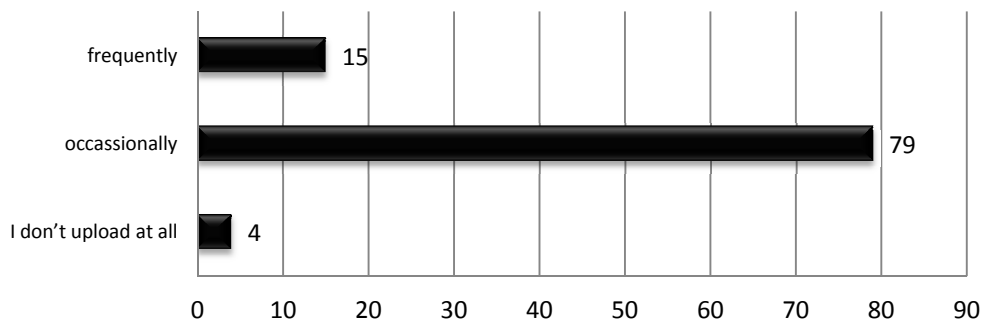
CHART 2: PURPOSE BEHIND USING FACEBOOK



42% of the target group uses Facebook as a tool for networking. Approximately one third of the target group uses facebook for checking the walls of friends and their partner which means that life of the other people attracts them and they start finding their own life boring, which causes serious consequences like depression, relationship jealousy etc.

CHART 3: FACT BEHIND SHARING PHOTOGRAPHS AND MAKING THEM LOOK ATTRACTIVE.

Fact behind sharing photographs and making them look attractive.

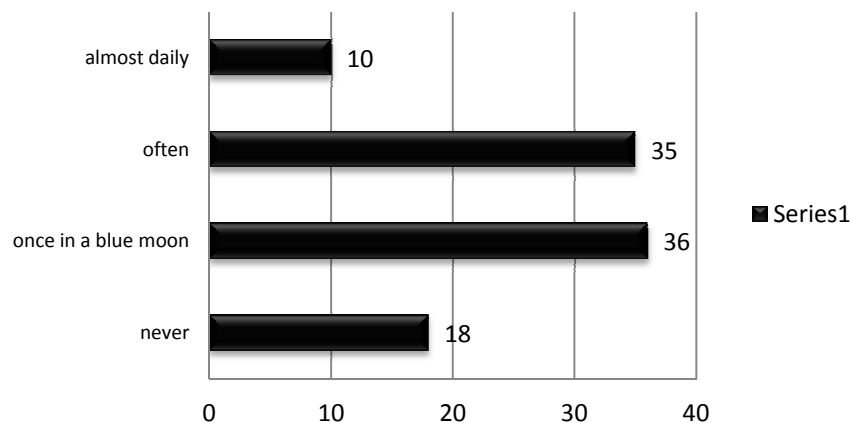


Approximately 81% of the people said that they share photographs occasionally and approximately 15% of them share photographs frequently which implies that people like to showcase the good part of their life on facebook.

And one interesting fact was found that 45% of the people have learnt a photo editing tool in order to make their photographs look more attractive. It means they are using facebook as a medium that can broadcast the shinier part of their life.

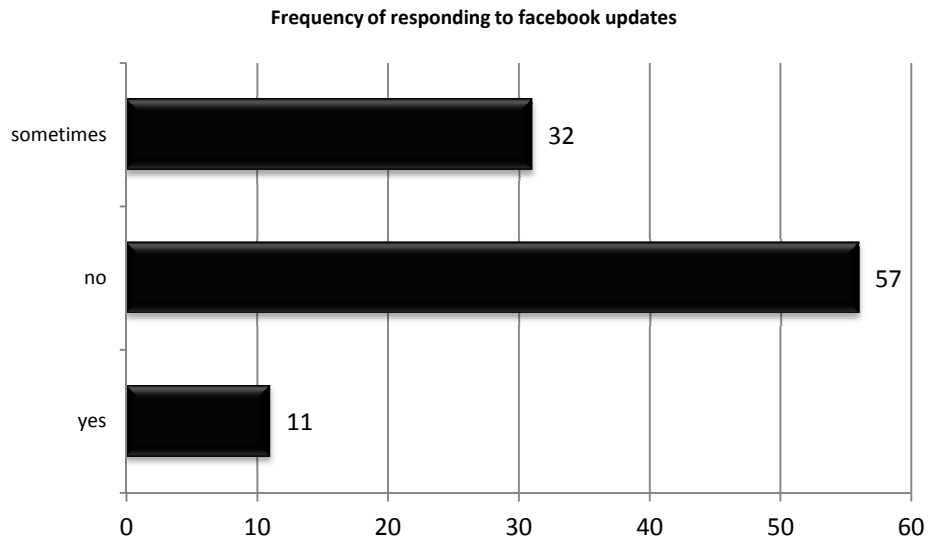
CHART 4: FACEBOOK AND RELATIONSHIPS

Facebook and relationships



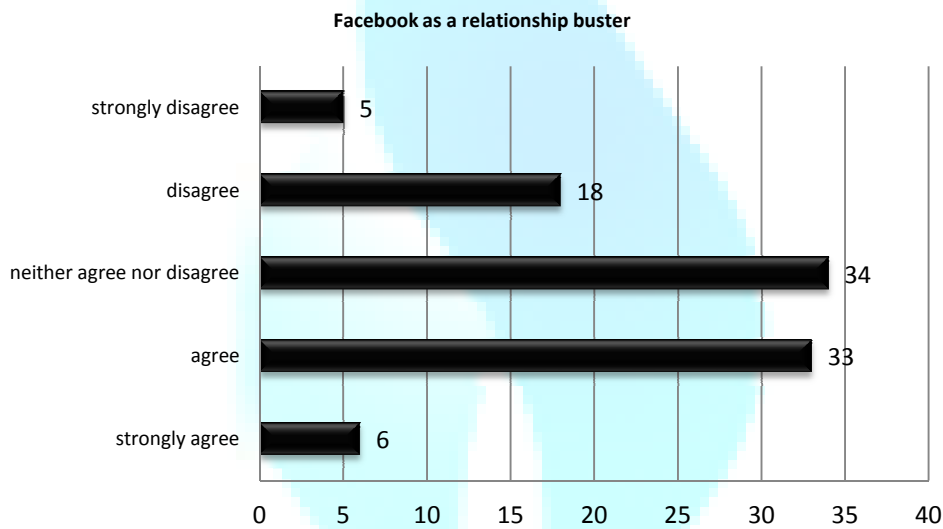
Knowing your partner is good but having the information about him/her in excess may harm a relationship. Spying on the partner's activities on facebook like enquiring about tagged photographs etc, is becoming the reason for disputes. This condition is very critical in west countries according to foreign researchers but when studied in Indian population the situation is not that bad. Still 35% of the people accepted that they visit their partner's facebook on a regular basis.

CHART 5: FREQUENCY OF RESPONDING TO UPDATES OF PEOPLE



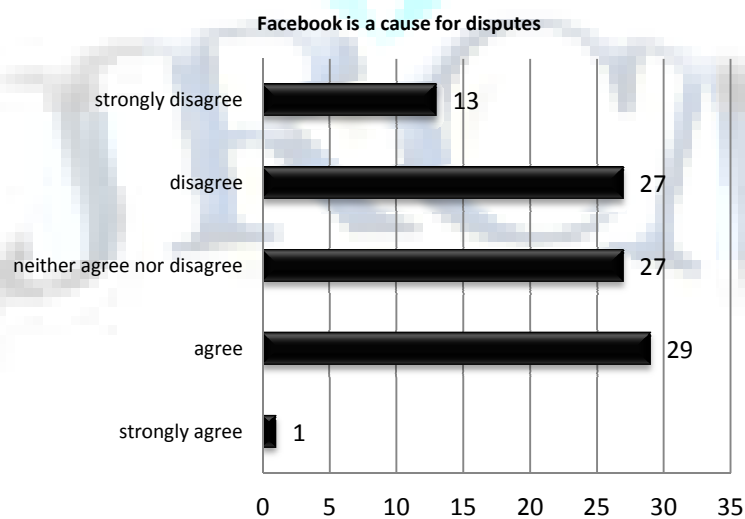
57% of sample said that they don't respond to facebook updates & 32% of sample said that they sometimes respond to the updates & only 11% said that they respond to updates.

CHART 6: FACEBOOK AS A RELATIONSHIP BUSTER



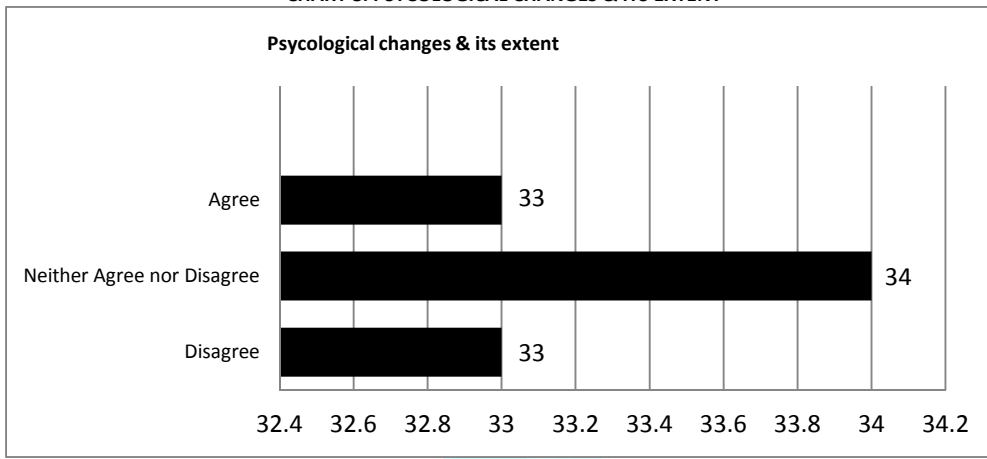
34.4% of the target group believes that Facebook is relationship buster against which approximately 30% of them believe that it causes disputes among friends and partners.

CHART 7: FACEBOOK IS A CAUSE FOR DISPUTES



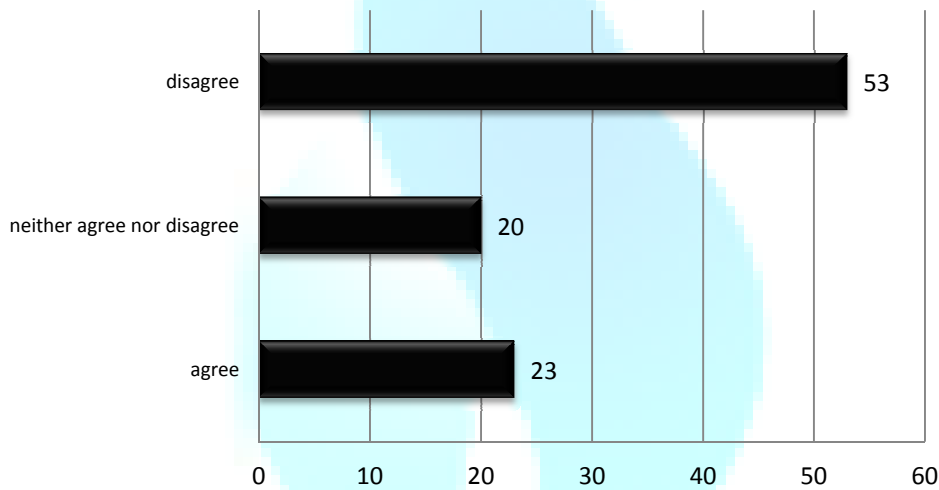
29% people agreed that facebook causes disputes & 27% disagreed that facebook is not a cause of dispute. There were 27% of people who were indecisive on this issue.

CHART 8: PSYCHOLOGICAL CHANGES & ITS EXTENT



Though foreign researchers claim that facebook gives birth to jealousy because on facebook people overestimate other's happiness and get depressed, when asked from an Indian target group, the results were different. One third of the population disagree to this point against which one third of the population is in support with this statement and remaining neither agree nor disagree to this statement.

CHART 9: FACEBOOK IS A CAUSE OF DETACHMENT FROM REAL LIFE
Facebook is a cause of detachment from real life

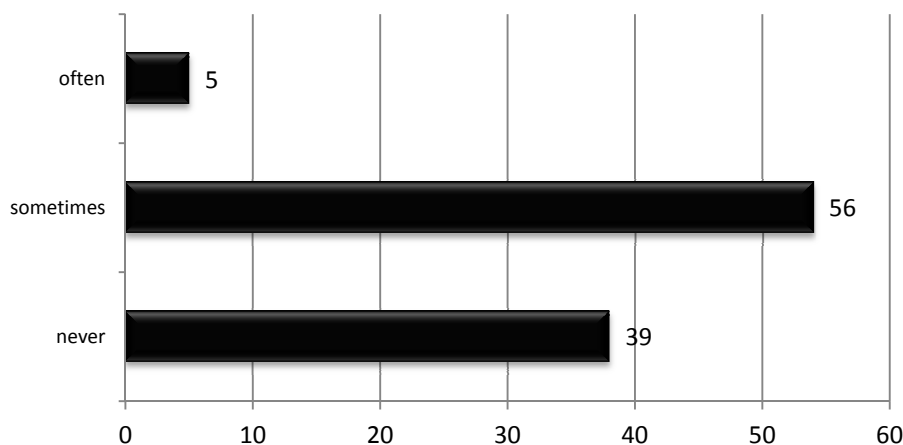


When asked that is facebook detaching you in real life, 55.2% of the population said that they disagree to this point .The reason behind it may be that most of them use facebook for networking and they also agreed to the point that Facebook is a relationship buster. While this result is totally opposite in foreign countries.

About 54% said that sometimes few sudden changes after login into facebook and during the use of facebook occurs.

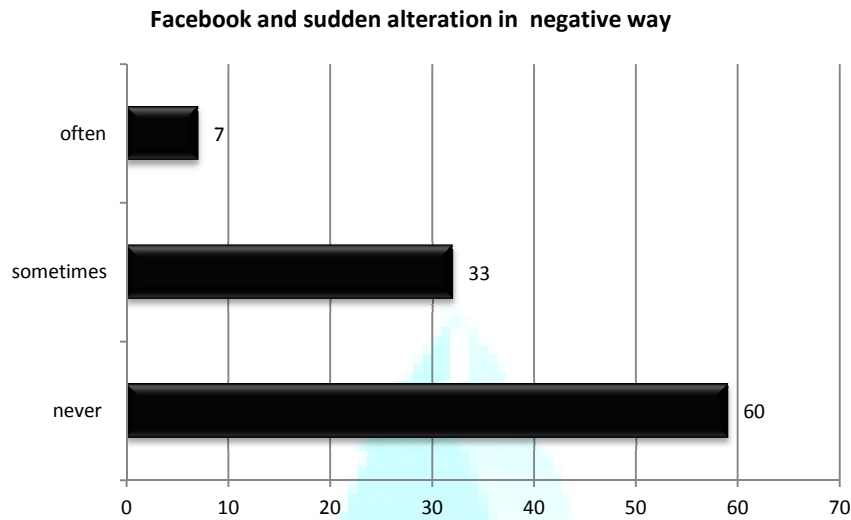
CHART 10: FACEBOOK & ANXIETY

Facebook and anxiety



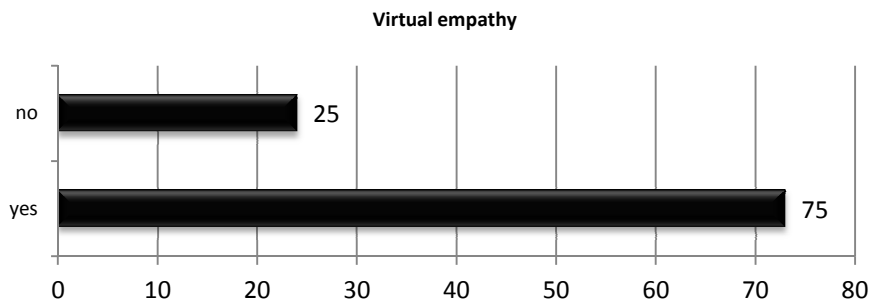
56% of the people say that facebook never makes them feel anxious. Whereas 39% of the people said facebook never makes them feel anxious

CHAT 11: FACEBOOK AND SUDDEN ALTERATION IN NEGATIVE WAY



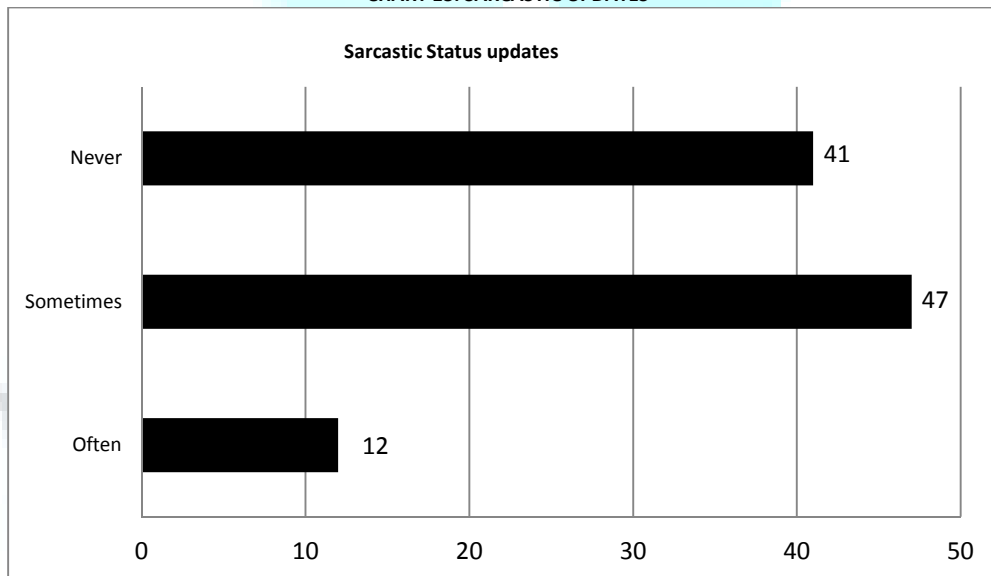
60% says that it never causes sudden mode alteration in a negative way. 33% ie one third of the population said that sometimes facebook turns their mode off.

CHAT 12: VIRTUAL EMPATHY



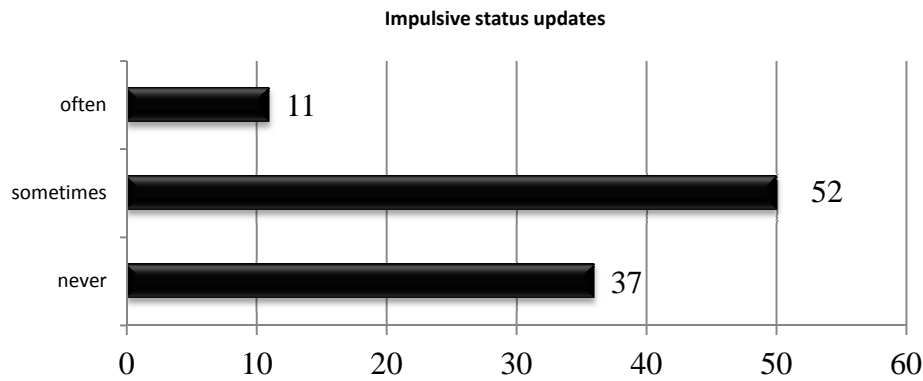
75% of the population feel that on facebook virtual empathy is shown that means people fake that they care about a particular event or person through their comments. This can come out as a big problem as a fake and illusionary world is being created on facebook which could be harmful for growing children.

CHAT 13: SARCASTIC UPDATES



47% of the people sometimes updates their status sarcastically, 41% said that they never updated their status sarcastically and 12% people said that they often used sarcastic status updates.

CHART 14: IMPULSIVE UPDATES



The generation Y of today's world is very impulsive and so is the facebook user base. They don't wait for showing their emotions on facebook whether its positive or negative. There is a major group of the population which accepted that their status updates are impulsive .

FOCUS GROUP INTERVIEW

The focus group was held at an open auditorium. After a brief introduction, the purpose and scope of the discussion were explained. Seven males and three females attended who are active users of facebook. The group was attentive, respectful of one another, and stayed on focus without prompts. The groups consist of diverse nature of people and have different facebook behavioral activity. Before conducting the focus group discussion the group has been assured that the opinion they present will be kept confidential and thus to be confident and honest about the points and thoughts. The members which are purposively selected set of participants gather to discuss issues and concerns related to facebook impacts on their relationships.

According to the objective and the data to be extracted from the group, topics have been given to them. The discussion is structured around the key themes using the probe questions prepared in advance. I have decided to open the forum and emphasized more on open ended questions avoiding questions that yield yes/no answers. The discussion was captured in writing wherein the key elements of the discussion were recorded using a tape recorder.

RESEARCH FINDINGS

QUANTITATIVE RESEARCH

From the quantitative research the findings are as follows:

1. 60% of the population uses facebook for more than 45 minutes on daily basis which clearly shows that facebook is an addiction to them.
2. Most of the people use facebook mainly for networking; however one of them say that they like checking their friends' and partner's wall as well .
3. There's a major group who keeps on uploading photographs and has even learnt tools to make them look more attractive. One third of the population accepts that they update their status out of impulse and thus this says that they cannot resist from expressing their emotions on facebook.
4. 75% of the population accepts that on facebook virtual empathy is shown.
5. One third of the people feel that facebook causes jealousy which later on becomes a reason for stress and depression.
6. Around 34% population thinks that facebook causes disputes. This is because people read comments and then they comment sometimes in sarcastic or in aggressive way. Reading each and every comment before commenting on anything is one of the major reasons for this particular problem.
7. 70% of the respondents agreed to this point that they check their partner's wall and 30% accepted that sometimes they react on some unexpected thing on their partner's wall. This is simply because facebook is acting as Pandora's Box wherein one can find excessive and unnecessary information about their partner which might harm their relationship.

QUALITATIVE RESEARCH

Here the results were more focused and clear. The main fact that identified was facebook somewhere is affecting relationships in a negative way but it is not the only reason behind that. The fact that is responsible is one's personality and psychology. It depends on the kind person a user is that facebook is affecting in which way. For some it's a thing which creates stress and for some its stress buster. One more thing which I want to point out is that even after such security features there are people who make fake facebook profile due to various reasons. Those who are impulsive and extrovert share their life without hesitation on facebook and those whose partners have issues or are introvert don't even share their relationship status.

The one important thing was noticed after reading different research papers and after doing research on this topic is that the Indian population is different from that of western countries. Condition there is more critical. Depression and stress, spying on the partner's activities on facebook and showcasing one's life on facebook are few things which are becoming major problem in west countries. In India these psychological changes are not up to that extent which is a good sign. Still it was identified that there should be a control over using the facebook so that it may not affect you in negative way .

CONCLUSION

This research opens a new avenue to study the impact of social networking sites on psychological changes on Indian population. This research finds out that Generation Y of Mumbai city is mostly using Facebook as a networking site & believes it as a relationships buster. The attitude of generation Y towards facebook was analysed with respect to factors like virtual empathy, impulsive updates, sarcastic updates, sudden alteration in negative way, anxiety, reasons for detachment from real world, reasons for disputes, sharing photographs & average time spend on facebook and it was found that most of the people are not aware that their attitude is changing because of using facebook and facebook is subtly moving into their lifes & changing their behaviour.

LIMITATIONS

1. Sample size could have been greater to match the diverse background of the respondents.
2. The method used for sampling is convenience sampling, this may lead to biasness.
3. The information comprises of 103 students. There might be a possibility that the respondents have not filled the questionnaire in 100% seriousness.

REFERENCES

1. BBC News UK , Scotland 16 February 2011
2. Cyber Psychology and Behavior, Journal Feb. 13th 2009
3. Cyberpsychology, Behavior and Social Networking. March 8 2011
4. DEIRDRE O'BRIEN AND ANN M. TORRES "Social Networking and Online Privacy:Facebook Users' Perceptions". IJM2012.indb
5. E. Botha, M. Farshid, L. Pitt. "How sociable? An exploratory study of university brand visibility in social media", South Africa journal of Business Management.2011,(42)2
6. Journal Personality and Social Psychiatry Bulletin , March 10th 2011

7. @Misery Has More Company Than People Think", Personality and Social Psychology Bulletin Jan. 31st 2011
8. Nicole B. Ellison Charles Steinfield Cliff Lampe."The Benefits of Facebook Friends: Social Capital and College Student Use of Online Social Network Sites". Journal of Computer-Mediated Communication 12 (2007) 1143–1168 © 2007 International Communication Association.
9. Patrick Wintour, political editor, guardian.co.uk, 24 February 2009
10. Personality and Social Psychology Bulletin ,September 4, 2010
11. TIME Magazine U.S. June 22nd 2009
12. TOI life & style Jan 18, 2012

WEBSITES

13. <http://www.socialbakers.com/facebook-statistics/india>
14. www.scribd.com
15. www.wikipedia.com

ANNEXURE**QUESTIONNAIRE**

1. How much time do you spend on facebook daily ?
 - less than 45 minutes
 - 45 minutes
 - More than 45 minutes
 - I don't log in daily
2. What is your purpose behind using facebook?
 - Networking
 - Applications/games
 - Checking friends' / partner's wall
 - Updating your own wall
3. How often do you upload your pictures on Facebook?
 - I don't upload at all
 - Occasionally
 - Frequently
4. Did you build up any photo editing skill after being Facebook user so that you can make your pictures look more attractive?
 - Yes
 - No
5. How often do you check your partner's wall
 - Never
 - Once in a blue moon
 - Often
 - Almost daily
6. Do you react to an unexpected post/ photo of your partner with a person of opposite sex, on your partner's wall?
 - No
 - Yes
 - sometimes
7. Do you feel that on Facebook virtual empathy(making people feel good through comments faking that you care about that particular thing) is shown?
 - Yes
 - No
8. Mark the most appropriate option (strongly agree, agree, neither agree nor disagree, disagree, strongly disagree)
 - Facebook is relationship burster
 - Facebook causes jealousy
 - It's a waste of time
 - Facebook causes disputes among friends or partners
 - Facebook is making you loner in real life
9. Mark the option which is most appropriate according to you (never, sometimes, often)
 - Facebook makes you feel anxious
 - Are your status updates sarcastic
 - Are your status updates impulsive
 - Facebook alters your mode suddenly in a negative way
10. On facebook people overestimate other's happiness and this causes depression.
 - Yes
 - No

The highlights of focus group interview are as follows:**1. TELL ME THE REASONS WHY ARE YOU AN ACTIVE USER OF FACEBOOK**

Fb1: I like making new friends and chatting with them online. I find it easy to do the same on facebook.

Also facebook gives you an option to search and add people very easily. That's the reason behind using the facebook.

Fb2: I have a girlfriend whom I met through facebook only. She lives overseas. Facebook is one of those medium through which I connect with her. Also I like playing games on facebook.

Fb3: I like adding people on my facebook profile and chatting with them. Also I like playing online games on facebook and watching my friends' photographs which they upload on regular basis. Facebook is a good time pass when you have nothing to do.

Fb4: I like chatting with my school and college friends on facebook as almost everyone is on facebook. Also I like to use facebook applications.

Fb5: I generally don't chat and add people because I don't have a genuine facebook account. I have a fake facebook profile with which I keep an eye on my girlfriend's activities on facebook.

Fb6: I like playing games on facebook and posting different kind of videos on my wall.

Fb7: I am a game addict and am using a fake account with different sex and different identity with the intentions to gain attraction from other users who are into the facebook gaming world. Sometimes I do chatting and flirt with a stranger using the same profile but my intentions are not to hurt their feelings and emotions.

Fb8: I log into facebook and just check my notifications and messages and reply to them. Other than this I like checking out new photographs which my friends have added up.

Fb9: Honestly, for me facebook is like a play thing. I upload photographs, videos, impulsive status updates. I like using facebook applications and chatting with my friends on facebook. Also facebook reminds me about various things like birthdays.

Fb10: I login to facebook and check my and my boyfriend's wall. I even know his password and I keep on changing our profile pictures. I don't chat that much but I like using facebook applications.

2. FACEBOOK AND YOUR RELATIONSHIP

Fb1: I have to pay attention while uploading any photograph or updating status. Because I feel that my partner keeps an eye on my account and I don't want any kind of stuff to misguide her.

Fb2: I have been in a virtual relationship with a girl overseas which I don't want to be public. But her step to put her relationship status as committed and tagging me into that made me very fuming due to which we had a very abusive comment sharing session into each other's wall and photos. This is very disturbing to me.

Fb3: Since I am single so I can't comment on this thing but yes I feel that there should be a limit. Your relationship shouldn't get affected by a virtual thing like facebook.

Fb4: My girlfriend can't peep into my account because almost everything is locked as my family members are also there on facebook. I don't check her wall as well but sometimes it happens that her status updates and photographs make me feel annoyed.

Fb5: I have a fake facebook account. I have tried to chat with her and tried my hands in flirting with her. But situation seems to be very well-regulated now because as far as she doesn't seem to be showing any kind of interest to the fake profile.

Fb6: I have been in a relationship, both of us mutually choose not to disclose it because somewhere I was concerned about my ex's emotions and was looking forwards for her return in my life. I didn't want to get embarrassed and answer irrelevant questions of my friends who knew about my earlier relationship.

Fb7: Till now I haven't felt any kind of changes in my relationship due to facebook. Probably because my girlfriend isn't an active user of facebook and she doesn't peep into my account.

Fb8: I was in a relationship and even after breaking up often it happens that my ex calls me up and ask about the tagged photographs and posts. It used to happen when I was committed to him and it became one of the major reasons for my break up.

Fb9: I have seen my friends fighting to their partners due to facebook but in my case it doesn't happen. I feel one should be understanding enough to give his/her partner the necessary space.

Fb10: I know my boyfriend's password and he does mine. So facebook has definitely never been a reason for dispute between us.

3. FACEBOOK IS DEPRESSING: TRUE OR FALSE

Fb1: At times it is depressing. Based on the recent incident happened to me on facebook where I found one of my friends relationship status as "married". I'm really happy that someone I consider a friend has found that special someone. I wonder why I wasn't invited. Having such kind of feelings depresses me sometimes.

Fb2: According to me it's false. Facebook is a platform where you can get connected to others play games etc. yes definitely sometimes it causes disputes but then this does make the adjective "depressing" correct for facebook.

Fb3: I think facebook can be depressing and can't be depressing. It all depends on a person's personality and his activities on facebook. Obviously if a girl checks out cool snaps of the other girl who is a friend of her he might get depressed.

Fb4: Well this is true at times but most of the times its not that way. I found one my best friend photo album, hanging out with some other friends leaving me uninvited. This behaviour disheartened me.

Fb5: I completely agree to Fb3. It depends on the user weather he gets depressed or not but for me and my close friends it definitely isn't depressing.

Fb6: Facebook is not depressing but it makes me feel anxious at times. When I see the photographs of my friends where I wasn't invited, or when I read few updates and comments where I feel a pinch of sarcasm for me I get restless and it annoys me.

Fb7: Facebook is definitely not depressing according to me. I personally feel it depends on the kind of person you are. If you get depressed easily you can get depressed by anything. But yes I feel sometimes there are things on facebook which are annoying.

Fb8: I can't call facebook depressing at least not for me because I don't spend much time on facebook.

Fb9: Facebook is not depressing but sometimes it's annoying. Reasons can be sarcastic status updates, comments etc. But at the same time it's a thing which can freshen up your mind in seconds.

Fb10: Facebook isn't depressing for me but one of my very close friends is having some problems with her friends and if she sees any kind of happy updates or photographs of them she gets sad and depressed. She feels that they are much happier than before.



COMPARATIVE STUDY OF CRM (PUBLIC SECTOR BANKS Vs. PRIVATE SECTOR BANKS) IN DELHI REGION**R. C. BHATNAGAR****PROFESSOR****AMITY SCHOOL OF INSURANCE, BANKING & ACTUARIAL SCIENCE****AMITY UNIVERSITY****NOIDA****RAJESH VERMA****ASST. PROFESSOR****AMITY SCHOOL OF INSURANCE, BANKING & ACTUARIAL SCIENCE****AMITY UNIVERSITY****NOIDA****ADITI GOEL****PROBATIONARY OFFICER****UNION BANK OF INDIA****RANI BAGH****ABSTRACT**

CRM is neither a product nor a service, rather it is an approach to build and manage the relationships of the company with the customers efficiently and effectively. CRM is a strategy to acquire new customers and retain the existing ones. It also includes customer loyalty making them the Brand Ambassador for the company. With cut-throat competition and low switching costs, it is a challenge for a company to retain its customers. Hence CRM is a major strategy adopted by many organizations as; it follows "Customer is King, and They have the Power". CRM is a Customer-Centric strategy which provides the company with an integrated approach to Acquire, Retain and Respect their customers.

KEYWORDS

CRM, Importance of CRM, Role of CRM in retaining customers.

1. INTRODUCTION

1.1 CUSTOMER RELATIONSHIP MANAGEMENT is the process of managing detailed information about individual customers and carefully managing all the customer "touch points" with the aim of maximizing customer loyalty. **Philip Kotler**

It is a business strategy that enables businesses to acquire new customers, understand the customers, helps in retention of the existing customers and reduces customer management costs. Customer relationship management has been widely used to enhance profitability thru cost reduction by satisfying the customers and improving upon their loyalty.

The changing needs and expectations of customers on one hand and increasing competition on the other hand has reduced the "level of tolerance" of customers thereby further changing the concepts and aspects of marketing. The market orientation has grown from different concepts, from production, product, selling, marketing concepts and now societal Marketing concept. The societal concept includes welfare of the society while satisfying the customer needs.

Banking industry, being a service industry is equally challenging for the implementation of CRM. Customer relationships have the potential to permit businesses to recover and improve from infrequent sub-optimal responses to customer needs to frequent optimal responses to their needs and expectations.. Businesses with long term relationships, provide much needed peace of mind to the customers. CRM practices have enabled the transformation from being Product Centric to Customer Centric. Customer Relations is an important asset in the balance sheet of any company. The goal is to make, the Right offer, to the Right customer and at the Right time.

1.2 IMPORTANCE OF CUSTOMER RELATIONSHIP MANAGEMENT

Customer Relationship Management (CRM) is an approach to maintain and cultivate relationships with customers efficiently. It not only helps in doing good business but also allows one to converse new ideas and make strong personal bonds between company and its customers.

As there is fluctuating economic environment, many organizations are busy in finding strategies to achieve beneficial tangible business relationship with their customers. In a growing economy, businesses work hard for expansion of their customer base and indulge in aggressive spending to derive the growth engine. Nurturing of relationship with the existing customers has helped the institutions to effectively bring down the costs of marketing.

Most of the organizations have espoused the value of effective marketing which helps in reducing the sales cost and invest in saving in customer relation by delivering the products and services they really want. CRM has been increasingly and enthusiastically being accepted. It is proved by LeadOrganizer.net that "70% of deals fail due to poor customer relationship with businesses".

1.3 CRM IN BANKING

Increasing number of competitors, low switching costs from one bank to another and near identical products, has decreased the customers loyalty towards their banks. The consumers mostly select banks based on their convenience in terms of location and distance to their offices or homes. The pressures of cut throat competition and aggressive marketing have contributed to the growth of CRM in the Financial Services Sector. Analysts have reported an increase in customer retention of 5% has helped increase Profitability by 35% in banking business. Banking industry, being a service industry with regular interaction with human beings is a bigger challenge for the implementation of CRM. "Customers are drifting away from Face-to-Face to virtual banking and from Branch specific to Anywhere banking." Banks have started recognizing that they can no longer hold on to a customer with one or two specific products but must encompass the entire customer relationship towards a client's expectations. Private Banks have projected themselves as extraordinarily 'Customer Centric' in what they believe to be highly customized services to the High Net Worth Individuals. As against this Public Sector Banks are perceived as institutions for "Aam Adami" and economic development. Despite this distinction CRM is equally important for both. This study brings out the some of the distinguishing features of both under CRM.

Business requirements for successful CRM strategy for any financial institution can be summed up as follows:

1. Create a Customer-centric Organization and develop Infrastructure to service the customer.
2. Understanding and implementing the strategies to Attract and Retain the most profitable Customers.

3. Gain an insight of the customer's needs and expectations after proper segmentation.
4. Assess Lifetime Value of an Customer.
5. Profitability from each and every Customer Relationship should be maximized.

2. REVIEW OF LITERATURE

1. CRM technology vendors have oversold the banking and financial industries with solutions. Unfortunately, these industries have quickly learned that effective CRM requires more than just a software application; it requires a business strategy supported by their human resource capital. Their business strategy should be:

- focus on customer equity assets
- enable organizational structures to support a customer-centered business model (as well as a product centered or function-centered model)
- provide a mechanism to develop data that supports the customer-centered model
- incorporate a technology infrastructure that optimizes customer relationships.

2. As per Semih Onut and Ibrahim Erdem, Results obtained by extensive usage of customer data to develop and apply Relational Marketing have convinced the Garanti Bank to proceed along the line undertaken. As lists of customers eligible for four very important banking product/services are available, as above described, the following actions are now being deployed:

- Extension of promotions to a larger customer population by having sales people in the branches contacting progressively 15,000 customers
- Targeted campaigns through Internet and the call center for customers actively using one or both of these innovative channels for their banking operations.

The same approach is now being extended to small and medium businesses and to commercial customers. Moreover the analytical and strategic CRM cycle is being completed by developing an application analyzing customers' attrition and deploying strategies to reduce it.

3. Many players in today's financial services industry are non-banks and non-financial service organisations; just look at players like Marks & Spencer, AT&T, Intuit, General Motors, Virgin and British Gas. Consumer electronics giant Sony have recently announced their intention to provide online financial services through their Dreamcast Electronic games consoles (Kunii, 1999; Nakamae and Abrahams, 1999). Today, banks are no longer gatekeepers but gateways to financial products (Kalakota and Whinston, 1997). In the old gatekeeper model, the bank functioned as an inhibiting intermediary that restricted a customer's set of product choices. In the new gateway model, the bank functions as a flexible intermediary that provides access to an entire spectrum of products and delivery channels. Some of the products — insurance, entertainment, travel, investment management — may not even originate from within the bank but instead be provided by third parties. It is possible that banks will be one type of trusted portal, part of peoples' personal connection to e-commerce. And institutions that fail to keep up with the online evolution are likely to find themselves regulated to supplying financial commodities to intermediaries. While IT plays a vital role in CRM happenings, as with all IT investments it should be driven by a strategic management perspective. Too often, companies seek to build CRM capabilities by designing a powerful IT system without considering wider business issues.

4. According to Deloitte, Though most institutions are not fully aware of this fact, the Internet and its evolution towards 2.0 platforms has changed for good the way people relate to one another. Under CRM's new "social" approach, relationships between customers and brand start prematurely and do not end but are under constant feedback. The rise of portable technologies, such as intelligent cell phones and other mobile devices with Internet access, enable connectivity from almost any place, under any circumstances, 24 hours a day. Finally, social media provide consumers with a platform to share experiences, either good or bad, with their virtual communities or social networks. Internet has changed how relationships work by going from the "one way" era (entity/customer) to a "two ways" era (entity/customer and customer/entity), where corporations are expected to respond. Social networks force changes in marketing strategies. Those organizations that earlier rather than later understand this and adapt to this new paradigm will gain an important competitive advantage in the next years.

5. A research Paper from The Hong Kong Polytechnic University says, With reference to the proposed software / CRM project management model, it was found that for the four prime project management areas (Scope management, Quality management, Time and Cost management), cost management was not as important as communication management. In fact, it was found that the most important four project management areas included Project Planning. Our findings imply that financial institutes implementing CRM project could increase its success rate by having a good management on communication. All our hypotheses are supported except H6 and H7. There are a number of limitations in our study. Low response rate from both financial institutes and software project management vendors has undermined the validity of the research results. Another limitation of the study is that it only focuses on one specific region - HK. In future, a comparison of the software project management practices with different service industries could be done.

6. A conclusion by Sanjay Kranti Das in his research paper has reported that, on analysis it is very clear that in almost all issues, the working performance of SBI and other nationalized banks is similar but differing at certain aspects only. The SBI though it is considered to be a public sector bank, has taken good care in implementation of CRM, by fine tuning the CRM practices and finally putting it on track. Whereas, other nationalized banks were not at par with SBI in most of the aspects like database management, responding to the customers in mean time and provisioning the services as expected by the customers.

3. OBJECTIVE OF THE STUDY

The main aim of this study is to prove the significance of CRM in banking sector, with its effect on the Customer Satisfaction with reference to both Public Sector and Private Sector Banks. The other specific objectives of the study are:

- To study the impact of CRM as a tool in banking sector to retain customers.
- To do the comparative study of CRM practices adopted by Public Sector vis-à-vis Private Sector banks in Delhi.
- To suggest for improved implementation of CRM in the banks through a suitable comparison.

4. RESEARCH METHODOLOGY

4.1 HYPOTHESIS

H0: There is no significant difference in the attitude of bank staffs towards the customers as far as type of banks is concerned.

H1: There is a significant difference in the attitude of bank staffs towards the customers as far as type of banks is concerned.

H0: There is no significant difference in the complaint resolution system as far as type of banks is concerned

H1: There is significant difference in the complaint resolution system as far as type of banks is concerned.

H0: There is no significant difference in the simplicity in the banking operations as far as type of banks is concerned

H1: There is significant difference in the simplicity in the banking operations as far as type of banks is concerned

H0: There is no significant difference in the customer perception towards the CRM Initiatives taken by public sector banks and private sector banks.

H1: There is a significant difference in the customer perception towards the CRM Initiatives taken by public sector banks and private sector banks.

1. <http://www2.sas.com/proceedings/sugi29/180-29.pdf>
2. http://www.necsi.edu/events/iccs/2002/nap12_onutcrmiccs2002-2fixed.pdf
3. ftp://163.13.193.155/Literature/Summer2004/CRMInfinancialservice_peppard_emj_2000.pdf
4. http://www.deloitte.com/assets/Dcom-Croatia/Local%20Assets/Documents/2012/FSINews03.02-Social_CRM.pdf
5. <http://www1.ucms.com/books/LFS/CSREA2006/EEE4455.pdf>
6. <http://www.pinnaclejournals.com/setup/business/paper40.pdf>

4.2 RESEARCH DESIGN

As the research linked to this topic requires the narration of the market character and is noticeable by the earlier formulation of particular hypothesis, it is a Descriptive research design. This paper requires associations between variables which is established with the help of descriptive study.

4.3 SAMPLE DESIGN

Sampling helps to determine the corresponding value of the population and plays a vital role in marketing research. The target population for this research is the **Customers of the public and private sector banks in Delhi**. The Sample Frame for this Research is **Data Base of the Banks**. The sampling unit is an **Individual Customer**. 200 respondents are taken in the sample. The sampling method opted is **Convenience Sampling**.

4.4 DATA COLLECTION METHOD

Primary Data is collected through survey and the tool which is being used is Questionnaire.

4.5 DATA ANALYSIS TOOL

The process of converting a data into information is known as Data Analysis. The Analysis will be showed with the help of,

- a. Tables
- b. MS Excel

5. DATA ANALYSIS

PSB: PUBLIC SECTOR BANKS

1. THE BANKS STAFF ATTITUDE TOWARDS CUSTOMERS IS GOOD

	PSB	Pvt Sector Banks
Disagree	31	15
Neutral	39	47
Agree	20	38

20% of PSB's customers agree that the Attitude of the bank employees is good, where as 38% of Pvt. banks customers agree that the attitude of the bank employees is good. On the other hand, 31% disagree that the PSB's employees attitude is good towards them, and only 15% Pvt Sector Banks customers disagree that the bank employees' attitude is good towards them.

2. THE WORKING OF BANKS OPERATION IS TRANSPARENT

	PSB	Pvt Sector .Banks
Disagree	18	16
Neutral	25	39
Agree	57	45

Banks being a Service Industry need to be Transparent. 57% of PSB's customers and 45% of Pvt Sector Banks customers agree with the fact that their respective banks operations like pre payment/charging of interest, acceptance/rejection of loan proposal are transparent.

3. THE BANK PROVIDES DETAILS OF PRODUCTS AND SERVICES EFFICIENTLY

	PSB	Pvt Sector Banks
Disagree	24	16
Neutral	53	45
Agree	23	39

Only 23% of the PSB's customers are satisfied with the details provided by the bank about their products and services, whereas 39% of the Pvt Sector Banks customers say that their bank provides the details of the products and services efficiently. This may be because these banks have aggressive marketing strategies.

4. THE BANK HAS EFFECTIVE COMPLAINT RESOLUTION MECHANISM

	PSB	Pvt Sector Banks
Disagree	39	21
Neutral	45	36
Agree	26	43

Only 26% customers of PSB's are satisfied with the complaint resolution mechanism of the bank, whereas 43% of Pvt Sector Banks customers are satisfied with the same. This shows the CRM initiatives taken by Pvt Sector Banks help in retaining their customers by effective Complaint Resolution system asunder CRM practices compared to PSB's customers.

5. THE BANKING OPERATIONS ARE SIMPLE

	PSB	Pvt Sector Banks
Disagree	24	21
Neutral	45	40
Agree	31	39

31% of the PSB's customers find operations of their bank simple as compared to 39% of pvt Sector Banks for the same. Thus, initiatives taken by Pvt Sector Banks to make their operations simple raising the level of awareness are successful to attract new customers.

6. THE BANK EMPLOYEES ARE HONEST IN THEIR NATURE

	PSB	Pvt Sector Banks
Disagree	16	23
Neutral	48	42
Agree	36	35

It is difficult for a customer to judge the honesty of bank employees so it can be considered as the perception of the customers about the bank employees. The highest percent of 48% for PSB's and 42% for Pvt Sector Banks customers says it is neutral. But still PSB's employees are considered more honest than Pvt Sector Banks employees as 36% of PSB's customers agree with the above statement whereas only 35% agree for Pvt Sector Banks .

7. THE BANK HAS A HIGH LEVEL SECURITY FOR CUSTOMERS PROFILE/DATA

	PSB	Pvt Sector Banks
Disagree	13	16
Neutral	46	45
Agree	41	39

The information about the customer profile is considered secure in both types of banks. 41% of PSB's customers and 39% of Pvt Sector Banks customers agree that their banks keep the information on their profile etc. secure.

8. THE ELECTRONIC SERVICES PROVIDED BY THE BANK ARE RELIABLE AND SECURE

	PSB	Pvt Sector Banks
Disagree	24	22
Neutral	40	42
Agree	36	36

Customers of both the banks (PSB's & Pvt Sector Banks) agree with the same (36%) that the electronic services provided are reliable and secure.

9. THE BANK PROVIDES SUPERIOR QUALITY OF SERVICE

	PSB	Pvt Sector Banks
Disagree	24	22
Neutral	45	44
Agree	31	34

The service quality gives the customer's perception about the service of the bank on specific dimensions like reliability, responsiveness, assurance, empathy, tangibles. Thus 31% of PSB's customers perceive that PSB's has superior service quality, whereas 34% Pvt Sector Banks customers perceive the same for Pvt Sector Banks .

H0: There is no significant difference in the attitude of bank staffs towards the customers as far as type of banks is concerned.

H1: There is a significant difference in the attitude of bank staffs towards the customers as far as type of banks is concerned.

	PSB	Pvt Banks	total(x)	Expected	E-O	(E-O)^2	(E-O)^2/E
Disagree	31	15	46	66.66667	20.66667	427.1111	6.406667
Neutral	49	47	96	66.66667	-29.3333	860.4444	12.90667
Agree	20	38	58	66.66667	8.666667	75.11111	1.126667
			200				20.44
	PSB	Expected	E-O	(E-O)^2	(E-O)^2/E		
Disagree	31	33.33333	2.333333	5.444444	0.163333		
Neutral	49	33.33333	-15.6667	245.4444	7.363333		
Agree	20	33.33333	13.33333	177.7778	5.333333		
	100				12.86		

	Pvt Banks	Expected	E-O	(E-O)^2	(E-O)^2/E
Disagree	15	33.33333	18.33333	336.1111	10.08333
Neutral	47	33.33333	-13.6667	186.7778	5.603333
Agree	38	33.33333	-4.66667	21.77778	0.653333
	100				16.34

At 95% confidence level and 2 degree of freedom, critical value of chi square is 5.991, and the calculated value of chi square is more than the critical value of Chi Square. Thus, the Null Hypothesis (H0) is rejected, and accept the alternative hypothesis (H1). So, there is significant difference in the attitude of bank staff in PSB's and Pvt Sector Banks.

H0: There is no significant difference in the complaint resolution system as far as type of banks is concerned

H1: There is significant difference in the complaint resolution system as far as type of banks is concerned.

The bank has effective complaint resolution mechanism: Agree Neutral Disagree

	PSB	Pvt Banks	total(O)	Expected	E-O	(E-O)^2	(E-O)^2/E
Disagree	29	21	50	66.66667	16.66667	277.7778	4.166667
Neutral	45	36	81	66.66667	-14.3333	205.4444	3.081667
Agree	26	43	69	66.66667	-2.33333	5.444444	0.081667
			200				7.33

	PSB	Expected	E-O	(E-O)^2	(E-O)^2/E
Disagree	29	33.33333	4.333333	18.77778	0.563333
Neutral	45	33.33333	-11.6667	136.1111	4.083333
Agree	26	33.33333	7.333333	53.77778	1.613333
	100				6.26

	Pvt Banks	Expected	E-O	(E-O)^2	(E-O)^2/E
Disagree	21	33.33333	12.33333	152.1111	4.563333
Neutral	36	33.33333	-2.66667	7.111111	0.213333
Agree	43	33.33333	-9.66667	93.44444	2.803333
	100				7.58

At 95% confidence level and 2 degree of freedom, critical value of chi square is 5.991, and the calculated value of chi square is more than the critical value of Chi Square. Thus, the Null Hypothesis (H0) is rejected, and accept the alternative hypothesis (H1). So, there is significant difference in the complaint resolution system as far as types of Banks are concerned.

H0: There is no significant difference in the simplicity in the banking operations as far as type of banks is concerned

H1: There is significant difference in the simplicity in the banking operations as far as type of banks is concerned

The banking operations are simple: Agree Neutral Disagree

	PSB	Pvt Banks	total(O)	Expected	E-O	(E-O) ²	(E-O) ² /E
Disagree	24	21	45	66.66667	21.66667	469.4444	7.041667
Neutral	45	40	85	66.66667	-18.3333	336.1111	5.041667
Agree	31	39	70	66.66667	-3.33333	11.11111	0.166667
			200				12.25

	PSB	Expected	E-O	(E-O) ²	(E-O) ² /E
Disagree	24	33.33333	9.333333	87.11111	2.613333
Neutral	45	33.33333	-11.6667	136.1111	4.083333
Agree	31	33.33333	2.333333	5.444444	0.163333
	100				6.86

	Pvt Banks	Expected	E-O	(E-O) ²	(E-O) ² /E
Disagree	21	33.33333	12.33333	152.1111	4.563333
Neutral	40	33.33333	-6.66667	44.44444	1.333333
Agree	39	33.33333	-5.66667	32.11111	0.963333
	100				6.86

At 95% confidence level and 2 degree of freedom, critical value of chi square is 5.991, and the calculated value of chi square is more than the critical value of Chi Square. Thus, the Null Hypothesis (H0) is rejected, and Alternative Hypothesis (H1) is accepted. So, There is significant difference in the simplicity in the banking operations as far as types of Banks are concerned.

H0: There is no significant difference in the customer perception towards the CRM Initiatives taken by public sector banks and private sector banks.

H1: There is a significant difference in the customer perception towards the CRM Initiatives taken by public sector banks and private sector banks.

Questions	PSB			Pvt. Banks		
	MEAN	x-xbar	X ₁ =(x-xbar) ²	MEAN	x-xbar	X ₂ =(x-xbar) ²
The banks staff attitude towards customers is good	1.89	-0.21889	0.047912346	2.23	0.034444	0.00118642
The working of banks operation is transparent	2.39	0.281111	0.079023457	2.29	0.094444	0.00891975
The bank provides details of products and services efficiently	1.99	-0.11889	0.014134568	2.23	0.034444	0.00118642
The bank has effective complaint resolution mechanism	1.97	-0.13889	0.019290123	2.22	0.024444	0.00059753
The banking operations are simple	2.07	-0.03889	0.001512346	2.18	-0.01556	0.00024198
The bank employees are honest in their nature	2.2	0.091111	0.008301235	2.12	-0.07556	0.00570864
The bank has a high level of customer information security	2.28	0.171111	0.029279012	2.23	0.034444	0.00118642
The electronic services provided by the bank is reliable	2.12	0.011111	0.000123457	2.14	-0.05556	0.00308642
The bank provides superior quality of service	2.07	-0.03889	0.001512346	2.12	-0.07556	0.00570864
	18.98		0.201088889	19.76		0.02782222
	2.108889			2.195556		
	S ₁ ² =ΣX ₁ /(N ₁ -1)		0.025136111	S ₂ ² =ΣX ₂ /(N ₂ -1)		0.00347778

$F = S_1^2 / S_2^2$	7.227636
$F(8,8)$	3.44
5% Significance level	

Thus, the Null Hypothesis (H0) is rejected, and we accept the alternative hypothesis (H1).

So, there is significant difference in the customer perception towards the CRM Initiatives taken by PSB's & Private Sector Banks.

6. FINDINGS

CRM has emerged as a most sought after business policy in today's competitive environment. It is a discipline which enables the companies to recognize and retain their most profitable customers. It involves latest and innovative marketing strategies which not only helps in retention of the existing customers but also helps in acquiring new customers. It has been seen as a distinctive method that can get outstanding changes in the production processes of companies. It can be inferred that, the CRM helps in finding out the relationship between commitment and loyalty, perception and satisfaction which underlines its importance in Indian Banking Sector. Customers mostly choose their banks on the basis of convenience of the location of bank from their homes or offices. With the introduction of innovative technologies in the banking business, such as ATM's and internet banking, nowadays customers can liberally select any bank. The pressures of aggressive and vibrant markets have contributed to the development of CRM in the Financial Services Sector as "an increase in Customer retention by 5% can increase 35% Profitability in the market". Therefore, there is more stress on customer retention and increasing market share. Private Banks have conventionally viewed themselves as "Customer Centric" offering, what they think to be extremely custom-made services to the High Net Worth Customers.

7. SUGGESTIONS

The Indian Banking Sector is comprises of different banks but of an identical molecule. In such a cut-throat competition, the Banks need to take up appropriate marketing skills rather than to depend on the trading skills alone. There should be a constant introduction of new services for ensuring the development of the banks, to compete in the market and to keep the employees and customers motivated and enthusiastic:-

1. The bank personnel should be given proper training regarding the behavioural patterns before they join and are allowed to interact with the customers directly. They should be capable enough to change the technique to deal with different type of customers and according to the customer's needs and the situation. Moreover, they should have good product knowledge, manners, attitude etc., which will add to "one to one" relationship, ultimately translating into Institutional loyalty.
2. Public Sector Banks should also adopt strong and strict marketing strategies with knowledgeable and informative marketing officers, who can provide all the information about the products and services provided by the bank in a transparent manner.
3. Public Sector bank employees should be motivated to be enthusiastic to work with the latest CRM practices and IT driven processes. The employees should be properly re- skilled to make extensive use of the infrastructure and CRM tools to extend the banking services.
4. CRM strategies can be revised over a period of time by Banks. The Banks should attempt to build a relationship with the customers by being in touch with them on regular basis and feedback should drive the reviews.
5. Banks should adopt a policy of continuous persuasion in building CRM throughout in all contacts..
6. The data or the information of the customers gathered should be properly evaluated and mined properly. It should be kept safe in a database for future queries and information. This helps customer get a feeling of belongingness and tickles his/her ego at times, which does help.

7. Banks should adopt a customer-centric approach and fine tune their processes to achieve it.
8. Banks which treat their customers with care and respect are rewarded with their loyalty. Thus, bank employees should respect and empathize with their customers and they will loyal to the Banks. Retention will be easy.
9. CRM is essential to establish Customer Relationships to achieve good growth of the bank by selling and cross-selling of new products and services. However, in order to avoid unhealthy and unethical practices, CRM should be done in a decent and ethical manner.

8. CONCLUSION

Indian Banks have recorded a phenomenal growth in the past decades after the initiation of Economic Reforms. The banks, both Public and Private, have transformed themselves into financial power houses while playing a developmental role in the economy. In an attempt to be more profitable, the banks have become competitive and increasingly customer – centric.

This new CRM orientation has nudged the Banks to take a more pragmatic approach for conducting the business. The CRM is one such tool which helps in meeting the customer's expectations according to their changing needs. While analyzing the CRM Implementation in both the sectors, it was found that the Private Sector Banks have been able to implement the CRM practices more effectively compared to their Public Sector counterparts. This indicates that strategically speaking, the Private Sector Banks have been more innovative in understanding their customers and in building good relations with them. However, a micro analysis reveals that the Public Sector Banks have highest scores in terms of trust and reliability and assurance whereas the Private Sector Banks have lower in terms of tangibility, reliability and assurance. This indicates that the private sector banks need to make proper strategies to improve their take in these areas. This will make them more efficient in serving the customers and in maintaining the long term relations with them. The analysis of the results also indicates that the banks (whether Public or Private) are equally affected by the kind of CRM initiatives they undertake. The banks are now under pressure to retain the existing customers because of the high cost of acquisition of a customer. This would not only ensure better customer relations but also loyalty among them, which is very critical and important in today's competitive world. Banks have understood the importance of the customers in developing their business. They have recognized that it is essential to protect and grow its customer base and ultimately this will help improve their profitability. The CRM approach adopted by banks focuses on maximizing the value for the customer and the bank. The key drivers to customer loyalty are:

- (a) Positive Staff Attitude.
- (b) Trust, Honesty, Integrity and Reliability.
- (c) Productive advice and delivery of the Promised service.
- (d) Consistent delivery of Superior quality service.
- (e) Simplicity and ease of doing business.
- (f) Fair and simple Grievances Redressal mechanism in the banks.

To achieve this and more there is a felt need for adequate training and motivation to the bankers to create fruitful and everlasting relations with their valuable customers. They should also intensify their efforts to make their customer literate in order to achieve the best potential available. CRM is here to take on the business world and is critical to compete effectively in today's market place. The more effectively one can use information about one's customers to meet their needs, higher will be the Customer Satisfaction and more Profitable the Institution will become. Operational CRM needs analytical CRM with predictive data mining models at its core. The route to a successful business requires that one understands one's customers and their requirements, and data mining is the key. Extensive usage of Internet is going to be a standard practice and it's the challenge for the corporate world to fulfill desire of the customers. Customer Relationship Management, as referred to in some literature, is "10% Strategy and 90% Action". It is a business strategy that adds value to the customer service in Banks. A proper strategic alliance between various partners in the process of implementing CRM should be decided well in advance and once the concept is accepted across the it should be implemented with utmost sincerity to move to "Customer Delight".

9. REFERENCES

1. Dr. M. Selvakumar & P. G. Kathiravan(2009). "A Study of Profitability Performance of Public Sector Banks in India"/ Indian Journal of Finance Archives: Volume3•Number9•September 2009
2. Dr.N.Bharathi (2010)"Profitability Performance of New Private Sector Banks – An Empirical Study" Indian Journal of Finance- Archives: Volume 4 • Number 3 • March 2010
3. Jyoti Saluja & Dr.Rajinder Kaur (2009). "Profitability Performance of Public Sector Banks InIndia"Indian Journal of Finance -Volume 4 • Number 4 • April 2010
4. Prakash Tiwari & Hemraj Verma(2009). "A Fundamental Analysis of Public Sector Banks inIndia "/Indian Journal of Finance Archives: Volume 3 • Number 3 • March 2009

WEBSITES

5. http://books.google.co.in/books?id=vl7RRngDaZcC&pg=PA212&lpg=PA212&dq=crm+initiatives+SBI&source=bl&ots=X02VinC5Su&sig=uRhGibzLUL_XD-WMRh8R2KtJd6g&hl=en&sa=X&ei=qHcSUcnBElr5rQe9xlGoCQ&ved=0CC4Q6AEwAA#v=onepage&q=crm%20initiatives%20SBI&f=false
6. <http://civicism.org/go/evaluate>
7. <http://crm-on-demand-software.blogspot.in/>
8. <http://customersolution.wordpress.com/2011/04/30/the-role-of-crm-customer-relationship-management/>
9. http://ipmglobal.net/_blog/The_IPM_Blog/post/7_reasons_why_project_managers_need_a_CRM_tool/
10. <http://www.crmnext.com/success-stories/hdfc-bank.aspx>
11. http://www.customerthink.com/blog/small_businesses_and_the_need_for_crm
12. <http://www.nasscom.in/hdfc-bank-wins-2012-celent-model-bank-award-great-customer-experience>
13. <http://www.stylusinc.com/BI/other/ecrm/>
14. <http://www.taltd.co.uk/Transforme1.nsf/All+Documents/22A03B29C0E55495802579DF0054F9BB?OpenDocument>
15. <http://www.workbooks.com/resources/essentials/10-questions-to-help-you-decide-if-you-need-crm>

FIRM, FINANCIAL SYSTEMS AND FINANCIAL DEREGULATIONS: A SURVEY OF LITERATURE

NEMIRAJA JADIYAPPA
RESEARCH SCHOLAR
IBS
HYDERABAD

DR. V. NAGI REDDY
PROFESSOR
IBS
HYDERABAD

ABSTRACT

Financial systems play an important role in capital structure decisions of firms. In this context various structural elements of financial systems become crucial in making capital structure related decisions at firm level. In this paper we have critically reviewed three streams of research in financial literature which helps us understand how exactly financial systems affect firm level decision making. The first stream, namely financial systems and firm stream, analyzes the literature which examines the underlying reasons for the existence of a relationship between a firm and its financial system. The second stream, namely financial reforms and financial markets stream, analyzes the literature which examines how various reforms in the financial markets affect the structural and behavioral aspects of the financial system and lastly the third stream, namely financial reforms and firm stream, analyzes the literature which examines the impact of financial reforms on the capital structure decisions of firms. In the last part of the paper we examine, empirically, how financial reforms affected the leverage ratios in India. We find supporting evidence for the observed decline of leverage ratio in the post financial reforms period in the literature (Bertrand et al., (2008) Agca et al., (2007))

KEYWORDS

Financial systems, financial reforms, capital structure and financial structure.

I. INTRODUCTION

Financial systems are the intermediaries which help in the mobilization of savings and allocating the mobilized savings to firms and households based on the marginal utility of resources. Various structural aspects of financial systems affect the efficiency of this resource mobilization and allocation process. In this part of the literature review we examine, critically, some of the studies which evaluate the relationships between financial systems and firms, then discuss how various structural features of the financial systems affect those relationships and finally, how financial regulations affect the structural aspects of financial systems which cause firms to change their capital structure decision behavior. These studies are important because they provide broad structural parameters on which financial reforms work. Specifically this paper tries to examine the following:

- 1) How do financial systems, with special reference to structural aspects and channels of mediation (e.g., cost of intermediation and accessibility), affect firm behavior?
- 2) How do financial deregulations affect the structural features of the financial systems and thus the channels of mediation?

The initial studies of the following section deal with the studies relating to firm and financial system relationships and the later studies relate to the structural aspects of financial systems and liberalization/deregulation of those systems.

II. FIRM AND FINANCIAL SYSTEMS

Firms' dependence on external finance results from their inability to meet their investments and working capital requirements internally (Rajan and Zingales (1998)). The technical differences in the operations of different industries give rise to different degrees of dependencies on external capital. This argument establishes a relationship between financial systems and firms. This dependency argument can be used to link the extent of financial development and output growth at industry level. Their simple argument is that the firms with higher dependency on external finance will grow faster in those countries where financial systems are developed. Working on US data at industry level, they group industries into various levels of dependencies using accounting data. Development of financial system is conceived in terms of the size of the system, bigger the size the more developed is the financial system and hence more output growth of those industries that depend more on the financial system. If we conceive financial liberalization as a measure to develop financial systems, then Rajan and Zingales (1998) argument links, directly, financial reforms with investments at firm level.

Levine and Zervos (1998) extended the scope of the relationship to cover apart from the size of the banking sector, other structural variables of the stock market such as liquidity, size and volatility and international integration. The scope of the dependent variables was also extended by including capital accumulation and productivity growth. In a cross-country study involving 47 countries and using panel regression, they establish empirically that banking development and stock market liquidity affect positively the current and future growth rates, productivity growth and capital accumulation while market integration, volatility and size did not show significant effect. This study apart from confirming size and output growth relationship, also establishes financial development and physical capital and productivity growth relationships. Thus bring in more channels of interactions between the financial systems and the firms. These results are important to our study because physical capital and productivity growth have important implications for corporate finance issues such as capital structure and the dividend policy.

Jayarathne and Strahan (1996) evaluated the impact of a change in the financial system on economic growth. They assume that banking system mediates the growth process by channeling the savings to the users and bank deregulation affects the efficiency of this process. Their study, in the context of branching deregulations in US, show that growth in real per capita income increased by 0.51% in the post reform period window of three years. The increase in the growth rate was mainly due to an increase in the efficiency of the investment projects as the rate of investment did not increase following the reforms. Thus they conclude that branching deregulations did not increase the volume of investment but increased the efficiency of investments.

Giannetti et al. (2002) using a large sample of European countries demonstrates that financial backwardness constrains growth in manufacturing industry below its potential and also affects investment and entrepreneurship. Their firm level study shows the significant and positive effect of financial development (measured by the size and of the financial system) on manufacturing firms' growth and this effect was more pronounced for small and medium sized firms. This study also establishes a positive and significant relation between firm value and firm entry into the industry and on the one hand and financial development on the other.

Dow and Gorton (1997) go little deeper to explain the interactions between financial markets and firm's micro-economic behavior. They propose a model which helps to understand how stock markets increase the economic efficiency of firms. Applying the agency approach to link the behavior of managers and the information content in the stock prices, they argue that stock markets increase the economic efficiency through their information role by indicating to managers the potential value of a project they are considering. If the stock price goes up then manager's estimation of positive NPV is confirmed and they adopt it. However, a decline in price suggests that managers should rethink the project. Another mode of influencing managers' behavior is by monitoring managements'

previous decision. Prices are used to evaluate previous decisions and on these evaluations rest their incentives and thus, managers will be careful in choosing their projects. It is through investment efficiency that price efficiency will bring in economic efficiency in the working of firms. But, they are careful to put some caveats and they conclude that in presence of alternative banking system, price efficiency is not a necessary condition for investment efficiency.

The above discussion clearly reveals the relationships between financial systems and the micro-economic behavior of the firms. The firm level variables that are affected by financial systems are investments, productivity growth, capital accumulation and economic efficiency. Pagano (1993) discusses three channels through which financial development influences the discussed relationships between financial systems and the micro-economic behavior of firms. First, it increases the proportion of savings channeled to project investment in the system and thus reducing the cost of financial intermediation. Secondly, through efficient allocation of resources it increases the marginal productivity of the capital. And lastly, financial development increases the savings rate at household level.

III. FINANCIAL REFORMS AND STRUCTURE OF FINANCIAL SYSTEM

In the following discussion, we provide empirical evidences for how financial development (financial reforms/liberalization) affects the structural elements of the financial systems. The resultant changes in the structural elements would then affect the channels of influence as discussed by Pagano (1993) and thus causing structural and behavioral changes at the firm level.

Cho (1988) analyzes the impact of financial liberalization on the cost of borrowings in Korea assuming that allocative efficiency of the financial system would increase after the liberalization of its financial system. His results show that cost of borrowing decreased following the liberalization and he notices also, the share of non-banking financial institutions in the total credit increased following the liberalization and he concludes from this fact that accessibility has increased for the firms because of liberalization.

Claessens et al. (2004) argue that competition in the financial systems affects the accessibility of resources for firms and households and also affects the cost of intermediation and thereby the cost of providing financial services. Increased access and low cost of intermediation would then help in achieving faster economic growth at the national level. Beck et al. (2003) found that concentration in the financial system increases firms' financing obstacles however; this effect is dampened in countries with a larger share of foreign owned banks.

Rice and Strahan (2010) examine how credit supply is influenced by the competition in the credit market. Considering US bank branching deregulation which increased the competition in the banking industry at national level, they document a decline in interest rates for lending. Their study reveals that small firms were able to borrow at rates that are 80-100 basis points lower in competitive system than in a concentrated system. Strangely, these decreased lending rates did not lead to increased total borrowing or any change in the debt maturity.

Demirguc-Kant et al., (2003) investigate the impact of banking concentration, institutions and regulations on the efficiency of the banking system (net interest margin) after controlling for bank level, macroeconomic and other financial variables. Their study reveals that net interest margin is inversely related to bank size and positively related to market share of a bank. Regulations on entry and banking activities found to be negatively related to net interest margin, but the effect is moderated by overall institutional framework involving property rights. As far as the relation between concentration and net interest margin is concerned, the results are mixed. The effect is significant when controlling only for banking variables (such as the size) but the relationship breakdowns when macro-economic and institutional variables included in the model.

Blundell and Browne (1991) noticed that financial liberalization in OECD countries during 1970s spurred innovations in financial system and increased the competition in providing financial services. This enable customers easy access to credit, new instruments to hedge their risks and technological advancements which made transactions easy. Cost of financial services reduced due to competition because of reduced the operating cost and they conclude that financial liberalization leads to efficiently functioning of market economies. This study is an improvement over other studies in that, it examines the channels through which competition in a financial system brings in the efficiency.

Cardenas et al., (2003) study the impact of ownership structure of banking system on its efficiency. They argue that entry of foreign banks have a positive impact on the efficiency of the banking system of the host country as foreign banks bring with them new products, technology and management techniques. Also, because of increased competition from foreign banks, efficiency in the domestic banking sector increases. They then turn towards stability aspect of the banking system and show that stability of the system as a whole increases following the entry of foreign banks. This occurs because of the geographically diversified banking portfolio which is less affected by the local stress. But their results on banking concentration show that cross border mergers and acquisitions have led to an increase of concentration. This view is also supported by Demirguc-kunt et al., (1998), who find evidence which suggests that the increased participation of foreign banks tends to lower the probability of a banking crisis.

Poshakwale and Qian (2009) studied the impact of financial liberalization on the competitiveness and production efficiency of Egypt's financial system. They also studied the implications of competition and efficiency on the growth of the economy. They found both competition and efficiency increased after liberalization with private banks being more competitive than government owned banks and domestic banks being more competitive than foreign banks. Their study shows a short term positive relationship with economic growth and efficiency growth.

Jayarathne and Strahan (1996) studied the impact of branching deregulation on the competitiveness and efficiency of banking sector in US. They argue that banking efficiency was increased greatly because of deregulation of interstate branching and this increased efficiency in terms of lower loan losses and lower non-interest expenses. This increased efficiency was attributed to the selection hypothesis where in banks increased their loan selection and monitoring efficiency. This increased efficiency resulted in decreased banking costs and thus lower interest rates for the firms also, they notice that weaker banks merged with the stronger banks, this consolidation lead to increased concentration of the banking system at the national level while the concentration of banking activities at the local level remain unchanged.

These studies show how financial markets affect the firm level variables like investments, physical capital accumulation and productivity. The main channels of mediation are the cost of borrowings, the accessibility of financial resources and the efficiency of the investments. The later part of the above section details how reforms in financial systems affect various structural features such as competition, size, credit supply, geographical spread and allocative efficiency. In summary, the above section answers how financial systems are related to firms? What are the mediation channels? And how these mediation channels are affected by liberalization process?

IV. FINANCIAL DEREGULATIONS AND CAPITAL STRUCTURE DECISIONS

In this section we review briefly some important studies which examine the issue of impact of financial regulations/deregulations on firm behavior in general and capital structure and investment decisions in particular. This section builds on the previous literature discussed above, which linked the financial systems, firm level variables and the liberalization of financial systems, to extend our knowledge on how reforms impacted capital structure decisions at the firm level? Deregulations/liberalization is expected to influence the capital structure decisions at firm level as it affects the availability of funds, cost of borrowings and the efficiency of the investments as discussed in the above section. We first discuss studies related to banking deregulations and then stock market liberalization. We organize the studies chronologically.

Harries et al., (1994) examine the impact of banking deregulation of 1983 on credit allocation and investment decisions of 523 Indonesian manufacturing firms over the period 1981-1988. They adopted accelerator methodology to model the investment behavior of firms and used ordinary least squares (OLS) and GMM⁴ procedures to estimate the parameters. Their variables include cash flow and debt to capital ratio. Controlling for firm fixed effects, they observe that financial liberalization increases the cost of borrowing for small firms but at the same time the accessibility of small firms to financial system also increases.

⁴ Generalized methods of moments

Jaramillo et al., (1996) examine the investment decisions of 420 Ecuadorian manufacturing firms over the period 1983-1988 to check whether or not the financing constraints are eased following the financial liberalization of 1980s. Using the dynamic Euler investment model which accounted for increasing interest rates for corporate borrowings and GMM estimation procedure, they find the existence of financial constraints for small firms in the pre reform period and what is more interesting is that these constraints did not relax even after the liberalization. In both the periods large firms did not face any constraints for their investment.

Boyle and Eckhold (1997) examine the impact of financial liberalization on debt choices of firms in New Zealand. They also compare the explanatory powers of various capital structure theories in the pre (1982-1985) and post (1986-1989) reforms. Using two book measures of leverage (long term and short term leverage) as the dependent variables and analyzes the data using pooled regression method and generalized least square estimation procedures with a dummy variable representing the pre and post liberalization period. Their results show that leverage, in both the cases, decreases following the liberalization. Comparison of the capital structure models for long term debt reveals little as the explanatory powers (R^2) of their models do not show any changes (from 0.22 to 0.25 with insignificant F) while for short term debt the explanatory power has actually decreases to 0.09 from 0.15 with significant F in the post liberalization period. Applicability of their study is limited by the small number of firms included in the analysis (548 observations for 8 years).

Henry (2000) studies the effect of stock market liberalization in 12 emerging countries on the cost of equity. Using event study methodology, they test the hypothesis that stock market liberalization would decrease the cost of equity on the assumption that stock market liberalization allows risk sharing between foreign and domestic investors. They use International finance corporation's (IFC) stock market liberalization dates for the event and their study (regressing the returns on a liberalization dummy over a period of 8 months) shows that on average, stock market liberalization yields cumulative abnormal returns (CAR) of 4.7% per month over an eight month event window (T-7 to T). But when controlled for other macro-economic effects, the CAR was reduced to 3.3% per month with a model fit (R^2) of 15%. This 3.3% CAR during the event window, they argue, would reduce the discount rate by 15%.

Cardenas et al., (2003) found that increased foreign bank participation, due to financial deregulation in many countries, decreased the financing constraints of all firms in the economy. Although they also reported evidence which suggests that entry by foreign banks benefits large enterprises more than small enterprises, they did not find indications of any harm to SME (Small and Medium Enterprises) finance. But increased competition in the wholesale market may force domestic banks to channel resources to SMEs while they begin the process of selecting among them the most creditworthy customers.

Maghyereh (2004) studies the impact of financial liberalization of 1990s on the capital structure of 36 non-listed manufacturing Jordanian firms over the period 1984-2000. Using the dynamic adjustment model and generalized method of moments estimation procedure, they find that there was a decrease in the mean leverage for Jordanian firms in the post reforms period. Also, they tested the speed of adjustment (SOA) of firm leverage towards the target leverage using a partial adjustment model and they found that the speed of adjustment⁵ towards the target leverage decreased in the post reform period. They also find that the traditional determinants of the capital structure⁶ become significant and account for more variation in leverage in the post reform period than in the pre-reform period. Their study essentially is an event study which compared the pre and post leverage ratios by assuming that financial liberalization is a single short period phenomenon which is not so in reality.

Cetorelli and Strahan (2006) investigated the impact of banking competition on the industry structure. Specifically, they considered the impact on the size distribution of the firms, average firm size and number of firms in a given industry. Following the identification strategy of Rajan and Zingales (1998) on external bank dependence, they regress the dependent variables (average firm size, number of firms and size distribution) on the interaction term of bank dependence and bank competition (Herfindhal-Hirschmann Index) along with some control variables such as GDP, industry fixed effect...etc. Their results show that more competition in the banking sector is associated with the more number of firms operating in a given industry with smaller average size. Also, they found the number of firms in small size category increased monotonically with an increase in the bank competition. Their analysis supports the viewpoint that banking deregulation lowers the entry barriers at the industry level.

Agca et al., (2007) study the impact of financial liberalization and financial openness, using the financial reforms index of Abiad et al., (2005)⁷, on leverage and debt maturity in a cross-country examination involving 38 countries consists of both developed and emerging countries. Using panel data fixed effects estimation procedure they find that an increase in leverage and the proportion of long-term debt in response to financial liberalization. In the case of emerging countries, the leverage actually declines whereas debt maturity shows mixed results. Also, they find that bank privatization is associated with the decline in long term debt proportion in the total debt while the development of capital markets is associated with an increase in long term debt proportion. They argue that financial deepening (increase in the accessibility of financial services already available) in developed countries increases the availability of debt to constrained firms and hence leverage increases in those countries while in emerging economies, poor governance and weak legal environment prevents the reforms to achieve their full potential. The main problem with this study is that it provides no theoretical basis for the observed changes in the leverage and debt maturity, it is simply an observational study.

Bertrand et al., (2007) study the impact of French banking deregulations of 1985 on industry structure and capital structure of French firms. They use panel regression fixed effects estimation procedure by adding a dummy variable to represent the pre reform period in their analysis. Their leverage measure is the ratio of bank debt to the total debt and their results show a decreasing trend in the long term debt following the bank deregulation and this decrease is compensated by a corresponding increase in trade credit while equity proportion has remained almost the same. The decrease in the leverage ratio was mainly due to an increase in the cost of debt. They find that the decline in leverage is especially pronounced in those industries which were under government subsidy programme in the pre-reform period. These firms exhibit poor performance in the post reform period and had significantly higher cost of debt than for better performing firms.

Rice and Strahan (2010) evaluate the impact of branching deregulation on credit supply to the small and constrained firms in the US context. Using the setting provided by the branching deregulation in the US over a period of 1985 to 1996 they examine whether or not it reduces the supply constraints for small firms. They first investigate the impact of bank competition on loan rates using the event study methodology that is comparison of pre and post interest rates, and find that loan rates for small firms were 80 to 100 basis points lower in states where branching regulations took effect. They then relate this issue to capital structure at the firm level. Their analysis shows that while more firms started using bank debt in deregulated states but it did not affect the volume of borrowings, debt maturity or the rate of credit approval for small firms.

The above studies show that financial liberalization generally associated with a fall in leverage ratios (Maghyereh (2004), Agca et al., (2007), Bertrand et al., (2007)). But in the case of developed countries Agca et al., (2007) find that financial liberalization results in an increase in leverage. With respect to debt maturity issue, Bertrand et al., (2007) notice a decreasing trend in the long term debt because of banking deregulation and this result is supported by Agca et al., (2007) in the context of developed countries. It is also observed that entry of firms has increased considerably when financial systems are liberalized (Bertrand et al., (2007)). The study of Rice and Strahan (2010) shows that cost of borrowings decreases following the deregulation in US whereas Bertrand et al., (2007) find an increase in the cost of debt following French banking deregulations in 1985. Stock market liberalization in various emerging countries resulted in the lower cost of equity (Henry (2000)).

V. EMPIRICAL EVIDENCE: INDIAN CASE

Just to illustrate empirically how financial regulations affect the capital structure decisions of firms, we take the case India where financial reforms were initiated in 1991. In figure 1 we have presented the trends in leverage ratios (total leverage, long term leverage and short term leverage) from 1975 till 2009. As we can observe from figure 1, the total and the long term leverage ratios have increased consistently in the pre-reform period and reached the peak in 1991-92. We

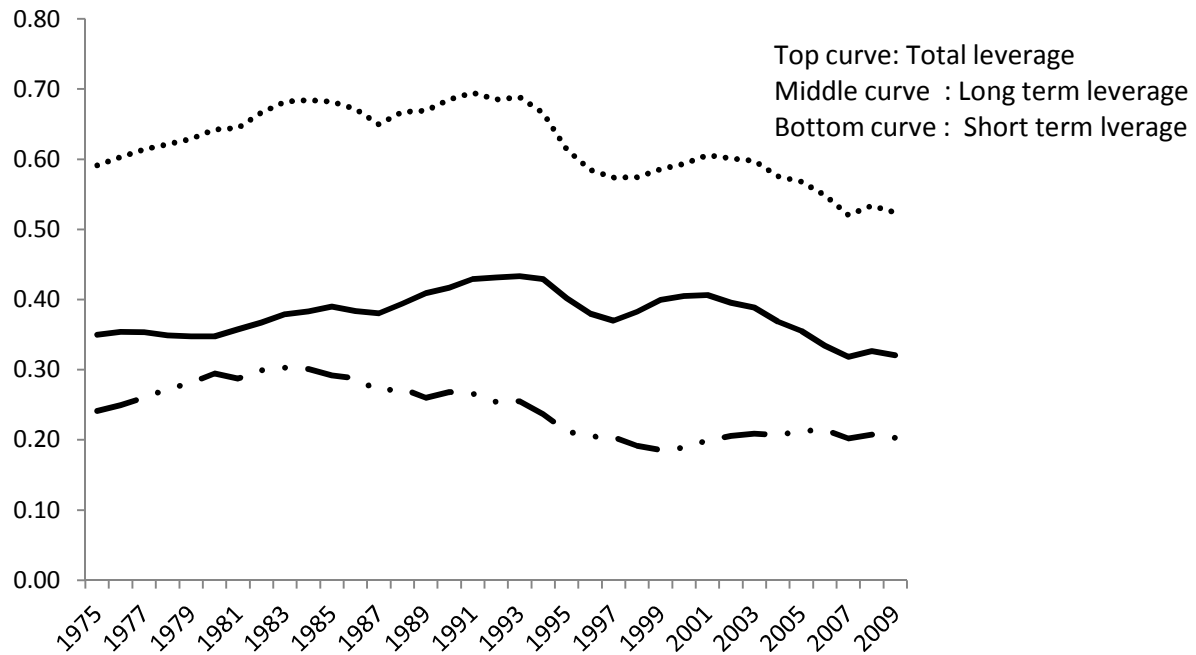
⁵Speed with which the actual leverage move towards the target leverage

⁶size, performance, tangibility and growth opportunities

⁷The earlier version of Abiad et al., (2008) database on financial liberalization

find that 1991-92 marks a break in the debt trends as these leverage ratios started to decrease. Decreasing trend in the short term leverage ratio is observed in 1983 but the rate of decrease increased after 1991-92.

FIGURE 1 : TRENDS IN DEBT RATIOS FROM 1975 TO 2009⁸



(Source: RBI,)

These trends are econometrically verified by regressing the three leverage ratios on the time line, time dummy taking value 1 for years after 1990 and the product term involving the time line and the time dummy. The results are presented in table 1.

TABLE 1: ECONOMETRIC ANALYSIS OF TRENDS IN LEVERAGE RATIOS FROM 1975 TO 2009⁹
(in parenthesis we have presented the standard autocorrelation adjusted standard errors)

Variable	Total Debt	Long Term Debt	Short term
Intercept	0.6*	0.34*	0.27*
	(0.02)	(0.01)	(0.03)
Time	0.005*	0.004*	0.001*
	(0.002)	(0.001)	(0.0002)
Time Dummy	0.2*	0.2*	0.008*
	(0.05)	(0.03)	(0.0001)
Time*Time Dummy	-0.0138*	-0.01*	-0.003*
	(0.003)	(0.002)	(0.001)
R-Square	0.81	0.78	0.76
F	50.52	41.77	37.33

The interaction variable, which gives differential slope coefficient for post reform period, is negative and significant in all the columns conveying a message that leverage ratios are significantly lesser in the post reform period. This econometric test supports the observations inferred from figure 1. These results support the earlier findings of Maghyereh (2004), Agca et al., (2007), Bertrand et al., (2007).

REFERENCES

1. ———. 1998. "Financial Dependence and Growth." The American Economic Review no. 88 (3):559-586.
2. ———. 1999. "Institutions, financial markets, and firm debt maturity." Journal of Financial Economics no. 54 (3):295-336. doi: 10.1016/s0304-405x(99)00039-2.
3. ———. 2001. "The Influence of the Financial Revolution on the Nature of Firms." The American Economic Review no. 91 (2):206-211.
4. Abiad Abdul, Thierry Tressel, EnricaDetragiache. 2008. "A New Database of Financial Reforms." IMF Working Papers (08/266).
5. Agca, Senay, Gianni De Nicol , EnricaDetragiache. 2007. "Financial Reforms, Financial Openness, and Corporate Borrowing: International Evidence." IMF Working Papers (07/186).
6. Bekaert, Geert, and Campbell R. Harvey. 2000. "Foreign Speculators and Emerging Equity Markets." The Journal of Finance no. 55 (2):565-613.
7. Bertrand, Marianne, Antoinette Schoar, and David Thesmar. 2007. "Banking Deregulation and Industry Structure: Evidence from the French Banking Reforms of 1985." The Journal of Finance no. 62 (2):597-628.
8. Blundell-Wignall, A. and F. Browne (1991), "Macroeconomic Consequences of Financial Liberalisation: A Summary Report", OECD Economics Department Working Papers, No. 98, OECD Publishing. <http://dx.doi.org/10.1787/088742707378>
9. Boyle, Glenn & Kelly R. Eckhold. 1997 " Capital structure choice and financial marketliberalization: evidence from New Zealand" Applied Financial Economics, 7:4, 427-437
10. Cetorelli, Nicola, and Philip E. Strahan. 2006. "Finance as a Barrier to Entry: Bank Competition and Industry Structure in Local U.S. Markets." The Journal of Finance no. 61 (1):437-461.

⁸Total leverage is the ratio of total debt to total assets, long term leverage is the ratio of long term debt to total assets and the short term leverage ratio is the ratio of short term debt to total assets

⁹ Results are adjusted for auto-correlation

11. Cho, Yoon Je. 1988. "The effect of financial liberalization on the efficiency of credit allocation: Some evidence from Korea." *Journal of Development Economics* no. *Journal of Development Economics* (1):101-110.
12. Demirgüç-Kunt, Asli, and Vojislav Maksimovic. 1996. "Stock Market Development and Financing Choices of Firms." *The World Bank Economic Review* no. 10 (2):341-369.
13. Demirgüç-Kunt, Asli, Harry Huizinga, and Stijn Claessens. 1998. "How Does Foreign Entry Affect the Domestic Banking Market?" SSRN eLibrary.
14. Demirgüç-Kunt, Asli, Luc A. Laeven, and Ross Levine. 2003. "Regulations, Market Structure, Institutions, and the Cost of Financial Intermediation." SSRN eLibrary. doi: 10.2139/ssrn.427200.
15. Dow, James and Gorton Gary, 1997. "Stock Market Efficiency and Economic Efficiency: Is There a Connection?" *The Journal of Finance*, Vol. 52, No. 3
16. Giannetti, Mariassunta, Luigi Guiso, Tullio Jappelli, Mario Padula, and Marco Pagano. 2002. "Financial Market Integration, Corporate Financing and Economic Growth." *European Economy - Economic Papers* no. 179.
17. Harris, John R., Fabio Schiantarelli, and Miranda G. Siregar. 1994. "The Effect of Financial Liberalization on the Capital Structure and Investment Decisions of Indonesian Manufacturing Establishments." *The World Bank Economic Review* no. 8 (1):17-47.
18. Henry, Peter Blair. 2000. "Stock Market Liberalization, Economic Reform, and Emerging Market Equity Prices." *The Journal of Finance* no. 55 (2):529-564.
19. Jaramillo, Fidel & Schiantarelli, Fabio & Weiss, Andrew, 1993. "Capital market imperfections before and after financial liberalization: a Euler Equation approach to panel data for Ecuadorian firms," *Policy Research Working Paper Series 1091*, The World Bank.
20. Jayaratne, Jith, and Philip E. Strahan. 1996. "The Finance-Growth Nexus: Evidence from Bank Branch Deregulation." *The Quarterly Journal of Economics* no. 111 (3):639-670.
21. Levine, Ross, and Sara Zervos. 1998. "Stock Markets, Banks, and Economic Growth." *The American Economic Review* no. 88 (3):537-558.
22. Maghyereh, Aktham Issa. 2004. "The Capital Structure Choice and Financial Market Liberalization: A Panel Data Analysis and Gmm Estimation in Jordan" *Applied Econometrics and International Development*, Vol. 4, No. 2, 2004. Available at SSRN: <http://ssrn.com/abstract=1232102>
23. Mariassunta Giannetti, Luigi Guiso, Tullio Jappelli, Mario Padula, Marco Pagano. 2002. "Financial Market Integration, Corporate Financing and Economic Growth." *European Economy - Economic Papers* (179).
24. Pagano, Marco. 1993. "Financial markets and growth: An overview." *European Economic Review* no. 37 (2-3):613-622. doi: 10.1016/0014-2921(93)90051-b.
25. Poshakwale, Sunil S., and Binsheng Qian. 2011. "Competitiveness and Efficiency of the Banking Sector and Economic Growth in Egypt." *African Development Review* no. 23 (1):99-120. doi: 10.1111/j.1467-8268.2010.00275.x.
26. Rajan, Raghuram G., and Luigi Zingales. 1995. "What Do We Know about Capital Structure? Some Evidence from International Data." *The Journal of Finance* no. 50 (5):1421-1460.
27. Rice, Tara, and Philip E. Strahan. 2010. "Does Credit Competition Affect Small-Firm Finance?" *The Journal of Finance* no. 65 (3):861-889. doi: 10.1111/j.1540-6261.2010.01555.x.



PREFERENCES AND SIGNIFICANCE OF DEMOGRAPHICS ON THE FACTORS INFLUENCING INVESTMENT DECISIONS: A STUDY OF INVESTORS IN THANE CITY, MAHARASHTRA, INDIA

DINESH GABHANE
ASST. PROFESSOR
RAJEEV GANDHI COLLEGE OF MANAGEMENT STUDIES
NAVI MUMBAI

DR. S. B. KISHOR
HEAD
DEPARTMENT OF COMPUTER SCIENCE
SARDAR PATEL MAHAVIDYALAYA
CHANDRAPUR

ABSTRACT

This paper attempts to know the preferences and analyze the significance of demographic factors on the factors that influence the investor's decision towards making investments. From previous studies, various demographic factors and factors compel investors to invest were identified. The hypotheses have been developed considering its relevancy to the research objectives. The literature has been reviewed from various secondary sources and primary data were collected through structured questionnaire by interviewing 384 respondents among the population of Thane city. Data were classified, tabulated and tested for significance at $\alpha=0.05$. Statistical inferences were drawn by the use of SPSS (Statistical package for Social Sciences) software and Pearson's Chi-square technique. The study reveals that some of the demographic factors have significant relationship with the factors influencing investor's decision and insignificant in others too. It has been found that bank fixed deposit and life insurance is the preferred investment avenue followed by gold/silver, real estate, mutual fund and others.

JEL CODE

M10

KEYWORDS

Demographic factors, investment decisions, investment preferences, Thane city.

INTRODUCTION

Investment is one of the prime concerns of the investors. Mostly, the challenges faced by the investors are perhaps taking investment decisions. Plenty of investment avenues are available to invest which give rise to following questions viz. why, where, how and when to invest. Investment, in context to finance involves complex decision making process i.e. putting money in the available investment avenues with the expectation of returns with or without making thorough analysis. The return on such investments (ROI) depends on investor's preferences towards various investment avenues, his ability to take risk and off course his demographic characteristics. Moreover, investors differ from each other in their demographics such as gender, age, occupation, education attainment level, annual income, etc.

Investment is categorized on the basis of its variability of returns into fixed and variable return. The investment avenues offering fixed returns are less risky, as it is associated with interest and inflation risk. On the other hand, the investment avenues offering variable returns are moderate and highly risky due to the volatile nature of the market conditions. Various financial instruments are available to invest such as equity, fixed income bond, corporate debentures, company fixed deposits, bank fixed deposits, public provident fund, life insurance policies, post office savings, gold/silver, real estate, mutual fund etc. Moreover, the factors that influence the investor's decision are awareness level, period of investment, safety/protection, risk taking capability, return on investment (ROI) and liquidity/marketability. Investment is always attached with the element of risk of losing the invested money which is usually not under the control of the investor. Investor has to take the investment decision very wisely in order to safeguard his return.

This study was conducted in Thane city of Maharashtra state to know the investor's varied preferences over different investment avenues and whether or not their demographic characteristics have any relevance to the factors that influence investment decisions. The city has witnessed large number of immigrants from the city of Mumbai as well as from other parts of the state and country. In other words, Thane city is having the representative population of the country.

REVIEW OF LITERATURE

An attempt has been made by the researcher to understand and acknowledge the work of various researchers in the area of investments.

Gupta (1994) carried out a household investor survey with the objective to provide data on the investor preferences on Mutual Funds and other financial assets. The findings of the study were more appropriate, at that time, to the policy makers of mutual funds to design the financial products for the future. Sunil Gupta (2008) study on investment pattern among different groups in Shimla revealed a complex picture that the people are not aware about the different investment avenues and they did not respond positively. Moreover, it was difficult for them to understand the different avenues. Simran Saini (2011) research on investor's awareness and perception about mutual funds revealed that mostly the investors have positive approach towards investing in mutual funds. M. R. Shollapur and A. B. Kuchanur (2008) in their research on identifying perception and perceptual gaps of individual investors in selected avenues presents certain revelations that corporate securities are less preferred; government securities do not provide regular and steady income; investment in insurance policies appreciate in values; bank deposits require more transaction costs, etc. Dr. R. Sellappan (2013) study on women attitudes towards different sources of securities concluded that married women are more curious in making investment than the unmarried. As well as the younger are mostly like to invest in shares, mutual funds, insurance and fixed deposits than the older women. The middle age persons prefer to invest in real estate source of investment. So the government, Bankers and Financial institutions can introduce lot of schemes of investment based on segmentation of the age and marital status factors to acquire more funds. A. P. Pati and D. Shome (2011) study on shift in savings and saving determinants revealed that households are still preferring the safe channel of bank deposit schemes rather than switching over to high yielding but risky channels of savings. Sanjay Kantidas (2011) study on preferred investment avenue among rural and urban households revealed that insurance products still remains the most preferred investment avenues of the households. The results also highlighted that certain factors like education level, awareness about the financial system, age of investors etc make significant impact while deciding on the avenues for investment. SEBI-NCAER survey (2000) was carried out to estimate the number of households and the population of individual investors, their economic and demographic profile, portfolio size, and investment preference for equity as well as other savings instruments. The findings of the study showed that the households preference for instruments match their risk perception; bank deposit has an appeal across all income class; 43% of the non-investor households (estimated around 60 million households) apparently lack awareness about stock markets; and, compared with low income groups, the higher income groups

have a higher share of investments in mutual funds signifying that mutual funds have not truly become the investment vehicle for small investors; the number of households owning units of mutual funds is more (9%) than the investor households owning investments in shares and debentures (8%).

Lewellen (1977) found that age, sex, income and education affect investor's preferences. Yesh Pal Davar and Suveera Gill (2007) study on exploration of the role of gender revealed that there is higher level of awareness for males than females for different investment avenues; female investors tend to display less confidence in their investment decisions and hence have lower satisfaction levels. Manish Mittal and Vyas (2008) investigated that the investors have certain cognitive and emotional weaknesses which come in the way of their investment decisions. Empirical evidence also suggests that factors such as age, income, education and marital status affect an individual's investment decision. B. B. S. Parihar, Rajeev Sharma and Deepika Singh Parihar (2009) study on investor's attitude towards mutual funds revealed that the majority of investors have still not formed any attitude towards mutual fund investments. The main reason behind this has been observed to be the lack of awareness of investors about the concept and working of the mutual funds. Lalit Mohan Kathuria and Kanika Singhania (2012) conducted a gender based study of private sector bank employees found that both male and female respondents were using magazines, Internet and TV channels as the three most important sources of awareness for collecting information about various investment alternatives. P. Varadharajan and Dr. P. Vikraman (2011) study on investor's perception towards investment decision in equity market concluded that there exists an independency between the demographics, majority of the factors and the returns obtained. Giridhari Mohanta and Dr. Sathya Swaroop Debasish (2011) study on investment preferences among urban investors in Orissa observed that there is significant role of income and occupation in investment avenue selection by the male and female investors. Mostly male investors are found as active participant in avenue selection than female and generally they are found in these two respects than female investors. Meenakshi Chaturvedi and Shruti Khare (2012) study on saving pattern and investment preferences of individual household in India revealed that the impact of age, education, occupation and income level of the individual on investment. Shanmugham (2001) conducted a survey of 201 individual investors to study the information sourcing by investors, their perception of various investment strategy dimensions and the factors motivating share investment decisions. The results of the study showed that, psychological and sociological factors dominated economic factors in share investment decisions. Aregbeyen & Mbadiugha (2011) study on Nigerian investor found that twenty variables grouped under social, economical, psychological and cultural factors influences investment decisions.

NEED FOR THE STUDY

The investment companies offer variety of products to the investors. These investors invest on the advice of the investment advisor or take their own investment decisions with or without having better understanding of the product. A question arises that how much effort does the advisor takes to understand the investment needs of the investors. Apart from the factors viz. psychological, behavioral etc., there is a need to study the factors that compel the investor to invest in the available avenues. There is always a gap between what really investor wants and what he is being offered. A study on relevance of demographic characteristics on factors influencing investor's decisions assumes a greater importance in bridging this gap, development of investment product, formulation of the policies to regulate the markets in general and promotion and protection of retail investors in particular.

OBJECTIVES OF THE STUDY

1. To study the attitude of respondents towards various financial instruments and to evaluate their awareness.
2. To study the relevance of demographics on the factors influencing investor's decision towards available investment avenues.
3. To analyze the factors that influences the investors to make an investment.

HYPOTHESES

- H₀₁: There is no significance of demographic factors on awareness level of the investors.
 H₀₂: There is no significance of demographic factors on safety/protection of the investment.
 H₀₃: There is no significance of demographic factors on period of investment.
 H₀₄: There is no significance of demographic factors on risk taking capability of the investors.
 H₀₅: There is no significance of demographic factors on returns to the investors from investment.
 H₀₆: There is no significance of demographic factors on liquidity/marketability of the investment instrument.

RESEARCH METHODOLOGY

The study is based on secondary and primary sources of data. Secondary data comprises of various references which already existed in the published form such as research papers, articles in referred journals, websites, books etc. Selection of the papers is done on the basis of their relevance and contribution to the body of knowledge. Survey method was adopted. Primary data were collected by conducting structured interviews and filled up the questionnaires among 384 respondents randomly selected from the population of Thane city. Part I of the questionnaire covers the demographic characteristics of the respondents and part II of the questionnaire covers the research questions. Statistical software SPSS is used to test the hypotheses at 5% level of significance by applying Chi-square test as a statistical technique.

RESULTS & DISCUSSIONS

From Table 1, preferences of the sample respondents are collected in the form of multiple responses. Gender wise preference shown by investors, 37% in equity; 21% in fixed income bonds; 29% in corporate debentures; 23% in company fixed deposit; 83% in Bank fixed deposit; 62% in public provident fund; 81% in life insurance; 28% in post office savings, 71% in gold/silver; 50% in real estate and 51% in mutual fund.

HYPOTHESIS 1

From Table 2, the computed value of chi-square (χ^2) test is less than the table value at 5% level of significance in all the relationships (we accept H₀) except educational attainment level (we reject H₀). Hence, we conclude that, awareness level of the investor has high relevance with educational attainment level.

HYPOTHESIS 2

From Table 3, the computed value of chi-square (χ^2) test is less than the table value at 5% level of significance in all the relationships (we accept H₀). Hence, we conclude that, safety of the investment has high relevance with gender, age, educational attainment level, occupation and annual income.

HYPOTHESIS 3

From Table 4, the computed value of chi-square (χ^2) test is less than the table value at 5% level of significance in all the relationships (we accept H₀) except age and occupation (we reject H₀). Hence, we conclude that, age and occupation have high relevance with period of investment.

HYPOTHESIS 4

From Table 5, the computed value of chi-square (χ^2) test is less than the table value at 5% level of significance in all the relationships (we accept H₀) except annual income (we reject H₀). Hence, we conclude that, annual income has high relevance with risk taking capability.

HYPOTHESIS 5

From Table 6, the computed value of chi-square (χ^2) test is less than the table value at 5% level of significance in all the relationships (we accept H₀) except annual income (we reject H₀). Hence, we conclude that, annual income has high relevance with return on investment.

HYPOTHESIS 6

From Table 7, the computed value of chi-square (χ^2) test is less than the table value at 5% level of significance in all the relationships (we accept H₀) except age and annual income (we reject H₀). Hence, we conclude that, liquidity of the investment instrument has high relevance with age and occupation.

CONCLUSIONS

The study reveals that both male and female investors have high preference towards bank fixed deposit and life insurance followed by gold/silver, real estate, mutual fund and others. Awareness among investors about investment avenues vary with their educational attainment level. Also, investors lack awareness about investment avenues especially in company debentures, company fixed deposit and fixed income bonds. Safety from the investment is the prime concern of every investor while taking investment decisions. Younger investor prefers to invest in the investment avenue having low liquidity for longer period and older one prefers to invest in the investment avenue having high liquidity for shorter period. Moreover, service class investors prefer to invest for longer period with the expectation of safe gains while business class investors are opportunistic and prefer to invest for shorter period with the expectation of higher returns. Risk taking capabilities of the investors differ in their income. In other words, it is directly proportional to income. Expectation of returns by the investors on investment largely depends on his capacity to invest i.e. earnings and preference about the investment avenue. Finally, it is inferred that some of the demographic factors have significant relationship with the factors influencing investor's decision and insignificant in others too.

RECOMMENDATIONS

It has been recommended that age, income and educational attainment level of the investors are the important demographic factors required to be considered for developing any investment instrument and framing policies.

SCOPE OF THE FUTURE STUDY

1. The research was conducted in Thane city; it can be extended further to other parts of the country.
2. The study has been undertaken considering few but representative investment avenues and factors influencing investor's decision which may be changed according to the objective of the research.
3. This research would be useful to the concerned department of the government to better understand the investor's attitude towards investment avenues and framing of policies for their betterment.

REFERENCES**BOOKS**

1. Dr. S. L. Gupta, H. G. (second edition, 2011). *SPSS 17.0 for Researchers*. New Delhi: International Book House Pvt. Ltd.
2. Kothari, C. R. (2004). *Research Methodology-Methods & Techniques*. New Delhi: New Age International Publishers.

JOURNAL ARTICLES

3. B. S. Parihar, R. S. (Vol. VIII, No. 7, 2009). Analyzing Investors' Attitude Towards Mutual Funds as an Investment Option. *The Icfaian Journal of Management Research*, pp. 56-64.
4. Bhonde-Saraf, A. (Volume 9, Issue 2, June 2010). Impact of economic meltdown on investor preferences: A study with reference to earning residents of Aurangabad City, Maharashtra. *Indian Journal of Economics and Business*.
5. Das, S. K. (Vol. 01, 2011). An empirical analysis on preferred investment avenues among rural and semi-urban. *Journal of Frontline Research*, pp. 26-36.
6. Dr. R. Sellappan, S. J. (Volume 2, Issue 2, Feb 2013). Investment Attitude of Women Towards Different Sources of Securities - A Factor Analysis Approach. *Global Research Analysis*, 34-36.
7. Dr. Taqadus Bashir, A. A. (Volume 9, Issue 5, Mar.-Apr. 2013). An Assessment Study on the "Factors Influencing the Individual Investor Decision Making Behavior". *IOSR Journal of Business and Management*, PP 37-44.
8. Ebenezer Bennet, M. S. (Vol. 7, No. 3, March 2011). Factors Influencing Retail Investors' Attitude Towards Investing. *Journal of Modern Accounting and Auditing*, pp. 316-321.
9. Giridhari Mohanta, D. S. (Volume 3, Issue 1, March 2011). A Study on Investment Preference among. *Journal of Management Thought and Practice*, pp1-10.
10. Lalit Mohan Kathuria, K. S. (Vol. IX, No. 1, 2012). Investment Decision Making: A Gender-Based Study of Private Sector Bank Employees. *The IUP Journal of Behavioral Finance*, pp. 45-56.
11. Lewwllan W. Lease, R. C. (Issue 3, July 1977). Patterns of investment strategy and behaviour among individual investors. *The Journal of Business*, Volume 50, pp. 296-333.
12. M. R. Shollapur, A. B. (Vol. V, No. 2, 2008). Identifying Perceptions and Perceptual Gaps: A Study on Individual Investors in Selected Investment Avenues. *The Icfa University Journal of Behavioral Finance*, pp. 48-64.
13. Meenakshi Chaturvedi, S. K. (Volume No. 3, Issue No. 5, May 2012). Study of saving pattern and investment preferences of individual household in india. *International journal of research in commerce & management*, 115-120.
14. N. Geetha, M. R. (Volume 1, Issue 1, August 2012). A study on relevance of demographic factors in Investment Decisions. *International Journal of Financial Management*, pp. 39-56.
15. P. Pati, D. S. (Vol. X, No. 1, 2011). Do Households Still Prefer Bank Deposits? An Analysis of Shift in Savings and Savings Determinants. *IUP Journal of Bank Management*, pp. 46-59.
16. P. Varadharajan, D. V. (Volume 1, Issue 3, August 2011). A study on investor's perception towards investment decision in equity market. *International Journal of Management, IT & Engineering*, pp. 57-81.
17. Rajesh Kumar, R. S. (Volume-07, No. 1, January 2013). Investor's perception about Mutual Funds in India: An Empirical Study. *Indian Journal of Finance*, pp. 44-52.
18. Simran Saini, D. B. (Vol.1 Issue 1, May 2011). Investors' awareness and perception about mutual funds. *International Journal of Multidisciplinary Research*, 14-29.
19. Subramanya P R, T. P. (Volume 3, Issue 1, Jan-March 2013). Investor's attitude towards Mutual Fund (special reference to Chhikamagalore District, Karnataka State, India). *International Journal of Management and Business Studies*.
20. Yesh Pal Davar, S. G. (Vol. 34, No.1, January-June 2007). Investment Decision Making: An Exploration of the Role of Gender. *Indian Institute of Management Calcutta*, pp. 95-120.

CONFERENCE PAPERS

21. V.R.Palanivelu, K. (March 2013). A Study on Preferred Investment Avenues among Salaried Peoples with Reference to Namakkal Taluk, Tamil Nadu, India. *International Conference on Business, Economics, and Accounting* (pp. pp. 20-23). Bangkok - Thailand: IBEA.

APPENDICES

TABLE 1: INVESTOR PREFERENCES

Investor Demographics		Investment Avenues											Total
		E	FIB	CD	CFD	BFD	PPF	LI	POS	G/S	RE	MF	
Gender	Male	78	30	49	37	176	109	164	52	130	108	95	1028
	Female	64	50	63	52	141	129	147	54	141	85	100	1026
Age (in Years)	<=30	37	7	21	11	52	30	56	2	24	48	51	339
	>30 <=40	41	17	32	22	62	32	69	8	55	72	62	472
	>40 <=50	30	24	28	29	68	62	63	16	74	38	44	476
	>50 <=60	22	18	19	15	70	66	59	34	61	24	28	416
	>60	12	14	12	12	65	48	64	46	57	11	10	351
Education	Matriculate	18	2	4	1	90	9	47	35	48	23	9	286
	Intermediate	38	8	16	6	88	44	65	38	66	34	18	421
	Graduate	50	36	54	42	75	112	106	22	89	66	80	732
	Post Graduate	36	34	38	40	64	73	93	11	68	70	88	615
Occupation	Service	84	48	70	55	239	201	229	81	183	123	131	1444
	Business	58	32	42	34	78	37	82	25	88	70	64	610
Annual Income (in Lakhs)	<=2	17	0	1	1	65	40	48	44	33	17	7	273
	>2 <=4	36	6	6	6	91	56	77	31	61	32	38	440
	>4 <=6	26	12	18	14	76	63	70	12	61	49	47	448
	>6 <=8	23	20	31	25	43	45	49	8	51	39	43	377
	>8 <=10	22	17	30	24	23	24	35	5	35	27	31	273
	>10	18	25	26	19	19	10	32	6	30	29	29	243

*Totals are based on responses collected from respondents.

ABBREVIATIONS

E- Equity, FIB- Fixed Income Bonds, CD- Corporate Debentures, CFD- Company Fixed Deposits, BFD- Bank Fixed Deposits, PPF- Public Provident Fund, LI- Life Insurance, POS- Post Office Savings, G/S- Gold/Silver, RE- Real Estate, MF- Mutual Fund

Source: Survey data

TABLE 2: DEMOGRAPHIC FACTORS AND AWARENESS LEVEL OF THE INVESTORS

Demographic Factors	Value	df	Asymp. Sig. Value (2- sided)	Significant or Not significant
Gender	6.063	4	0.194	Not Significant
Age	24.122	16	0.087	Not Significant
Educational Attainment level	76.104	12	0.000	Significant
Occupation	1.778	4	0.776	Not Significant
Annual Income	27.653	20	0.118	Not Significant

Source: SPSS 19

TABLE 3: DEMOGRAPHIC FACTORS AND SAFETY OF THE INVESTMENT

Demographic Factors	Value	df	Asymp. Sig. Value (2- sided)	Significant or Not significant
Gender	6.917	4	0.140	Not Significant
Age	14.895	16	0.532	Not Significant
Educational Attainment level	20.303	12	0.062	Not Significant
Occupation	5.186	4	0.269	Not Significant
Annual Income	23.404	20	0.269	Not Significant

Source: SPSS 19

TABLE 4: DEMOGRAPHIC FACTORS AND PERIOD OF INVESTMENT

Demographic Factors	Value	df	Asymp. Sig. Value (2- sided)	Significant or Not significant
Gender	3.014	4	0.555	Not Significant
Age	27.55	16	0.036	Significant
Educational Attainment level	14.342	12	0.279	Not Significant
Occupation	14.253	4	0.007	Significant
Annual Income	16.521	20	0.684	Not Significant

Source: SPSS 19

TABLE 5: DEMOGRAPHIC FACTORS AND RISK TAKING CAPABILITY OF THE INVESTORS

Demographic Factors	Value	df	Asymp. Sig. Value (2- sided)	Significant or Not significant
Gender	0.447	4	0.978	Not Significant
Age	22.244	16	0.135	Not Significant
Educational Attainment level	20.563	12	0.057	Not Significant
Occupation	6.645	4	0.156	Not Significant
Annual Income	32.471	20	0.039	Significant

Source: SPSS 19

TABLE 6: DEMOGRAPHIC FACTORS AND RETURN FROM THE INVESTMENT

Demographic Factors	Value	df	Asymp. Sig. Value (2- sided)	Significant or Not significant
Gender	0.399	2	0.819	Not Significant
Age	3.202	8	0.921	Not Significant
Educational Attainment level	7.453	6	0.281	Not Significant
Occupation	2.280	2	0.320	Not Significant
Annual Income	21.171	10	0.020	Significant

Source: SPSS 19

TABLE 7: DEMOGRAPHIC FACTORS AND LIQUIDITY OF THE INVESTMENT AVENUE

Demographic Factors	Value	df	Asymp. Sig. Value (2- sided)	Significant or Not significant
Gender	4.674	4	0.322	Not Significant
Age	35.213	16	0.004	Significant
Educational Attainment level	14.661	12	0.261	Not Significant
Occupation	10.016	4	0.040	Significant
Annual Income	17.115	20	0.645	Not Significant

Source: SPSS 19



DETERMINANTS OF LEVERAGE: AN EMPIRICAL STUDY ON INDIAN TEXTILE SECTOR

D. VIJAYALAKSHMI
ASST. PROFESSOR
DEPARTMENT OF B. COM. (AM)
PSGR KRISHNAMMAL COLLEGE FOR WOMEN
COIMBATORE

DR. PADMAJA MANOHARAN
HEAD (RETD.)
DEPARTMENT OF COMMERCE
PSGR KRISHNAMMAL COLLEGE FOR WOMEN
PEELAMEDU

ABSTRACT

Every firm needs funds to run and manage the business. The success of any firm depends on the effective utilization of funds procured. The principal sources of finance of a firm are owners' equity and the borrowed money. The decision on the composition of funds, otherwise, known as 'capital structure' is an essential decision, which influences the risk and return of the investors. Leverage plays an essential role in framing the capital structure. Textile is a capital intensive sector, where greater prominence has been given in constructing the capital structure. In this backdrop, the study makes an attempt to identify and analyse the determinants of leverage of Indian Textile sector. A panel data approach has been applied to analyse the data. The study reveals that the variables, namely, profitability and size are the key determinants of leverage of Indian Textile sector.

KEYWORDS

Capital structure, leverage, profitability, size.

INTRODUCTION

The performance and survival of a firm depend on the choice of the source of funds and its effective utilization. The decision on the composition of funds, otherwise, known as 'capital structure' is an essential decision, which influences the risk and return of the investors. The decision taken by the firms with respect to capital structure has a great impact on their success. Leverage is an indicator of relationship between owners' funds and borrowed fund. A proper mix of debt and equity would determine the path to increase the shareholder value. Firms have to analyse the factors determining the leverage before framing its capital structure. In this background, the study makes an attempt to identify and analyse the determinants of leverage of Indian textile sector for the period 1995-96 to 2009-10.

TEXTILE

Textile sector is one of the major sectors of the economy. It occupies a unique place in our country. It is closely linked with agricultural and rural economy. The industry consists of cotton textiles, synthetic textiles, textile processing, readymade garment and other textiles such as wool & wollen textiles, jute goods, handloom goods etc.; it has contributed 14 per cent to industrial production. 4 per cent to National GDP and 10.63 per cent of country's export earnings. It has provided direct employment to over 35 million people. The sector has earned foreign exchange of US\$ 10.32 billion in the year 2011. India has the potential to increase its textile and apparel share in the world trade from 4.5 per cent to 8 per cent. The sector has grown at 3-4 per cent during the last six decades.

REVIEW OF LITERATURE

Mehdi Janbaz (2010) has conducted a study on "Capital Structure decisions in the Iranian corporate sector". He has examined the determinants of capital structure and their influence on capital structure. A sample of 70 companies for the year 2006-2007 has been taken from Tehran Stock Exchange. He has employed statistical techniques such as descriptive statistics, Pearson correlation and multiple regression analysis to analyse the data. He has taken leverage as a dependent variable and the independent variables, such as, profitability, asset tangibility, growth, firm size, tax provision, liquidity and agency conflict. The correlation result has shown that the tangibility, growth, firm size, tax and agency conflict have a positive correlation with leverage. The variables, viz., profitability and liquidity are negatively correlated with the leverage ratio. The regression result has revealed that all factors have a positive impact on leverage except the variables, namely, profitability and liquidity. The study has concluded that the Pecking order theory has more predictions on decision making in the Iranian corporate capital structure.

Sumikhare and Saima Rizvi (2011) have conducted a study on "Factors affecting the capital structure of BSE-100 Indian firms: A panel data analysis". The objectives of the study are to examine the variables that impact debt-equity choice of a company and they have also identified which of the two theories, namely, trade off or pecking order is suitable for the Indian firms. The data have been collected for 69 firms from BSE 100 index. The study has covered a period of 10 years from 2000-2009. They have taken leverage as a dependent variable and the independent variables, such as, tangibility, size, depreciation to total assets, depreciation over operating profit, profit margin on sales, return on assets and growth opportunities. They have applied panel data model to analyse the data. A random effect model has been fitted to panel data analysis. The result has shown that the variables, namely, profitability, return on asset and profit margin on sales are found to be significant. The result has supported the pecking order theory.

FRAMEWORK OF THE STUDY

The dependent variables taken to represent the leverage are Long term debt ratio, Short term debt ratio and Total debt to asset ratio.

Dependent Variables	Formulae
Long term debt ratio (LTD)	Long term debt / Total assets
Short term debt ratio (STD)	Short term debt / Total assets
Total debt to total asset ratio (TDTA)	Total debt / Total assets

DETERMINANTS OF LEVERAGE

Leverage depends on many factors, both internal and external. The following variables have been considered to study the determination of the leverage.

Independent Variables	
Profitability	PBIT net of P&E / Total assets
Size	Natural logarithm of total assets
Tangibility	Net fixed assets / Total assets
Non debt tax shield (NDTS)	Depreciation + Amortization / Total assets
Growth	Growth rate in total assets
Business Risk (BR)	Standard deviation of PBIT net of P&E
Liquidty	Current assets / Current liabilities and provision
Free cash flow to total assets (FCFTA)	PAT net of P&E + depreciation / Total assets
Cost of borrowing (COB)	Interest paid / Total Borrowing
Tax rate (TR)	$1 - \frac{\text{PAT net of P\&E}}{\text{PBT net of P\&E}}$

THEORIES OF CAPITAL STRUCTURE

The capital structure is one of the most important debatable issues in the field of finance. The Modigliani and Miller (1958) have made the first attempt to explain the relationship between capital structure and the firm value. The capital structure has been revisited by many theories, such as, pecking order theory, static trade off theory, agency theory and signaling theory.

SIGNALING THEORY

The Signaling Theory has been originally developed by Leland and Pyle (1976) and Rose (1977). According to Leland and Pyle the value of a company is positively correlated with the managerial ownership and each change noticed on the level of the managerial ownership results in a modification in the financial policy followed by a new value of the company. He has argued that the higher is the managerial ownership in the capital of the company, the larger is the debt capacity. Such strong ownership is highly recognized by the bond holders and signals confidence in the future investments.

According to Rose (1977), the managers have been informed about the company's profitability than external investors. They know the true distribution of the company returns, but investors do not. He has argued that higher financial leverage can be used by the managers to signal an optimistic future of the company since the debt is a contractual obligation to repay both principal and interest. He has stressed that the usage of more debt in the capital structure is a good signal of the managers' optimism about their companies.

STATIC-TRADE OFF THEORY

According to Static trade off model, the tax benefit – bankruptcy cost trade off models have predicted that companies seek to maintain an optimal capital structure by balancing the benefits and the costs of debt (DeAngelo and Masulis, 1980). The benefits include the tax shield whereas the costs include expected financial distress costs. This theory has predicted that companies maintain an optimum capital structure where the marginal benefit of debt equals the marginal cost. The implication of the trade-off model is that companies have target leverage and they adjust their leverage towards the target over time.

OBJECTIVE OF THE STUDY

- To identify and to analyse the determinants of leverage of Indian Textile sector

HYPOTHESIS

The following null hypothesis has been framed for the purpose of the study:

- Leverage is an independent function

RESEARCH METHODOLOGY**SAMPLE AND SAMPLING DESIGN**

A sample of 50 firms, which have been listed at both BSE and NSE stock exchange by applying purposive sampling technique have been taken for the study. The data has been collected from PROWESS 3.1 version maintained by Centre for Monitoring Indian Economy Pvt Ltd. The study has covered a period of 15 financial years from post-liberalisation era, namely, 1995 -1996 to 2009- 2010.

TOOLS FOR ANALYSIS

Panel data set has both cross section dimension and time series dimension. In particular, the same cross-sectional units (e.g. individuals, companies, firms, cities, states) are observed over time. It is different from the Pooled OLS i.e., pooling independent cross sections across time. Two main models, viz., Fixed Effect Model (FE) and Random Effect model (RE) are available for panel data. All the three models (pooled OLS, FE and RE) have been applied in the study and further, two tests have been carried out to decide the appropriateness of these three models. Initially, the Lagrange multiplier (LM) test has been applied to find the existence of panel effect in the values. The classical model (Pooled OLS) and the RE model are compared and when there is no panel effect, the pooled OLS will be chosen for further analysis. Otherwise, the RE model will be chosen for the next step of application. As a second step, the RE model is compared with FE model using Hausman Specification test and the appropriate model is chosen for further analysis based on the significance of the chi-square value.

RESULTS AND DISCUSSIONS**LONG TERM DEBT RATIO**

The following null hypothesis has been framed to find whether the selected variables have a significant influence on long term debt ratio:

H₀: "The variables, namely, profitability, size, tangibility, NDTS, growth, BR, liquidity, FCFTA, COB and TR do not have a significant influence on LTD ratio"

TABLE 1 - LTD - POOLED OLS AND PANEL DATA REGRESSION-TEXTILE

	Pooled OLS			Fixed Effect			Random Effect		
	B	T	Sig.	B	t-value	Sig.	B	z-value	Sig.
(Constant)	-0.0375900	-1.100	NS	-.1597836	-3.23	**	-.1108109	-2.46	*
Profitability	1.5800000	7.757	**	1.191906	6.24	**	1.225477	6.51	**
Size	0.0103200	1.926	NS	.0570876	7.00	**	.0397294	5.58	**
Tangibility	0.4830000	15.608	**	.2868573	7.49	**	.3692103	10.36	**
NDTS	1.6010000	5.162	**	.3405722	1.09	NS	.5351249	1.75	NS
Growth	0.0000989	4.625	**	.0000451	2.30	*	.000053	2.71	**
Business Risk	-0.0006117	-2.732	**	-.0002956	-1.71	NS	-.0003218	-1.81	NS
Liquidity	-0.0008997	-1.170	NS	-.0000767	-0.10	NS	-.0004035	-0.51	NS
FCFTA	-1.9090000	-8.400	**	-1.388303	-6.61	**	-1.461604	-7.02	**
COB	-0.0440600	-6.172	**	-.0269886	-4.46	**	-.0312894	-5.11	**
TR	-0.0001287	-.053	NS	.0000814	0.05	NS	.0000391	0.02	NS
R ²	.550			0.3572			0.3433		
F-statistic	68.243		**	28.54		**			
Wald (χ ²)							362.33		**
Hausman (χ ²)				51.42		**			
LM (χ ²)							581.73		**

Source: Computed

* significant at 5 per cent level ** significant at 1 per cent level

It is observed from the table 1 that the sign of the regression coefficients have been the same in all the three models for all the independent variables, except the variable, tax rate. The R² values have shown a high correlation in the pooled OLS model and a moderate correlation has existed in the FE model and the RE model. The F-value and Wald chi-square have shown a significant value at one per cent level indicating the existence of significant correlation between the selected independent variables and the long term debt ratio.

The LM test has revealed that the chi-square value (581.73) is significant at one per cent level implying that the RE model has been considered instead of the pooled OLS model.

The Hausman test has revealed that the value of chi-square (51.42) is significant at one per cent level indicating that the FE model has been more effective than the RE model. In all the three models applied, the FE model has been taken for further analysis.

The FE model has revealed that the variables, namely, profitability, size, tangibility and growth have a significant positive influence on LTD ratio and the variables, namely, free cash flow to total assets and cost of borrowing have a significant negative influence on LTD ratio. Hence, the null hypothesis has been rejected for these variables.

The rest of the variables, namely, NDTS, BR, liquidity and TR have not had a significant influence on LTD ratio. Hence, the null hypothesis has been accepted for these variables.

To conclude, Profitability, size, tangibility, growth, FCFTA and COB have influenced the leverage (LTD ratio) of the Textile sector during the study period.

SHORT TERM DEBT RATIO

The following null hypothesis has been framed to find whether the selected variables have a significant influence on short term debt ratio:

H₀: "The variables, namely, profitability, size, tangibility, NDTS, growth, BR, liquidity, FCFTA, COB and TR do not have a significant influence on short term debt ratio"

TABLE 2 - STD - POOLED OLS AND PANEL DATA REGRESSION-TEXTILE

	Pooled OLS			Fixed Effect			Random Effect		
	B	T	Sig.	B	t-value	Sig.	B	z-value	Sig.
(Constant)	0.53400000	17.265	**	.3072807	5.91	**	.4179814	9.80	**
Profitability	0.71900000	3.901	**	.4559612	2.27	*	.4829689	2.55	*
Size	-0.01334000	-2.750	**	.0229049	2.67	**	.0037645	0.56	NS
Tangibility	-0.33600000	-11.990	**	-.3540338	-8.80	**	-.3332544	-9.60	**
NDTS	1.35900000	4.836	**	1.524152	4.63	**	1.353482	4.43	**
Growth	-0.00000846	-.437	NS	-.0000404	-1.96	*	-.0000259	-1.31	NS
BR	-0.00011950	-.589	NS	-.0000834	-0.46	NS	-.0000917	-0.50	NS
Liquidity	-0.00764100	-10.971	**	-.0034588	-4.10	**	-.0048399	-6.17	**
FCFTA	-1.29100000	-6.275	**	-.7444473	-3.37	**	-.853761	-4.07	**
COB	0.02622000	4.056	**	.016462	2.59	**	.0187374	3.01	**
TR	0.00205400	.943	NS	.0026293	1.43	NS	.0026949	1.45	NS
R ²	.398			0.1864			0.1759		
F-statistic	36.942		**	11.77		**			
Wald (χ ²)							173.86		**
Hausman (χ ²)				31.37		**			
LM (χ ²)							279.41		**

Source: Computed

* significant at 5 per cent level ** significant at 1 per cent level

It is discernible from the table 2 that the regression co-efficient signs have been similar for all the independent variables, in all the three models, except for the variable - size in the pooled OLS model. The R² values have revealed a low correlation between the selected independent variables and the STD ratio in the FE model and the RE model. A moderate correlation has been found in the pooled OLS model. The F value and Wald-chi square have shown significant values in all the three models.

The LM test has exhibited that the chi-square value (279.41) is significant at one per cent level revealing the existence of panel effect; thereby, the RE model is found effective.

The result of Hausman specification test shows that the chi-square value (31.37) is significant at one per cent level revealing that the FE model is effective, in comparison to the RE model. In all the three models applied, the FE model has been taken for further analysis of the determinants of leverage.

The FE model has expressed that the variables, namely, profitability, size, NDTS and the COB have a significant positive influence on STD ratio. The ratios, such as, tangibility, growth, liquidity and FCFTA have a significant negative influence on STD ratio. Hence, the null hypothesis has been rejected in respect of these variables.

The rest of the variables, namely, BR and TR have not had a significant influence on STD ratio. Hence, the null hypothesis has been accepted in respect of these variables.

In general, it is inferred that in the Textile sector, the factors, namely, **profitability, size, NDTs, COB, tangibility, growth, liquidity** and **FCFTA** have influenced the leverage (short term debt ratio) during the study period.

TOTAL DEBT TO TOTAL ASSET RATIO

The following null hypothesis has been framed to find whether the selected variables have a significant influence on total debt to total asset ratio:

H_0 : "The independent variables, namely, **profitability, size, tangibility, NDTs, growth, BR, liquidity, FCFTA, COB and TR do not have a significant influence on TDTA ratio**"

TABLE 3 - TDTA - POOLED OLS AND PANEL DATA REGRESSION-TEXTILE

	Pooled OLS			Fixed Effect			Random Effect		
	B	t	Sig.	B	t-value	Sig.	B	z-value	Sig.
(Constant)	0.497000	12.774	**	.1474971	2.87	**	.2624824	5.35	**
Profitability	2.299000	9.921	**	1.647867	8.31	**	1.678574	8.31	**
Size	-0.003023	-4.96	NS	.0799925	9.45	**	.0517736	6.70	**
Tangibility	0.147000	4.173	**	-.0671764	-1.69	NS	.02269	0.59	NS
NDTS	2.960000	8.385	**	1.864724	5.74	**	1.916936	5.84	**
Growth	0.000090	3.717	**	0.00000470	0.23	NS	.0000208	0.99	NS
BR	-0.000731	-2.870	**	-.000379	-2.11	*	-.0004063	-2.14	*
Liquidity	-0.008540	-9.759	**	-.0035355	-4.24	**	-.0046288	-5.48	**
FCFTA	-3.200000	-12.375	**	-2.132751	-9.78	**	-2.247937	-10.07	**
COB	-0.017840	-2.196	*	-.0105266	-1.68	NS	-.01315	-2.01	*
TR	0.001926	.703	NS	.0027107	1.50	NS	.0027236	1.42	NS
R ²	.473			0.3193			0.2953		
F-statistic	50.134		**	24.09		**			
Wald (χ^2)							256.54		**
Hausman(χ^2)				81.38		**			
LM (χ^2)							629.21		**

Source : Computed

* significant at 5 per cent level ** significant at 1 per cent level.

It is observed from the table 3 that the signs of the regression coefficients have been the same for all the variables both in the FE and RE models, except for the variable, tangibility. The R² values have revealed a moderate correlation between the selected independent variables and the TDTA ratio. The F value and chi-square values have shown a significant correlation between the selected independent variables and the TDTA ratio.

The result of **LM test** has revealed that the chi-square value (629.21) is significant at one per cent level implying that the RE model is considered better than the pooled OLS model.

Nevertheless, the result of **Hausman specification test** has revealed that the chi-square value (81.38) is significant at one per cent level implying that the FE model is more effective than the RE model. Among all the three models applied, the **FE model** serves as an appropriate model for further analysis.

The **FE model** has displayed that the variables, namely, profitability, size and NDTs have a significant positive influence on TDTA ratio.

The variables, namely, BR, liquidity and FCFTA have a significant negative influence on TDTA ratio. Hence, the null hypothesis has been rejected for these variables. The rest of the variables, namely, tangibility, growth, COB and TR have no significant influence on TDTA ratio. Hence, the null hypothesis has been accepted for these variables.

In general, it is inferred that in the textile sector, the factors, namely, **profitability, size, NDTs, BR, liquidity** and **FCFTA** have influenced the leverage during the study period.

CONCLUSION

To conclude, **profitability and size** are identified as the major determinants of leverage of Indian textile sector with a positive influence. They have supported the trade off theory and signaling theory, according to which, higher profitable firms have higher debt capacity and larger firms are expected to employ greater amount of debt in their capital structure.

REFERENCES

1. Debasish Sur, Kaushik Chakraborty and Parveen Begam (2009), "Financial leverage and owners return", SNS Journal of Finance, Volume 1, Issue 1, pp 9-19.
2. Malabika Deo and Jackline.S (2009), "The determinants of debt ownership structure – some empirical evidence", Indian Journal of Finance, Vol.3, No.1, pp 22-27.
3. Mehdi Janbaz, (2010) "Capital structure decisions in the Iranian corporate sector", International Research Journal of Finance and Economics, Issue 58.
4. Santanu Kumar Ghosh and Paritosh Chandra Sinha (2009), "Is there optimality in firms' capital structure? An empirical study", Finance India, Vol 23, No.3, pp 867-888.
5. Santi Gopal Maji and Santanu Kumar Gosh (2007), "Determinants of capital structure of Indian companies", The ICFAI Journal of Applied Finance, Vol.13, No.5, pp 5-15.
6. Sumikhare and Saima Rizvi, (2011) "Factors affecting the capital structure of BSE-100 Indian firms: A panel data analysis", Indian Journal of Finance, Vol.5, No.6, pp 20-24.
7. Sushma Rani Verma (2010), "Determinants of capital industries in small scale industries", KAİM Journal of Management and Research, Vol.2, No.2, pp 76-82.

CUSTOMER SATISFACTION & AWARENESS REGARDING INSURANCE POLICIES

DR. MEGHA SHARMA
ASSOCIATE PROFESSOR
DEPARTMENT OF MANAGEMENT
FAIRFIELD INSTITUTE OF MANAGEMENT & TECHNOLOGY
NEW DELHI

ABSTRACT

When Life Insurance Company came to our country, it's difficult to survive just because of cut throat competition as well as profiteering. As a result Life Insurance Corporation of India (LIC) came into existence on 1st September, 1956 after nationalization of all the 245 companies engaged in life insurance business. However, Government made a paradigm shift in the economic policy by adopting the process of liberalization, privatization and globalization at the end of previous decade. Consequently, Insurance Regulatory and Development Authority (IRDA) has been established under IRDA Act, 1999 to regulate the insurance business in the country. As a result, private sector has been allowed entry both in general and life insurance sector in India. Life insurance industry expanded tremendously from 2000 onwards in terms of number of offices, number of agents, new business policies, premium income etc. Further, many new products (like ULIPs, pension plans etc.) and riders were provided by the life insurers to suit the requirements of various customers. The insurance sector in India has grown at a fast rate post-liberalization in 1999. More importantly, the pace and nature of growth will likely see a change where new behaviors' and dynamics of demand and supply will apply. On the demand side, growth is being fuelled by the growing population base, rising purchasing power, increased insurance awareness, increased domestic savings and rising financial literacy. The suppliers are correspondingly playing a market making role as competition heightens and differentiation become necessary for profitable growth.

KEYWORDS

Life Insurance, Business Policies, Financial, Government, awareness.

INTRODUCTION

The insurance is primarily a social device adopted by civilized society for mitigating the incidence of loss of income to families by unforeseen contingencies. In India, when life insurance companies started operating in the middle of 20th century the evil play natural to all business had its sway. There was a lot of cut throat competition as well as profiteering. The avowed social objective of insurance had been totally relegated to background. As a result Life Insurance Corporation of India (LIC) came into existence on 1st September, 1956 after nationalization of all the 245 companies engaged in life insurance business. From its very inception, the Corporation has made impressive growth always striving for further improvement. However, Government made a paradigm shift in the economic policy by adopting the process of liberalization, privatization and globalization at the end of previous decade. Consequently a committee was set up under the chairmanship of Mr. Malholtra, Ex-governor of RBI for undertaking various reforms in the insurance sector in the light of new economic policy. The Committee which submitted his report in 1993 recommended the establishment of a special regulatory agency along the lines of SEBI and opening of insurance industry for private sector. This was aggressively opposed by the various trade unions of then operating insurance companies which led to some delay in implementation of Malhotra Committee's recommendations. However, the Government passed Insurance Regulatory and Development Authority (IRDA) Act in 1999 and established IRDA to regulate the insurance business in the country. As a result, private sector was allowed entry both in general and life insurance sector in India. IRDA also allowed foreign participation up to 26 per cent in equity shareholding of private companies. As a result many companies (both in general and life insurance) got themselves registered with IRDA to operate in India. Presently, twenty life insurance companies

REVIEW OF LITERATURE

A study on Customer satisfaction measurement by **Rose, (1995)** describes the service strategy adopted by Private Patients Plan (PPP) to achieve quality improvement plus customer satisfaction. Covers six areas: the marketplace; the customer; how customer satisfaction is measured; use of the telephone; maintaining standards; and use of technology. According to **Andreassen & Lanseng, (1997)** A large number of service corporations are configured with headquarters that determine the major principles of operation (services, pricing, marketing and advertising) and regional sales forces that are responsible for acquiring new customers and catering to the needs of existing customers. According to **Nigel F. Piercy, (1995)** Many management theorists and consultants urge companies to focus on their customers' needs and satisfaction – this is common to strategic management, the marketing concept, the pursuit of "excellence", market-orientation, total quality management, relationship marketing strategies, and service quality theorists. According to **Alomaim et al., (2003)** Current organizational practice worldwide has responded to the demands of an increasingly competitive global market. Market or customer priorities derive from a focus on value, combining quality and cost integration according to the perception of the customer. According to **Diane Schmalensee, (1991)** Asserts that internal customer satisfaction, which is critical to successful services marketing, has three aspects: involvement, enablement, and pure internal customer satisfaction. According to **Paul Morris, (1991)** Companies that adopt a profit-centre based approach to customer service treat it as an element of total corporate philosophy, rather than as a separate activity or a set of performance measures. According to **Athanassopoulos et al., (2001)**, investigates the behavioral consequences of customer satisfaction. More specifically, the authors examine the impact of customer satisfaction on customers' behavioral responses. In the words of **Johnson et al, (2008)** aims to examine competing models of the directionality of influences between customer satisfaction, affective commitment, and the customer's perceptions of risk associated with a service organization. According to **Laura & García, (2009)**, examine whether International Organization for Standards (ISO) certification affects consumer perceptions of the service provider. In the words of **Guy Dresser, (1997)** describes Customer satisfaction programmers are an increasingly costly part of most business budgets, yet proof that they produce loyal customers is elusive. As a result, leading companies are turning to 'relationship marketing' to ensure that their clients steer clear of the competition

OBJECTIVES OF THE STUDY

- To find out which company satisfy most of the customers.
- To know how many people take insurance as a medium of tax saving or as a financial instrument.
- To know whether people enjoy the benefits of insurance.
- To know how much the customers are aware of the Insurance companies ?
- To check their satisfaction level and also rates it.
- To study and analyze the customers in order to find out their awareness regarding various insurance policies prevailing in the market and rating the satisfaction level for the same. Various companies came to this sector to give benefit to the customers like SBI,ICICI, LIC and many private companies also with this hope to create market.

SIGNIFICANCE OF THE STUDY

I. SIGNIFICANCE TO THE INDUSTRY

The analysis and conclusions drawn by me during the course of my study can serve as a guide to the industry people since a systematic analysis of facts has been attempted by me.

II. SIGNIFICANCE FOR THE RESEARCHER

No professional curriculum is considered complete without work experience. It is well evident that work experience is an indispensable part of every professional course. In the same manner practical work in any organization is must for each and every individual, who is undergoing management course. Without the practical exposure one cannot consider himself as a qualified capable manager. Entering in the organization is like stepping into altogether a new world.

RESEARCH METHODOLOGY

Research comprise defining and redefining problems, formulating hypothesis or suggested solutions; collecting, organizing and evaluating data; making deductions and reaching conclusions; and at last carefully testing the conclusions to determine whether they fit the current problem. In short, the search for Knowledge through Objective and Systematic method of finding solutions to a problem.

RESEARCH DESIGN

Type of Research: Exploratory research

Exploratory research includes Surveys and fact-finding enquiries of different kinds. The main characteristic of this method is that the researcher has no control over the variables; he can only report what has happened or what is happening.

Sample size: 100 respondents.

Research area: New Delhi, Dwarka.

DATA SOURCES

PRIMARY DATA: The data is collected for the research purpose by the respondents through questionnaire.

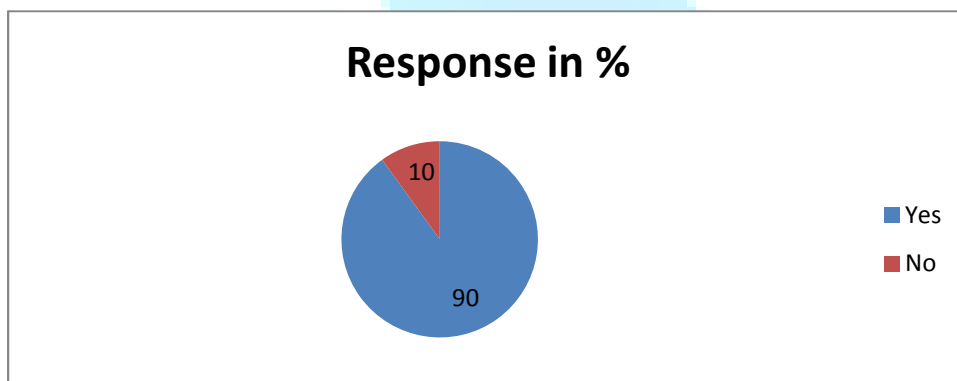
The Method used Survey Method as the research done is **Exploratory Research**

DATA ANALYSIS AND INTERPRETATION

Q 1). Are you satisfied with your present insurance company?

Ans.

Particulars	Response Percentage
Yes	90
No	10

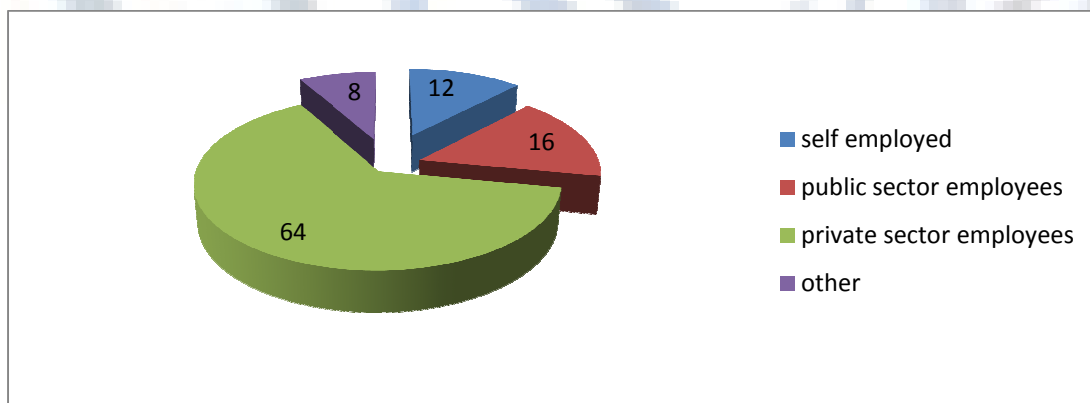


Interpretation: This shows that 90% of the respondents are satisfied with the current insurance Company and only 10% are those who were not satisfied with the performance of the company.

Q 2). State the Comparison of the occupation of the respondents?

Ans.

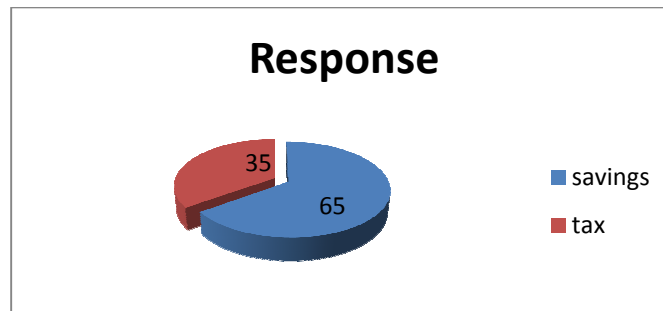
Particulars	Percentage of Occupation
Self- Employed	12
Public Sector Employees	16
Private Sector Employees	64
Other	8



Interpretation: This shows that 64% employees belong to the private sector, 16% employees in public sector, 12% are self employed and 8% belong to other category. All these 3 respondents are retired from their jobs.

Q 3). What the individual looking for while taking a policy?

Concern of People	Response Percentage
Savings	65
Tax	35

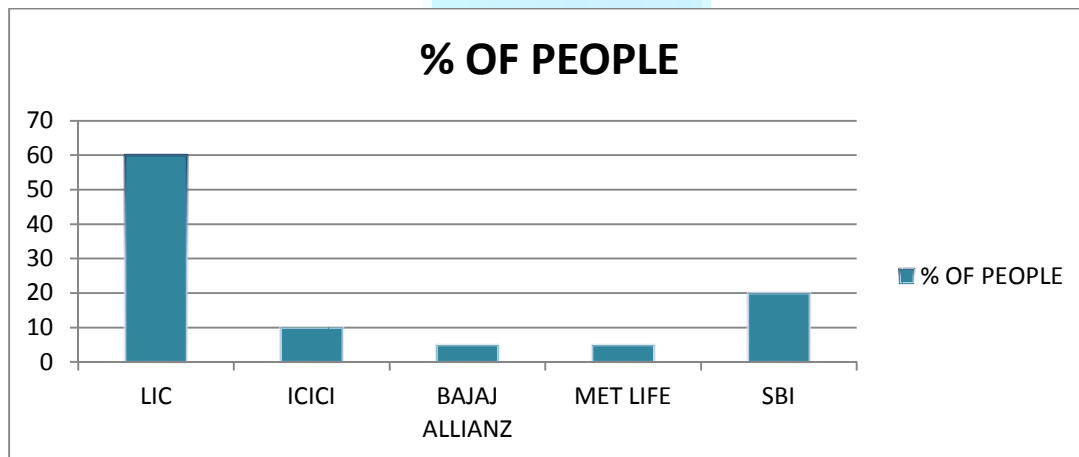


Interpretation: This shows that most of the individuals were like to choose any policy with the motive to save more 65% pupil belong to this category, only 35% were those who have the motive to save tax.

Q 4). Where would you like to insure, if given chance?

Ans.

Companies name	Percentage of people
LIC	60
ICICI	10
BAJAJ ALLIANZ	5
MET LIFE	5
SBI	20

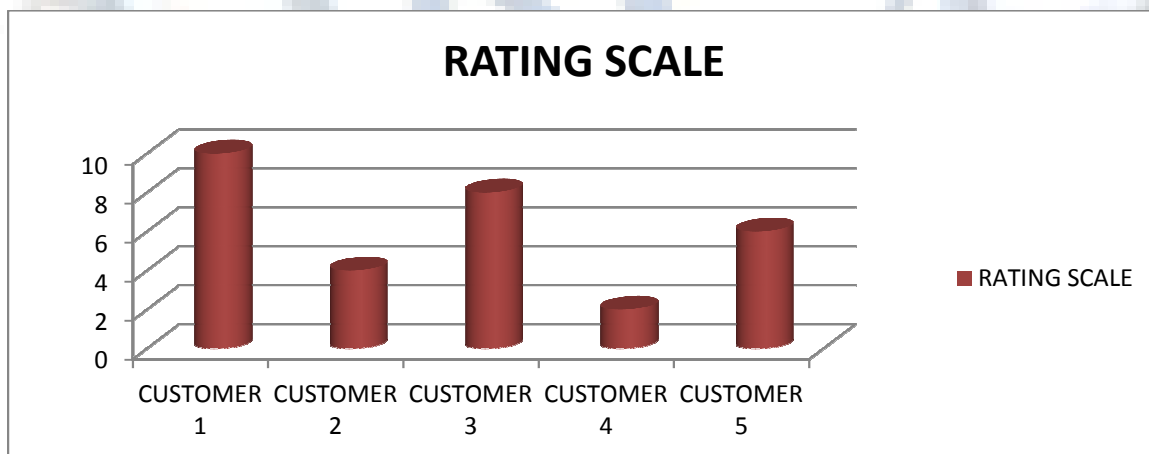


Interpretation: This shows that maximum no. of people like to insure by the government companies rather than the private one .most of the majority that is 60% pupil would like to go with LIC and 20% with SBI and hardly 5%,5% and 10% people goes with MET LIFE, BAJAJ ALLIANZ and ICICI respectively.

Q 5). Do these companies satisfy your financial needs? (Please rate on the scale of 1 to 10 with One being least satisfied)

Ans.

Customers	Response (Ratings on scale 1-10)
I	10
II	4
III	8
IV	2
V	6

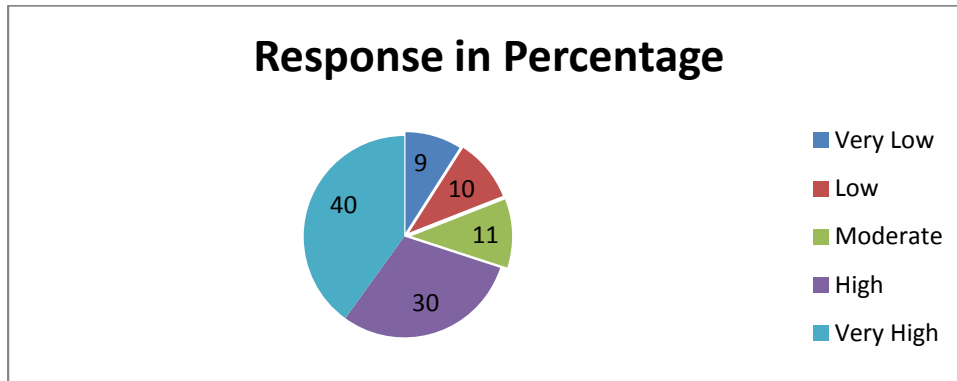


Interpretation: This shows that most of the customers were satisfied with the financial needs provided to them by the insurance company like customer 1,3 and 5 and also their satisfaction level were also high like 10, 8and 6 in the same way there were few customers who were not satisfied by the performance of the insurance company and their rating shows only 2 and 4 % satisfaction level.

Q 6). Opinion for the premiums paid for the various policies by the customers?

Ans.

Satisfaction Levels	Response Percentage
Very Low	9
Low	10
Moderate	11
High	30
Very High	40

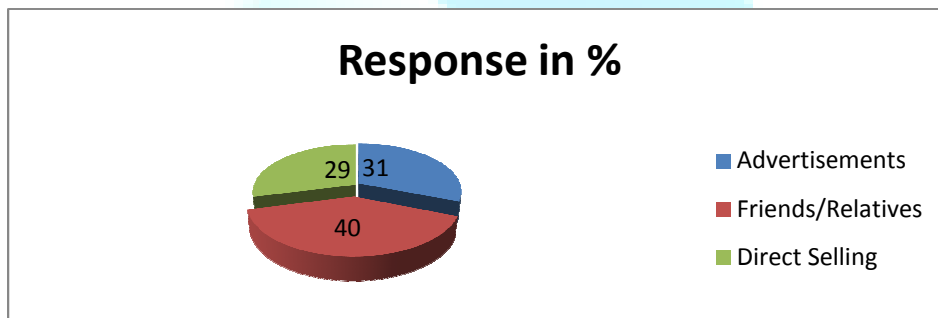


Interpretation: This shows that most of the respondents were highly satisfied by the premium paid method by the customers and were very minimum no. of respondents were not satisfied by the method of premium payment.

Q 7) how you come to know about this policy?

Ans.

Particulars	Response Percentage
Advertisements	31
Friends and Relatives	40
Direct selling	29

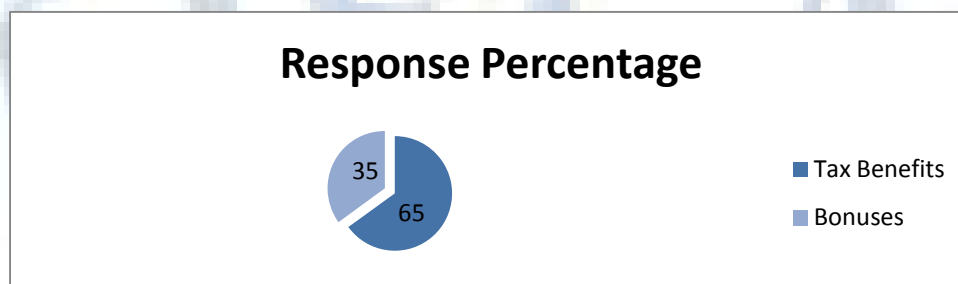


Interpretation: This shows that most of the respondents were like to know about the policies by the nearby friends /relatives i.e. only 40% and 31% came to know about advertisements and hardly 29% preferred to choose any policy by direct selling.

Q 8). Is there any benefit/incentives (tax benefits or Bonuses) associated with insurance policy?

Ans.

Particulars	Response Percentage
Tax Benefits	65
Bonuses	35

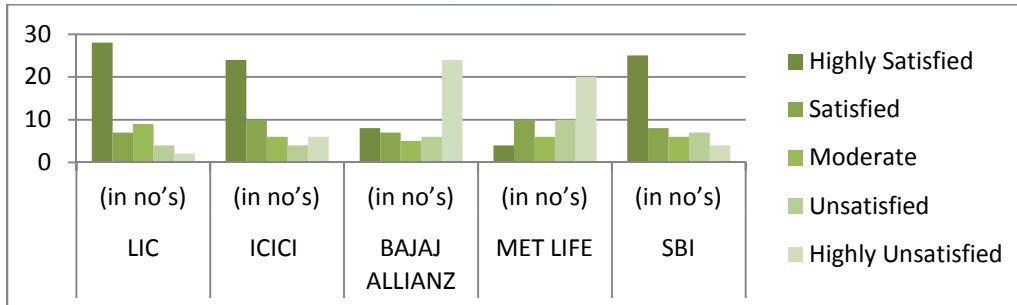


Interpretation: This shows that 65% respondents were associated with tax benefit and only 35% were associated with bonus.

Q 9) Comparison of customer's satisfaction level between LIC and different Insurance Companies?

Ans.

Particulars	LIC (in no's)	ICICI (in no's)	BAJAJ ALLIANZ (in no's)	MET LIFE (in no's)	SBI (in no's)
Highly Satisfied	28	24	8	4	25
Satisfied	7	10	7	10	8
Moderate	9	6	5	6	6
Unsatisfied	4	4	6	10	7
Highly Unsatisfied	2	6	24	20	4

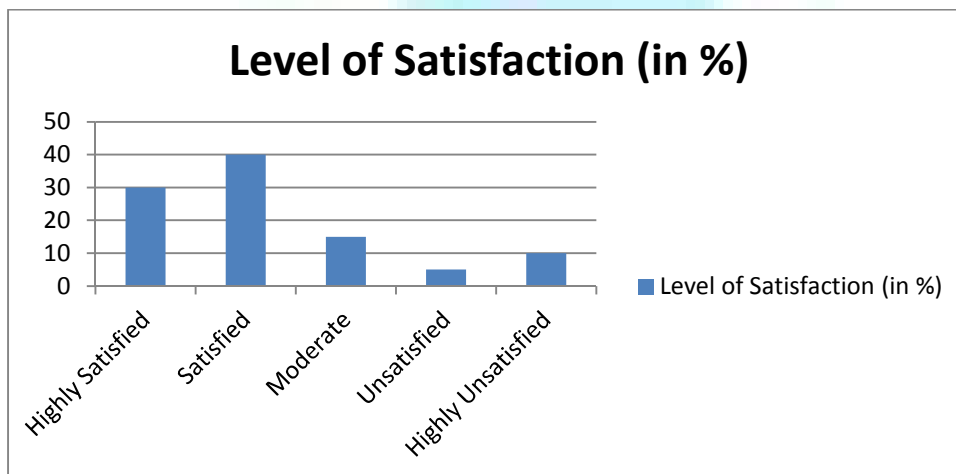


Interpretation: This shows that maximum no of respondents were satisfied by the policies of LIC and SBI were the next company who satisfy most of the customers and then the private companies like ICICI and others.

Q 10). Are you satisfied with the incentives associated with your policy?

Ans.

Satisfaction Level of Customers	Level of Satisfaction (in %)
Highly Satisfied	30
Satisfied	40
Moderate	15
Unsatisfied	5
Highly Unsatisfied	10

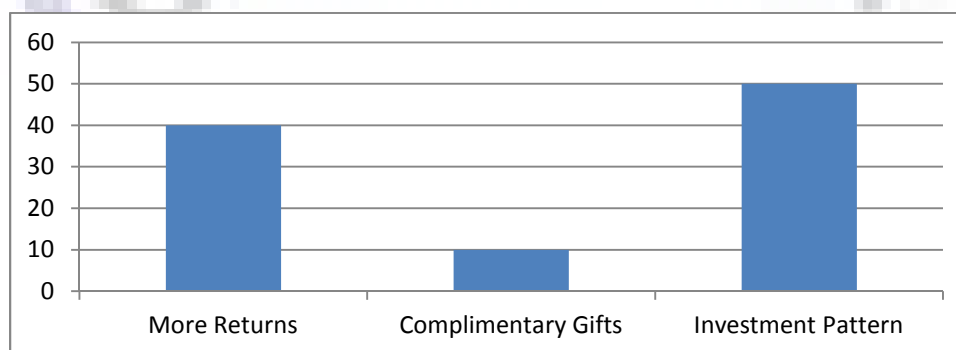


Interpretation: This shows that maximum no of customers were satisfied by the incentives policy and hardly 15% i.e 10 and 5% were unsatisfied by the incentives policies of the company.

Q 11). What flexibility you expect from Insurance companies?

Ans.

Particulars	Response Percentage
More Returns	40
Complimentary Gifts	10
Investment Pattern	50



Interpretation: This shows that respondents would expect more flexibility in investment patterns i.e. 50% and 40% expects more returns and hardly 10% expects complimentary gifts.

FINDINGS

- This was observed that most of the people was satisfied with the insurance company and their policies.
- Research was done on most of the private sector employees, individual will like to purchase it as a medium of their savings.
- More education about what insurance really is needs to be imparted.
- Private companies need to advertise more aggressively, especially in rural areas.
- Most people in rural areas know that private companies are operating in insurance policies but most of the people still trust LIC. In urban areas.
- A lot of people are not yet clear about insurance as a financial instrument. They mostly take it as a tax saving instrument.
- It is difficult to create the interest in the people to find out their likings.
- Majority of people are not aware about the Privatization of Insurance so give them a detailed knowledge about the companies and their working environment.
- Most of the policy holders are satisfied if some additional benefits were given to them.
- In comparison to private sector, still people like to go with public sector and like to purchase policies from LIC, SBI etc.
- Insurance companies also succeed in fulfilling the financial needs of the customers.

CONCLUSION

- There is no right and wrong in all this. The success of marketing insurance depends on understanding the social and cultural needs of the target population, and matching the market segment with the suitable intermediary segment.
- In addition a major segment of the Indian population has low disposable income, meaning that every penny won will be obtained after a lot of persuasion and the expected value for money is high.
- More emphasis should be on promotional activities.
- Plenty of advertisement should be done through T.V, Newspaper and Radio as these media's are having maximum recall value.
- Total financial planning and advice should be given to every customer.
- The company should quite frequently send their agent to the customer so that they should be aware of the latest offer.
- The company should attempt to open more and more of its branches in the country so as to promote their product publicity.
- Strengthen the role of branches as a single point of service and contact for customers.
- To overcome costly maintenance of organization and low returns, it must improve productivity of employees and streamline systems and procedures.
- Training of agents and development officers to be reviewed and the practice of indiscriminate recruitment to be stopped as inefficient and untrained work force, high turnover of agents.
- Insurance awareness of the company should be increased as low insurance awareness among the general public results in excessive lapse ratio of policies.
- The company should upgrade their information support and adopt meaningful computerization. Careful long-term planning along with cost-benefit analysis is needed.

REFERENCES

1. Antreas Athanassopoulos, Spiros Gounaris, Vlassis Stathakopoulos, (2001) "Behavioural responses to customer satisfaction: an empirical study", *European Journal of Marketing*, Vol. 35 Iss: 5/6, pp.687 – 707
2. David Rose, (1995) "Customer satisfaction measurement at Private Patients Plan", *Managing Service Quality*, Vol. 5 Iss: 1, pp.38 – 42
3. Diane Schmalensee, (1991) "Internal customer satisfaction", *Managing Service Quality*, Vol. 1 Iss: 3, pp.141 – 144
4. Guy Dresser, (1997) "SATISFACTION is no guarantee of RETURN", *Measuring Business Excellence*, Vol. 1 Iss: 1, pp.55 - 57
5. <http://www.sebi.com>.
6. Laura Martínez Caro, Jose Antonio Martínez García, (2009) "Does ISO 9000 certification affect consumer perceptions of the service provider?", *Managing Service Quality*, Vol. 19 Iss: 2, pp.140 - 161
7. Mark S. Johnson, Eugene Sivadas, Ellen Garbarino, (2008) "Customer satisfaction, perceived risk and affective commitment: an investigation of directions of influence", *Journal of Services Marketing*, Vol. 22 Iss: 5, pp.353 – 362
8. Nasser Alomaim, Mustafa Zihni Tunca, Mohamed Zairi, (2003) "Customer satisfaction @ virtual organizations", *Management Decision*, Vol. 41 Iss: 7, pp.666 – 670
9. Nigel F. Piercy, (1995) "Customer satisfaction and the internal market: Marketing our customers to our employees", *Journal of Marketing Practice: Applied Marketing Science*, Vol. 1 Iss: 1, pp.22 – 44
10. Paul Morris, (1991) "Making Customer Satisfaction Your Biggest Profit Centre", *Logistics Information Management*, Vol. 4 Iss: 1, pp.32 – 35
11. Tor Wallin Andreassen, Even Lanseng, (1997) "The principal's and agents' contribution to customer loyalty within an integrated service distribution channel: An external perspective", *European Journal of Marketing*, Vol. 31 Iss: 7, pp.487 – 503

RISK-ADJUSTED PERFORMANCE EVALUATION OF INFRASTRUCTURE FUNDS IN INDIA**G. ARUNA****ASSOCIATE PROFESSOR****MALLA REDDY INSTITUTE OF MANAGEMENT****MAISAMMAGUDA, SECUNDERABAD****ABSTRACT**

Asset Management Companies or fund houses constantly come out with different schemes. A lot has been written about performance of equity diversified funds, debt funds, large cap funds, mid cap funds and small cap funds but not much is known about infrastructure funds and their performance. Infrastructure funds also called infra funds invest in stocks of companies related to the infrastructure space and ancillary industries like banking and financial services, energy utilities, media and consumer goods. The total assets managed by these funds shows that the corpus grew to almost Rs 19,000 crores at the end of March 2008, reached its peak Rs. 20,000 crores in September 2009 and are now down to just around Rs. 7,600 crores at the end of February 2013. Hence the need to evaluate the performance of infra funds. The data is collected from official website of Association of Mutual Funds in India (AMFI), National Stock Exchange (NSE) and from respective websites of Asset Management Companies (AMCs). 'Descriptive Statistics' is employed. Annualised mean, annualised standard deviation and Systematic risk are calculated. Finally, risk adjusted performance using Sharpe Index is measured and funds are ranked. The returns from all the funds are disappointing. With the disappointing returns of infrastructure funds, many unit holders may have redeemed their units. Among all the funds, Canara Robeco Infrastructure fund performed better. High portfolio turnover ratio of Canara Robeco Infrastructure fund shows that fund manager has been very aggressive in holding the funds of a portfolio.

JEL CODES

G10, G12, G20, G23.

KEYWORDS

Assets under Management, Infrastructure funds, Portfolio turnover ratio, Standard deviation, Systematic risk.

INTRODUCTION

Asset Management Companies or fund houses constantly come out with different schemes. A lot has been written about performance of equity diversified funds, debt funds, large cap funds, mid cap funds and small cap funds but not much is known about infrastructure funds and their performance. But before knowing about infrastructure funds, one should know what does infrastructure actually mean? It refers to all those services and facilities that constitute the basic support system of an economy. It is the network of power, telecom, ports, airports, roads, civil aviation, railways and transportation in a country. Infrastructure in any country plays a vital role for the economy's growth and development. Infrastructure is the base on which all economic activities of the country depend. Infrastructure is the key to production of goods and services, trade and investment, regional integration. Infrastructure promotes income generation, education, health and sharing the benefits of growth. In other words, we can say that Infrastructure development mirrors the overall health of the organization. On the other hand, to ensure cruded growth rate, development of adequate infrastructure is essential. The main industries that come under infrastructure industry are eight. They include crude oil, petroleum refinery products, natural gas, fertilizers, coal, electricity, cement and steel. In India, these eight core infrastructure industries registered a robust 6.8% growth in output in Feb 2012.

The performance of infrastructure is largely a reflection of the performance of an economy. With globalization, urbanization and increasing involvement of foreign investments, Infrastructure industry in India has been experiencing a rapid growth rate in different sectors. The Indian government has taken initiatives to develop the infrastructure sector with major emphasis on construction, power, engineering, health, information technology, telecommunications transportation etc. But investment in new infrastructure projects involves huge capital, long payback periods, high risk and low returns. Hence in order to bring in adequate resources for setting up efficient infrastructure base, the government has entered into "Public Private Partnership" (PPP) program.

Although the sector is booming, there are certain hindrances like:

- Paucity of funds
- Mismatch of supply and demand in construction equipment
- Import duty on construction equipment
- Increase in prices of materials like steel, cement, diesel and coal etc.
- Large time gap in obtaining approvals and delays in awarding contracts .
- Shortage of skilled manpower

Now back to our topic Infrastructure funds .Infrastructure funds ,also called infra funds are type of mutual funds that are categorized as thematic funds. Unlike sectoral funds which invest in particular sectors like banks, IT, power, pharma etc, the thematic funds invest in stocks of companies related to the infrastructure space and ancillary industries like banking and financial services, energy utilities, media and consumer goods. This shows that the investment universe of these funds is quite large and diversified. The first thematic fund was launched by UTI in April 2004. But these funds gained momentum in the year 2006 and 2007. Among the five best performing equity diversified funds, three were infrastructure funds. The best performing equity fund in 2006 was UTI Infrastructure fund with a 61.5% return, followed by Tata Infrastructure fund and ICICI prudential Infrastructure fund delivering 60.5 % and 60.3% returns respectively. In couple of years almost every fund house came out with new funds in this category. Seeing these returns, the investors too gave an overwhelming response.

If we observe the number of funds in thematic category, there were only 5 funds with sizeable money under management before 2006. These include DSP ML Tiger fund, Prudential ICICI Infrastructure fund, Tata Infrastructure fund, UTI Thematic fund and Sundaram BNP Paribas Capex Opportunities fund. Around six new infra funds were launched during the year 2007, followed by another three fund launches in 2008. As of Sep 2010, there are about 22 infrastructure funds in the thematic category.

A look at the total assets managed by these funds shows that the corpus was around Rs 5,000 crores at the end of 2006, which grew to almost Rs 19,000 crores at the end of March 2008. However, as the financial crisis set in (US subprime mortgage crisis and the Lehman Brother bankruptcy), the assets of infrastructure funds fell sharply to Rs 10,000 crores in late 2008. Also it was a disappointing year for these funds, as they delivered an average return of -59% in 2008, compared to -52% return delivered by Nifty Index. On the other hand, with the market recovery of 2009, Fund companies launched new funds and investors once again started to pour money into these funds. The total assets of these funds grew to almost Rs. 20,000 crores in September 2009, which was its peak. The funds also delivered superior returns of about 80% compared with 76% returns returned by Nifty in the year. The subsequent year 2010 was disappointing as infra funds could deliver only average returns of 7% compared with 18% returns returned by Nifty in that year. It has been mostly downfall for these funds since then. The condition still worsened in 2011 with these funds decline by 33% compared to Nifty's 25% decline during the year. Many investors got disappointed and started pulling out the money from these schemes. As a result, the assets of all large infrastructure funds have shrunk over the years. Total assets of infrastructure funds are now down to just around Rs. 7,600 crores at the end of February 2013, making it the lowest level of assets these funds have managed since mid-2007. At the same time, the companies in the infra space are under pressure and are impacted by the following factors

1. Rising Interest rates
2. Working capital management problems
3. Delay in resource procurement
4. Availability and increase in price of raw materials
5. Intense competition among similar firms

OBJECTIVES OF THE STUDY

1. To analyse the performance of infrastructure funds using mean return and variance analysis.
2. To find out the systematic risk for the funds under study.
3. To evaluate the performance of infrastructure funds using risk adjusted measure as suggested by Sharpe.

METHODOLOGY

DATA

Funds which are in existence for a period of 3 years or more are only considered for the study. All the funds chosen for the sample are of growth option. The data is collected from official website of Association of Mutual Funds in India (AMFI), National Stock Exchange (NSE) and from respective websites of Asset Management Companies (AMCs). Three years data from April 1 2010 to March 31 2013 for these selected funds (11 infrastructure funds) is collected. Nifty is considered as Proxy for the market. Risk free rate is taken as 6 %.

The performance of Infra funds is evaluated using daily NAVs. Daily returns are computed making use of daily Navs. Further, 'Descriptive Statistics' is employed to obtain mean and standard deviation. Thereafter annualised mean and annualised standard deviation are calculated. Systematic risk (beta) for the funds is calculated with respect to Nifty. Finally, risk adjusted performance using Sharpe Index is measured.

The following formulae are used

$$\text{Return } R_t = \ln(\text{NAV}_t - \text{NAV}_{t-1}) * 100$$

Where

R_t = Return for the period t

\ln = log normal or natural logarithm

NAV_t = Net Asset Value of fund in period t

NAV_{t-1} = Net Asset Value of fund in period t-1

For computing annualised returns and annualised standard deviation, the following formulae are used.

$$\text{Annualised returns} = (\text{avg daily returns} * T)/3$$

$$\text{Annualised std deviation} = (\text{std deviation} * \sqrt{T})/3$$

Where T = number of trading days.

Systematic risk is calculated as

$$\beta = (\sum(X - X_i)(Y - Y_i)) / \sum(X - X_i)^2$$

Where β = beta

$(Y - Y_i)$ = deviation of fund return and fund mean return

Sharpe Index is computed as

$$S_i = (r_p - r_f) / \sigma_p$$

Where S_i = Sharpe index

r_p = return on portfolio

r_f = risk free rate

σ_p = total risk of portfolio

FINDINGS

From table 1, it is clearly evident that the returns of all the funds are disappointing. Among the 11 funds, Canara Robeco infrastructure fund is performing better, followed by ICICI prudential infrastructure fund and HDFC infrastructure fund. The least performance is given by Reliance Infrastructure fund. The standard deviation or the risk associated with the fund is least for Canara Robeco infrastructure fund and highest for Reliance Infrastructure fund.

Beta coefficient is a measure of sensitivity of a share price to movement in the market price. Table 2 depicts that the systematic risk is highest for LIC infrastructure fund and lowest for Canara Robeco infrastructure fund.

TABLE 1: ANNUALISED RETURN AND ANNUALISED STANDARD DEVIATION OF SELECTED FUNDS

Sno	Scheme Name	Annualised Return	Annualised Std Dev
1	Canara Robeco Infrastructure - Regular Plan – Growth	-0.82	7.62
2	ICICI Prudential Infrastructure Fund - Regular Plan - Growth	-5.83	9.57
3	HDFC Infrastructure-Growth Option	-5.83	10.77
4	Birla Sun Life Infrastructure Fund-Growth	-6.19	9.65
5	LIC Nomura MF Infrastructure Fund - Growth Option	-6.92	10.75
6	Taurus Infrastructure Fund -Growth Option	-8.17	10.20
7	Sahara Infrastructure Fund -Variable Pricing Option -Growth Option	-9.24	9.41
8	L&T Infrastructure Fund - Growth Option	-9.63	9.92
9	UTI Infrastructure Fund-Growth Option	-10.02	10.21
10	SBI Infrastructure Fund Series I - Regular Plan –Growth	-12.39	9.32
11	Reliance Infrastructure Fund -Growth Option	-22.89	11.64

TABLE 2: SYSTEMATIC RISK OF SELECTED FUNDS

Sno	Fund Name	Beta
1	LIC Nomura MF Infrastructure Fund - Growth Option	1.0323
2	Reliance Infrastructure Fund -Growth Option	1.0139
3	UTI Infrastructure Fund-Growth Option	0.9438
4	ICICI Prudential Infrastructure Fund - Regular Plan - Growth	0.9428
5	HDFC Infrastructure-Growth Option	0.9425
6	L&T Infrastructure Fund - Growth Option	0.9172
7	Taurus Infrastructure Fund -Growth Option	0.9068
8	Birla Sun Life Infrastructure Fund-Growth	0.8859
9	SBI Infrastructure Fund Series I - Regular Plan –Growth	0.8279
10	Sahara Infrastructure Fund -Variable Pricing Option -Growth Option	0.8110
11	Canara Robeco Infrastructure - Regular Plan – Growth	0.6691

TABLE 3: SHARPE INDEX OF SELECTED FUNDS

Sno	Fund Name	Sharpe Measure
1	Canara Robeco Infrastructure - Regular Plan – Growth	-0.11533
2	HDFC Infrastructure-Growth Option	-0.54706
3	ICICI Prudential Infrastructure Fund - Regular Plan - Growth	-0.61553
4	Birla Sun Life Infrastructure Fund-Growth	-0.64773
5	LIC Nomura MF Infrastructure Fund - Growth Option	-0.64954
6	Taurus Infrastructure Fund -Growth Option	-0.80723
7	L&T Infrastructure Fund - Growth Option	-0.97717
8	UTI Infrastructure Fund-Growth Option	-0.98756
9	Sahara Infrastructure Fund -Variable Pricing Option -Growth Option	-0.98795
10	SBI Infrastructure Fund Series I - Regular Plan –Growth	-1.33694
11	Reliance Infrastructure Fund -Growth Option	-1.97252

Table 3 gives picture about the performance of infrastructure funds based on Sharpe Index. Of all the funds , Sharpe index is highest for Canara Robeco fund and ranks in first position , followed by HDFC infrastructure fund and ICICI Prudential infrastructure fund. On the other hand Reliance infrastructure has got the least reward to variability ratio.

DISCUSSION

TABLE 4: ASSETS UNDER MANAGEMENT OF SELECTED FUNDS (in crores)

Sno	Fund Name	As on April 30 2010	As on April 30 2011	As on April 30 2012
1	Canara Robeco Infrastructure - Regular Plan – Growth	176.77	140.52	119.22
2	SBI Infrastructure Fund Series I - Regular Plan –Growth	N.A	N.A	720.24
3	UTI Infrastructure Fund-Growth Option	N.A	2646.05	2073.76
4	LIC Nomura MF Infrastructure Fund - Growth Option	231.43	162.35	81.82
5	L&T Infrastructure Fund - Growth Option		3143.99	3263.72
6	Reliance Infrastructure Fund -Growth Option	2149.54	1104	701
7	Sahara Infrastructure Fund -Variable Pricing Option -Growth Option	1316.83	887.37	698.76
8	Taurus Infrastructure Fund -Growth Option	27.76	17.79	13.92
9	Birla Sun Life Infrastructure Fund-Growth	561.26	NA	NA
10	HDFC Infrastructure-Growth Option	N.A	1115.14	746
11	ICICI Prudential Infrastructure Fund - Regular Plan - Growth	3854.96	N.A	2153.67

TABLE 5: PORTFOLIO TURNOVER RATIOS OF SELECTED FUNDS (in times)

Sno	Fund Name	As on April 30 2010	As on April 30 2011	As on April 30 2012
1	Canara Robeco Infrastructure - Regular Plan – Growth	0.13	1.02	0.51
2	SBI Infrastructure Fund Series I - Regular Plan –Growth	N.A	1.19	1.97
3	UTI Infrastructure Fund-Growth Option	N.A	1.03	0.39
4	LIC Nomura MF Infrastructure Fund - Growth Option	N.A	N.A	0.29
5	L&T Infrastructure Fund - Growth Option	N.A	0.29	0.04
6	Reliance Infrastructure Fund -Growth Option	N.A	0.18	0.18
7	Sahara Infrastructure Fund -Variable Pricing Option -Growth Option	2.63	1.71	1.54
8	Taurus Infrastructure Fund -Growth Option	N.A	N.A	N.A
9	Birla Sun Life Infrastructure Fund-Growth	N.A	N.A	N.A
10	HDFC Infrastructure-Growth Option	N.A	0.38	0.07
11	ICICI Prudential Infrastructure Fund - Regular Plan - Growth	1.23	N.A	0.31

TABLE 6: STANDARD DEVIATION OF SELECTED FUNDS

Sno	Fund Name	As on April 30 2010	As on April 30 2011	As on April 30 2012
1	Canara Robeco Infrastructure - Regular Plan – Growth	51.65	10.41	7.37
2	SBI Infrastructure Fund Series I - Regular Plan –Growth	N.A	36.75	27.69
3	UTI Infrastructure Fund-Growth Option	N.A	17	21.1
4	LIC Nomura MF Infrastructure Fund - Growth Option	N.A	N.A	1.67
5	L&T Infrastructure Fund - Growth Option	N.A	5.23	5.69
6	Reliance Infrastructure Fund -Growth Option	N.A	2.74	3.19
7	Sahara Infrastructure Fund -Variable Pricing Option -Growth Option	38.59	34.29	30.4
8	Taurus Infrastructure Fund -Growth Option	40.36	17.92	19.95
9	Birla Sun Life Infrastructure Fund-Growth	41.42	37.73	31.64
10	HDFC Infrastructure-Growth Option	N.A	10.5	9.3
11	ICICI Prudential Infrastructure Fund - Regular Plan - Growth	34.28	N.A	22.89

Assets under management is generally looked at as a measure of success against the competition. Table 4 gives a glimpse about assets under management of selected funds. It is observed that almost all the funds AUM has declined over the period. The reasons for the decline in AUM could be following:

1. With the disappointing returns of infrastructure funds, many unit holders may have redeemed their units.
2. The share prices of the stocks held by the infrastructure funds have plunged.

A look at decline in AUM reveals that AUM of Canara Robeco Infrastructure fund declined by 32% while that of Reliance Infrastructure fund declined by 67%. This could be one of the reasons for Canara Robeco Infrastructure fund performing better, inspite of negative returns. Turnover ratio denotes the percentage of the holdings of the fund that changes each time. Higher turnover ratio implies higher the volume of trading performed by the fund. In the year 2011, for most of the funds, portfolio turnover ratio is high, indicating that more trading activity has taken place. High portfolio turnover ratio of Canara Robeco Infrastructure fund shows that fund manager has been very aggressive in holding the funds of a portfolio. Standard deviation is the most appropriate measure for measuring the risk of a fund. The fund with higher standard deviation implies greater volatility. Table 6 depicts the information about standard deviation of all sample funds. High standard deviation of Canara Robeco Infrastructure fund indicates that the stocks of this particular fund have been more volatile. To reduce the risk, the fund manager might have opted for frequent changes in the portfolio resulting in more volatility and high turnover.

CONCLUSION

Thematic funds or infrastructure funds are subject to higher risk. Infrastructure funds had delivered an average return of 53.38% and 82.73% in 2006 and 2007 respectively. However, in the recent past, there has been downhill for infrastructure funds. The poor performance of sectors like capital goods, construction, realty, metals, power and oil & gas attributed to the underperformance of those funds. Over the period, the asset base of all infra funds declined. The main reason could be disappointing returns of infrastructure funds compelled the unit holders to redeem their units. A look at portfolio turnover ratio reveals that active trading has taken place and the fund manager has been aggressive in holding the stocks of portfolio.

REFERENCES

1. www.amfi.com
2. www.birlasunlife.com
3. www.canararobeco.com
4. www.hdfcfund.com
5. www.icicipruamc.com
6. www.licnomuramf.com
7. www.lntmf.com
8. www.nseindia.com
9. www.reliancemutual.com
10. www.saharamutual.com
11. www.sbimf.com
12. www.taurusmutualfund.com
13. www.utimf.com

EMPOWERMENT OF RURAL WOMEN THROUGH ENTREPRENEURSHIP IN SMALL BUSINESS: A EMPIRICAL STUDY IN KHAMMAM DISTRICT OF A.P

DR. S. RADHAKRISHNA
ASSOCIATE PROFESSOR
DEPARTMENT OF ECONOMICS
KAKATIYA UNIVERSITY P. G. COLLEGE
KHAMMAM

DR. T. GOPI
ASST. PROFESSOR
DEPARTMENT OF COMMERCE
KAKATIYA UNIVERSITY P. G. COLLEGE
KHAMMAM

ABSTRACT

Empowerment of women and Entrepreneurship complement each other. Empowerment enables the entrepreneurs to be motivated to accomplish the set goals. It also enables the women to think independently and make their own perceptions and judgment. Rural women need support counseling and training to become empowered. Dissemination of innovative approaches and new knowledge developed is also extremely important in furthering the cause of entrepreneurship. A positive relationship between Women Entrepreneurships and Women Empowerment is found to be significant in the study.

KEYWORDS

entrepreneurship, small business, women empowerment.

INTRODUCTION

In recent years there has been an upsurge of interest in the role of entrepreneurship and small business development as providers of employment, contributors to Gross National Product, boosters of economic development and address to a large number of problems being faced by the community in general and educated youth in particular. Small business and entrepreneurship in India are the prime-force in generating productive employment and ensuing a more equitable distribution of income in the process of economic development of the country. It facilitates effective mobilization of resources of capital and skills and helps to reduce poverty and unemployment. Empowerment enables the entrepreneurs to be motivated to accomplish the set goals. It also enables the women to think independently and make their own perceptions and judgments (Vijalaxmi2008). In this backdrop this study has been undertaken to examine the level of empowerment of sample rural women entrepreneurs before and after starting the small enterprise.

OBJECTIVES

1. To assess the change in the status of rural women Empowerment through entrepreneurship in select study area.
2. To find out the factors responsible for successful performance of women Entrepreneurship
3. To suggest measures to promote empowerment of women entrepreneurship in rural areas.

HYPOTHESIS

Women entrepreneurship leads to women empowerment.

METHODOLOGY

A sample of 283 women respondents engaging in small business selected from 26 villages in khammam District of Andrapradesh . Out of the total sample, 141 respondents were chosen from the tribal villages and rest of 142 from non tribal villages. The economic activities of sample women are presented in Appendix-I.

FINDINGS OF THE STUDY

To know the improvement in the status of the respondent women entrepreneurs both in family and society, after starting the enterprises their opinions are collected (Table-1). About 64 per cent of the respondents state that there is some change of progressive nature in their status both in family and society. Another 34 per cent felt that their status has improved and a recognized change has occurred. Together, 98 per cent respondents opened that their status after starting the units has improved in the family and also in the society.

TABLE 1: STATUS OF THE WOMEN ENTREPRENEURS AFTER STARTING THE UNIT

Sl.No.	Opinion	No. of Respondents	Percentage
1	No Change	5	1.8
2	Some change	182	64.3
3	Recognized change occurred	96	33.9
	Total	283	100.0

Source: Field Study

EARNINGS

Entrepreneurship has improved the financial status of the respondents. They are habituated to maintain available relationships with the customers and the general public. It is also observed that the confident levels of the respondents are also improved after starting the units. All these factors have a cumulative effect on the regard and recognition of the role of the respondents in the family and also by the husband. They treat the respondents in a better manner with all respect, love and affection after starting the units. It is natural that the entrepreneurial activities will definitely elevate their image in the family also.

CONTROL OVER EARNINGS

Indian cultural ethos is to handover the earnings of the women to the male members of the family. They have no control over their earnings or properties since they always depend on the males under the dictum of MANU. But over the period since mid seventies situation has been changing and the desire for empowerment of women is picking up.

TABLE 2: RESPONDENTS' CONTROL OVER THEIR EARNINGS

Sl.No.	Opinion	No. of Respondents	Percentage
1	YES	227	80
2	NO	56	20
	Total	283	100

Source: Field Study

Education, economic activities and awareness in the lines of empowerment are encouraging women folk to assert themselves in the family and society. (Table-2) examines the extent to which the respondents have control over the earnings. The data helps to investigate the freedom of the women on dealing with their earnings. This freedom is a component of empowerment of the women. Nearly 80 per cent of the respondents state that they have control over their earnings. They can spend or save their earnings as desired by them. Though empowerment is perceptible, it is still open for improvement, because 20 per cent of respondents have no control over their earnings is not a small figure.

CHANGE IN CONSUMPTION PATTERN

It is usually hypothesized that Entrepreneurial activities increase incomes and increased incomes induce higher expenditure in consumption which leads to the improvement in the standards of living of the respondent households. For the purpose of identifying the improvement in the consumption levels, data levels data pertaining to before and after starting the enterprises is collected and presented in the table-3 Eight important consumption items are considered for analysis. Consumption quantities are taken in absolute terms for seven items to minimize the effect of variations in the prices for comparison. Prices of most of these goods have seasonal changes and hence comparison in absolute terms is made. However, consumption of cloth is taken in monetary terms as it is a manufacturing product and price changes are not seasonal in general.

TABLE 3: FAMILY CONSUMPTION PATTERNS

Sl. No.	Item	Previous consumption (per month)	Previous average (per month)	present consumption (monthly)	Present average	Difference in average consumption
1	Milk (Lts)	3928 / 279	14	6330 / 283	22	8
2	Vegetables (Kgs)	3782 / 283	13	4878 / 283	17	4
3	Fruits (Dozens)	1802 / 159	11	3205 / 265	12	1
4	Oil (Kgs)	720 / 283	2.5	966 / 283	3.5	1
5	Pulses (Kgs)	637 / 283	2.2	876 / 283	3.0	0.8
6	Non-Veg (Kgs)	492 / 267	1.8	705 / 271	2.6	0.8
7	Eggs (Dozens)	7429 / 244	30	9771 / 253	38	8
8	Clothing (Rs.)	99900 / 283	353	129200 / 283	456	103

Source: Field Study

Absolute quantities of consumption per month have increased with regard to all commodities. Consumption of milk has increased by 8 litres, vegetables by 4Kgs., fruits by 1 dozen, Oil by 1 kg., pulses 0.8 Kg., Non-veg. items by 0.8 Kgs and eggs in 8 numbers. Most of the items add to the value of nutrition and health of the family members. When incomes increase higher standards of living are reflected in the form of increased levels of consumption. The monthly expenditure on clothing has also increased by Rs. 103/- per month.

EXPENDITURE ON HEALTH

Nearly 99 per cent of the respondents state that there is a positive change in the medical services available to them table-4.

TABLE 4: ACCESS TO MEDICAL SERVICES

Sl.No.	Feeling	No. of Respondents
1	Yes	280 (98.9)
2	No	03 (1.1)
3	N.A	-
	Total	283 (100)

It implies that the financial viabilities of the respondent households have enabled them to go in for qualitative medical services. Their paying capacity has increased and they are in a position to go for better medical services. Traditional methods, techniques, and village level services by the unqualified and untrained medical practitioners are slowly given good bye by the rural people because of the awareness and incomes. Media also play an important role in creating health consciousness among the respondents.

DECISION MAKING

Role of the women in decision making at home speaks of their status in the family. Decision making role of the women is a component of empowerment of the women. A woman should be part of a decision maker at home. Empowerment becomes meaningful when she is involved in the family decisions. To examine this aspect of empowerment, 7 indicators are considered in the study table-5. Responses are consolidated item-wise, to have an idea on the role of the women in decision making. With regard to children education, 77 per cent of the respondents state that they are consulted in decision taking. 65 per cent of them state that they are taking decisions on the girl child education.

TABLE 5: IMPROVEMENT IN CHILDREN'S EDUCATION

Sl.No.	Change in children education	No. of Respondents
1	Yes	260(91.9)
2	No	22 (7.8)
3	N.A	01(0.3)
	Total	283(100)

Source: Field Study

About 88 per cent respondent women are involved in the decision making on purchase of clothes, another 94 per cent of them take decisions on cooking. 66 per cent respondents take decisions on spending their money. About 66 per cent of respondents take decisions to visit their parents and relatives, only 35 per cent of the respondents are consulted and involved in the purchase of home appliances. The data clearly points out that, more than 65 per cent of the women entrepreneurs play active role in decision making at home. The data reveals that the days of male domination in decision making are slowly fading out and the assertion of women in decision making is getting more pronounced.

SHARING OF EARNINGS IN THE FAMILY

Sharing of the earnings in respondent families in the study area is examined and data presented in table-6. How the incomes rotate between wife and husband in the form of sharing is also observed. Nearly 79 per cent of the respondents indicate that they give their earnings to their husbands. Similarly 78 per cent state that their husbands handover their earnings to them. It is really interesting to note that both the partners have mutual confidence and work for the overall welfare of the families. Further, 73 per cent respondents state that they save a part of their earnings. Women entrepreneurs have dual roles to play both at home and enterprise. So there is a possibility at every stage for conflicts. The conflicts may be with husband, family members, neighbors, employees, customers

and others. The burden of looking after the enterprise and taking care of the home may some times make the women restless and tired. Business oriented problems sometime create tensions. However, only 20 per cent of respondent women say that they have conflicts due to the dual role. It can be said that a majority of women do not have any conflicts. This is an appreciable observation in the study, implying the adaptability and flexibility of the women in performing both roles effectively. Incomes are shared between the partners. Savings of the respondent women are also high and the conflicts due to dual roles are limited. All these point out that the women are slowly progressing in the right direction of empowerment in the study area.

TABLE 6: SHARING OF THE EARNINGS

Sl.No.	Item	YES	NO	NA	Total
1	Do you give your earnings to husbands	223 (79)	29 (10)	31 (11)	283 (100)
2	Does your husband give his earning to you	222 (78.4)	30 (10.6)	31 (11)	283 (100)
3	Do you save your earnings	206 (72.8)	77 (27.2)	-	283 (100)
4	Do you have any conflicts due to dual role performed by you	57 (20.0)	226 (80)	-	283 (100)

Source: Field Study

DECISION MAKING IN MANAGING THE UNIT

Generally the entrepreneurs will consult the officials, other entrepreneurs, Bankers and marketing agents for various reasons. A majority of (36 per cent) respondents consult their co- entrepreneurs while managing their units table-7. They are easily accessible and discussions can be in the local dialect with a familiar touch. The consultations with the co-entrepreneurs along with others goes a long way in making the respondent women more confident about their activities. The specialties of the co-entrepreneurs, their success stories and problem solving mechanisms attract the respondents more and more.

TABLE 7: WHOM DO YOU CONSULT WHILE MANAGING THE UNIT

Sl.No.	Item	No. of Respondents	Percentage
1	Discussions with officials	07	2.5
2	Discussions with other entrepreneurs	102	36.0
3	Discussions with Bankers	14	5.0
4	Discussions with Marketing Agents	2	0.8
5	N.A.	74	26.0
6	1, 2	8	2.8
7	1, 3	17	6.0
8	2, 3	58	20.5
9	1, 2, 4	1	0.4
	Total	283 (100)	100.0

Source: Field Study

There is a general belief that the women in the economic, political activities and social activities leave the decisions to the husband, even though they have the decision taking power. Several studies on Governance in Panchayat Raj Institutions have found that the women in responsible positions are made dummies by their husbands/family members. However, a radical change has started with the movement for empowerment of women in India. Data has been analysed from this angle to know the extent of decision making in matters relating to the economic activities of the respondent women.

As per the table-8, 20 per cent of respondents take decisions on their own. About 77 per cent of respondents state that entrepreneurial issues are decided by both of them jointly. This type of joint decisions taken help analyze the issues in detail to take proper decisions. Both the wife and husband are to bear the consequences of business risks and so joint decision making is good. Nearly 23 per cent of respondent women are taking decisions on their own on the matters related to the economic activities. It can be inferred that to some extent the entrepreneurship has conferred empowerment to the respondent women.

TABLE 8: DECISIONS ABOUT THE MATTERS RELATING TO THE UNIT/BUSINESS

Sl.No.	Decisions	No. of Respondents	Percentage
1	Own	57	20.1
2	Husband	9	3.2
3	Jointly	217	76.7
	Total	283	100.0

Source: Field Study

TABLE 9: EMPOWERMENT AFTER JOINING SHG / STARTING THE UNIT – RESPONDENTS' OPINION

Sl.No.	Opinion	No. of Respondents	Percentage
1	Yes	281	99.3
2	No	2	0.7
	Total	283 (100)	100.0

Source: Field Study

MEMBERSHIP IN SHGs

Cognizable advantages and empowerment after starting the units by the respondents are examined in the table-9. SHG membership provides scope to start entrepreneurial activities and entrepreneurial activities help the cause of empowerment. Almost all the respondents revealed that they have derived different advantages by engaging economic activities. Empowerment or improvement in four vital areas is examined in table-10. The indicators viz., children education, girl child education, availability of nutritious food and healthy living in the form of cleanliness of the environment and personal cleanliness were considered to assess the level of empowerment.

TABLE 10: EMPOWERMENT INDICATORS – RESPONDENTS’ OPINION

Sl.No.	Opinion	No. of Respon-dents	Percentage
1	1. Children Education improved	5	1.8
2	2. Girl Children Education improved	2	0.7
3	3. Availability of nutritious food improved	7	2.5
4	4. Environment of surroundings and individual cleanliness improved.	9	3.2
5	1, 2	2	0.7
6	1, 3	12	4.2
7	1, 4	8	2.8
8	2, 3	3	1.1
9	2, 4	3	1.1
10	3, 4	79	27.9
11	1, 2, 3	6	2.1
12	1, 2, 4	1	0.4
13	1, 3, 4	49	17.3
14	2, 3, 4	10	3.5
15	1, 2, 3, 4	87	30.7
	Total	283 (100)	100.0

Source: Field Study

On the whole, it can be said that 83 per cent of the respondents either separately or in combination have an improvement both in the environmental and at personal cleanliness. About 61 per cent of respondents have felt that they had an improvement in children education and 40 per cent of them opined that they have an improvement in the education of girl children. Improvement in the availability of nutritious food is stated by 89 percent respondents.

EMPOWERMENT THROUGH ENTREPRENEURSHIP

Twelve aspects relating to both entrepreneurship and empowerment of sample women entrepreneurs are analysed to know the improvement whether these changes are the out come of women empowerment after starting the units.

About 98 per cent respondents state that there is an improvement in personal health and cleanliness table-11. A majority of respondents state (83 per cent) that they meet the Government officials without any inhibitions,77 per cent of them consult the non government organizations and officials without any hiccups. Another 87 per cent respondents opined that their banking habits have improved. Confidence of the lenders in extending loans is high in the opinion of 96 per cent of respondents. Status in the family has improved as stated by 80 per cent, 79 per cent respondents felt that their status in the group has improved, 76 per cent respondents felt that their status in the society has improved. Decision taking power has improved with regard to 62 per cent. About 83.0 per cent respondents state that their confidence levels are improved to a large extent. Only 62 per cent respondents state that their overall skills have improved. From the above analysis it can be said that there is a significant improvement in all aspects of empowerment. However, skill formation is the area where more concentration is needed.

TABLE 11: CHANGE IN EMPOWERMENT IN VARIOUS ASPECTS – OPINION OF THE RESPONDENTS

Sl. No.	Opinion	No. of Respondents		Total
		YES	NO	
1	1.Improvement in personal health and cleanliness	279 (98.5)	4 (1.5)	283 (100)
2	2.Ability to meet the Govt. Officials	234 (82.7)	49 (17.3)	283 (100)
3	3.Ability to meet Non-Govt. Officials	218 (77.0)	65 (23)	283 (100)
4	4.Improvement in Banking habits	246 (87)	37 (13)	283 (100)
5	5. High level of confidence of the lenders on repayment	273 (96.4)	10 (3.6)	283 (100)
6	6.Improvement in the position and status in the family	226 (79.8)	56 (19.7)	283 (100)
7	7.Betterment of status in the group	224 (79.1)	59 (20.9)	283 (100)
8	8.Discernible improvement in the social status	217 (76.6)	66 (23.4)	283 (100)
9	9. Increasing role in decision making in the family matters	198 (70.0)	85 (30.0)	283 (100)
10	10.Assertive role in decision making in the group	175 (61.8)	108 (38.2)	283 (100)
11	11.Higher levels of self confidence	235 (83.0)	48 (17.0)	283 (100)
12	12.Improvement in your overall skills	176 (62.1)	107 (37.9)	283 (100)

Source: Field Study

POLITICAL EMPOWERMENT

Extent of political status and political awareness of the respondents are analyzed in the table-12.

TABLE 12: POLITICAL EMPOWERMENT – OPINION OF RESPONDENTS

Sl.No.	Opinion	YES	NO	Total
1	Are you a member of local body?	06 (2.1)	277 (97.9)	283 (100)
2	Do you take decisions on your own?	27 (9.5)	256 (90.5)	283 (100)
3	Do you take help in decision making from local political leaders?	10 (3.5)	273 (96.5)	283 (100)
4	Do you know that as per 73, 74 constitutional Amendment Reservation for women in local bodies is provided?	112 (39.6)	171 (60.4)	283 (100)
5	Do you regularly participate in Grama Sabha?	57 (20.1)	226 (79.9)	283 (100)
6	Do you raise issues / problems of village in Grama Sabha?	53 (18.7)	230 (81.3)	283 (100)
7	Do you feel that the women MPTCs and ZPTCs are able to take decisions on their own?	159 (56.2)	124 (43.8)	283 (100)
8	Do you feel that the member of SHG generally participates actively in local political / administrations than others?	260 (91.9)	23 (8.1)	283 (100)

Source: Field Study

Women members through organization, DWACRA groups and Mahila Mandals are educating the women even in local areas on political issues. They actively participate and cast votes in the elections at the Central, State and Local levels. Political awareness and status are also ingredients of the over all empowerment of the women. However, only 9.5 per cent state that they take decisions on political issues on their own. It implies that decision making to a large extent is influenced by local leaders, husband, family members, relatives and friends. Independent decision taking needs a lot of groundwork including education. Ignorance is the basic reason for the women to depend on others in political matters. This is the general frame work in India, especially in the rural areas, in which Indian democracy thrives. Political parties encash this weakness to their advantage by encouraging mob psychology. Education, awareness and responsible media can improve situation and ignite the spirit of independence in political issues.

CONCLUSION

A majority of women entrepreneurs in the state that their status both in the family and society has improved after starting the entrepreneurial activities. They feel that husbands and their family members treat them better with all love, affection and respect. A majority of the respondent women state that they have control over their earnings. Thus, it can be inferred that economic activities increase the women entrepreneurs' incomes and consumption levels. Most of the women entrepreneurs state that they are now looking after their health and there is a progressive change in the education of children. The word of the respondent women at home is given respect and regard and they are involved in decision making at home. The respondents have the potentiality to save a part of their income. While managing the units, respondent women mostly consult other co-entrepreneurs and bankers. A majority of the respondents expressed that there is an improvement in personal health and cleanliness, consultation with officials, banking habits, status of the family in the society and decision making ability. Out of total income. The percentage share of expenditure on children education and personal health has been increased. It implies that health consciousness and the urge for quality education to their children are increasing in the study area. The study found an improvement in political empowerment of sample women entrepreneurs who are members of SHGs. Most of the women felt that arranging adult education programmes for women, registering property in the name of the women, equal opportunities with men, abolition of dowry, prohibition of liquor, creation of social awareness are some of the important aspects that would definitely improve the conditions of women. On the whole, from the foregoing analysis it can be concluded that positive relationship between women entrepreneurship and women empowerment is found to be significant.

REFERENCES

1. Christopher, K.J. (1969) Socio-Psychological Factors Influencing the Adoption of Innovation of Starting of Small Industrial Unit, SIET Institute, Hyderabad.
2. Dix, Carol. (1991), Enterprising Women – The Lives of successful business Women, Bantum Pres, Trans World Publishers Ltd., London.
3. Kanitkar, Ajit. (1995), Entrepreneurs and Micro- Enterprise in Rural India, New Age Institutional Publishers Ltd., New Delhi.
4. Purushothaman, Sangeetha (1998). The Empowerment of Women in India. Sage Publications. New Delhi.
5. Vijayalaxmi G and Prajeelathe B (2008), "Empowerment of women through Entrepreneurship: An empirical study" in L.Radhakrishna.Op.Cit.

APPENDIX

TABLE-1: ECONOMICS ACTIVITY OF WOMEN RESPONDENTS

Economics activity	No of respondents	Percentage
Mini dairy	154	54.4
Business	74	26.1
Tailoring	25	8.8
Veg-Fruits & Fish vending	6	2.1
Running small hotel	3	2.9
Pickles making	5	0.4
Horticulture	2	0.7
Flour mill	3	1.0
Leaf plate making	1	0.4
Rearing pigs & Goats	3	1.4
Ironing & painting	5	1.8
	283	100.00

THE ETERNAL FIGHT: SMALL TRADITIONAL STORES Vs. SUPERMARKETS

DR. FAYAZ AHMAD NIKA
ASSOCIATE PROFESSOR
DEPARTMENT OF MANAGEMENT STUDIES
CENTRAL UNIVERSITY OF KASHMIR
SRINAGAR

ARIF HASAN
RESEARCH SCHOLAR
DEPARTMENT OF MANAGEMENT STUDIES
CENTRAL UNIVERSITY OF KASHMIR
SRINAGAR

ABSTRACT

Retail sector in India came with evolutionary patterns from small traditional store to super market and growing day by day rapidly. Retail sector was unorganized in the beginning but has undergone transformation during the past 15 years. It is one of the growing sectors and this research paper identifies the core drivers of the retail emergence in India changing the buying behavior of the customer. The study was intended to find out the weaknesses of small traditional stores as compared to the supermarkets and the problems faced by small traditional stores with respect to FDI allowed by government and organized sector in some retail formats. The study has been conducted on various traditional stores in Delhi/NCR. The study identifies the problems being faced by small merchants and their competitive advantage over supermarkets. It is concluded that both small traditional stores and supermarkets are important to the Indian economy. FDI is important for the growth of the economy and it should be considered as an opportunity not as a threat. Secondly government should provide support to small traditional stores. An attempt is made here to identify the problems and find out the solutions for the enhancement of traditional stores with special reference to Delhi/NCR.

KEYWORDS

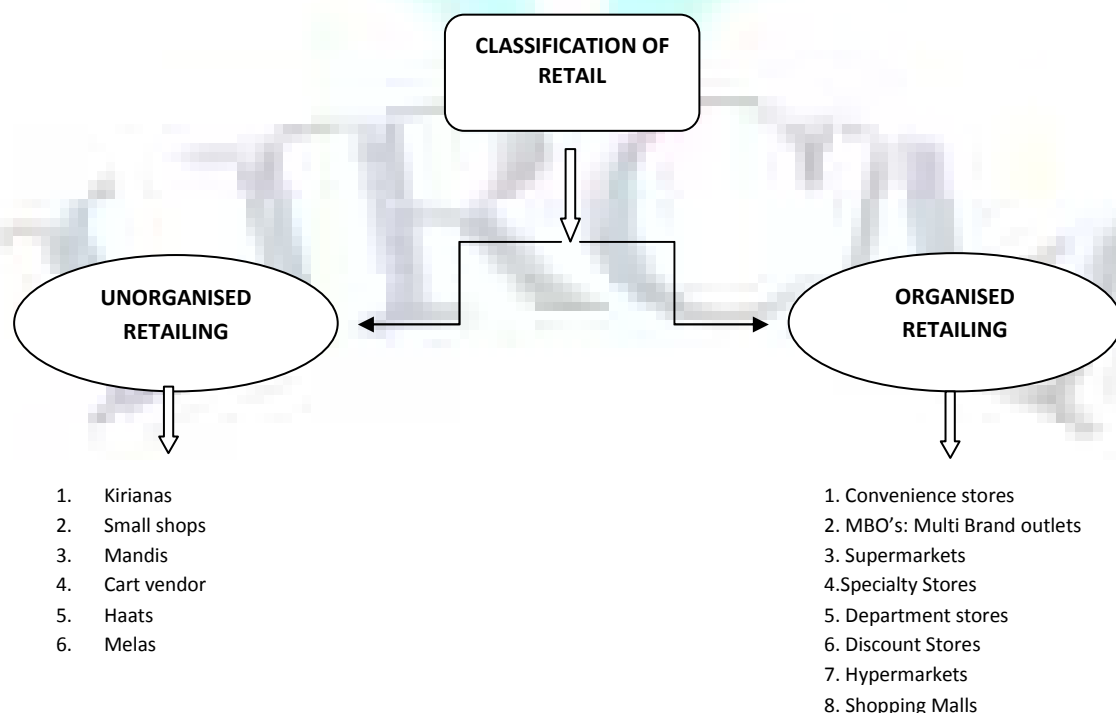
FDI, Small Traditional stores, Supermarkets.

INTRODUCTION

The retailing has been derived from the French word "retailer" which means to cut a piece off or to break bulk. Retailing is defined as a conclusive set of activities or steps used to sell a product or a service to consumers for their personal or family use. The journey of the sale of a product begins with the producer from whom a middleman acquires supplies of goods or services and delivers to the ultimate consumer by performing different sets of activities. The job of retailing is done by the retailer who thus links the producers with a variety of supplies of all the manufacturers.

This research is conducted on various small traditional stores in Delhi/NCR. In this research the problems faced by traditional store have been highlighted. But during this research it has been found that traditional stores also have competitive edge over supermarket as they are having the timely need of credit of the customer, easy availability etc. It is accomplished that both small traditional stores and supermarkets are important to the Indian economy. If small traditional stores start using their competitive advantages to the best level, they can make their strong position in the retail market

The major factors which influence the consumer behavior towards shopping from Small traditional Store to Supermarket are rise in disposable income, Independent earning couple, changing lifestyles, **increasing worldwide exposure and growing awareness among the existing and potential customers and their shopping experience with value of their money.** In India we are having large number of middle and upper class consumers as well as youth population, whose contribution is large in retail sector. The middle class as well as lower middle and upper middle is considered to be a major prospective customer group. The youth of India are seen as early adopters and fashionable and quick judgmental in making purchase decision during shopping.



FDI POLICY WITH REGARD TO RETAILING IN INDIA

1. Foreign Direct Investment (FDI) is prohibited in retail trading, except in single-brand product retail trading, in which FDI, up to 100%, is permitted, under the Government route,
2. The Government of India has reviewed the extant policy on FDI and decided to permit FDI, up to 51%, under the Government route, in Multi-Brand Retail Trading,

SOURCE:- Government of India Ministry of Commerce & Industry Department of Industrial Policy & Promotion (FC-I Section) Press Note No.5 (2012 Series)

LITERATURE REVIEW

A study on the "impact of malls on small shops and hawkers in Mumbai" (Kalhan, 2007) unambiguously indicated that there has been a severe impact of malls on the unorganised retail shops operating in the vicinity of malls.

Joseph Mathew, Soundararajan Nirupama and Sahu Sanghamitra (2008) found in their study that small retailers in the nearby of organized retailers faced a decrease in sales and profit in the initial years after the presence of large organized supermarket retailers.

Mukherjee M. (2011) in his study examined the government policies of different countries including India regarding the unorganized and organized retail sector .It examines whether the government provides a tight legal framework along with economic support to the unorganized retailers to sustain in present competition. The study examined that in the environment of intense competition government of different countries have helped small as well as big domestic retail chains through formulating appropriate policies overtime.

Sharma (2011) in his research found that India is poised to be the key driver for retail market globally.

Chattopadhyay Atish, Dholakia Nikhilesh & Dholakia Ruby (2011) in their study found that even in market where there is modern retail outlets, consumers continue to shop from traditional stores.

Handa Vidhushi and Grover Navneet (2012) are of the view that there is a need of balanced approach to Retail and Government and has to play very vital role in shaping the future course. According to them Organised Sector becomes the growth mantra of retail sector.

M.Khadikar (2012) in his research attempted to determine the changing practices of retail trade like small grocery shop keepers, hypermarkets and customers in Kolhapur city."

RESEARCH METHODOLOGY**STATEMENT OF THE PROBLEM**

With the emergence of organized stores such as supermarkets, hypermarkets, the non organised sector small traditional stores and kirana stores are receiving a great set back. The permission of Government of India allowing FDI in retail sector, the small traditional shops shall see the giant player of retail such like Wal-Mart, Tesco as a potential threat. Now the question arise how small traditional stores can be saved from these big giants in the market so that small business person can earn their bread and butter. Under normal circumstances, the small traditional stores may not be able to withstand the pressure of competition from global players as the big fish has always eaten small fish. However, these vulnerable stores shall not run away rather these should see it as a challenge to improve.

OBJECTIVES OF THE RESEARCH

1. To find out the problems being faced by the unorganised retail sector in Delhi/NCR.
2. To find out the solutions for the betterment and growth of unorganised retail sector.
3. To find out ways to save small traditional stores from the Supermarkets.

DATA COLLECTION

Data has been collected through primary as well as secondary sources.

The primary data has been collected from field survey through questionnaire in Delhi/NCR.

Secondary information has been collected from the related and available literature including books, magazines, journals, and internet.

SAMPLE SIZE AND DESIGN

The study is based on traditional and small retails stores operating in national Capital Region. A sample size of 100 stores has been chosen and the opinion of general public has been gathered to understand the consumer preference towards traditional and supermarkets.

RESULTS AND DISCUSSION**TABLE 1: FACILITIES PROVIDED BY SMALL TRADITIONAL RETAIL STORES**

FACILITIES PROVIDED BY SMALL TRADITIONAL STORES	NO OF STORES PROVIDING THE FACILITY
Credit facility	80
Home delivery	20
Free gifts	20
After sales service	45

INFERENCES: - It shows that most of the small stores are running on the basis of credit system only. It is the strategic tool in the hands of shopkeepers. Only 45% of the shopkeepers provide after sale service. There is very less provision for free gifts and home delivery.

TABLE 2: FACTORS AFFECTING THE SALES LEVEL OF TRADITIONAL RETAIL STORES

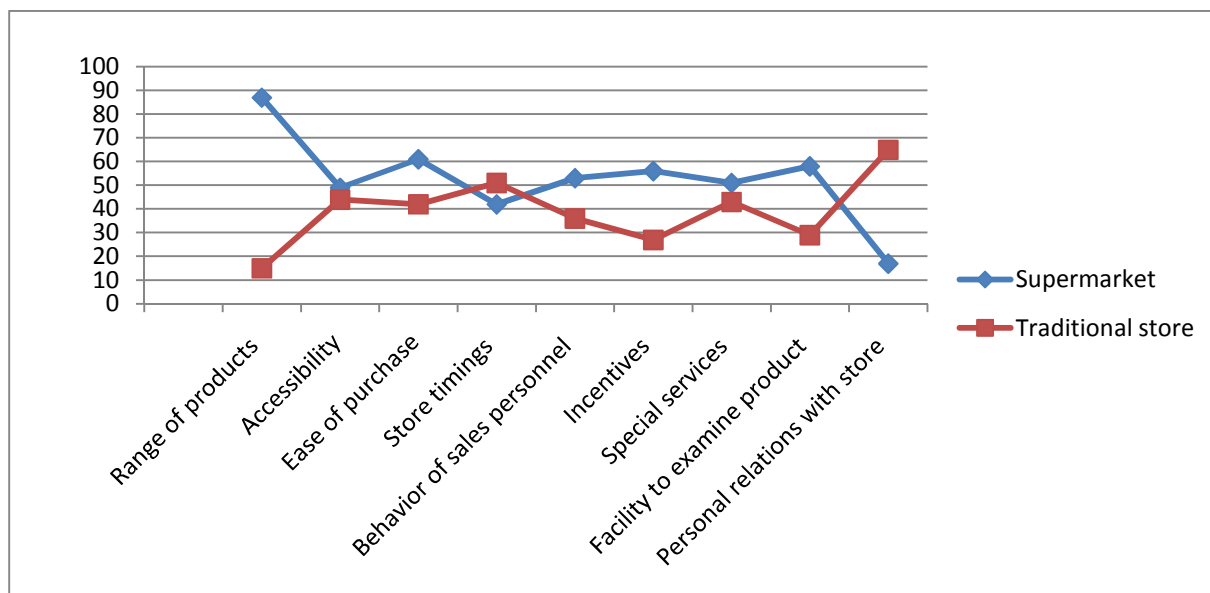
FACTOR AFFECTING SALES OF TRADITIONAL STORES	HIGHLY AFFECTED	MODERATELY AFFECTED	NO EFFECT
Opening up of the Supermarket	40	30	30
Government regulation	95	5	0
Recession	0	40	60
Fair price shops	50	20	30
Rapid changes in prices	67	12	21

INFERENCES: - Above table shows that only 40% respondents replied that supermarkets have adversely affected the sales of their stores. Government regulation and price change has 95% impact on the sales of traditional stores. Recession has affected the small traditional business to a low extent. 50% shopkeepers are affected by opening up of fair price shops.

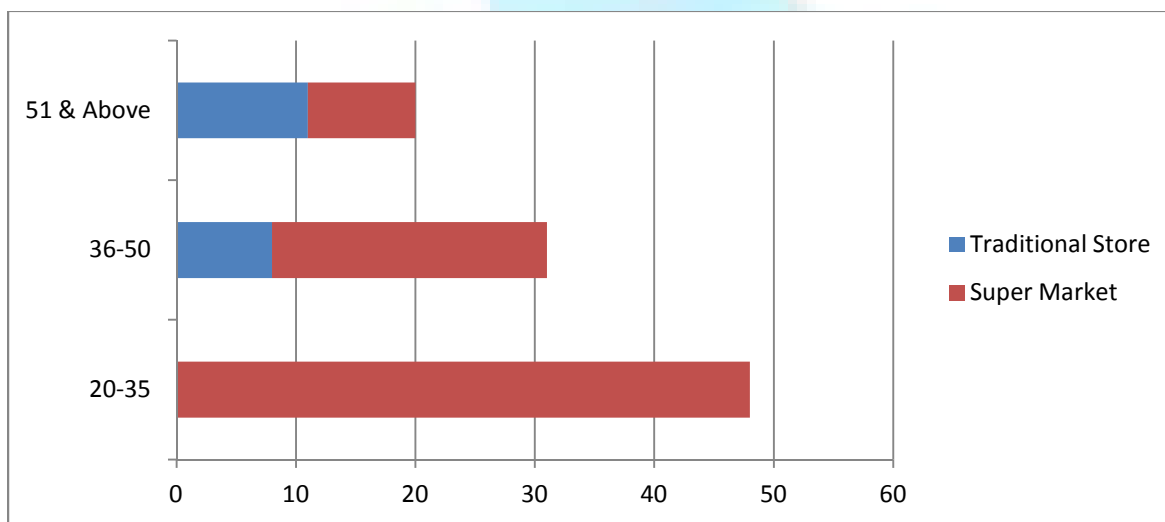
The traditional retails stores by dint of their small scale and magnitude are already confronted with many problems and the challenges put forth by the supermarkets shall still aggravate the situation for these stores. Study the following table:

TABLE 3: PROBLEMS FACED BY TRADITIONAL MERCHANTS

PROBLEMS OF TRADITIONAL MERCHANTS	ALWAYS	SOMETIMES	NEVER
Non timely payments	80	20	0
Inventory	50	30	20
Few loan facilities	70	30	0
Lack of knowledge of market	50	24	26



INFERENCES: -As far as the preference goes according to the parameters listed, the range of products has been a major factor that attracts customers, to the supermarkets. But as far as the accessibility goes, most of the supermarkets are not located as per the easy convenience of the customers. Hence, accessibility has been a limiting factor. Comparing the other factors of supermarkets with local small stores, only the store timings and personal relation with store keeper has been a limiting factor. Other factors score high as compared to traditional stores. Supermarkets have been the craze of younger generations and to some extent also of the adult generation but the older generation still continues to buy from traditional retail stores. The reason may be the lack of awareness of product range available in supermarkets on the part of old people or the psychological impression that the supermarkets may be charging higher prices given the high operating expenditures they incur as compared to small traditional stores. Study the following diagram:



INFERENCES: -This graph shows the co-relationship between age and the preference of small traditional stores or supermarkets. From the chart, it is seen that supermarkets are generally preferred by the younger generation between the age group of 20-35. Convenience traditional stores on the other hand are mostly preferred by people above the age of 50.

FINDINGS

Unorganised retail sector traditional shops exist everywhere and offer a wide range of varieties of products. They are having regular customers from nearby areas/locality as well as customers from far off areas. It has also been found out that traditional stores are not financially so strong and they adopt self-decide inventory system and product choice as per past sales of record. Traditional shop provide free home delivery to their customers, flexible timing 8 a.m. to 10 p.m. and even on Sunday, credit period ranging from 20 to 30 days and it can extend up to 60 days depending upon past record of worthiness of customers. But on the other hand it is having no proper system of debt recovery in place leading to sometimes bad debts. Traditional stores are not technologically oriented that they rarely accept the MasterCard or ATM. Etc. With the advent of modern retailing, traditional store are still existing and earning enough profit. In fact they have become more customers oriented and also provide augmented products. Customer preferences are shifting from traditional store to supermarket due to status symbol. It has also found that younger age group having high influence towards supermarkets due to several benefits as comparison to local stores.

SUGGESTIONS

1. Small traditional stores should modernize their stores with innovative methods of doing business. They should have some space for franchise of renowned brand to make customers loyal towards their store.
2. Government should take initiatives to conduct training programs for small stores so that they can groom and compete with organised retail sector such as Supermarket, shopping mall, and provide loan facilities to them.
3. Traditional store keeper should play an active role towards fulfillment of social responsibilities and be proactive in this direction so as to create image of his store in the minds of the people and thus make its presence felt.

4. Traditional stores shall concentrate more on ethical practices of business so that it creates a win-win situation for all the stake holders.

CONCLUSION

The Indian Retail sector operates in a unique and complex environment. Indian economy cannot deny the positive effects of FDI and self owned business for growth. It should take lesson from the recent global slowdown and should not forget the role of retail sector to save India from its drastic effects. The need of the hour is to reengineer the operations of Kirana stores otherwise the big giants will leave no space for them to grow. If the Kirana stores improve their functioning and the area of operation be specified by the government then there will be win-win situation for both the parties.

The concept of retail in Indian economy is primitive in Indian context. We had so many stores which are working well in India. In India we cannot deny the advantage of FDI as we need it for economic growth. Recently giant players like Wal-Mart or Reliance have entered in retail market and there is feeling that the traditional stores may be overshadowed.

India's organised and unorganised retail sectors can retain their own place in Indian market. It is also observed that organized retail market is flourishing due to changes in the consumer's behaviour and their increased income, changing lifestyle, and patterns of demography which are favorable for organised retail sector. It has been observed that consumers' preference for shopping has changed; and the customer is always searching for convenient market place where he/she could find desired things under one roof in organized retail market. While on the other hand the traditional stores in the unorganized sector are the shops where consumer feels convenient in shopping and develops store loyalty. Now-a-days many giant retail store are implementing CRM (customer relationship management) but still they are lacking the interaction with the customers as compared to unorganised sector. To conclude it can be said that the organised sector in retailing has to go a long way to understand the customer requirement. **"Small is beautiful. We often visit Supermarkets for shopping, but the small traditional stores are for the odd quantities in daily routine life. Like when you need a packet of salt or one soap."** Traditional stores shall provide best possible incentives to the customers and try to gain competitive advantage.

REFERENCES

1. Bajaj Chetan, "Retail Management", Oxford University Press (2008)
2. Berman Barry, Evans R Joel, "Retail Management: A Strategic Approach", edition 9th, Prentice Hall.
3. Franklin, A.W. (2001), "The impact of Wal-Mart's supercenter on supermarket concentration in U.S. metropolitan areas", *Agribusiness*, 17:105-114.
4. Goetz, S.J. and Swaminathan, J. (2006), "Wal-Mart and country-wide poverty" *Social Sciences Quarterly*, 87: 211-226.
5. Hollander, Stanley (1966), "Notes on the retail accordion", *Journal of Retailing*, Vol. 42, pp. 29-40.
6. Humphrey, John (2007), "The supermarket revolution in developing countries: tidal wave or tough competitive struggle?", *Journal of Economic Geography*, 7 (4), 433-450.
7. Michael levy and Barton A Weitz 2004, "Retailing Management", Tata McGraw-Hill Publishing Co Ltd, 5th edition, New Delhi
8. Paruchiri, Srikanth, Baum, Joel A.C. and Porter, David (2009) "The Wal-Mart Effect: Wave of Destruction or Creative Destruction?" *Economic Geography*, 85 (2), 209-236.
9. Reardon, Thomas and Berdegué, Julio A. (2002), "The Rapid Rise of Supermarkets in Latin America: Challenges and Opportunities for Development", *Development Policy Review*, 20 (4), 371-388.
10. Srivastava, R.K. (2008), "Changing retail scene in India", *International Journal of Retail & Distribution Management*, 36 (9), 714-721.
11. Traill, W. Bruce (2006), "The Rapid Rise of Supermarkets?" *Development Policy Review*, 24 (2), 163-174.

**A STUDY ON CUSTOMER SATISFACTION TOWARDS MARKETING STRATEGY OF BANKING LOANS
ADOPTED BY SCHEDULED COMMERCIAL BANKS WITH SPECIAL REFERENCE TO COIMBATORE DISTRICT**

**G. SANGEETHA
RESEARCH SCHOLAR
SNR INSTITUTE OF MANAGEMENT SCIENCES
SNR SONS COLLEGE
COIMBATORE**

**DR. R. UMARANI
ASSOCIATE PROFESSOR
SNR INSTITUTE OF MANAGEMENT SCIENCES
SNR SONS COLLEGE
COIMBATORE**

ABSTRACT

Marketing is a total system of business activities to plan, price, promote and distribute wanted and satisfying products to target markets to achieve organizational objectives. Marketing strategies of banking sector revealed that banks can base their marketing strategies on various parameters which are broadly in terms of 7P's of marketing viz. product, place, price, promotion, people, physical evidence and processes. Bank marketing is the aggregate function directed at providing service to satisfy customer's financial needs and wants, more effectively than the competition keeping in view the organizational objective. In this background of growing markets for financial services, increasing competition and improving level of financial awareness and sophistication by the end users, both personnel and corporate, the banks had to develop their marketing skill at least to maintain their marketing share and profitability levels. The changing face of banking industry has brought in new challenges and newer responsibilities to the bankers in India. They have to function with new vigour and vitality in the significantly competitive banking business. Any failure on their part in keeping the eternal vigil is fraught with disastrous and devastating consequences. There is no specific research study dealing with marketing of consumer loans by banks in Coimbatore district so far. The present study aims at not only to fill up the research gap but also to plan for evolving appropriate strategies for effective marketing of consumer loans by banks in the study area. And analysis has been made using SPSS package.

KEYWORDS

Marketing strategies, financial services, banking industry, consumer loans.

INTRODUCTION

For any business marketing is a "concept that of seeing the business through the eyes of customers and ensuring profitability through providing them with value satisfaction"¹. Marketing is also "a way of organizing the enterprise" Again the starting point for organizational design should be the customer and the decisions ensure that the production and delivery of services and products are in the most customer effective way. Marketing covers 'a range of activities' such as identification of customer needs, creation, production and delivery of products and services based on the identification needs, pricing of products, communication with the market etc and ensuring integration of all customer impinging activities for meeting the challenges from competitors.

"Bank marketing is the aggregate function directed at providing service to satisfy customer's financial needs and wants, more effectively than the competition keeping in view the organizational objective. The banking sector represents the most important financial sector not only in terms of turnover, profits and employment, but also on its paramount impact on the other spheres of the economy, it became inevitable to recognize marketing"². Efforts should be made to widen and deepen the process of information flow for the benefit and education of Indian customers. There is a need to educate the customers on bank products.

Finance is the life blood of any business and that has been provided by banks to most of the business firms. Bank spread in India leads to a chain of economic activities which further improves the overall economy of the country. India is relatively in a sanguine position with strong growth potential. The Indian Bank's Association has identified that there are 27 Public Sector Banks, 27 private sector banks and 33 foreign banks. The central bank of India has identified that there are 30 state cooperative banks, 95 regional rural banks and 55 urban cooperative banks, which fall outside the definition of the universe of commercial banks for our purposes.

In this background of growing markets for financial services, increasing competition and improving level of financial awareness and sophistication by the end users, both personnel and corporate, the banks had to develop their marketing skill at least to maintain their marketing share and profitability levels³. Banks have identified specific market segments to gain competitive advantage and are creative in positively differentiating their product offering and exploit the weakness of their bank competitors⁴. The consumer will buy the bank or service that provides the best service for him. The strategies must attract borrowers and users of services.

The concept of bank marketing has been generally viewed by various bank marketers "as that part of the management activity, which seeks to direct the flow of banking services profitability to selected customers" from a strategic managerial perspective "bank marketing is an integrated business activity directed as identifying, creating and servicing demand"⁵. Marketing activities must be integrated throughout the entire planning process and should permeate every facet of a bank's activities, from receiving deposits to corporate planning. Since the marketing focuses on the customers, the success of the bank is depended on its capacity to satisfy consumer wants and needs. A comprehensive explanation of bank marketing is given by Deryk Weyner of Barclay's Bank. According to him bank marketing is "identifying the most profitable markets now and in the future, assessing the present and future needs of customers, setting the business and promoting them to achieve the plans - all in the context of a changing environment in the market"⁶. Thus the adoption of marketing concept by banks recognizes that customer's needs are changing and banks must define these in explicit terms to satisfy them at a profit to the bank. Moreover banking has the special service of lending – one of its major products which is in a way leasing of money. Any renting or leasing operation needs very high control standards which do not so obviously apply when products are sold for cash at point of sale⁷.

Marketing is the way which a bank achieves prosperity. It requires the identification of market needs and their subsequent conversation into positive demand. Obviously, there is a time lag between identifying market requirements and satisfying them. This period is also the marketing planning period and involves accurately determines customer needs, setting objectives and deciding what action is required to achieve stated aims. In the case of financial services marketing plan is an administrative and management system to control future volume, growth, profits, costs and market share in accordance with pre-ordained and quantifiable objectives⁸. Without a clearly laid down system, a bank marketing effort will lack direction, co-ordination, purpose and ability to measure the success or failure of its efforts.

This study precisely aims at achieving those objectives and will help the banks to manage the competition effectively. Consumer finance has been acknowledged as a growth sector by banks. It has immense potential, with high profit margin and low default rate. Personal loans would soon cross Rs. 20,000 crores due to

the liberal policy of RBI. Consumer credit has many advantages for banks like changing higher rate of interest.. With better profit margins and very low default rate, the profitability of banks will significantly improve in the future.

Successful and effective banking marketing of bank products is a necessary condition. This condition can only be fulfilling only by attracting the more and more customers. Bank should make only policies which are helpful in fulfilling the needs of customers. Banking sector reforms have changed the traditional way of doing banking business. Mainly technology is the outcome of banking reforms. Customer is now the king and customer focus or satisfaction of customer is the main aim of the banks. With the introduction of new products and services competition has grown up among the banks. Only those banks will survive who face the competition with the effective ways of marketing.

LITERATURE REVIEW

Churchil et al (1982) defined customer satisfaction as an attitude which is assessed by the sum of the satisfaction towards the various attributes of the product or service. Chakravarthy Committee (1985) while commenting on the operational efficiency of banks they expressed their view that the concept of operational efficiency of commercial banks in India is associated with such diverse aspects of its operations as cost effectiveness, profitability, customer services, priority sector lending, mobilization of deposits and deployment of credit. Operational efficiency in banks has attained a wider connotation. The committee again observed that there is a need to introduce some element of price competition among banks.

Brahmanandam et al (1990) tried to find out the problems of customers in transacting with bank branches and to measure the extent of customer satisfaction with the service of banks. The study revealed that convenient location and suitable timings have played a dominant role in selecting a branch. Punctuality in opening and closing the branch was observed and at times work even extended beyond normal hours to clear off waiting customers.

Teas and Wong (1991) identified the important determinants of customer satisfaction in retail banking are the enabling features, related to convenience and accessibility, service easier or more comfortable for the customers, bank statements, communications, automatic teller machines (ATMs), range of services, banks internal and external layout and also the location of branches.

Kate Stewart (1998) concluded that the respondents view their dealings with the bank not just as a series of discrete transactions but as a relationship. Evidence for this lies in the exit process – the sort of issues considered, actions taken, emotions experienced and the influences on the process. Staffs and management target has its own role in some performance levels in relation to customer exit. Management of customer relationships has a pre-requisite of a marketing outline.

Manoj (2004) identified that the general needs of customers from banking are financial security, quick service, convenience, attractive yield, low cost loan, personalized service, advice/counseling, easy access, simple procedure, attractive package, friendly approach and variety of product. The different types of products available are deposits, loans and advances. The loan schemes are grouped on the mode of repayment, additional benefit and use of accumulated funds, calculation and payment of interest and need for liquidity, safety and growth.

METHODOLOGY

In the present study, the descriptive research design has been used. The descriptive research is marked by clear statement of the problem, specific hypothesis, detailed information needs, sample selection, data collection and processing and analysis of the collected data to get valid inferences in the form of findings. The present study deals with scrutinizing the characteristics of banks and the strategies followed by banks for marketing consumer loans, the borrowers perception on the services and service quality offered by the banks and the degree of correlation between the profile of the banks and the borrowers' expectations regarding consumer finance. Hence, the present study is purely descriptive in nature. The present study covers a period of five years, ie from 2007-2008 to 2011-2012. The area of study was selected to be the Coimbatore District. The present study is based on both primary and secondary data. In the Pilot study, Interview schedule were prepared to collect necessary primary data from the customers for various loans. These schedules were pre-tested to confirm their suitability to administer them for the final survey. For the study, 60 borrowers were randomly selected to pre-test the interview schedule and form the part of final sample for the study. The present study focuses on important dimension that is the consumers of the banks. The selections of the borrowers were done using a stratified random sampling technique. Finally 300 sample borrowers were identified randomly in proportion to the number of consumer loans disbursed by each of the chosen branch using lottery method. For the purpose of the comprehensive analysis of data, appropriate statistical techniques and tools were used based upon the nature of data and the relevance of the statistical technique. SPSS package was used to analyze the data using appropriate statistics to arrive at the results and to draw valid inferences.

1. One Way Analysis of Variance (ANOVA)
2. T-TEST

ANALYSIS

To analyse the objective whether there is any significant difference in the satisfaction level on various dimensions between male and female respondents.

Null Hypothesis: (H_0)

1) Male and female, 2) Married and unmarried and 3) Joint and nuclear family respondents give on an average same level of opinion on various marketing mix strategies adopted by the bank

Alternative Hypothesis: (H_1)

1) Male and female, 2) Married and unmarried and 3) Joint and nuclear family respondents do not give on an average same level of opinion on various marketing mix strategies adopted by the bank.

Level of Significance: 5%

TABLE - 1

DIMENSION	GROUP	MEAN	S.D	Z	DF	SIG	RESULT	LEVEL OF SATISFACTION
Overall satisfaction	Male	4.0226	0.60885	0.717	298	0.474	Accept	High
	Female	3.9760	0.51428					Above Average
Service provided	Male	59.0677	9.74384	-0.847	298	0.397	Accept	Above Average
	Female	59.9701	8.67376					Above Average
Rates charged	Male	33.2030	5.20745	-1.136	298	0.257	Accept	Above Average
	Female	33.9162	5.54762					Above Average
Methods adopted	Male	27.8722	5.02028	-1.042	298	0.298	Accept	Above Average
	Female	28.4431	4.45406					High
Support provided	Male	39.3910	7.79844	-1.313	298	0.190	Accept	Above Average
	Female	40.5329	7.21927					High
Publicity	Male	40.2256	5.47116	-0.611	298	0.542	Accept	High
	Female	40.6467	6.26818					High
Relationship	Male	39.9774	6.06339	0.146	298	0.884	Accept	Above Average
	Female	39.8743	6.06608					Above Average
Promotion offers	Male	16.6241	3.31800	0.353	298	0.724	Accept	Above Average
	Female	16.4850	3.44467					Above Average
Loan mela	Male	36.2030	4.08204	0.061	298	0.952	Accept	High
	Female	36.1737	4.24120					High
Online application	Male	31.0088	4.30427	-1.128	258	0.260	Accept	Above Average
	Female	31.5986	4.08247					Above Average
Repayment of loan	Male	37.6617	4.56085	1.062	298	0.289	Accept	Above Average
	Female	37.0539	5.19877					Above Average
Transparency in interest	Male	42.1654	4.94849	0.938	298	0.349	Accept	Above Average
	Female	41.6228	4.99833					Above Average
Charges for interest calculation	Male	38.5338	10.98039	0.366	298	0.715	Accept	High
	Female	38.1138	8.90405					High
Disbursement stage	Male	36.1880	4.95304	0.193	298	0.847	Accept	High
	Female	36.0778	4.88049					High
Privilege banking advantage	Male	11.6541	1.81761	-0.713	298	0.477	Accept	Above Average
	Female	11.7964	1.63375					Above Average

INFERENCE

Since the sig value is greater than the level of significance 0.05 the null hypothesis is accepted. On the basis of this it is concluded that male and female are satisfied with market mix strategies adopted by the bank. Thus we can conclude that on all marketing mix strategies adopted by the bank male and female give an average same level of opinion (the level of satisfaction is given in the table-1).

LEVEL OF SATISFACTION Vs. MARITAL STATUS OF RESPONDENTS

TABLE - 2

DIMENSION	GROUP	MEAN	S.D	Z	DF	SIG	RESULT	LEVEL OF SATISFACTION
Overall satisfaction	Married	3.9903	.59112	-0.293	298	0.770	Accept	Above Average
	Unmarried	4.0108	.47764					High
Service provided	Married	59.7005	9.32775	0.368	298	0.713	Accept	Above Average
	Unmarried	59.2796	8.81373					Above Average
Rates charged	Married	33.4928	5.22491	-0.512	298	0.609	Accept	Above Average
	Unmarried	33.8387	5.79972					Above Average
Methods adopted	Married	28.2415	4.75819	0.282	298	0.778	Accept	High
	Unmarried	28.0753	4.63736					High
Support provided	Married	39.8357	7.49058	-0.658	298	0.511	Accept	Above Average
	Unmarried	40.4516	7.51306					High
Publicity	Married	40.3913	5.36860	-0.299	298	0.765	Accept	High
	Unmarried	40.6129	7.02949					High
Relationship	Married	39.9372	5.98874	0.073	298	0.942	Accept	Above Average
	Unmarried	39.8817	6.23254					Above Average
Promotion offers	Married	16.3043	3.41884	-1.858	298	0.064	Accept	Above Average
	Unmarried	17.0860	3.25929					Above Average
Loan mela	Married	36.1159	3.94945	-0.438	298	0.662	Accept	High
	Unmarried	36.3441	4.62624					High
Online application	Married	31.4581	4.38488	0.663	258	0.508	Accept	Above Average
	Unmarried	31.0864	3.70877					Above Average
Repayment of loan	Married	37.2367	4.66520	-0.454	298	0.650	Accept	Above Average
	Unmarried	37.5161	5.48835					Above Average
Transparency in interest	Married	41.7101	4.77484	-0.795	298	0.427	Accept	Above Average
	Unmarried	42.2043	5.40644					Above Average
Charges for interest calculation	Married	37.9324	9.51112	-0.963	298	0.336	Accept	High
	Unmarried	39.1183	10.61362					High
Disbursement stage	Married	36.2512	4.75565	0.656	298	0.513	Accept	High
	Unmarried	35.8495	5.23771					Above Average
Privilege banking advantage	Married	11.7295	1.70215	-0.058	298	0.954	Accept	Above Average
	Unmarried	11.7419	1.75637					Above Average

INFERENCE

Since the sig value is greater than the level of significance 0.05 the null hypothesis is accepted. On the basis of this it is concluded that married and unmarried respondents are satisfied with market mix strategies adopted by the bank. Thus we can conclude that on all marketing mix strategies adopted by the bank married and unmarried respondents give an average same level of opinion (the level of satisfaction is given in the table-2).

LEVEL OF SATISFACTION VS NATURE OF FAMILY OF THE RESPONDENTS

TABLE - 3

DIMENSION	GROUP	MEAN	S.D	Z	DF	SIG	RESULT	LEVEL OF SATISFACTION
Overall satisfaction	Joint	3.9450	.59059	-1.214	298	.226	Accept	Above average
	Nuclear	4.0262	.53739					High
Service provided	Joint	59.6147	9.00299	.064	298	.949	Accept	Above average
	Nuclear	59.5445	9.27003					Above average
Rates charged	Joint	33.4954	5.47321	-.253	298	.801	Accept	Above average
	Nuclear	33.6597	5.37483					Above average
Methods adopted	Joint	27.9541	4.76947	-.654	298	.514	Accept	Above average
	Nuclear	28.3246	4.68922					High
Support provided	Joint	39.6422	7.38181	-.671	298	.503	Accept	Above average
	Nuclear	40.2461	7.56218					High
Publicity	Joint	39.9358	5.42504	-1.159	298	.247	Accept	Above average
	Nuclear	40.7592	6.18186					High
Relationship	Joint	39.5872	6.33072	-.719	298	.473	Accept	Above average
	Nuclear	40.1099	5.90035					High
Promotion offers	Joint	16.5872	3.54915	.156	298	.876	Accept	Above average
	Nuclear	16.5236	3.29565					Above average
Loan mela	Joint	36.0826	4.27336	-.327	298	.744	Accept	High
	Nuclear	36.2461	4.11124					High
Online application	Joint	31.1489	4.36742	-.560	258	.576	Accept	High
	Nuclear	31.4518	4.08331					High
Repayment of loan	Joint	37.1376	4.86763	-.493	298	.623	Accept	Above average
	Nuclear	37.4293	4.97086					Above average
Transparency in interest	Joint	41.7064	4.98015	-.412	298	.681	Accept	Above average
	Nuclear	41.9529	4.98343					Above average
Charges for interest calculation	Joint	38.3028	9.31795	.004	298	.997	Accept	High
	Nuclear	38.2984	10.18564					High
Disbursement stage	Joint	35.8073	4.97489	-.851	298	.395	Accept	Above average
	Nuclear	36.3089	4.86814					High
Privilege banking advantage	Joint	11.6789	1.69902	-.414	298	.679	Accept	Above average
	Nuclear	11.7644	1.72961					Above average

INFERENCE

Since the sig value is greater than the level of significance 0.05 the null hypothesis is accepted. On the basis of this it is concluded that joint and nuclear family respondents are satisfied with market mix strategies adopted by the bank. Thus we can conclude that on all marketing mix strategies adopted by the bank joint and nuclear family respondents give an average same level of opinion (the level of satisfaction is given in the table-3).

ANOVA

Since there are more than two groups in the case of age group, education qualification, occupation and respondents employed in, so to compare the groups on the basis of their mean values ANOVA technique is used.

Null Hypothesis: (H₀)

Respondents belonging to 1) various age groups, 2) occupation, 3) education level and 4) employed in respondents give on an average same level of opinion on various marketing mix strategies adopted by the bank

Alternative Hypothesis: (H₁)

Respondents belonging to 1) various age groups, 2) occupation, 3) education level and 4) employed in respondents do not give on an average same level of opinion on various marketing mix strategies adopted by the bank

Level of Significance: 5%

TABLE - 4

DIMENSION	GROUP	N	MEAN	S.D	F	SIG	RESULT
Overall satisfaction	< 30	107	4.0374	.56511	.508	.602	Accept
	30 – 50	100	3.9600	.60168			
	>50	93	3.9892	.49988			
Service provided	< 30	107	59.4206	9.03561	2.340	.098	Accept
	30 – 50	100	58.2900	9.63505			
	>50	93	61.1183	8.62737			
Rates charged	< 30	107	33.9252	5.52985	1.630	.198	Accept
	30 – 50	100	5.40238	.54024			
	>50	93	5.21335	.54060			
Methods adopted	< 30	107	4.74341	.45856	1.676	.189	Accept
	30 – 50	100	4.88836	.48884			
	>50	93	4.44692	.46112			
Support provided	< 30	107	7.36459	.71196	1.267	.283	Accept
	30 – 50	100	7.58720	.75872			
	>50	93	7.50775	.77852			
Publicity	< 30	107	40.4953	5.22038	.146	.864	Accept
	30 – 50	100	40.2200	7.09471			
	>50	93	40.6774	5.32051			
Relationship	< 30	107	39.5888	6.26604	.966	.382	Accept
	30 – 50	100	39.6000	6.23933			
	>50	93	40.6452	5.59045			
Promotion offers	< 30	107	17.1869	2.94647	3.972	.020	Reject
	30 – 50	100	16.5100	3.45387			
	>50	93	15.8495	3.66222			
Loan mela	< 30	107	36.4019	4.34559	2.028	.133	Accept
	30 – 50	100	35.5200	4.28170			
	>50	93	36.6559	3.75759			
Online application	< 30	99	31.0606	3.56233	1.828	.163	Accept
	30 – 50	80	30.9500	4.20638			
	>50	81	32.0741	4.77697			
Repayment of loan	< 30	107	37.6355	4.48560	.486	.616	Accept
	30 – 50	100	37.3400	5.66260			
	>50	93	36.9462	4.57870			
Transparency in interest	< 30	107	41.9346	5.01934	.029	.971	Accept
	30 – 50	100	41.7700	5.46033			
	>50	93	41.8817	4.39577			
Charges for interest calculation	< 30	107	39.1308	10.19627	.988	.374	Accept
	30 – 50	100	38.4500	10.69161			
	>50	93	37.1828	8.44412			
Disbursement stage	< 30	107	35.7944	5.09854	2.005	.137	Accept
	30 – 50	100	35.7000	5.31721			
	>50	93	36.9677	4.09520			
Privilege banking advantage	< 30	107	11.6916	1.80362	.204	.816	Accept
	30 – 50	100	11.6900	1.81851			
	>50	93	11.8280	1.50090			

INFERENCE

From the above table it is clear that the sig value is greater than the level of significance except the promotion offers, thus it can be concluded that null hypothesis is accepted except promotion offers. In order to find which group differs significantly from the other groups, Post-hoc test is used.

TABLE - 5

DIMENSION	GROUP	N	MEAN	S.D	F	SIG	RESULT
Overall satisfaction	Professional	36	3.972	.50631	.876	.479	Accept
	Private	47	3.872	.49418			
	Self	61	4.065	.54372			
	Administrative	33	4.030	.63663			
	Others	123	4.008	.57965			
Service provided	Professional	36	61.1667	7.73674	.502	.734	Accept
	Private	47	59.8723	8.58871			
	Self	61	59.8033	10.10251			
	Administrative	33	59.7576	9.39757			
	Others	123	58.8211	9.26569			
Rates charged	Professional	36	34.5278	4.56375	.577	.679	Accept
	Private	47	33.4468	6.04263			
	Self	61	33.5902	6.19510			
	Administrative	33	34.3030	5.76891			
	Others	123	33.2033	4.86028			
Methods adopted	Professional	36	29.5833	4.08044	1.298	.271	Accept
	Private	47	28.4894	4.32321			
	Self	61	28.3934	5.20025			
	Administrative	33	27.8182	4.80530			
	Others	123	27.6667	4.72639			
Support provided	Professional	36	41.2778	6.46578	.417	.796	Accept
	Private	47	39.8511	7.41907			
	Self	61	39.6066	7.48394			
	Administrative	33	40.7273	7.94226			
	Others	123	39.7480	7.73918			
Publicity	Professional	36	41.2778	4.60193	.356	.840	Accept
	Private	47	40.8511	8.51081			
	Self	61	39.9836	5.87223			
	Administrative	33	40.6061	5.00587			
	Others	123	40.2683	5.35015			
Relationship	Professional	36	40.8611	5.70290	1.054	.380	Accept
	Private	47	39.0000	6.28317			
	Self	61	39.0328	6.38218			
	Administrative	33	40.7879	5.72144			
	Others	123	40.2033	5.97942			
Promotion offers	Professional	36	17.5000	2.77231	2.470	.045	Reject
	Private	47	15.7872	3.94493			
	Self	61	15.7869	4.13568			
	Administrative	33	17.0303	3.58369			
	Others	123	16.8049	2.70294			
Loan mela	Professional	36	36.0833	3.74452	.315	.868	Accept
	Private	47	36.0213	4.55159			
	Self	61	35.9180	4.58365			
	Administrative	33	36.8788	4.39998			
	Others	123	36.2276	3.88316			
Online application	Professional	30	31.2667	3.70399	.119	.976	Accept
	Private	37	31.4595	4.79348			
	Self	56	31.6429	4.99974			
	Administrative	26	31.1538	2.96233			
	Others	111	31.2162	3.93448			
Repayment of loan	Professional	36	38.4722	3.85069	2.873	.023	Reject
	Private	47	35.5957	5.93684			
	Self	61	36.5574	5.20424			
	Administrative	33	37.7576	5.08079			
	Others	123	37.9106	4.43165			
Transparency in interest	Professional	36	41.9722	5.10174	.856	.491	Accept
	Private	47	41.1915	4.78966			
	Self	61	41.2787	5.07323			
	Administrative	33	41.6364	4.86581			
	Others	123	42.4390	4.99860			
Charges for interest calculation	Professional	36	37.0278	6.24493	.752	.558	Accept
	Private	47	36.6809	6.14006			
	Self	61	38.1475	11.44820			
	Administrative	33	39.0606	11.90047			
	Others	123	39.1626	10.44139			
Disbursement stage	Professional	36	36.2222	4.47285	.037	.997	Accept
	Private	47	36.0426	4.90766			
	Self	61	36.0984	5.38116			
	Administrative	33	35.8788	4.36433			
	Others	123	36.2114	4.98728			
Privilege banking advantage	Professional	36	12.3611	1.43731	1.749	.139	Accept
	Private	47	11.8511	1.51770			
	Self	61	11.6885	1.80315			
	Administrative	33	11.3939	1.81899			
	Others	123	11.6179	1.76728			

INFERENCE

From the above table it is clear that the sig value is greater than the level of significance except promotional offers and repayment of interest. Thus it can be concluded that null hypothesis is accepted except in all the other cases. In order to find which group differs significantly from the other groups, Post-hoc test is used.

DISCUSSIONS

From the analysis it is studied that both male and female are satisfied with the marketing mix strategies and give an average same level of opinion on satisfaction. It can be concluded that both married and unmarried respondents are satisfied with the various marketing mix strategies and also they give an average same level of opinion on satisfaction. Nature of family does not affect the satisfaction level where all the respondents are satisfied with the marketing mix strategies. Among various age groups the respondents give same level of opinion on marketing mix strategies except promotional offers provided by the banks.

It is found that respondents belonging to <30 years age group express higher level of satisfaction on promotional offers than respondents belonging to >50 years age group, where in respondents under other age groups do not show significant difference. It is identified that respondents under education qualification give same level of opinion on marketing mix strategies except few dimensions. Table reveals that respondents with school level qualification are highly satisfied than respondents with UG qualification in the case of service provided and methods adopted.

Table reveals that respondents with school level qualification are highly satisfied than respondents with UG and PG qualification in the case of rates charged, relationship and online application. Respondents with school level qualification are highly satisfied than respondents with UG, PG and professional qualification in the case of loan mela and disbursement stage. Respondents with UG and professional qualification are highly satisfied than respondents with PG qualification in the case of promotional offers. The study reveals that respondents with School and UG qualification are highly satisfied than respondents with PG qualification in the case of repayment of loan. Respondents with School level qualification are highly satisfied than respondents with PG qualification in the case of transparency in interest calculation. It is clear that there is no meaningful difference to compare among other levels. It is found that respondents under various occupational categories give same level of opinion on marketing mix strategies except promotion offers and repayment of loan.

Table reveals that considering various occupational categories the difference is not significant in the case of promotion offers. The study reveals that respondents under other category are highly satisfied than respondents under private occupational category. There is no meaningful difference among other levels. It can be studied that in the case of respondents employed in respondents give same level of opinion on marketing mix strategies except few dimensions.

The respondents those who are employed in agriculture are highly satisfied than respondents employed in private, self-employed and other categories in the case of relationship, loan mela and disbursement stage and are highly satisfied than respondents employed in private and those self-employed in the case of online application of loan. Table reveals that the respondents those who are employed in agriculture and other categories are highly satisfied than respondents under self-employment category in the case of repayment of loan amount. Considering various employment categories the difference is not significant in the case of charges of interest calculation. There is no meaningful difference to compare among other levels.

SUGGESTIONS

Considering the above findings few suggestions are being given below:

1. Banks have to concentrate on the promotional offers that they provide to the customers. Familiar and attractive offers would help the banks to attract the customers.
2. More services have to be rendered to the customers considering their requirements like giving adequate details, maintaining good relation, being transparent in dealings, guiding at each stage of availing loans.
3. Common and reasonable charges have to be charged to all level of customers.
4. Methods adopted in applying loan should be made easy and quick.
5. Loan mela should be arranged frequently so that customers get the information about the loan facilities up to date.
6. Awareness has to be created among the customers regarding the facilities and advantages available in the online application of loan.
7. Banks has to liberalize the standards fixed in the repayment of the availed loan.
8. Procedures has to be taken to provide with transparent dealings and methods adopted in calculation of interest.
9. Utmost care has to be taken by the bankers at the stage of disbursement of loan to the customers. Proper relationship has to be maintained between the bankers and the customers.

CONCLUSION

Thus to conclude with the bankers has to maintain good relationship with the customers by being polite, providing all valid details, guiding them in availing loans, suggesting good schemes available in the bank, charging reasonable interest rates, charging reasonable charges for various services provided, educating the customers about various schemes, guiding customers at each stage and so on in order to retain existing customers and attract new customers to their banking services.

REFERENCES

1. Arther Meidan, Bank Marketing Management, Mac Millian - London 1984, P. 1
2. Book, Prentice - Hall, New Jersey. 1956. p.1
3. Cass Bettinger, Developing Marketing strategy, The Bankers Magazine. VOL. 173.NO.1, 1987. p64-71.
4. Deryk Weyner, Marketing in Banking, Lecture delivered in the Institute of Banks, London, 1969.
5. Deryk Weyner, Quoted by Neylor and Mc Iver, Marketing Financial services by Banks, p.5
6. Eric R. Reidenbach, Robert E. Pitts, Bank Marketing - A guide to strategic planning, Reston
7. John Marsh, Managing Financial Services Marketing, Pitman, London 1988. p. 3
8. John Marsh, op.cit. pp 183-1 84
9. Patrick Forsyth, Marketing Professional Services Hand Book, Pitman 1992. U.K., p. 1

KNOWLEDGE CAPTURE SYSTEMS IN SOFTWARE MAINTENANCE PROJECTS

SARFARAZ NAWAZ
SR. ASST. PROFESSOR
VIT BUSINESS SCHOOL
VIT UNIVERSITY
VELLORE

ABSTRACT

Knowledge Management has emerged as a very promising area to assist the software maintenance practice. It is an activity that requires lots of knowledge. For example, maintainers must know what changes should do to the software, where to do those changes and how those changes can affect other modules of the system. This knowledge is difficult and costly to gather and usually stays on the minds of the person who worked in a particular project. Availability of tools to capture and document this knowledge is also sparse. In this paper a system that would facilitate maintainers to have a peek on the minds of the maintainers is presented by leveraging on the existing knowledge, capture tacit as well as explicit knowledge while easing out the task of navigating through the various other utilities in the project is presented.

KEYWORDS

Knowledge Management, software maintenance, knowledge, capture, tool, tacit, explicit knowledge, project.

1. INTRODUCTION

To maintain legacy software systems, software engineers need knowledge on many different domains: application domain, system's architecture, particular algorithms used, past and new requirements, programming language, development environment, etc. One could argue that software development suffers from the same knowledge needs, however these needs are more difficult to fulfill during maintenance. It is not uncommon in software maintenance to have a very vague knowledge of what were the exact requirements for the system, whereas during software development, one is expected to have access to the requirements relatively easily.

The constant quest for knowledge is one of the prominent problems of software maintenance and should be dealt with accordingly for example, using knowledge management methods. Adopting a knowledge management point of view on software maintenance could bring in a new light on the problem and may help improve the conditions in which it is performed. In this paper, presented are some experiments performed on software maintenance projects in the industry to capture the knowledge gained during the maintenance.

KNOWLEDGE MANAGEMENT (KM)

Knowledge management is crucial in software Maintenance organizations to provide an environment to create and share knowledge. SMT environment is complex, knowledge-driven and highly collaborative. Issue such as inadequacy of knowledge is still regarded as a major challenge in SMT.

Knowledge management efforts typically focus on objectives such as enhanced performance, competency, innovation, making known the lessons learned to all, integration and continuous improvement of the organization. KM efforts foster sharing of knowledge. It is seen as an enabler of organizational learning.

SOFTWARE MAINTENANCE

Software maintenance (SMT) consumes a large part of the overall lifecycle costs. The incapacity to change software quickly and reliably causes organizations to lose business opportunities. Thus, in recent years we have seen an increase in research directed towards addressing these issues. On the other hand, software maintenance is a knowledge intensive activity. This knowledge comes not only from the expertise of the professionals involved in the process, but it is also intrinsic to the product being maintained, and to the reasons that motivate the maintenance (new requirements, user complaints, etc.) processes, methodologies and tools used in the organization. Moreover, the diverse types of knowledge are produced in different stage of the Maintenance process. During the software maintenance activities different people intervene. Each person has partial information that is necessary to other members of the group. If the knowledge only exists in the software engineers and there is no system in charge of transferring the tacit knowledge (contained in the employees) to explicit knowledge (stored on paper, files, etc) when an employee leaves the organization a significant part of the intellectual knowledge goes with him/her. Another well-known issue that complicates the Maintenance process is the scarce documentation that exists related to a specific software system, or even if detailed documentation was produced when the original system was developed, it is seldom updated as the system evolves. For example, legacy software written by other units often has little or no documentation describing the features of the software.

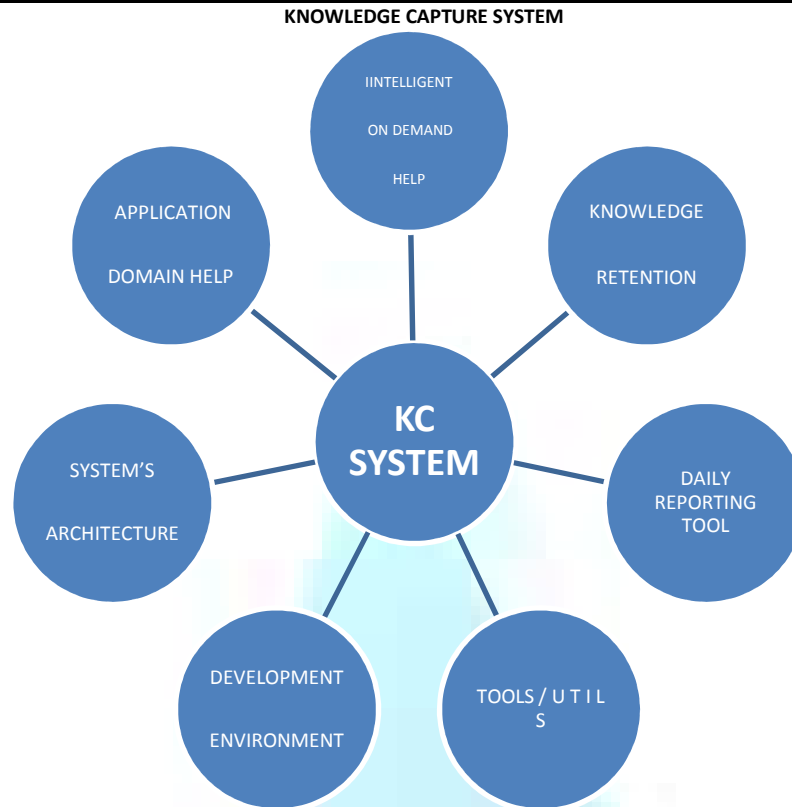
KNOWLEDGE CAPTURE SYSTEM IN SOFTWARE MAINTENANCE

Using a KM system the diverse kinds of knowledge generated may be stored and shared. Moreover, new knowledge can be captured, obtaining the maximum benefit from the current information. By reusing information and producing relevant knowledge the high costs associated with software maintenance could also be decreased.

It should serve to be a one shop for all purposes within the project, be it traversing the extensive existent knowledge available, the application domain, shared vision, since they are brought to the same page and misunderstanding in staff communications may be avoided

With all the sources of knowledge located and traversing in different repositories via different tools, keeping track of information useful for both users and maintainers could be a nightmare. One of the main goal of a Knowledge Capture (KC) system is to automate, as much as possible, the tasks of acquiring, disseminating and storing of knowledge. The system aims to integrate the following systems

1. Application Domain
2. Development Environment
3. Tools and Utilities
4. Knowledge Retention
5. On Demand Help
6. Development Environment
7. Daily Reporting tool



OBJECTIVES OF THE STUDY

1. To provide an insight into the necessity of knowledge management in software maintenance projects.
2. To recognize the need for a knowledge capture system in such projects.

REVIEW OF LITERATURE

There are various propositions of mental models to describe how software engineers go about doing maintenance [Rugaber and Tisdale 1992], [von Mayrhauser and Vans 1994]. They offer little interest since they concentrate on the process of doing maintenance rather than on the knowledge used

In [Ramal et al. 2002], one of us started to study the knowledge used during software maintenance. This earlier work contained a very crude identification of various knowledge domains connected with this activity. The domains identified were: Computer Science Domain, Application Domain and General Domain (common sense knowledge). The current research is a follow-up on the preceding paper and describes the result of our efforts to formally and completely identify the knowledge useful during software maintenance

Deridder 2002, proposes to help maintenance using a tool that would keep explicit knowledge about the application domain (in the form of concepts and relations between them) and would keep links between these concepts and their implementation. He follows a trend of thought very similar to ours, but concentrates exclusively on application domain knowledge whereas we identified four other sub-ontologies that had useful concepts in them. Also, he concentrates on how to acquire and use this knowledge rather than extensively identify it (which would actually depend on every single application domain).

Aurora Vizcaíno(2007) describes a system to manage the information (and knowledge) generated during the software maintenance process which consumes a large part of the software.

Kitchenham et al. in [Kitchenham et al. 1999] designed an ontology of software maintenance. In this ontology, they identified all the concepts relevant to the classification of empirical studies in software maintenance, these concepts are classified along four main axes: the People, the Process, the Product, and the Organization. These four axes correspond respectively to our Skills, Modification, System, and Organizational Structure sub-ontologies. This was one of the most inspiring work for us and we reused many of its concepts, however due to the particular focus they had when identifying these concepts (providing a framework to help categorize empirical studies on software maintenance), we felt that many concepts were either over or under detailed. The most striking evidence of this is the idea of application domain which we developed as a sub-ontology, whereas it is only included in Kitchenham's work as an attribute of the software system lifecycle costs.

Mohd Zali Mohd Nor(2010) KM is envisaged to contribute to the organizations in the following manners (KPMG, 2003):

- Bring synergies among different teams, units or departments
- Accelerate innovation and boosting revenues for market development.
- Improve quality in operational and functional processes
- Reduce costs and exposure to business risks.

Becerra-Fernandez, et al – Knowledge Management 1/e -- © 2007 Prentice Hall. Knowledge capture systems support process of eliciting explicit or tacit knowledge from people, artifacts, or organizational entities.

Knowledge Capture and Collaboration Systems , An Automae White Paper

Lindval et al. (2003) and Lawton (2001) elaborate the above various tools, and group the tools into document and content management, collaboration services, data and knowledge discovery, expert networks, expertise/competence management .

A common perception of maintenance is that it merely involves fixing defects. However, one study indicated that the majority, over 80%, of the maintenance effort is used for non-corrective actions (Pigosky 1997).

NISSINK, F. AND VAN VLIET, H. 2000. Software maintenance from a service perspective. *Journal of Software Maintenance and Evolution : Research and Practice* 12, 103-120.

Software maintenance and evolution of systems was first addressed by Meir M. Lehman in 1969. Over a period of twenty years, his research led to the formulation of Lehman's Laws (Lehman 1997)

RESEARCH GAPS

As for suggestions for further research the review of the literature brought forward an issue that calls for attention. The absence of a system that would integrate all modules of a maintenance project with the knowledge capture system is brought to the fore.

Another gap that was evident is in the fact that tools and utilities considered are disparate and it allows future research to explore the possibility of having them integrated.

CONCLUSION

Software Maintenance is a knowledge intensive activity and need to go a long way to make sure that this knowledge is trapped and could be put to good use. Software maintainers need knowledge of the application domain of a legacy software. All this knowledge may come from diverse source experience of the maintainers, knowledge of users, documentation, source code, Most of the time however, the knowledge once acquired stays in someone's head as opposed to be formally documented for later retrieval and reuse. When a maintainer leaves the organization, all the knowledge he/she gathered on the various systems he/she worked on, should not be lost for this organization. The presence of a knowledge capture system to assist in knowledge capture, retention of the knowledge and also to provide the maintainer with the necessary information at the right time is recognized here.

REFERENCES

1. Alavi, Maryam; Leidner, Dorothy E. (1999). "Knowledge management systems: issues, challenges, and benefits". *Communications of the AIS* 1 (2). <http://portal.acm.org/citation.cfm?id=374117>.
2. Alavi, Maryam; Leidner, Dorothy E. (2001). "Review: Knowledge Management and Knowledge Management Systems: Conceptual Foundations and Research Issues". *MIS Quarterly* 25 (1): 107–136
3. Barbara A. Kitchenham, Towards an Ontology of Software Maintenance. *Journal of Software Maintenance: Research and Practice*, 11:365–389, 1999.
4. Chandra and Ramamoorthy 1996] Chandra, C., Ramamurthy, C. V.: "An Evaluation of Knowledge Engineering Approaches to the Maintenance of Evolutionary Software"; *Proc. 8th Software Engineering An Knowledge Engineering Conference, Nevada, USA*, p.181-188, Jun . 1996.
5. Clayton et al. 1998] Clayton R., Rugaber S., Wills L: "On the Knowledge Required to Understand a Program"; *Proc. Working Conference on Reverse Engineering*, p. 69-78, Oct. 1998.
6. Deridder 2002] Deridder, D.: "Facilitating Software Maintenance and Reuse Activities with a Concept-oriented Approach"; *Programming Technology Lab, Vrije Universiteit Brussel, Brussels, Belgium*, 2002.
7. Domingue 1998] Domingue, J.: "Tadzebao and WebOnto: Discussing, Browsing, and Editing Ontologies on the Web"; *11th Knowledge Acquisition for Knowledge-Based Systems Workshop, Banff, Canada*, Apr. 1998
8. Lionel C. Briand. A Change Analysis Process to Characterize Software Maintenance Projects. In *International Conference on Software Maintenance/ICSM'94*, pages 1–12, 1994.
9. M. D. Storey, "On the use of visualization to support awareness of human activities in software development: a survey and a framework," in *Proceedings of the 2005 ACM symposium on Software visualization*. St. Louis, Missouri: ACM, 2005, pp. 193-202
10. Miguel Jiménez ,Challenges and improvements in distributed software development: a systematic review, *Advances in Software Engineering*, 2009, p.1-16, January 2009
11. Nicolas Anquetil a, (2006) , Software maintenance seen as a knowledge management issue, *Information And Software Technology*, Elsevier. 49 (2007) 515–529
12. O. N. Robillard, "The Role of Knowledge in Software Development", *Communications of the ACM*, 42(1), pp. 87-92, 1999.
13. P. N. Robillard, "The role of knowledge in software development," *Commun. ACM*, vol. 42, no. 1, pp. 87-92, 1999.
14. Pigoski 1996] Pigoski, T. M.: "Practical software maintenance: best practices for managing your software investment"; John Wiley & Sons. P.87-102, Dec. 1996.
15. Pigoski 2001] Pigoski, T. M.: "Software maintenance"; In: *Guide To The Software Engineering Body Of Knowledge*; Los Alamitos, CA: IEEE Computer Society Press. Trial Version 1.00, May, 2001.
16. Pressman 2001] Pressman, R. S.: "Software Engineering"; 5th Edition, p.225-241, McGraw Hill, 2001.
17. Ramal et al. 2002] Ramal, M. F., Meneses, R., Anquetil, N.: "A Disturbing Result on the Knowledge Used During Software Maintenance"; *Proc. Working Conference on Reverse Engineering, Richmond*, p. 277-287, Oct-Nov. 2002.
18. Rugaber and Tisdale 1992] Rugaber, S., Tisdale, V. G.: "Software Psychology Requirements for Software Maintenance Activities"; *Software Engineering Research Center, Georgia Institute of Technology*, 1992.

SELF-MANAGING COMPUTING**K. M. PARTHIBAN****HEAD****DEPARTMENT OF INFORMATION TECHNOLOGY
SASURIE ACADEMY OF ENGINEERING
COIMBATORE****M. UDHAYAMOORTHY****ASST. PROFESSOR****DEPARTMENT OF INFORMATION TECHNOLOGY
SASURIE ACADEMY OF ENGINEERING
COIMBATORE****A. SANTHOSH KUMAR****STUDENT****DEPARTMENT OF INFORMATION TECHNOLOGY
SASURIE ACADEMY OF ENGINEERING
COIMBATORE****KONSAM CHANU BARSANI****STUDENT****DEPARTMENT OF INFORMATION TECHNOLOGY
SASURIE ACADEMY OF ENGINEERING
COIMBATORE****ABSTRACT**

The increasing scale complexity, heterogeneity and dynamism of networks, systems and applications have made our computational and information infrastructure brittle, unmanageable and insecure. Most software is fragile: even the slightest error, such as changing a single bit, can make it crash. Complexity is increasing rapidly as a result of two factors: the increasing use of distributed systems and the increasing scale of these systems as a result of the addition of many new computers to the Internet. To manage this new complexity, we propose an approach based on self-managing systems. The goal of autonomic computing is to realize computer and software systems and applications that can manage themselves in accordance with high-level guidance from humans. This paper motivates about its principles, challenges and related discussions about autonomic computing with hackers.

KEYWORDS

heterogeneity, dynamism, unmanageable, complexity, managing, hackers.

1. INTRODUCTION

Self managing computing helps to address the complexity issues by using technology to manage technology. The idea is not new many of the major players in the industry have developed and delivered products based on this concept. Self managing computing is also known as autonomic computing.

Autonomic Computing is an initiative started by IBM in 2001. Autonomic computing refers to the self-managing characteristics of distributed computing resources, adapting to unpredictable changes while hiding intrinsic complexity to operators and users. The term autonomic is derived from the autonomic nervous system of the human biology. The autonomic nervous system monitors the heartbeat, checks the blood sugar level and keeps the body temperature close to 98.6°F, without one's conscious awareness. In much the same way, self managing computing components anticipate computer system needs and resolve problems with minimal human intervention.

Self managing computing systems have the ability to manage themselves and dynamically adapt to change in accordance with business policies and objectives. Self managing systems handle more and more tasks on their own, without the need for intervention on the part of the IT staff. It can perform management activities based on situations they observe or sense in the IT environment. Rather than IT professionals initiating management activities, the system observes something about itself and acts accordingly. This allows the IT professional to focus on high-value tasks while the technology manages the more mundane operations. Self managing computing can result in a significant improvement in system management efficiency, when the disparate technologies that manage the environment work together to deliver performance results system wide.

2. OBJECTIVES OF THE STUDY

The goal of autonomic computing is to create systems that run themselves, capable of high-level functioning while keeping the system's complexity invisible to the user.

To create autonomic systems researchers must address key challenges with varying levels of complexity.

Self-managing systems can perform management activities based on situations they observe or sense in the IT environment. Rather than IT professionals initiating management activities, the system observes something about itself and acts accordingly.

3. AUTONOMIC COMPUTING

Self-Management is the process by which computer systems shall manage their own operation without human intervention.

The increasing heterogeneity of big corporate computer systems, the inclusion of mobile computing devices, and the combination of different networking technologies like WLAN, cellular phone networks, and mobile ad hoc networks make the conventional, manual management very difficult, time-consuming, and error-prone.

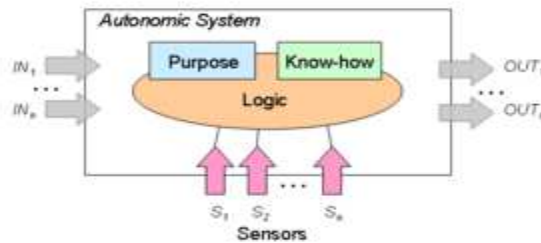
An autonomic system makes decisions on its own, using high-level policies; it will constantly check and optimize its status and automatically adapt itself to changing conditions. An autonomic computing framework is composed of Autonomic Components (AC) interacting with each other.

Driven by such vision, a variety of architectural frameworks based on “self-regulating” autonomic components has been recently proposed. A very similar trend has recently characterized significant research in the area of multi-agent systems.

Autonomy-oriented computation is a paradigm proposed in 2001 that uses artificial systems imitating social animals' collective behaviors to solve difficult computational problems. For example, ant colony optimization could be studied in this paradigm.

4. CONCEPTUAL MODEL

FIG. 1: CONCEPTUAL MODEL



A fundamental building block of an autonomic system is the sensing capability (*Sensors S_i*), which enables the system to observe its external operational context. Inherent to an autonomic system is the knowledge of the *Purpose* (intention) and the *Know-how* to operate itself (e.g., bootstrapping, configuration knowledge, interpretation of sensory data, etc.) without external intervention. The actual operation of the autonomic system is dictated by the *Logic*, which is responsible for making the right decisions to serve its *Purpose*, and influence by the observation of the operational context (based on the sensor input).

This model highlights the fact that the operation of an autonomic system is purpose-driven. This includes its mission (e.g., the service it is supposed to offer), the policies (e.g., that define the basic behavior), and the “survival instinct”. If seen as a control system this would be encoded as a feedback error function or in a heuristically assisted system as an algorithm combined with set of heuristics bounding its operational space.

5. LEVELS OF AUTONOMY MATURITY

Products, systems, and IT environments can be classified in the following five levels of maturity that show how a business is evolving its use of autonomic capabilities and supporting processes and skills:

- Level 1-Basic:* At the basic level, IT professionals manage each infrastructure element independently and set it up, monitor it, and eventually replace it.
- Level 2-Managed:* At the managed level, systems management technologies can be used to collect information from disparate systems onto fewer consoles, helping to reduce the time it takes to collect and synthesize information.
- Level 3-Predictive:* At the predictive level, analysis capabilities are introduced in the system to monitor situations that arise in the environment, and analyze the situations to provide possible courses of actions. The IT professional makes a determination on what course of action to take.
- Level 4-Adaptive:* At the adaptive level, the IT environment can automatically take actions based on the available information and the knowledge of what is happening in the environment. As analysis and algorithmic technologies improve and as people become more comfortable with the advice and predictive power of such technologies, systems can progress to the adaptive level.
- Level 5-Autonomic:* At the autonomic level, business policies and objectives govern the IT infrastructure operation. IT professionals interact with the autonomic technology tools to monitor business processes, alter the objectives, or both.

6. AUTONOMY COMPUTING REFERENCE ARCHITECTURE

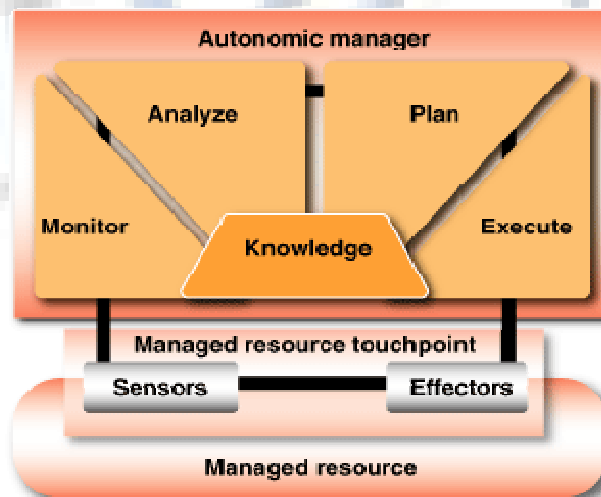
The autonomic concepts presented in this section form the basis for a common approach and the base set of terminology needed in architecting autonomic computing systems in a heterogeneous environment.

Control loop

The autonomic computing reference architecture starts from the premise that implementing self-managing attributes involves an intelligent control loop. This loop collects information from the system, makes decisions and then adjusts the system as necessary. An intelligent control loop can enable the system to have the self-configuring, self-healing, self-optimizing, and self-protecting attributes described before.

The architecture describes three types of system components, autonomic managers, managed resources, and managed resource touch points. An autonomic manager is a component that implements a particular control loop. A touch point is a component that delivers access to the managed resource. A managed resource is what the autonomic manager is controlling. Figure 1 illustrates the relationship between the different components.

FIG. 2: AUTONOMY COMPUTING REFERENCE ARCHITECTURE



Autonomic manager: The autonomic manager is a component that implements the control loop.

The architecture splits the loop into four parts that share knowledge. They are:

- *Monitor*-provides the mechanisms that collect, aggregate, filter, manage, and report details collected from a managed resource.
- *Analyze*-provides the mechanisms to correlate and model complex situations that allow the autonomic manager to learn about the IT environment and help predict future situations.
- *Plan*-provides the mechanisms that construct the action needed to achieve goals and objectives.
- *Execute*-provides mechanisms that control the execution of a plan with considerations for dynamic updates.

The four parts work together to provide the control loop functionality. They consume and generate knowledge. The knowledge is continuously shared among the four parts, leading to more informed decisions being made by the parts. Figure 1 shows a structural arrangement of the parts, not a control flow. The bold line that connects the four parts should be thought of as a common messaging bus rather than a strict control flow.

Managed resource: The managed resource is a controlled system component. There can be a single managed resource (a server, database server, or router) or a collection of resources.

An autonomic manager communicates with a managed resource through the manageability interface. A touch point is the implementation of the manageability interface by a specific managed resource. For example, a database server might implement a touch point for communicating with an autonomic manager.

Managed Resource Touch point: The touch point, one of the three main elements of the autonomic computing architecture, delivers the manageability interface to the autonomic manager.

In the simplest terms, sensor operations are typically used to transmit events or properties to an autonomic manager, whereas effector operations are typically used to cause some sort of change in a managed resource, such as altering state data or setting property values.

Sensor and effector operations each can have two interaction styles:

- Sensor retrieve-state
- Sensor receive-notification
- Effector perform-operation
- Effectors call-out-request

In both the sensor retrieve-state interaction style and the effectors perform-operation interaction style, the autonomic manager makes first contact. In the sensor receive-notification and effectors call-out-request interaction styles, it is the managed resource that makes contact first.

The combination of sensor and effectors operations forms the manageability interface that is available to an autonomic manager. For example, a configuration change that occurs through effectors should be reflected as a configuration change notification through the sensor interface.

7. SYSTEM OVERVIEW

Currently, the most important industrial initiative towards realizing self-management is the Autonomic Computing Initiative (ACI) started by IBM in 2001. The ACI defines the following four functional areas:

FIG. 3: SPECTRUM OF SELFMANAGING COMPUTING



1. Self-configuring

Software tools, disciplines, and automatic with or without manual intervention can be applied to help for a self-configuring process:

- Z/OS Wizards are Web-based dialogs that assist in z/OS customization.
- Capacity upgrade CPU provides instant access to additional processors or servers, memory, I/O.
- Customer-initiated upgrade.
- Automatic hardware detection/configuration.
- Automatic communication configuration.

When hardware and software systems have the ability to define themselves "on-the fly," they are self-configuring. This aspect of self-managing means that new features, software, and servers can be dynamically added to the enterprise infrastructure with no disruption. Systems adapt automatically to dynamically changing environments. Self-configuring not only includes the ability for systems within the enterprise to configure them into the e-business infrastructure of the enterprise.

2. Self-healing

The characteristics of z/OS that can be considered as self-healing address many different aspects of the system's health.

1. Some of them are related to the capability of the hardware to detect a failure and solve it. The solution can be:
 - Repair - as in the *Error Correction Code* (ECC) scheme.
 - IBM System z Hardware has spare units on many components. This is called N+1 design.

This design provides fault-tolerant capabilities, allowing:

- Use of spare PUs
 - Use of spare memory chips
 - I/O has multipath access
2. There are also design points that allow these schemes to work, for instance the Chip kill memory design.

3. *Electronic Service Agent* - this offers "call home" support. Every IBM System z machine can, and usually does, have a phone connection with the nearest plant.

4. Concurrent updates

- Most maintenance can be done while the systems are up and running. Nevertheless, updates are usually done during periods of low activity using System Modification Program/E, which manages the system software configuration and checks for pre-requisites and co-requisites.
- The way hardware is packed allows users to have more capacity (CPs and memory) than needed.

5. System software

There are self-healing capacities in system software, as well. These capacities fall into three main areas, dealing with data replication, automation tools, and virtualization techniques:

- Data replication
- Coupling Facility (CF) structure duplexing
- Synchronous copy
 - Automation engines
- System automation for z/OS
- Geographically Dispersed Parallel Sysplex
 - Virtualization
- Dynamic Virtual IP takeover and take back
- Dynamic disk balancing

3. Self-optimizing

Self-optimizing features include:

- Intelligent Resource Director (IRD) extensions (non-z/OS partitions - CPU(Linux), I/O, server-wide) - allows dynamic resource allocation on IBM System z servers
- Dynamic LPAR, WLM LPAR extensions for Linux
- Parallel Sysplex Extensions - Sysplex Distributor, CP Coupling
- BIND9 DNS-DNS BIND Version 9.0 on z/OS
- z/OS Workload Manager (CPU, memory, I/O, TCP/IP QOS, Web request management, and batch initiator balancing)

Self-optimization requires hardware and software systems to efficiently maximize resource utilization to meet end-user needs without human intervention.

4. Self-protecting

Self-protecting features include:

- LPAR
- Intrusion detection IDS, PKI
- Hardware cryptographic (coprocessors, accelerators and CP assist) adapters
- Digital certificates providing identity authentication
- SSL and TLS (manages Internet transmission security), Kerberos (authenticates requests for service in a network), VPN, encryption
- Tivoli Policy Director
- LDAP (aids in the location of network resources)

Self-protecting systems must have the ability to define and manage user access to all computing resources within the enterprise, to protect against unauthorized resource access, to detect intrusions and report and prevent these activities as they occur, and to provide backup and recovery capabilities.

8. AUTONOMIC COMPUTING RESEARCH ISSUES AND CHALLENGES

Key research issues and challenges are presented below.

Conceptual Challenges: Conceptual research issues and challenges include (1) defining appropriate abstractions and models for specifying, understanding, controlling, and implementing autonomic behaviours; (2) adapting classical models and theories for machine learning, optimization and control to dynamic and multi agent system; (3) providing effective models for negotiation that autonomic elements can use to establish multilateral relationships among themselves.

Architecture Challenges: Autonomic applications and systems will be constructed from autonomic elements that manage their internal behaviour and their relationships with other autonomic elements in accordance with policies that humans or other elements have established. As a result, system/application level self-managing behaviours will arise from the self-managing behaviours of constituent autonomic elements and their interactions.

Middleware Challenges: The primary middleware level research challenge is providing the core services required to realize autonomic behaviours in a robust, reliable and scalable manner. These include discovery, messaging, security, privacy, trust, etc. Autonomic systems/applications will require autonomic elements to identify themselves, discover and verify the identities of other entities of interest, dynamically establish relationships with these entities, and to interact in a secure manner.

Application Challenges: The key challenges at the application level is the formulation and development of systems and applications that are capable of managing (i.e., configuring, adapting, optimizing, protecting, healing) themselves. This includes programming models, frameworks and middleware services that support the definition of autonomic elements, the development of autonomic applications as the dynamic and opportunistic composition of these autonomic elements, and the policy, content and context driven definition, execution and management of these applications.

9. PROPOSED IDEA: AUTONOMIC COMPUTING WITH HACKERS

The principles and concepts of autonomic computing have led to the creation of autonomic computing framework where management and computing elements are joined together to observe and act directly on the computer resources to enhance their performance. Autonomic computing allows system to adapt dynamically to the changing environment using policies provide by the IT professionals. It can detect malfunctions and create policies without disrupting the IT environment.

Using autonomic computing, we can anticipate, detect, identify and protect against threads from anywhere like hostile behaviors such as unauthorized access and use, virus infections, denial of service attacks etc. Moreover using the principle of self optimizing, the system can monitor and manage the resources automatically, such that the needs of end users or business needs are met properly and avoids the probability of scarcity of resources. But after this all still we are facing numerous illegal attacks from hackers.

A **Hacker** is a person who is interested in the working of any computer operating system and breaks into other people systems, with malicious intentions. Hackers gain unauthorized access, destroy important data, stop services provided by the server, or basically cause problems for their targets. Hackers can easily be identified because their actions are malicious. Many malicious Hackers are electronic thieves. Just like anyone can become a thief, or a robber, anyone can become a Hacker, regardless of age, gender, or religion. Technical skill of Hackers varies from one to another. Some Hackers barely know how to surf the Internet, whereas others write software that other Hackers depend upon.

Information security research teams and detection systems exist to try to find these holes and notify vendors before they are exploited and to track attacking hackers while the attacking hackers develop by-passing techniques which are eventually resulted in bigger and better detecting and tracking systems respectively. The **Ethical Hacking** with the intent to discover vulnerabilities from a Hacker's viewpoint so systems can be better secured. Ethical Hacking is part of an overall information Risk Management program that allows for ongoing security improvements.

From the time autonomic computing was first initiated by IBM until the exiting today, we are still facing the threads and losses from hackers. Even though autonomic computing was meant for self-managing and self-protecting the system without any consciousness of the users, till now no one could find a complete solution for detecting and disrupting the hackers. And so in the future we need more software engineering methods and theories to implement to clear out the hackers.

10. CONCLUSIONS

Autonomic computing is about shifting the burden of managing systems from people to technologies. When the Self-Managing Autonomic Technology and self-management capabilities delivered by IBM and other vendors can collaborate, the elements of a complex IT system can work together and manage themselves based on a shared view of system wide policy and objectives. Autonomic computing architecture is a range of software technologies that enable you to build an information infrastructure that can, to lesser and greater degrees, manage itself, saving countless hours (and dollars) in human management and all this without giving up control of the system.

The future of autonomic computing is heavily dependent on the developments and successes in several other technology arenas that provide an infrastructure for autonomic computing systems including Web and grid services, architecture platforms such as service-oriented architecture (SOA), Open Grid Services Architecture (OGSA), and pervasive and ubiquitous computing. Even if autonomic computing technology is readily available and taught in computer science and engineering curricula, it will take another decade for the proliferation of automaticity in existing systems.

REFERENCES

1. Agarwala S, Chen Y, Milojicic D, and Schwan K 2006 QMON: QoS- and Utilityaware monitoring in enterprise systems in Proceedings of the 3rd IEEE International Conference on Autonomic Computing (ICAC), Dublin, Ireland.
2. Anthony R. 2006: Emergent graph colouring in Engineering Emergence for Autonomic Systems (EEAS), First Annual International Workshop, at the third International Conference on Autonomic Computing (ICAC).
3. Boca Raton, Ann Arbor, 2006 by CRC Press LLC: Autonomic Computing: Concepts, Infrastructure, and Applications
4. D. M. Chess, C. C. Palmer and S. R. White: Security in an autonomic computing environment
5. Daniel Worden, Nicholas Chase: A quick tour of Autonomic Computing
6. Hausi A. Müller, Liam O'Brien, Mark Klein, Bill Wood, April 2006, Software Architecture Technology: Autonomic Computing.
7. IBM Corporation: An architectural blueprint for autonomic computing, June 2005, Third Edition
8. Jia Bai, Sherif Abdelwahed: A Model Integrated Framework for Designing Self-managing Computing Systems
9. Manish Parashar and Salim Hariri: Autonomic Computing: An Overview
10. Markus C. Huebscher, Julie A. McCann, Imperial College London: A survey of Autonomic Computing — degrees, models and applications
11. Mike Ebbers, Frank Byrne, Pilar Gonzalez Adrados, Rodney Martin, Jon Veilleux: Introduction to the New Mainframe: Large-Scale Commercial Computing, ibm.com/redbooks
12. Mohamed N. Bennani and Daniel A. Menasc'e, George Mason University: Assessing the Robustness of Self-Managing Computer Systems under Highly Variable Workloads
13. Nick Antonopoulour, Ashiq Anjum and Lee Gillam, Journal of Cloud Computing 2012: Intelligent Techniques and Architectures for Autonomic Clouds: Introduction to the itaac Special Issue.
14. Ozalp Babaoglu, M'ark Jelasity, and Alberto Montresor, Department of Computer Science, University of Bologna, Italy: Grassroots Approach to Self-management in Large-Scale Distributed Systems.
15. P. Horn. Autonomic Computing: IBM's perspective on the State of Information Technology. <http://www.research.ibm.com/autonomic/>, Oct 2001. IBM Corp.
16. Peter Van Roy: Self Management and the Future of Software Design
17. R.K. Sahoo, I. Rish, A. J. Oliner, M. Gupta, J.E. Moreira, S. Ma, R. Vilalta, A. Sivasubramaniam: Autonomic Computing Features for Large-scale Server Management and Control.
18. S. Hariri, L. Xue, H. Chen, M. Zhang, S. Pavuluri, and S. Rao.: Autonomia: an autonomic computing environment, in Performance, Computing, and Communications Conference, 2003. Conference Proceedings of the 2003 IEEE International, April 9-11 2003.
19. Sherif Abdelwahed, Nagarajan Kandasamy and Sandeep Neema, Institute for Software Integrated Systems, Vanderbilt University: Online Control for Self-Management in Computing Systems.
20. Siew Fan Wong: ISRC Future Technology Topic Brief, Autonomic Computing.

A STUDY ON PERFORMANCE OF DISTRICT CONSUMER DISPUTES REDRESSAL FORUMS IN INDIA

GURLEEN KAUR
ASST. PROFESSOR
GURU NANAK KHALSA COLLEGE
KARNAL

ABSTRACT

This paper attempts to study working and performance of 632 District Consumer Disputes Redressal Forums working in 34 States and Union Territories of India. Analysis of Data makes it crystal clear that District Consumer Disputes Redressal Forums are striving its best to provide quick justice to the consumers, however, there is still need of agencies working at state and national level to dispose of the pending cases as early as possible by creating additional and circuit benches and by introducing evening shifts to ensure timely justice to consumers because justice delayed is justice denied.

KEYWORDS

Consumer protection, DCDRF, CPA.

INTRODUCTION

Government of India enacted number of laws for protection of aggrieved consumers but, Consumer Protection Act, 1986 was one of legislation which facilitated setting up Consumer Disputes Redressal Agencies at District, State and National level for providing simple, speedy and inexpensive redressal to aggrieved consumers.

TYPE OF RESEARCH

The present study is descriptive cum exploratory in nature.

OBJECTIVES OF STUDY

It attempts to elaborate the state of affair of the cases filed/disposed of at the 632 District Consumer Disputes Redressal Forums in India working in 34 state/union territories. It further compares their performance with various consumer dispute Redressal agencies working at District, national and state level in India. The study points out various problems being faced by these District Consumer Disputes Redressal Forums and suggest their possible solutions.

RESULTS AND DISCUSSION**TABLE 1.1: STATEMENT OF CASES FILED/DISPOSED OF IN DISTRICT CONSUMER DISPUTES REDRESSAL FORUMS OF DIFFERENT STATES/U.T.**

Sl. No.	Name of State	Cases filed since inception	Cases disposed of since inception	Disposal (%)	As On
1	Andhra Pradesh	192331	186441	96.94	31.12.12
2	A & N Islands	330	301	91.21	31.03.06
3	Arunachal Pradesh	404	338	83.66	30.11.12
4	Assam	13704	11976	87.39	31.08.10
5	Bihar	84369	73573	87.20	30.09.12
6	Chandigarh	46795	45614	97.48	31.12.12
7	Chhattisgarh	37292	34129	91.52	31.01.13
8	Daman & Diu and DNH	162	144	88.89	31.03.11
9	Delhi	239215	228875	95.68	30.09.11
10	Goa	6387	5840	91.44	31.01.13
11	Gujarat	173597	161750	93.18	31.01.13
12	Haryana	220997	203297	91.99	31.01.13
13	Himachal Pradesh	57043	53672	94.09	31.01.13
14	Jammu & Kashmir	20792	18855	90.68	31.12.07
15	Jharkhand	33985	30720	90.39	31.12.12
16	Karnataka	155588	150723	96.87	31.01.13
17	Kerala	180640	172869	95.70	31.12.12
18	Lakshadweep	75	65	86.67	31.12.12
19	Madhya Pradesh	184906	169904	91.89	31.01.13
20	Maharashtra	255993	236744	92.48	30.06.12
21	Manipur	1037	1012	97.59	30.09.08
22	Meghalaya	847	750	88.55	31.10.12
23	Mizoram	3466	2819	81.33	31.12.10
24	Nagaland	290	266	91.72	31.12.11
25	Odisha	92978	86305	92.82	31.12.12
26	Puducherry	2907	2714	93.36	31.12.12
27	Punjab	154458	148813	96.35	31.12.12
28	Rajasthan	289436	261290	90.28	31.12.12
29	Sikkim	296	280	94.59	31.12.12
30	Tamil Nadu	102719	97061	94.49	31.12.12
31	Tripura	2751	2538	92.26	31.10.12
32	Uttar Pradesh	565666	490670	86.74	31.12.12
33	Uttarakhand	34759	32598	93.78	31.12.12
34	West Bengal	86109	81310	94.43	31.12.12
	TOTAL	3242324	2994256	92.35	
	National Commission	80014	69253	86.55	28.02.13
	State Commission	600097	504834	84.13	

Source: Unpublished records of National Consumer Disputes Redressal Commission, New Delhi (2013)

1. The study examined the Statement of Cases Filed / Disposed of in District Consumer Disputes Redressal Forums in the different States / U.T. of India as depicted in Table 1.1. Analysis of Table 1.1 reveals that 3242324 cases have been filed out of which 2994256 cases (92.35%) has been disposed of.
2. The overall disposal rate of 92.35 percent reflects high disposal rate of the cases at District Consumer Disputes Redressal Forums of the State/U.T. It is further observed that Manipur stood first with 97.59 percent disposal rate of the cases. Chandigarh (97.48%) and Andhra Pradesh (96.94%) stood at second and third position respectively on the basis of disposal percentage of the cases.
3. The District Consumer Disputes Redressal Forums in the State of Mizoram (81.33%) were having lowest disposal percentage. It is followed by Arunachal Pradesh (83.66%).
4. Out of total 632 District Forums in 34 States / U.T.'s, District Forums of 15 State / U.T. (44.12%) have disposal rate higher than the overall disposal rate of 92.35 percent
5. Out of total 632 District Forums in 34 States / U.T.'s, District Forums 19 State / U.T.'s District Forums (55.88%) have disposal rate lower than the overall disposal rate of 92.35 percent.
6. As per statistics released by National Consumer Disputes Redressal Commission on its official website on March 06, 2013 100 post of president and 249 posts of members were vacant in different District Forums of India so, concerned State/U.T. Governments should take necessary steps to solve this problem.
7. The study observed that the overall disposal rate of District Consumer Disputes Redressal Forums in India (95.35%) is much better as compared to the U.T./State Commissions (84.13%) as well as the National Consumer Disputes Redressal Commission (86.55%).

CONCLUSION

Consumer Disputes Redressal agencies are playing a very important role to protect the interest of consumers by providing justice to the affected consumers. Large number of District Consumer Disputes Redressal Forums are facing problem of vacant post of president and/or members which is a serious issue. For example as per statistics released by National Consumer Disputes Redressal Commission on its official website on March 06, 2013 100 post of president and 249 posts of members were vacant in different District Forums of India so, concerned State/U.T. Governments should take necessary steps to solve this problem. On the overall performance basis; the District Consumer Disputes Redressal Forums in India may be assigned first rank which is followed by National Consumer Disputes Redressal Commission and U.T.\State Consumer Disputes Redressal Commissions respectively. Hence, we can say that District Consumer Disputes Redressal Forums are striving its best to provide quick justice to the consumers.

REFERENCES

1. Bhatt, Ramesh (1996), "Buying pattern of Urban Poor and Distribution Systems", Research Study, Consumer Confrontation, CERC, Ahmedabad, pp. 36-46.
2. Mehta, D.S. (1992), "Changing Faces of Indian Consumers", Hindustan Times, May 2, p. 20.
3. Ramesh, M. K. (1989), "Consumer Interest in Legal Profession – Problems and Perspectives", Cochin University Law Review, Vol. 13 (4), December.
4. Tangade, F. Shrimant and Basavaraj, C. S. (2004), "Awareness and Perception of Educated Consumer about Consumer Protection Laws", Indian Journal of Marketing, April, pp.3-6
5. Unpublished records of National Consumer Disputes Redressal Commission, New Delhi (2013)

TEA INDUSTRY IN INDIA: STATE WISE ANALYSIS

DR. R. SIVANESAN
ASST. PROFESSOR
ST. JEROME'S COLLEGE OF ARTS & SCIENCE
ANANDHANADARKUDY

ABSTRACT

The discovery of indigenous tea in Assam in 1823 led to the origin of the tea industry in India. However, the Kolkata Agricultural Society differs from the above opinion. It has consistently held that in the early 1700's, the ships of the East India Company frequently brought the tea plants in the country by way of curiosity. Col. Kyol, a resident of Kolkata and a famous botanist, saw tea plants growing in his garden in 1780. This information was sent to Sir Joseph Bank and in 1782 his garden as handed over to Botanical Garden of Kolkata. In 1788, Sir Joseph Bank recorded the existence of indigenous tea growing wild in Coochbehar and Rangpur districts of Bengal and suggested the cultivation of this plant. The wild teas of Coochbehar confirmed the first discovery of indigenous tea in India.

KEYWORDS

Tea, Industry, Tea Yield, Production, Marketing.

INTRODUCTION

The discovery of indigenous tea in Assam in 1823 led to the origin of the tea industry in India. However, the Kolkata Agricultural Society differs from the above opinion. It has consistently held that in the early 1700's, the ships of the East India Company frequently brought the tea plants in the country by way of curiosity. Col. Kyol, a resident of Kolkata and a famous botanist, saw tea plants growing in his garden in 1780. This information was sent to Sir Joseph Bank and in 1782 his garden as handed over to Botanical Garden of Kolkata. In 1788, Sir Joseph Bank recorded the existence of indigenous tea growing wild in Coochbehar and Rangpur districts of Bengal and suggested the cultivation of this plant. The wild teas of Coochbehar confirmed the first discovery of indigenous tea in India. The birth of Indian tea industry was marked by the discovery of indigenous tea plant in Assam in 1823 by Robert Bush. This received momentum when the East India Company in 1833 lost the tea trading monopoly in China. In 1835, a scientific deputation was sent to Assam to report on prospects of the tea industry and the team saw tea plants in many parts in the hills between Assam and Burma. In 1836, C.A. Bruce was made the superintendent of Tea Forests. Among others, he formed the Bengal Tea Company at Kolkata with the objective of purchasing the produce from the East India Company's tea plantations in India. A similar company was also established in the same year in London with the same objectives. In 1839 the first consignment of tea from India (eight chests) was shipped to London and it was auctioned at a price ranging from six to thirty four shillings per pound. In 1840, two thirds of experimental teas were handed over to new company. In 1852, the first tea company in India paid its final dividends. The second limited company in 1859 was formed in Assam called Jorhat Company. During 1862-67, tea cultivation started in Chittagong and Chotta Nagpur. Ultimately tea cultivation was commissioned in many districts in India wherever there was some hope of a success. Within a few months, India along with Sri Lanka dominated the world tea trade/ market.

IMPORTANCE OF TEA INDUSTRY

The importance of the tea industry in the nation's economy and its role in our planned economic development has been widely recognized. Except the public utility services like the Railways, it is the largest organized industry which comprises more than a million workers employed both in plantation and manufacturing industry. Till recently tea had been the largest foreign exchange earner for India but for the last few years' jute has taken the first place and tea remains as the second largest foreign exchange earner.

OBJECTIVES OF THE STUDY

The objectives of the study are stated as follows

1. To analyse the state wise tea cultivation area in India.
2. To analyse the state wise tea production of tea in India.
3. To analyse the state wise yield of tea in India.

HYPOTHESIS OF THE STUDY

The following are the important objectives framed by the researcher.

- Ho₁: Average yield of Tea in Tamilnadu and Kerala are significantly same.
 Ho₂: Average yield of Tea in Tamilnadu and Karnataka are significantly same.
 Ho₃: Average yield of Tea in Tamilnadu and Assam are significantly same.
 Ho₄: Average yield of Tea in Tamilnadu and West Bengal are significantly same.

PERIOD OF THE STUDY

The present study covers the periods ten years from 1998 to 2007.

FRAME WORK OF ANALYSIS

The collected data are processed with the help of appropriate statistical tools like correlation analysis, t test analysis, paired sample test and hypothesis in order to fulfill the objectives of the study.

ANALYSIS OF THE STUDY

This part is analyses the state-wise tea cultivation area, production and yield for different states in India. Assam, West Bengal, Tripura, Himachal Pradesh, Tamilnadu, Kerala and Karnataka are the important states of tea cultivation in India.

STATE-WISE TEA CULTIVATION AREA IN INDIA

The following Table 1 shows the state wise tea cultivation area in India.

TABLE 1: STATE-WISE TEA CULTIVATION AREA IN INDIA (in hectares)

Year	Tamilnadu	Kerala	Karnataka	South India	Assam	West Bengal	Others	North India	All India
1998	63,543	37596	7888	109027	259865	97556	07579	365000	474027
1999	69,103	38845	4798	112746	258455	99967	19032	377454	490200
2000	74,398	36940	2122	113460	266512	107479	16915	390906	504366
2001	75,625	36940	2128	114657	269154	110820	15139	395113	509770
2002	75,619	36967	2128	113314	270683	113113	15830	399626	511940
2003	75,619	36967	2128	114714	271589	113351	19944	404884	519598
2004	75,978	37107	2128	115213	271768	114003	20419	406190	521403
2005	80,939	36772	2112	119823	300502	114525	20761	435788	555611
2006	81,276	36236	2137	119649	311822	114788	20761	447371	567020
2007	80,462	37137	2141	119740	321319	115095	22304	458718	578458

Source: Statistical Report of Tea Board

It is clear from Table 1 Assam stands first as for as tea production area is concerned. The area under tea cultivation in Assam is 259865 hectares in 1998 and it increased to 321319 hectares in 2007. West Bengal stands second with 99967 hectares in 1998 and it increased to 115095 hectares in 2007. Tamilnadu stands third with 63543 hectares in 1998 and it increased to 80462 hectares in 2007. Kerala got fourth place with 37596 hectares in 1998 and it decreased to 37137 hectares in 2007. Karnataka and other states are with almost same area under tea cultivation.

State-wise tea cultivation area is analysed through correlation analysis and the result of it is stated in Table 1.1 as follows:

TABLE 1.1: STATE-WISE TEA CULTIVATION AREA IN INDIA (Correlation Analysis)

States	Correlations Marked correlations are significant at p < .05000 (N=10)							
	Means	S. D.	Tamilnadu	Kerala	Karnataka	Assam	W.Bengal	Others
Tamilnadu	75256.2	5501.01	1.000000	-0.692230	-0.881908	0.797983	0.934779	0.806454
Kerala	37150.7	683.73	-0.692230	1.000000	0.599681	-0.536938	-0.754155	-0.217126
Karnataka	2971.0	1920.66	-0.881908	0.599681	1.000000	-0.449310	-0.894692	-0.753725
Assam	280166.9	22446.08	0.797983	-0.536938	-0.449310	1.000000	0.662889	0.620311
W.Bengal	110069.7	6401.36	0.934779	-0.754155	-0.894692	0.662889	1.000000	0.712856

It is clear from Table 1.1 that there exists high positive correlation between Karnataka and West Bengal as for as tea cultivation area in different periods.

It is further analysed related to t test of independent variable to know the comparative consistency in the growth over a period of time. The result of the analysis is stated in Table 1.2 as follows:

TABLE 1.2: STATE-WISE TEA CULTIVATION AREA IN INDIA (t test Analysis)

States	Test of means against reference constant (value)							
	Mean	S. D.	N	S. E.	Reference	t-value	df	p
Tamilnadu	75256.2	5501.01	10	1739.573	0.00	43.2613	9	0.000000
Kerala	37150.7	683.73	10	216.215	0.00	171.8228	9	0.000000
Karnataka	2971.0	1920.66	10	607.367	0.00	4.8916	9	0.000858
Assam	280166.9	22446.08	10	7098.073	0.00	39.4708	9	0.000000
W.Bengal	110069.7	6401.36	10	2024.289	0.00	54.3745	9	0.000000
Others	17868.4	4307.12	10	1362.032	0.00	13.1189	9	0.000000

It is clear from the Table 1.2 that, t value is low for Kerala and it shows that there is comparatively high consistency with respect to tea cultivation area for different periods of the study.

STATE-WISE TEA PRODUCTION IN INDIA

The following Table 2 shows the state wise tea production in India from 1998 to 2007.

TABLE 2: STATE-WISE TEA PRODUCTION IN INDIA (m.kgs)

Year	Tamilnadu	Kerala	Karnataka	South India	Assam	West Bengal	Others	North India	All India
1970	55.557	42.764	2.848	101.169	212.027	101.197	4.124	317.348	418.517
1975	60.452	43.215	2.892	106.559	263.055	111.86	5.663	380.578	487.137
1980	74.006	53.614	3.745	131.095	300.700	133.185	4.192	438.077	569.172
1985	84.853	53.104	3.911	141.867	352.538	157.371	4.386	514.295	656.162
1990	110.576	60.665	3.991	175.232	388.181	149.753	7.172	545.106	720.338
1995	117.915	64.778	4.692	187.385	402.617	157.522	8.492	568.631	756.016
1998	132.046	65.943	5.461	203.45	467.046	193.789	9.823	670.658	874.108
1999	130.462	66.833	5.381	202.676	437.324	175.975	9.96	623.259	825.935
2000	131.812	68.947	5.407	206.166	449.219	181.536	10.001	640.756	846.922
2001	132.401	65.151	5.564	203.116	453.936	186.876	9.995	650.807	853.923
2002	128.963	59.679	5.768	194.41	432.511	189.841	9.403	631.755	826.165
2003	131.712	56.622	5.135	193.469	453.438	200.595	9.553	663.586	857.055
2004	163.056	62.416	5.620	231.092	435.649	214.541	11.994	662.184	892.97
2005	158.837	63.341	5.376	227.554	487.487	217.546	13.383	718.416	945.97
2006	163.656	59.452	5.444	228.562	502.041	237.106	14.091	753.238	981.80
2007	160.531	55.966	5.188	221.685	511.885	236.344	16.516	764.745	986.43
2008	170.500	70.300	6.100	246.900	495.338	226.258	12.304	733.900	980.80
2009	169.400	68.900	5.800	244.100	495.001	224.213	15.686	734.900	979.00
2010	170.700	66.800	5.900	243.400	489.984	221.880	11.136	723.000	966.40

Source: Statistical Report of Tea Board

It is clear from Table 2 Assam stands first as for as tea production in India is concerned. The tea production in Assam is 212.027 million kilograms in 1998 and it increased to 498.984 million kilograms in 2007. West Bengal stands second with 101.197 million kilograms in 1998 and it increased to 221.88 million kilograms in 2007.

2007. Tamilnadu stands third with 55.557 million kilograms in 1998 and it increased to 170.7 million kilograms in 2007. Kerala got fourth place with 42.764 million kilograms in 1998 and it increased to 66.8 million kilograms in 2007. Other states got fifth place with 4.124 million kilograms in 1998 and it increased to 11.136 million kilograms in 2007. Karnataka got last place with 2.848 million kilograms in 1998 and it increased to 5.9 million kilograms in 2007. State-wise tea production area is analysed through correlation analysis and the result of it is stated in Table 2.1 as follows:

TABLE 2.1: STATE-WISE TEA PRODUCTION IN INDIA (Correlation Analysis)

State	Correlations Marked correlations are significant at p < .05000 (N=19)							
	Means	S. D.	Tamilnadu	Kerala	Karnat.	Assam	W.Beg.	Others
Tamilnadu	128.8124	37.19655	1.000000	0.779772	0.925608	0.952840	0.966504	0.915688
Kerala	60.4468	7.99947	0.779772	1.000000	0.864362	0.801732	0.665600	0.589570
Karnataka	4.9591	0.99400	0.925608	0.864362	1.000000	0.927419	0.892067	0.783160
Assam	422.6304	84.92364	0.952840	0.801732	0.927419	1.000000	0.953259	0.879628
West Bengal	185.1257	40.92111	0.966504	0.665600	0.892067	0.953259	1.000000	0.914103
Others	9.8881	3.67238	0.915688	0.589570	0.783160	0.879628	0.914103	1.000000

It is clear from Table 2.1 that there exists high positive correlation between Karnataka and West Bengal as for as tea production in different periods are concerned.

It is further analysed related to t test of independent variable to know the comparative consistency in the growth over a period of time. The result of the analysis is stated in Table 2.2 as follows:

TABLE 2.2: STATE-WISE TEA PRODUCTION IN INDIA (t test Analysis)

State	Test of means against reference constant (value)							
	Mean	S. D.	N	S. E.	Reference	t-value	df	p
Tamilnadu	128.8124	37.19655	19	8.53347	0.00	15.09495	18	0.000000
Kerala	60.4468	7.99947	19	1.83520	0.00	32.93740	18	0.000000
Karnataka	4.9591	0.99400	19	0.22804	0.00	21.74674	18	0.000000
Assam	422.6304	84.92364	19	19.48282	0.00	21.69247	18	0.000000
West Bengal	185.1257	40.92111	19	9.38795	0.00	19.71951	18	0.000000
Others	9.8881	3.67238	19	0.84250	0.00	11.73660	18	0.000000

It is clear from the Table 2.2 that t value is low for other states and it shows that there is comparatively high consistency with respect to production for different periods of the study.

STATE-WISE AVERAGE YIELD OF TEA IN INDIA

The following Table 3 shows that state wise average yield of tea in India.

TABLE 3: STATE-WISE AVERAGE YIELD OF TEA IN INDIA (kgs per hectare)

Year	Tamilnadu	Kerala	Karnataka	South India	Assam	West Bengal	Others	North India	All India
1998	1890	1753	2366	1987	1668	1629	1296	1805	1844
1999	1888	1814	2536	1875	1692	1638	1211	1631	1685
2000	1772	1866	2548	1817	1686	1689	1209	1639	1679
2001	1751	1764	2615	1771	1685	1686	1156	1647	1675
2002	1893	1563	2741	1802	1601	1662	1152	1575	1625
2003	2203	1569	2476	2004	1601	1770	1106	1601	1690
2004	2146	1675	2641	2003	1603	1882	1189	1630	1713
2005	2022	1591	2545	1899	1622	1900	1211	1649	1703
2006	2014	1641	2547	1910	1610	2066	1152	1684	1732
2007	1995	1507	2423	1851	1593	2053	1045	1667	1705

Source: Statistical Report of Tea Board

It is clear from Table 3, Karnataka stands first as for as yield of tea in India is concerned. The yield of tea in Karnataka is 2366 kgs per hectare in 1998 and it increased to 2423 kgs per hectare in 2007. Tamilnadu stands second with 1890 kgs per hectare in 1998 and it increased to 1995 kgs per hectare in 2007. Kerala stands third with 1753 kgs per hectare in 1998 and it decreased to 1507 kgs per hectare in 2007. West Bengal stands fourth with 1629 kgs per hectare in 1998 and it increased to 2053 kgs per hectare in 2007. Hence, it overtakes Kerala in recent years. Assam got fifth place with 1668 kgs per hectare in 1998 and it decreased to 1593 kgs per hectare in 2007. Though the yield is above West Bengal in the beginning it is significantly very low in the following years and hence Assam is ranked in fifth place. Other states got the last place with 1296 kgs per hectare in 1998 and it decreased to 1045 kgs per hectare in 2007.

State-wise tea yield were analysed through correlation analysis and the result of it is stated in Table 3.1 as follows:

TABLE 3.1: STATE-WISE AVERAGE YIELD OF TEA IN INDIA (Correlation Analysis)

State	Correlations Marked correlations are significant at p < .05000 (N=10)							
	Means	S. D.	Tamiln.	Kerala	Karnat.	Assam	W.Beng.	Others
Tamilnadu	1957.400	147.2565	1.000000	-0.635137	-0.127933	-0.767822	0.517890	-0.329848
Kerala	1674.300	120.1934	-0.635137	1.000000	-0.022571	0.920997	-0.599389	0.662320
Karnataka	2543.800	107.6505	-0.127933	-0.022571	1.000000	-0.126827	-0.146236	-0.088459
Assam	1636.100	41.2592	-0.767822	0.920997	-0.126827	1.000000	-0.670856	0.598084
West Bengal	1797.500	167.3893	0.517890	-0.599389	-0.146236	-0.670856	1.000000	-0.558434
Others	1172.700	67.9968	-0.329848	0.662320	-0.088459	0.598084	-0.558434	1.000000

It is clear from Table 3.1 that there exists high positive correlation between Karnataka and West Bengal as for as tea yield in different periods.

It is further analysed related to t test of independent variable to know the comparative consistency in the growth over a period of time. The result of the analysis is stated in Table 3.2 as follows:

TABLE 3.2: STATE-WISE AVERAGE YIELD OF TEA IN INDIA (t test Analysis)

State	Test of means against reference constant (value)							
	Mean	S. D.	N	S. E.	Reference	t-value	df	p
Tamilnadu	1957.400	147.2565	10	46.56661	0.00	42.0344	9	0.000000
Kerala	1674.300	120.1934	10	38.00849	0.00	44.0507	9	0.000000
Karnataka	2543.800	107.6505	10	34.04207	0.00	74.7252	9	0.000000
Assam	1636.100	41.2592	10	13.04731	0.00	125.3975	9	0.000000
W.Bengal	1797.500	167.3893	10	52.93313	0.00	33.9579	9	0.000000
Others	1172.700	67.9968	10	21.50248	0.00	54.5379	9	0.000000

It is clear from the table that t value is low for West Bengal and it shows that there is comparatively high consistency with respect to yield for different periods of the study.

The researcher further analysed the state wise average yield of tea in India with the help of hypothesis analysis (t test). In this regard the following hypothesis are framed

Ho₁: Average yield of Tea in Tamilnadu and Kerala are significantly same.

Ho₂: Average yield of Tea in Tamilnadu and Karnataka are significantly same.

Ho₃: Average yield of Tea in Tamilnadu and Assam are significantly same.

Ho₄: Average yield of Tea in Tamilnadu and West Bengal are significantly same.

TABLE 3.3: STATE WISE AVERAGE YIELD OF TEA IN INDIA (Paired Sample Test)

	Paired Differences	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
					Pair 1	TN - Kerala			
Pair 2	TN - Karnataka	-586.40000	193.20755	61.09759	-724.61235	-448.18765	-9.598	9	.000
Pair 3	TN - Assam	321.30000	180.87814	57.19869	191.90758	450.69242	5.617	9	.000
Pair 4	TN - W.Bengal	159.90000	155.47522	49.16558	48.67973	271.12027	3.252	9	.010
Pair 5	TN - Others	784.70000	181.42097	57.37035	654.91926	914.48074	13.678	9	.000

Table value (t table)) at 5% level of significant = 3.25 (9 degrees of freedom)

RESULT

Since the calculated value of t is about same the hypothesis of average yield of tea in Tamilnadu and West Bengal, hence, the fourth hypothesis (Ho₄) is accepted and the average yield of tea in Tamilnadu and Kerala are somewhat significantly same hence the first hypothesis (Ho₁) is also accepted. The calculated value of t is high for the remaining two hypothesis (Ho₂ and Ho₃) hence they are rejected.

PRODUCTION OF TEA IN INDIA BY DIFFERENT METHOD OF MANUFACTURERS

The following Table 4 shows the tea production in India by different methods of Manufacturers.

TABLE 4: PRODUCTION OF TEA IN INDIA BY DIFFERENT METHOD OF MANUFACTURER (Quantity in M. Kgs)

Year	North India					South India				All India				
	CTC	Orthodox	Darjeeling	Green	Total	CTC	Orthodox	Green	Total	CTC	Orthodox	Darjeeling	Green	Total
1961	118.8	115.1	10.1	29.3	273.3	3.3	76.2	1.6	81.1	122.1	191.3	10.1	30.9	354.4
1971	210.2	93.2	10.3	18.6	332.3	29.8	71.4	2.0	103.2	240.0	164.6	10.3	20.6	435.5
1981	299.3	119.3	12.2	7.0	437.8	58.2	63.8	0.6	122.6	357.5	183.1	12.2	7.6	560.4
1991	461.9	79.5	13.9	7.6	562.9	141.7	47.4	2.2	191.3	603.6	126.9	13.9	9.8	754.2
1992	485.1	65.9	12.4	7.0	570.4	125.6	33.9	2.4	161.9	610.7	99.8	12.4	9.4	732.3
1993	507.0	55.7	13.0	5.8	581.5	139.3	38.5	1.5	179.3	646.3	94.2	13.0	7.3	760.8
1994	498.8	50.8	11.1	7.3	568.0	137.0	47.4	0.5	184.9	635.8	98.2	11.1	7.8	752.9
1995	520.7	29.2	11.3	7.4	568.6	141.7	45.2	0.5	187.4	662.4	74.4	11.3	7.9	756.0
1996	542.8	36.9	10.6	7.8	598.1	138.1	43.4	0.5	182.0	680.9	80.3	10.6	8.3	780.1
1997	549.5	37.1	10.1	8.0	604.7	150.6	54.2	0.5	205.3	700.1	91.3	10.1	8.5	810.0
1998	594.1	59.5	10.3	6.8	670.7	144.1	58.8	0.5	203.4	738.2	118.3	10.3	7.3	874.1
1999	576.0	32.5	8.7	6.0	623.2	172.1	30.2	0.4	202.7	748.1	62.7	8.7	6.4	825.9
2000	590.1	35.7	9.3	5.6	640.7	170.3	35.3	0.6	206.2	760.4	71.0	9.3	6.2	846.9
2001	592.1	44.4	9.8	4.5	650.8	167.4	34.8	0.9	203.1	759.5	79.2	9.8	5.4	853.9
2002	570.4	48.4	9.2	3.8	631.8	174.7	31.1	0.9	206.7	745.1	79.5	9.2	4.7	838.5
2003	607.9	26.9	9.6	3.9	648.3	191.6	37.2	1.0	229.8	799.5	64.1	9.6	4.9	878.1
2004	617.8	28.9	10.1	5.4	662.2	196.8	32.5	1.5	230.8	814.6	61.4	10.1	6.9	893.0
2005	667.0	32.6	11.3	7.5	718.4	182.4	43.3	1.9	227.6	849.4	75.9	11.3	9.4	946.0
2006	702.1	30.8	10.9	9.4	753.2	191.3	35.5	1.8	228.6	893.4	66.3	10.9	11.2	981.8
2007	701.4	44.5	10.0	8.8	764.7	186.5	34.1	1.1	221.7	887.9	78.6	10.0	9.9	986.4

Source:www.teaboard.gov.in

It is clear from Table 4 that in North India Orthodox tea, green tea, CTC tea and Darjeeling tea are produced and in South India orthodox tea, green tea and CTC tea are produced.

FINDINGS OF THE STUDY

The following are the important findings of the study.

Tea cultivation areas in different states are differing from year to year. The correlation analysis shows high positive correlation between Karnataka and West Bengal as for as tea cultivation area in different periods and t test analysis shows the t value is low for Kerala and it shows that there is comparatively high consistency with respect to tea cultivation area for different periods of the study. Tea productions in different states are differing from year to year due to climatic conditions of the different state. The correlation analysis shows high positive correlation between Karnataka and West Bengal as for as tea production in different periods are concerned and t test analysis shows t value is low for other states and it shows that there is comparatively high consistency with respect to production for different periods of the study. Average yield of tea in different states are differing from year to year due to different climatic conditions. The correlation analysis shows high positive correlation between Karnataka and West Bengal as for as tea yield in different periods and t test analysis shows that t

value is low for West Bengal and it shows that there is comparatively high consistency with respect to yield for different periods of the study. The paired sample test shows the calculated value of t is about same the hypothesis of average yield of tea in Tamilnadu and West Bengal, hence, the fourth hypothesis (H_{04}) is accepted and the average yield of tea in Tamilnadu and Kerala are somewhat significantly same hence the first hypothesis (H_{01}) is also accepted. The calculated value of t is high for the remaining two hypothesis (H_{02} Tamilnadu and Kerala and H_{03} Tamilnadu and Assam) hence they are rejected.

SUGGESTIONS OF THE STUDY

In order to increase the cultivation tea, Tea Board may provide various assistance to tea producing state like., Tea Plantation Development Scheme, Special Purpose Tea Fund Scheme, Quality Upgradation and Product Development Scheme, Human Resource Development Scheme, Development Grant under Research and Development Scheme, Orthodox Tea Production Subsidy Scheme and Revolving Corpus for Loan Schemes. In Tamilnadu there are lot of uncultivable land. The Tea Board can encourage the tea cultivators to cultivate the tea plant by explaining clearly about the production and marketing activities of tea.

CONCLUSION

Tea is one of the oldest industries in India and today it enjoys the status of one of the best organized industries in the country. Although tea has been known since 2737 B.C. and consumed as a beverage for 1250 years, its cultivation in India commenced very recently. Tea is marketed and made available to the consumers in two different forms through loose and packaged. Loose tea is not subjected to any further major processing after it is purchased at auction. It is sold to the consumer rather in the same condition or in blended form. It is generally not packed in convenient sizes before it is sold. In packet tea trade, on the other hand, tea undergoes further processing and different types of tea are blended and sold to the consumers in packets of conventional sizes.

REFERENCES

BOOKS

1. Asopa V.N, Tea Industry of India, Indian Institute of Management, Ahmedabad, July 2007
2. Aswathi, "Economics of Tea Industry in India", United Publishers, Gawhati, 1975.
3. Awasthi. R.C. "Economics of Tea Industry in India", United Publishers, Gauhati, (1975).
4. Awasthi. R.C., and Jain. N.K., "Economics of Tea Industry in India", United Publishers, Gauhati, 1975.
5. Bald I.C, Indian Tea, Its Culture and Manufacture, Calcutta, 1965.
6. Banerjee. G.D., Banerji Srijeet, "Tea Industry – A Road Map Ahead", Abhijeet Publications, Delhi, 2008.
7. Bellerby, J.R Agriculture and Industry: Relative Incomes, Macmillian, 1966.
8. Chakrabarti S.R, The Chinese Puzzle, NAMDANG House, Calcutta, 1987.
9. Chaudhuri. M.R., "The Tea Industry in India" – A Diagnostic Analysis of Its Geo-Economic Aspects, Oxford book and Stationary Co., New Delhi, 1978.
10. Courtenay, P.P. Plantation Agriculture, Bell, London, 1985.
11. Dwibedi, H.N. (1999) Production of Tea in India (Calcutta: K.P. Bagchi).
12. Farzana, Rabia Jahani, Kumar Ganesh, Ravi. AG, "Principles of Management & Organizational Behaviour", CBH Publishers, Chennai, 2003.

JOURNALS

13. Asok Kumar N, Limiting Factors of Tea Production in Tamil Nadu, Kisan World, April-1994, Vol. 31.
14. Banerjee G.D, and Sarda Banerjee, Tea Industry at Crossroads, YOJANA, August 2005, Vol. 49.
15. Bose Bimal, Crisis in Indian Tea, Tea & Coffee Trade Journal, October 1, 1998.
16. Bose, Bimal, India: Coffee and Tea Update, Tea and Coffee Trade Journal, January 1, 1991.
17. Dhurjati Mukharjee and Patatri De Sarkar, Tea Industry Needs Revamping, Yojana, May 23, 1990.
18. Dudeja, Vijay, Internal and Export Tea Demand Outstripping Supply in India, Tea & Coffee Trade Journal, September 1, 1989.
19. Gagnesh Sharma and Mona Sharma, Human Resource and Marketing Management in Tea, Planters' Chronicle, August 2008.
20. Govindasamy S.K, Tea and Drought, Kisan World, April-1993, Vol. 20.
21. Gururaj G. Kulkarni and Manoj Kumar M. Reddy, Tea Mosquito Bug Menace on Neem, Kisan World, July – 1997.
22. Krishna Swamy P.R, Tea for Good Health, Kisan World, Aug-2001, Vol. 28, No. 8.

WEBSITES

23. www.tea.co.in
24. www.teaboard.gov.in
25. www.teaindustry.co.in

THE ROLE OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IN ENHANCING THE QUALITY EDUCATION OF ETHIOPIAN UNIVERSITIES: A REVIEW OF LITERATURE

DR. BIRHANU MOGES

ASST. PROFESSOR

SCHOOL OF EDUCATIONAL SCIENCES AND TECHNOLOGY EDUCATION

ADAMA SCIENCE & TECHNOLOGY UNIVERSITY

ADAMA TOWN

ABSTRACT

Globalization, enhanced by the devices of Information and Communication Technology (ICT) has greatly challenged the quality education of university. The use of ICT in education lends itself to more student-centred learning settings and often this creates some tensions for some teachers and students. But with the world moving rapidly into digital media and information, the role of ICT in education is becoming more and more important and this importance will continue to grow and develop in the 21st century. This study discusses the roles of ICT in enhancing quality education. Information Communication Technologies (ICT) at present are influencing every aspect of human life. They are playing salient roles in work places, business, education, and entertainment. The paper further highlights the hindrances associated with the use of ICT in quality education such as insufficient ICT facilities, epileptic electricity power supply, teachers' lack of ICT knowledge/skills, difficult to integrate ICT to instruction, insufficient teacher time, not enough simultaneous access, not enough supervision staff and lack of technical assistance. The review concludes that regardless of all the limitations characterizing it, ICT benefits education systems to provide quality education in alignment with constructivism, which is a contemporary paradigm of learning. The paper then recommend that, the government of Ethiopia should pass a bill at the national assembly on the use of sophisticated ICT facilities in the educational system by provision of adequate fund, securing of ICT experts in institutions and schools and ensuring that these facilities are monitored from time to time.

KEYWORDS

Ethiopia, Information and Communication Technology, quality education, universities.

1. INTRODUCTION

Education is the backbone of a nation. Education is seen as a key for transformation of individual for National development. A nation is said to be valued when a sizeable number of the citizens have quality education. Quality education includes: Learners who are healthy, well-nourished and ready to participate and learn and supported in learning by their families and communities; environments that are healthy, safe, protective and gender-sensitive, and provide adequate resources and facilities; content that is reflected in relevant curricula and materials for the acquisition of basic skills, especially in the areas of literacy, numeracy and skills for life, and knowledge in such areas as gender, health, nutrition, HIV/AIDS prevention and peace; processes through which trained teachers use student-centred teaching approaches in well-managed classrooms and schools and skilful assessment to facilitate learning and reduce disparities; and outcomes that encompass knowledge, skills and attitudes, and are linked to national goals for education and positive participation in society (Daniels, 2002; UNICEF, 2002).

In many countries, demand for university far outstrips supply and Governments and institutions are turning more and more to the use of ICTs to bridge the access gap. It is too early to say whether the role of ICTs in the teaching function of university is truly transformative, or whether it is simply a repackaging of previous pedagogy. ICTs are a potentially powerful tool for extending educational opportunities, both formal and non-formal, to previously underserved constituencies—scattered and rural populations, groups traditionally excluded from education due to cultural or social reasons such as ethnic minorities, girls and women, persons with disabilities, and the elderly, as well as all others who for reasons of cost or because of time constraints are unable to enroll on campus. ICTs make possible asynchronous learning, or learning characterized by a time lag between the delivery of instruction and its reception by learners. Effectiveness, cost, equity, and sustainability are four broad intertwined issues which must be addressed when considering the overall impact of the use of ICTs in enhancing quality education. The educational effectiveness of ICTs depends on how they are used and for what purpose. And like any other educational tool or mode of educational delivery, ICTs do not work for everyone, everywhere in the same way.

2. BACKGROUND

In recent years there has been a groundswell of interest in how computers and the Internet can best be harnessed to improve the efficiency and effectiveness of education at all levels and in both formal and non-formal settings (Haddad & Jurich, 2002). If Ethiopia as a Nation needs to improve her quality in education the essentials of Information and Communication Technology (ICT) in her educational system needs urgent attention. Educational systems around the world are under increasing pressure to use the new Information and Communication Technologies (ICTs) (Yuen, Lee, Law & Chan, 2008). Similarly, Nwosu and Ugbomo (2012) opined that, the field of education has certainly been affected by the penetrating influence of ICT worldwide and in particular developed countries. ICT has made an impact on the quality and quantity of teaching, learning and research in the tradition and/or distance education institutions using it (Kwacha, 2007). The need for re-orient and re-engineer of its formal education patterns for transformation of its citizens is vital. Nwosu and Ugbomo (2012) assert that, ICTs greatly facilitate the acquisition and absorption of knowledge, offering developing countries unprecedented opportunities to enhance educational systems, improve policy formulation and execution, and widen the range of opportunities for business and the poor. UNESCO (2002) points out that "this vision of education emphasizes a holistic, interdisciplinary approach to developing the knowledge and skills needed for a sustainable future as well as changes in values, behaviour, and lifestyles.

In the past universities have provided little choice for students in terms of the method and manner in which programs have been delivered. Students have typically been forced to accept what has been delivered and universities have tended to be quite staid and traditional in terms of the delivery of their programs. The uses of ICTs provide many options and choices and many universities are now creating competitive edges for themselves through the choices they are offering students. These choices extend from when students can choose to learn to where they learn (Oliver, 2002). Another way in which emerging ICTs are contributing significantly on the content of education curricula stems from the ways in which ICTs are dominating so much of contemporary life and work. Already there has emerged a need for universities to ensure that graduates are able to display appropriate levels of information literacy, "the capacity to identify and issue and then to identify, locate and evaluate relevant information in order to engage with it or to solve a problem arising from it" (Haddad & Jurich, 2002). However, Law, Pelgrum and Plomp (2008) opined that, acquisition of Information and Communication Technology (ICT) skills include the ability to become lifelong learners within a context of collaborative inquiry and the ability to work and learn from experts and peers in a connected global community. According to Webb and Cox (2004), the introduction of ICT usage, integration and diffusion has initiated a new age in educational methodologies, thus it has radically changed traditional method of information delivery and usage patterns in the domain as well as offering contemporary learning experience for both instructors and students. For developing countries, ICTs have the potential for increasing access to and improving the relevance and quality of education (Nwosu & Ugbomo, 2012). Nwosu and Ugbomo further stated that, when used appropriately, different ICTs helps to expand access to education, strengthen the relevance of education to the workplace, and raise educational quality by creating an active process connected to real life. Information, Knowledge, and Communication Technology also play vital role in the growth as well as producing and offering goods and services at relatively reduced costs.

3. STATEMENT OF THE PROBLEM

Smart use of ICTs can process information, create knowledgebase and make them available wherever and whenever necessary. But despite having relatively poor economic condition, Information and Communication Technologies (ICTs) in most cases have tremendous success in providing services at reduced costs to the people's door steps. ICTs have the same to do for making the university available to all classes of people throughout the country at a lower cost. As a result, on one hand people will have the access right on university and on the other hand will gain the necessary knowledge, skills, and experiences to serve the nation and prosper accordingly.

This current era of globalization, enhanced by ICT innovations, stands to improve the quality of students learning from Ethiopian universities. This is premised on the fact that ICT tools, if well positioned, could help to maintain and enhance education quality as new ways of teaching and learning, research and development, and acquiring and disseminating knowledge are made possible. The end result of this would be graduates with the appropriate knowledge, skills and competencies needed in the world of work, moving Ethiopia closer to the standards and productivity of the other countries competing in the global economy. This paper examines the roles ICT facilities might play in enhancing the quality education of Ethiopian universities.

The purpose of this paper aims to bring together the findings and key points from a review of significant part of the available literature associated with ICTs for Education and ICTs in Education. This review set out to identify and evaluate relevant strategies in national and international research and initiatives related to measuring and demonstrating the effective use of ICT for education with regard to the teaching learning process; ICT and quality and accessibility of education; ICT and learning motivation, ICT and learning environment, and ICT to enhance the scholastic performance. Hence, the main objectives of the paper are to evaluate the importance of ICT in university education and to analyze the government initiatives for development of ICT in university quality education.

SPECIFICALLY, THE OBJECTIVES OF THIS STUDY ARE:

- to assess the benefits of ICTs in enhancing quality of education.
- to investigate the current status of ICT-based universities in Ethiopia
- to explore the limitations and key challenges of ICTs integration to education systems

Therefore, this review paper discusses the roles of ICTs, the promises, limitations and key challenges of integration to enhance quality education systems. The review attempts in answering the following questions:

1. What are the benefits of ICTs in enhancing quality of education?
2. What are the existing promises of ICT use in education systems of Ethiopian universities?
3. What are the limitations and key challenges of ICTs integration to education systems?

4. THE ROLE OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IN ENHANCING QUALITY EDUCATION

In this paper, the researcher is concerned with the way in which ICTs can play a role in enhancing quality education at the universities. ICTs open up new ways of accessing information thereby changing the relationships between students and between students and their teachers. In addition, ICTs enable teachers to transform their teaching practices by facilitating student-student discussion and collaboration or by simulating 'real-world' problems thus providing students with authentic learning experiences.

In this section, the researcher discussed how ICT enhancing quality of education/teaching and learning process; the concept of information and communication technology (ICT); the benefits of ICT in enhancing quality education; how ICT enhancing learning, environment, motivation and the scholastic performance; some of the teaching and learning challenges that hinder ICT in enhancing quality education by teachers and students in university.

4.1 THE CONCEPT OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

Introducing Information and Communication Technology (ICT) as a tool to support the education sector has initiated substantial discussions since the late 1990s. A decade ago the emphasis was on Technical and Vocational Education and Training and training teachers. During the last few years, an increasing number of international development agencies have embraced the potential of ICT to support the education sector.

ICT is a term used to refer to technologies that are used in creating, accumulating, storing, editing and disseminating of information in various forms. ICT as described by Bandle (2006) is a revolution that involves the use of computers, internet and other telecommunication technology in every aspect of human endeavour. These include: Internet access, electronic mail, CD-ROMS, telephone, on line databases, library services and fax machines Nwosu and Ugbomo (2012). Webb and Cox(2004) grouped ICT used in education into two categories namely synchronous and asynchronous media. Synchronous media require all participants to be together at the same time even though in different location, examples of synchronous are audio graphics, audio conferencing as in a telephone conference, broadcast radio and television, teleconferencing, computer conferencing such as chat and internet telephony. Asynchronous ICT allow for participants in the learning process to be at different times and different places, examples of asynchronous include audio and video tapes CDs, email, computer files transfers, virtual conferences, multimedia products, offline, web based learning formats. Teleconferencing is used in both formal and non-formal learning contexts to facilitate teacher-learner and learner-learner discussions, as well as to access experts and other resource persons remotely. In open and distance learning, teleconferencing is a useful tool for providing direct instruction and learner support, minimizing learner isolation (Tinio, 2002).

Information and Communication Technologies (ICTs) are referred to as the varied collection of technological gear and resources which are made use of to communicate. They are also made use of to generate, distribute, collect and administer information. ICT is a force that has changed many aspects of the way we live. Information and Communication Technologies (ICTs) consist of the hardware, software, networks, and media for collection, storage, processing, transmission and presentation of information (voice, data, text, images), as well as related services. ICTs can be divided into two components, Information and Communication Infrastructure (ICI) which refers to physical telecommunications systems and networks (cellular, broadcast, cable, satellite, postal) and the services that utilize those (Internet, voice, mail, radio, and television), and Information Technology (IT) that refers to the hardware and software of information collection, storage, processing and presentation.

Information Technology (IT) is concerned with managing and processing information using electronics, computers and computer software to convert, store, protect, process, transmit and retrieve information. The advancement from Information Technology (IT) to Information and Communication Technology (ICT) was the result of the advent of the Internet, broadband connections and broad wave transmission energy, enabling a wider applicability in business, education and the like (Webb & Cox, 2004). ICTs are used as productivity tools or enrichment resources; this generally means that they support the traditional teacher-led mode of instruction in subject areas such as math, language, social studies, or science.

Transformative applications of ICTs refer to non-traditional emerging uses where exposure to and deployment of ICTs fundamentally change the way education is conceived and delivered to students. ICTs are enablers that optimize student-centered pedagogical methods. They are used to develop broad, generic skills such as problem solving, independent and collaborative learning, and communication. They lead to more individualized instruction, less didactic delivery, and an emphasis on problem-solving and cooperative learning situations. Teachers assume the role of facilitators and skills developers. They help the students achieve a greater understanding of information by making use of new technologies.

The experience of introducing different ICTs in the classroom and other educational settings for universities all over the world over the past several decades suggests that the full realization of the potential educational benefits of ICTs is not automatic. The effective integration of ICTs into the educational system is a complex, multifaceted process that involves not just technology indeed, given enough initial capital, getting the technology is the easiest part – but also curriculum and pedagogy, institutional readiness, teacher competencies, and long-term financing, among others. Knowledge, skills and competencies have quickly become economic commodities and there is consequently legitimate pressure on national systems to enter and thrive in the competitive global market where knowledge is central to success. There is thus the urgent need for sustainable quality education in Ethiopia universities powered by ICT tools. Such procedures would bring Ethiopian universities and students on par with others and ensure that the globally accepted Millennium Development Goal is better maintained.

4.2 ICT ENHANCING THE QUALITY AND ACCESSIBILITY OF EDUCATION

The field of education has been affected by ICTs, which have undoubtedly affected teaching, learning and research (Yusuf, 2005). ICTs have the potential to accelerate, enrich, and deepen skills, to motivate and engage students, to help relate school experience to work practices, create economic viability for tomorrow's workers, as well as strengthening teaching and helping schools change (Yusuf, 2005). In a rapidly changing world, basic education is essential for an individual be able to access and apply information. Such ability must find include ICTs in the global village.

Conventional teaching has emphasized content. For many years course have been written around textbooks. Teachers have taught through lectures and presentations interspersed with tutorials and learning activities designed to consolidate and rehearse the content. Contemporary settings are now favouring curricula that promote competency and performance. Curricula are starting to emphasize capabilities and to be concerned more with how the information will be used than with what the information is. Contemporary ICTs are able to provide strong support for all these requirements and there are now many outstanding examples of world class settings for competency and performance-based curricula that make sound use of the affordances of these technologies (Oliver, 2000). The integration of information and communication technologies can help revitalize teachers and students. This can help to improve and develop the quality of education by providing curricular support in difficult subject areas. To achieve these objectives, teachers need to be involved in collaborative projects and development of intervention change strategies, which would include teaching partnerships with ICT as a tool. According to Zhao and Cziko (2001) three conditions are necessary for teachers to introduce ICT into their classrooms: teachers should believe in the effectiveness of technology, teachers should believe that the use of technology will not cause any disturbances, and finally teachers should believe that they have control over technology. However, research studies show that most teachers do not make use of the potential of ICT to contribute to the quality of learning environments, although they value this potential quite significantly (Smeets, 2005). Varma(2008) conducted case studies in three primary and three secondary schools, which focused on innovative pedagogical practices involving ICT. Varma(2008) concludes that the benefits of ICT will be gained "...when confident teachers are willing to explore new opportunities for changing their classroom practices by using ICT. As a consequence, the use of ICT will not only enhance learning environments but also prepare next generation for future lives and careers (Wheeler, 2001). Changed pool of teachers will come changed responsibilities and skill sets for future teaching involving high levels of ICT and the need for more facilitative than didactic teaching roles (Littlejohn et al., 2002).

According to Varma(2008), the flexibilization time-space accounted for by the integration of ICT into teaching and learning processes contributes to increase the interaction and reception of information. Such possibilities suggest changes in the communication models and the teaching and learning methods used by teachers, giving way to new scenarios which favour both individual and collaborative learning". The use of ICT in educational settings, by itself acts as a catalyst for change in this domain. ICTs by their very nature are tools that encourage and support independent learning. Students using ICTs for learning purposes become immersed in the process of learning and as more and more students use computers as information sources and cognitive tools (Cross & Adam, 2007), the influence of the technology on supporting how students learn will continue to increase. In the past, the conventional process of teaching has revolved around teachers planning and leading students through a series of instructional sequences to achieve a desired learning outcome. Learning approaches using contemporary ICTs provide many opportunities for constructivist learning through their provision and support for resource-based, student centered settings and by enabling learning to be related to context and to practice (Haddad& Draxier, 2002). As mentioned previously, any use of ICT in learning settings can act to support various aspects of knowledge construction and as more and more students employ ICTs in their learning processes, the more pronounced the impact of this will become. Teachers generate meaningful and engaging learning experiences for their students, strategically using ICT to enhance learning. Students enjoy learning, and the independent enquiry which innovative and appropriate use of ICT can foster. They begin to acquire the important 21st century skills which they will need in their future lives.

The major teaching and learning challenges facing in university revolve around student diversity, which includes, amongst others, diversity in students' academic preparedness, language and schooling background. Education is perhaps the most strategic area of intervention for the empowerment of human in any society and the use of Information and Communication Technologies (ICTs) as an educational tool in the promotion of human's advancement has immense potential. The application of ICTs as a tool for effective enhancement of learning, teaching and education management covers the entire spectrum of education from early childhood development, primary, secondary, tertiary, basic education and further education and training.

Tinio (2002) further noted that ICT can expand access to education in the following ways:

Access to remote learning resources: Teachers and students no longer have to rely solely on printed books and other materials in physical media housed in libraries and available in limited quantities for their educational needs. With the Internet and the World Wide Web, a wealth of learning materials in almost every subject and in a variety of media can now be accessed from anywhere at any time of the day and by an unlimited number of people. This is particularly significant for many universities in developing countries that have limited and outdated library resources. ICTs also facilitate access to resource persons-mentors, experts, researchers, professionals, business leaders and peers all over the world.

Improving the quality of education and training is a critical issue, particularly at a time of educational expansion: ICTs can enhance the quality of education in several ways; by increasing learner motivation and engagement, by facilitating the acquisition of basic skills, and by enhancing teacher training (Haddad& Draxier, 2002). ICTs are also transformational tools which, when used appropriately, can promote the shift to a learner-centred environment.

Motivating to learn: ICTs such as videos, television and multimedia computer software that combine text, sound and colourful moving images can be used to provide challenging and authentic content that will engage the student in the learning process. Interactive radio likewise makes use of sound effects, songs, dramatizations, comic skits, and other performance conventions to compel the students to listen and become involved in the lessons being delivered. More so than any other type of ICT, net-worked computers with Internet connectivity can increase learner motivation as it combines the media richness and interactivity of other ICTs with the opportunity to connect with real people and to participate in real world events.

Enhancing teacher training: ICTs have also been used to improve access to and the quality of teacher training. Integrating ICT in teaching and learning is high on the educational reform agenda. Often ICT is seen as indispensable tool to fully participate in the knowledge society. ICTs need to be seen as "an essential aspect of teaching's cultural toolkit in the twenty-first century, affording new and transformative models of development that extend the nature and reach of teacher learning wherever it takes place" (Chandra & Patkar, 2007). For developing countries like Ethiopia, ICT can moreover be seen as a way to merge into a globalizing world. It is assumed that ICT brings revolutionary change in teaching methodologies. The innovation lies not per se in the introduction and use of ICT, but in its role as a contributor towards a student-centered form of teaching and learning.

ICT increases the flexibility of delivery of education so that learners can access knowledge anytime and from anywhere. It can influence the way students are taught and how they learn as now the processes are learner driven and not by teachers. This in turn would better prepare the learners for lifelong learning as well as to improve the quality of learning. In concert with geographical flexibility, technology-facilitated educational programs also remove many of the temporal constraints that face learners with special needs (Cholin, 2005). Students are starting to appreciate the capability to undertake education anywhere, anytime and anyplace.

One of the most vital contributions of ICT in the field of education is- *Easy Access to Learning*. With the help of ICT, students can now browse through e-books, sample examination papers, previous year papers etc. and can also have an easy access to resource persons, mentors, experts, researchers, professionals, and peers-all over the world. This flexibility has heightened the availability of just-in-time learning and provided learning opportunities for many more learners who previously were constrained by other commitments (Young, 2002). Wider availability of best practices and best course material in education, which can be shared by means of ICT, can foster better teaching. As well as learning at anytime, teachers are also finding the capabilities of teaching at any time to be opportunistic and able to be used to advantage (Young, 2002). Thus, ICT enabled education will ultimately lead to the democratization of education. Especially in developing countries like Ethiopia, effective use of ICT for the purpose of education has the potential to bridge the digital divide.

The Information and Communication Technology (ICT) curriculum provides a broad perspective on the nature of technology, how to use and apply a variety of technologies, and the impact of ICT on self and society. Technology is about the ways things are done; the processes, tools and techniques that alter human activity. ICT is about the new ways in which people can communicate, inquire, make decisions and solve problems. It is the processes, tools and techniques for:

- gathering and identifying information

- classifying and organizing
- summarizing and synthesizing
- analyzing and evaluating
- speculating and predicting

Enhancing and upgrading the quality of education and instruction is a vital concern, predominantly at the time of the spreading out and development of education. ICTs can improve the quality of education in a number of ways: By augmenting student enthusiasm and commitment, by making possible the acquirement of fundamental skills and by improving teacher training. ICTs are also tools which enable and bring about transformation which, when used properly, can encourage the shift an environment which is learner-centered. ICTs which can be in the form of videos, television and also computer multimedia software, that merges sound, transcripts and multicolored moving imagery, can be made use of so as to make available stimulating, thought provoking and reliable content that will keep the student interested in the learning process. The radio on the other hand through its interactive programs utilizes songs, sound effects, adaptations, satirical comedies and supplementary collections of performances so as to induce the students to listen and get drawn in to the training that is being provided.

ICT according to a number of commentators, enhance teaching, learning, and research, both from the constructivist and instructivist theories of learning. Behind this increasing faith in the role of technology in higher education however, lies implied acceptance of technology by various commentators, either as neutral and autonomous, neutral and human controlled, autonomous and value laden, or human controlled and value laden.

The main objective of the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2009) is to contribute to peace and security in the world by promoting collaboration among nations through education, science, culture and communication in order to foster universal respect for justice, the rule of law, and the human rights and fundamental freedoms that are affirmed for the peoples of the world, without distinction of race, sex, language or religion, by the Charter of the United Nations. UNESCO's principles on ICT in education can be summarized as follows:

- Old and new technologies need to be used in a balanced way. On-the-air and off-the air radio/radio-cassette, television and offline video-assisted technologies are still considered valid and cost-effective modes of education delivery, as important as more interactive computer/Internet-based virtual education or online distance learning.
- Meeting the international education goals by 2015 will require huge investments in teacher training institutions.
- The demand for higher education cannot be met in both the developed and developing world without use of ICT, distance or virtual modes of learning.
- Vocational training needs cannot be met without virtual classes, virtual laboratories, etc.
- Educational goals cannot be met without gender sensitivity. Wherever possible, the proposed indicators will address the need to measure the gender gap.

4.3 THE BENEFITS OF ICT IN ENHANCING QUALITY EDUCATION

Tools are now available on the Internet to assist both teachers and students to manage writing assignments to detect and avoid the pitfalls of plagiarism and copyright violations. One of the great benefits of ICTs in teaching is that they can improve the quality and the quantity of educational provision. For this to happen however, they must be used appropriately. While using ICTs in teaching has some obvious benefits, ICTs also bring challenges. First is the high cost of acquiring, installing, operating, maintaining and replacing ICTs. While potentially of great importance, the integration of ICTs into teaching is still in its infancy.

There are numerous benefits derived from the use of ICT tool in enhancing quality ICT education such as the ability for learner to choose when to learn irrespective of geographical location without stress. Secondly, ICT also enable learners to discover and explore new ideas or innovations from experts around the global world through the use of the common ICT available facilities. Thirdly, the existence of ICT into education system, will enable delivery of teachers to students, monitoring of learner progress and assessment can be done timely. However, Nwosu and Ugbomo (2012) listed the following as the benefits derived from the use of ICT in education:

Active learning: ICT-enhanced learning mobilizes tools for examination, calculation and analysis of information, thus providing a platform for student inquiry, analysis and construction of new information. Learners therefore learn as they do and, whenever appropriate, work on real-life problems in-depth, making learning less abstract and more relevant to the learner's life situation. In this way, and in contrast to memorization-based or rote learning, ICT enhanced learning promotes increased learner engagement. ICT-enhanced learning is also "just-in-time" learning in which learners can choose what to learn when they need to learn it.

Collaborative learning: ICT-supported learning encourages interaction and cooperation among students, teachers, and experts regardless of where they are. Apart from modeling real-world interactions, ICT-supported learning provides learners the opportunity to work with people from different cultures, thereby helping to enhance learners' teaming and communicative skills as well as their global awareness. It models learning done throughout the learner's lifetime by expanding the learning space to include not just peers but also mentors and experts from different fields.

Creative Learning: ICT-supported learning promotes the manipulation of existing information and the creation of real-world products rather than the regurgitation of received information.

Integrative learning: ICT-enhanced learning promotes a thematic, integrative approach to teaching and learning. This approach eliminates the artificial separation between the different disciplines and between theory and practice that characterizes the traditional classroom approach.

Evaluative learning: ICT-enhanced learning is student-directed and diagnostic. Unlike static, text- or print-based educational technologies, ICT-enhanced learning recognizes that there are many different learning pathways and many different articulations of knowledge. ICTs allow learners to explore and discover rather than merely listen and remember.

4.4 CHALLENGES THAT HINDER ICT IN QUALITY EDUCATION

However, investment in ICTs has been controversial. The educational system is fraught with problems and universities typical of the Third World. Chandra and Patkar (2007) in his paper identified some problems related to ICT-based education: technology and moral issues, affordability, technological imperialism, socialisation and humanisation of technology, appropriateness and acceptability. Opportunities offered by ICT-based education may not be beneficial to all learners in countries with different socio-economic, political and cultural environments. The availability of knowledge through technology may cause serious maladjustment to the people of many developing countries. The cost of establishing and maintaining the program economically, culturally, socially or politically must be affordable as globalised system of education. Any replacement or reformation of the use of technology in developing countries needs to be harmonised socially, culturally, economically. Each technology has its own strengths and weaknesses. One medium may serve a teaching function better than another in a particular area and culture and learners may have different preferences for the technology to best learn with. The socio-economic and cultural background of a person influences their ability to learn from different media technology. Use of new communication technologies requires trained manpower to design, develop, produce and deliver educational material. Few developing countries have adequately trained human resources for these specialised jobs. Among the targeted people they are habituated in a way that providing of education should be done in conventional mode because in some places still people don't have the access to power.

The challenge faced in use of ICT is that in many developing nations the basic requirement of electricity and telephone networks is not available as required. Also many universities do not have proper rooms or buildings so as to accommodate the technology. Another challenge is that the teachers need to develop their own capacity so as to efficiently make use of the different ICTs in different situations. The four most common mistakes in introducing ICTs into teaching-learning are: (a) installing learning technology without reviewing student needs and content availability; (b) imposing technological systems from the top down without involving teachers and students; (c) using inappropriate content from other regions of the world without customizing it appropriately; and (d) producing low quality content that has poor instructional design and is not adapted to the technology in use.

The hindrances affecting ICT in quality education are numerous but some include issues such as:

- Insufficient ICT facilities and unsophisticated accessories
- Epileptic electricity power supply

Insufficient ICT facilities and unsophisticated accessories: In Ethiopia, most ICT facilities are not sufficient to enhance quality education to learners and teachers, even where it exist there are not sophisticated enough to stand the taste of time like the ones acquired in developed countries. Nwosu and Ugbomo (2012) stated that, Problems of quality and lack of resources are compounded by the new realities faced by universities battle to cope with every increasing student's numbers.

Epileptic electricity power supply: In Ethiopia, electricity power supply is irregular this affect most of the ICT operations in her universities and at homes thus causing frequent damages of the existing ICT equipment which hinder ICT uses in enhancing quality education. According to Chandra and Patkar (2007) all ICT equipment, infrastructure and terminals depend on electricity to energize, unless this vital source is always available and reliable, Ethiopians will not be able to fully enjoy the benefits that the digital revolution offers and that overcoming the energy crises is a major pre-requisite for Ethiopia to achieve its Vision of national transformation.

However, others scholars listed the following as hindrances to ICT in quality education; Kwacha (2007) noted that, the most common problems associated with the effective implementation of ICT are lack of qualified ICT personnel, cost of equipment, management attitudes, inconsistent electric power supply, inadequate telephone lines, particularly in rural areas and non inclusion of ICT programmes in teacher's training curricula and at the basic levels of education. Pelgrum (2001) stated that, obstacles for ICT implementation include the following: Insufficient number of computers, teachers' lack of ICT knowledge/skills, difficult to integrate ICT to instruction, scheduling computer time, insufficient peripherals, not enough copies of software, insufficient teacher time, not enough simultaneous access, not enough supervision staff and lack of technical assistance. In addition, Lewis and Smith (2002) summarized these barriers as limited equipment, inadequate skills, minimal support, time constraints and the teacher's own lack of interest or knowledge about computer.

Since the teaching and learning challenges are multi-faceted, multi-pronged approaches are needed in order to attempt to solve some of these problems. Cross and Adam (2007) postulates:

[...] information technology is a cost-effective investment only in the context of a systemic reform. Unless other simultaneous innovations in pedagogy, curriculum, assessment, and school organization are coupled to the usage of instructional technology, the time and effort expended on implementing these devices produces few improvements in educational outcomes – and reinforces many educators' cynicism about fads based on magical machines.

The researcher infers from Cross and Adam that there are several inter-related factors that influence improvements in educational outcomes. Thus together, pedagogy, curriculum, assessment and organization contribute to bringing about improvements in the educational process. Although educational technology is not the panacea for educational challenges, it does leverage and extend traditional teaching and learning activities in certain circumstances and hence has the potential to impact on learning outcomes. While, Knapper (2001:94) argues that:

[...] technology may be a good solution for some instructional problems, and in some cases it may be a partial solution. But in other instances technology does little to address the fundamental teaching and learning issue or – even worse – provides a glitzy but inappropriate solution to a problem that has simply been misconstrued.

The trick is to identify situations where educational technology will be appropriate and when and how to use educational technology in these situations. There are times where technology may not be useful and may indeed be counter-productive. However, there are many times when educational technology offers a solution for problems that would be difficult, cumbersome or impossible to resolve in a face-to-face environment. Numerous manuals, websites and articles have been devoted to suggesting, explaining and modelling the ways that educational technology can be used to support teaching and learning. The researcher agrees with Czerniewicz, Ravjee & Mlitwa (2005) that it is important that educational technology-based resources be appropriately matched to both teaching and learning activities. Table 1 adapted from Czerniewicz et al., (2005) usefully explains how educational technology can be integrated into the curriculum. Czerniewicz et al guidelines are useful in that they provide a framework which relates ICT-based resources to particular teaching and learning activities. The guidelines therefore suggest particular uses of ICT for particular teaching and learning situations. The effectiveness of ICTs for teaching and learning, however, is largely dependent on how much the context is understood.

4.5 ICT ENHANCING LEARNING ENVIRONMENT

ICT presents an entirely new learning environment for students, thus requiring a different skill set to be successful. Critical thinking, research, and evaluation skills are growing in importance as students have increasing volumes of information from a variety of sources to sort through (Haddad & Draxier, 2002). ICT is changing processes of teaching and learning by adding elements of vitality to learning environments including virtual environments for the purpose. ICT is a potentially powerful tool for offering educational opportunities. It is difficult and maybe even impossible to imagine future learning environments that are not supported, in one way or another, by Information and Communication Technologies (ICT).

When looking at the current widespread diffusion and use of ICT in modern societies, especially by the young the so-called digital generation then it should be clear that ICT will affect the complete learning process today and in the future. Authenticity is an important issue which should be addressed in the design and development of learning environments (Cholin, 2005). Learning environments need to reflect the potential uses of knowledge that pupils are expected to master, in order to prevent the acquired knowledge from becoming inert (Chandra & Patkar, 2007). In addition, teachers should stimulate pupils to engage in active knowledge construction. This calls for open-ended learning environments instead of learning environments which focus on a mere transmission of facts (Cholin, 2005). ICT may contribute to creating powerful learning environments in numerous ways.

ICT provides opportunities to access an abundance of information using multiple information resources and viewing information from multiple perspectives, thus fostering the authenticity of learning environments. ICT may also make complex processes easier to understand through simulations that, again, contribute to authentic learning environments. Thus, ICT may function as a facilitator of active learning and higher-order thinking (Law, Pelgrum & Plomp, 2008). The use of ICT may foster co-operative learning and reflection about the content (Nwosu & Ugbomo, 2012). Furthermore, ICT may serve as a tool to curriculum differentiation, providing opportunities for adapting the learning content and tasks to the needs and capabilities of each individual pupil and by providing tailored feedback (Bottino, 2003). As Czerniewicz et al., (2005) point out, ICT may fit into a spectrum of instructional approaches, varying from traditional to innovative. Another aspect which may of course influence the use of ICT is access to technology (Kennewell, Parkinson, & Tanner, 2000). This refers not only to the number of computers, but also to the placement of the equipment, e.g. in the classroom or in a computer room. Kennewell et al. (2000) feel it is essential that computers be placed in the classroom, in order to maximize the opportunities for curriculum activity. ICT environment improves the experience of the students and teachers and to use intensively the learning time for better results. The ICT environment has been developed by using different software and also the extended experience in developing web based and multimedia materials. ICTs have an important role to play in changing and modernizing educational systems and ways of learning.

4.6 ICT ENHANCING LEARNING MOTIVATION

ICTs can enhance the quality of education in several ways, by increasing learner motivation and engagement, by facilitating the acquisition of basic skills, and by enhancing teacher training. ICTs are also transformational tools which, when used appropriately, can promote the shift to a student-centered environment. ICTs, especially computers and Internet technologies, enable new ways of teaching and learning rather than simply allow teachers and students to do what they have done before in a better way. ICT has an impact not only on what students should learn, but it also plays a major role on how the students should learn. Along with a shift of curricula from "content-centered" to "competence-based", the mode of curricula delivery has now shifted from "teacher centered" forms of delivery to "student-centered" forms of delivery. ICT provides- Motivation to Learn. ICTs such as videos, television and multimedia computer software that combine text, sound, and colourful moving images can be used to provide challenging and authentic content that will engage the student in the learning process. Interactive radio likewise makes use of sound effects, songs, dramatizations, comic skits, and other performance conventions to compel the students to listen and become more involved in the lessons being delivered.

ICT changes the characteristics of problems and learning tasks, and hence play an important task as mediator of cognitive development, enhancing the acquisition of generic cognitive competencies as essential for life in our knowledge society. Students using ICTs for learning purposes become immersed in the process of learning and as more and more students use computers as information sources and cognitive tools (Law, Pelgrum & Plomp, 2008), the influence of the technology on supporting how students learn will continue to increase. Learning approaches using contemporary ICTs provide many opportunities for

constructivist learning through their provision and support for resource-based, student centered settings and by enabling learning to be related to context and to practice (Kennewell, Parkinson, & Tanner, 2000). The teachers could make their lecture more attractive and lively by using multi-media and on the other hand the students were able to capture the lessons taught to them easily. As they found the class very interesting, the teachings also retained in their mind for a longer span which supported them during the time of examination. More so than any other type of ICT, networked computers with Internet connectivity can increase learner motivation as it combines the media richness and interactivity of other ICTs with the opportunity to connect with real people and to participate in real world events. ICT-enhanced learning is student-directed and diagnostic. Unlike static, text- or print-based educational technologies, ICT-enhanced learning recognizes that there are many different learning pathways and many different articulations of knowledge. ICTs allow learners to explore and discover rather than merely listen and remember. The World Wide Web (WWW) also provides a virtual international gallery for students' work (Loveless, 2003). ICT can engage and inspire students, and this has been cited as a factor influencing ready adaptors of ICT (Daniels, 2002; Windschitl, 2002).

4.7 ICT ENHANCING THE SCHOLASTIC PERFORMANCE

Based on the extensive usage of ICTs in education the need appeared to unravel the myth that surrounds the use of Information and Communication Technology (ICT) as an aid to teaching and learning, and the impact it has on students' academic performance. ICTs are said to help expand access to education, strengthen the relevance of education to the increasingly digital workplace, and raise educational quality. However, the experience of introducing different ICTs in the classroom and other educational settings all over the world over the past several decades suggests that the full realization of the potential educational benefits of ICT. The direct link between ICT use and students' academic performance has been the focus of extensive literature during the last two decades. ICT helps students to their learning by improving the communication between them and the instructors (Flecknoe, 2002; Sharma, 2003).

The analysis of the effects of the methodological and technological innovations on the students' attitude towards the learning process and on students' performance seems to be evolving towards a consensus, according to which an appropriate use of digital technologies in education can have significant positive effects both on students' attitude and their achievement. Research has shown that the appropriate use of ICTs can catalyze the paradigmatic shift in both content and pedagogy that is at the heart of education reform in the 21st century. Kozma's (2005) meta-analysis study revealed that, on average, students who used ICT-based instruction scored higher than students without computers. The students also learned more in less time and liked their classes more when ICT-based instruction was included. Fuchs and Woessman (2004) used international data from the Programme for International Student Assessment (PISA), they showed that while the bivariate correlation between the availability of ICT and students' performance is strongly and significantly positive, the correlation becomes small and insignificant when other student environment characteristics are taken into consideration. Becker (2000) found that ICT increases student engagement, which leads to an increased amount of time students spend working outside class. Coates et al. (2004) showed that students in on-campus courses usually score better than their online counterparts, but this difference is not significant here. ICTs especially computers and Internet technologies enable new ways of teaching and learning rather than simply allow teachers and students to do what they have done before in a better way.

5. CONCLUSIONS AND RECOMMENDATIONS

In order to conclude the researcher was try to proceed to synthesize from a general viewpoint the results obtained, taking into consideration the relevant aspects of the literature. The results provided by analysis of the literature obtained were exposed especially regarding those aspects which are related to ICTs for Education and ICTs in enhancing quality education at universities. ICTs for quality education refer to the development of information and communications technology specifically for teaching-learning purposes, while the ICTs in education involve the adoption of general components of information and communication technologies in the teaching learning process.

5.1 CONCLUSIONS

This literature review has sought to explore the role of ICT in enhancing quality education at university as we progress into the 21st century. In particular ICTs have impacted on educational practice in education to date in quite small ways but that the impact will grow considerably in years to come and that ICT will become a strong agent for change among many educational practices. Extrapolating current activities and practices, the continued use and development of ICTs within education will have a strong impact on: ICT and teaching-learning process; quality and accessibility of education; learning motivation, learning environment and ICT usage and academic performance.

As move into the 21st century, many factors are bringing strong forces to bear on the adoption of ICTs in education and contemporary trends suggest will soon see large scale changes in the way education is planned and delivered as a consequence of the opportunities and affordances of ICT. It is believed that the use of ICT in education can increase access to learning opportunities. It can help to enhance the quality of education with advanced teaching methods, improve learning outcomes and enable reform or better management of education systems. Extrapolating current activities and practices, the continued use and development of ICTs within education will have a strong impact on: What is learned, how it is learned, when and where learning takes place, and who is learning and who is teaching. The continued and increased use of ICTs in education in years to come, will serve to increase the temporal and geographical opportunities that are currently experienced. The integration of ICTs in university is inevitable. The very high demand for university has stimulated significant growth in both private and public provision. ICTs in the form of Management Information Systems are increasingly universal. The strength of computers in teaching is their power to manipulate words and symbols-which is at the heart of the academic endeavour. The use of ICT creates an open environment which enables the storage and the reuse of information materials as also it enables the interface among the teachers as well as students. Apart from having enabling telecommunications and ICT policies, governments and universities will need to develop strategies for effective ICT and media deployment and sustainability.

The adoption and use of ICTs in education have a positive impact on teaching, learning and research. ICT can affect the delivery of education and enable wider access to the same. In addition, it will increase flexibility so that students can access the education regardless of time and geographical barriers. It can influence the way students are taught and how they learn. It would provide the rich environment and motivation for teaching-learning process which seems to have a profound impact on the process of learning in education by offering new possibilities for students and teachers. These possibilities can have an impact on student performance and achievement. Similarly wider availability of best practices and best course material in education, which can be shared by means of ICT, can foster better teaching and improved academic achievement of students. The overall literature suggests that successful ICT integration in education.

It is imperative and equally inevitable to say that quality ICT tools are a prerequisite to quality ICT education. Therefore quality ICT facilities should be made available, accessible and equally made easy for teachers and students to obtain in order to have quality ICT education in Ethiopian universities. It is nice to say that ICT is a tool that enhances quality education for transformation of individual which in turn help, to boost national economy. Therefore, issues and challenges of ICTs in education should be given urgent/adequate attention in the national assembly and bill should be passed on the effective use of sophisticated ICT gadgets with ICT experts monitoring these equipments. These sophisticated ICT gadgets could stand in test of time be equipment tested and trusted for durability and reliability provided electricity supply is stable and not erratic.

The rigid use of textbook material and its high complexity and great diversity of content does not motivate students, as it imposes great difficulties on them in the understanding of concepts and how to relate the topics being studied with real applications. The findings showed that students prefer the flexibility in the learning process through ICT-based education.

In areas with a continuous change of technological content, as with information and communication technologies, the problem is the difficulty in selecting and organizing the knowledge to be taught. In terms of technical support, experts, and course materials ICT-based education system is expected to enhance its capability to satisfy the user groups. On the one hand, new knowledge has to be added to the curriculum constantly, and at the same time any other knowledge becomes obsolete. On the other hand, content has to be organized and ordered, relating every concept to others, which is not a trivial task because of their number and how often they change.

The ICT-based education system is a holistic approach where a very high level of integrity and moral standard is required by instructors, ICTs experts, students and other stakeholders. To be effective everyone concerned with the process has to upgrade themselves continuously to keep pace with the ever changing environment. Just copying strategies from advanced world will not serve the purpose of harnessing university. While implementing ICT-based education program we have to consider indigenous factors that affect the effectiveness of the operation.

5.2 RECOMMENDATIONS

The ICT enhancement of quality education among Ethiopian universities requires that the following recommendations first be implemented:

1. The current ICT policy framework must be reviewed to reposition it to function as a necessary tool for the development of universities. The focal point of this revised policy should be the availability, acceptability and accessibility of ICT facilities in the management of university education.
2. The adoption of ICT international standards and its inclusion in the Ethiopian education system. Continuous training and retraining of teachers, others supporting staff and academia on computers and ICT skill acquisition should be provided.
3. A regular supply of power must be made available to all universities irrespective of their locations. Optimal gains cannot be achieved in the use of ICT tools where the power supply is sporadic at best.
4. Development and training of ICT experts, specifically for instruction design and development, who will work in partnership with educators and teachers should be assigned by university.
5. The private sector and multinationals within the country must begin to collaborate with government and universities in the provision and maintenance of ICT facilities. These actors/stakeholders should also consider undertaking training administrators and teachers in the effective use of ICT facilities.

REFERENCES

1. Bandle SO (2006). Development of modern ICT and internet system. In Agagu AA (ed). Information and communication technology and computer Applications. Abuja: Panof Press,1– 3.
2. Becker, H. J. (2000). "Pedagogical Motivations for Student Computer Use that Leads to Student Engagement". Education Technology. Vol. 40, No. 5, Pp; 5-17.
3. Bottino, R. M. (2003), 'ICT, national policies, and impact on schools and teachers' development' 'CRPIT' 03: Proceedings of the 3.1 and 3.3 working groups conference on International federation for information processing', Australian Computer Society, Inc., Darlinghurst, Australia, Australia, 3-6.
4. Chandra, S. & Patkar, V. (2007), 'ICTS: A catalyst for enriching the learning process and library services in India', The International Information & Library Review Vol. 39, No. (1), Pp; 1-11.
5. Cholin, V. S. (2005), 'Study of the application of information technology for effective access to resources in Indian university libraries', The International Information & Library Review Vol.37, No.(3), 189-197.
6. Coates, D.; Humphreys, B. R. [et al.] (2004). "No Significant Distance' between Face-to-face and Online Instruction: Evidence from Principles of Economics". Economics of Education Review. Vol. 23, No. 6, Pp; 533-546.
7. Cross, M. & Adam, F. (2007), 'ICT Policies and Strategies in Higher Education in South Africa: National and Institutional Pathways', Higher Education Policy Vol. 20, No.(1), Pp; 73-95.
8. Czerniewicz, L., Ravjee, N. & Mlitwa, N. (2005) Information and Communication Technologies (ICTs) and South African Higher Education: Mapping the Landscape. A report for the Council for Higher Education.
9. Daniels J.S. (2002) "Foreword" in Information and Communication Technology in Education—A Curriculum for Schools and Programme for Teacher Development. Paris:UNESCO.
10. Flecknoe, M. (2002). "How can ICT help us to improve education"? Innovations in Education & Teaching International, Vol. 39, No. 4, Pp; 271-280
11. Haddad, A. & Draxier, C. (2002). Technologies for Education: Potentials, Parameters and Prospects. United Nations, Educational Scientific and Cultural Organization, Paris 3-17. Retrieved from <http://www.knowlednterprise.org>.
12. Haddad, W. & Jurich, S. (2002). ICT for education: Potential and Potency. In W. Haddad & D. Drexler (Eds.), Technologies for Education: Potential, Parameters, and Prospects. Washington, DC: Academy for Educational Development and Paris: UNESCO, pp.34-37. Retrieved from http://www.ncc.gov.ng/speeches_presentations/evc's%20presentation/champion_lecture_2007.pdf
13. Hepp, K. P., Hinostroza, S.E., Laval, M.E., Rehbein, L. F. (2004) "Technology in Schools: Education, ICT and the Knowledge Society" OECD. Available: www1.worldbank.org/education/pdf/ICT_report_oct04a.pdf.
14. Jhurreev, V. (2005) "Technology Integration in Education in Developing Countries: Guidelines to Policy Makers". International Education Journal [Electronic], 6(4):467-483. Available: <http://ehlt.flinders.edu.au/education/iej/articles/v6n4/jhurree/paper.pdf>.
15. Kennewell, S., Parkinson, J., & Tanner, H. (2000). "Developing the ICT capable school". London: Routledge Falmer.
16. Knapper, C. (2001). The challenge of educational technology. The International Journal for Academic Development. 6, 2, 93-95.
17. Kozma, R. (2005), 'National Policies That Connect ICT-Based Education Reform To Economic And Social Development', Human Technology Vol.1, No. (2), Pp; 117-156.
18. Kwacha, P.Z. (2007). The Imperative of Information and Communication Technologies for Teachers in Nigeria Higher Education. Merlot Journal of Online Learning and Teaching, 3 (4).
19. Law, N., Pelgrum, W. J., & Plomp, T. (2008). Pedagogy and ICT Use in Schools around the World: Findings from the IEA SITES 2006 Study. Hong Kong: Springer.
20. Lewis, B. & Smith R. (2002). The development of an electronic education portfolio: An outline for medical education professional. Teaching and Learning in Medicine, 19 (2),139-147.
21. Lim, C. P. & Chai, C.S. (2004), An activity-theoretical approach to research of ICT integration in Singapore schools: Orienting activities and learner autonomy', Computers & Education Vol. 43, No. (3), Pp; 215--236.
22. Littlejohn, A., Suckling, C., Campbell, L. & McNicol, D. (2002). The amazingly patient tutor: students' interactions with an online carbohydrate chemistry course. British Journal of Educational Technology, Vol. 33 No.(3), Pp;313-321.
23. Loveless, A. (2003), "Making a difference? An evaluation of professional knowledge and pedagogy in art and ICT". Journal of Art and Design Education, Vol. 22, No. (2), Pp145154,
24. Mooij, T. (2007), 'Design of educational and ICT conditions to integrate differences in learning: Contextual learning theory and a first transformation step in early education', Computers in Human Behaviour Vol. 23, No. (3), Pp; 1499--1530.
25. Nwosu, O & Ogbomo, E. F (2012) ICT in Education: A Catalyst for Effective Use of Information .The official publication of the Pacific Northwest library Association PNLA Quarterly. Retrieved from [http:// www.ict in education: as a catalyst for effective use of information](http://www.ict in education: as a catalyst for effective use of information).
26. Oliver, R. (2000). Creating Meaningful Contexts for Learning in Web-based Settings. Proceedings of Open Learning 2000. (Pp; 53-62).Brisbane: Learning Network, Queensland.
27. Pelgrum, W. J., Law, N. (2003) "ICT in Education around the World: Trends, Problems and Prospects" UNESCO-International Institute for Educational Planning. Available: www.worldcatlibraries.org/wcpa/ow/02d077080fcf3210a19afeb4da09e526.html.
28. Pelgrum, W.J. (2001). Obstacles to the integration of ICT in education: Results from a worldwide educational assessment. Computer & Education, 37, 163-178
29. Sharma, R. (2003), 'Barriers in Using Technology for Education in Developing Countries', IEEE0-7803-7724-9103.Singapore schools', Computers & Education Vol .41, No.(1),Pp; 49--63.
30. Smeets, E. (2005). Does ICT contribute to powerful learning environments in primary education? Computers & Education, No. 44,Pp; 343-355.
31. Tinio, V.L. (2002). ICT in education. Available: <http://www.eprimers.org> UNESCO (2002) Rewarding literacy: a study of the history and impact of the International Literacy Prizes, Paris.
32. Valasidou A, Sidiropoulos D, Hatzis T, Bousiou-Makridou D (2005). "Guidelines for the Design and Implementation of E-Learning Programmes, Proceedings of the IADIS". International Conference IADIS E-Society 2005, 27 June- 30 June, Qawra, Malta.

33. Varma. A. (2008). ICT in the Field of Education', Anil Varma (Ed), "Information and Communication Technology in Education", First edition, Icfai University Press, Hyderabad, p.10.
34. Webb, M., & Cox, M. (2004). A review of pedagogy related to information and communications technology. *Technology, Pedagogy and Education*, Vol. 13 No. (3), Pp; 235–286.
35. Wheeler, S. (2001). Information and communication technologies and the changing role of the teacher. *Journal of Educational Media*, Vol. 26, No.(1), Pp;7-17.
36. Windschitl, M. (2002). "Framing constructivism in practice as the negotiation of dilemmas: An analysis of the conceptual, pedagogical, cultural, and political challenges facing teachers". *Review of Educational Research*, Vol. 72 No. (2), Pp; 131–175 (p. 137).
37. Young, J. (2002). The 24-hour professor. *The Chronicle of Higher Education*, Vol. 48, No. (38), Pp; 31-33.
38. Yuen, A.; Law, N. & Wong, K. (2003), 'ICT implementation and school leadership Case studies of ICT integration in teaching and learning', *Journal of Educational Administration*, Vol. 41 No. 2, Pp;158-170.
39. Yusuf, M.O. (2005). Information and communication education: Analyzing the Nigerian national policy for information technology. *International Education Journal* Vol. 6 No. (3), Pp; 316-321.
40. Zhao, Y. & Cziko, G. A. (2001). Teacher adoption of technology: a perceptual control theory perspective. *Journal of Technology and Teacher Education*, Vol. 9, No. (1), Pp; 5-30



PROBLEMS & PROSPECTS OF WOMEN ENTREPRENEURS IN INDIA

JAINENDRA KUMAR VERMA
RAJIV GANDHI NATIONAL FELLOW
DEPARTMENT OF APPLIED ECONOMICS
UNIVERSITY OF LUCKNOW
LUCKNOW

ABSTRACTS

The emergence of woman entrepreneurs and their contribution thenational economy is quite visible in India. The number of woman entrepreneurshas grown over a period of time, especially in the 1990s. Our increasing dependency on service sector has created many entrepreneurial opportunities especially for women where they can excel their skills with maintaining balance in their life. Propose of this empirical study is intended to find out various motivating and de-motivating internal and external factors of women entrepreneurship.. In developing country like India where economic status of women is very pathetic especially in rural areas and opportunities of earning are very less in this scenario the Self Help Groups (SHGs) have paved the way for economic independence of rural women. This paper reviews concisely the literature in this field and addresses in particular opportunities and challenges faced by women entrepreneurs in rural areas. It is an attempt to quantify some for non-parametric factors to give the sense of ranking these factors. It will also suggest the way of eliminating and reducing hurdles of the women entrepreneurship development in Indian Context.

KEYWORDS

Characteristics, Women entrepreneurs, Problems, Association, Role of Government

INTRODUCTION

What is the role of entrepreneurship in economic development? At a minimum, the answer should be able to explain the role of entrepreneurs in the structural transformation of countries from low income, primary-sector based societies into high income service and technology based societies. More broadly though, it should also be able to explain the role of entrepreneurs in the opposite poles of stagnating development (including war/conflict) and in accelerating growth (including high innovation) situations. Over the past fifty years or so the world has experienced a wide diversity of development experiences, from successful economic structural transformations (such as in East Asia), mixed-success transformations (as in many countries of the former Soviet Union), rapid innovation episodes—sometimes accompanied by high growth (such as in Finland, India, Ireland, and the US to an extent), but also growth stagnation, collapse and persistent conflict (as in many African countries).

OBJECTIVES OF THE STUDY

The objectives of the study are:

- To explore characteristics of entrepreneurs
- To explore Women Entrepreneurs and Reasons for Boosting Women Entrepreneurship in India
- To explore Problems Faced by Women Entrepreneurs
- To explore some Association Promoting Women Entrepreneurs
- Role of Government to Develop Women Entrepreneurs
- Suggestion for the Development of Women Entrepreneurship

METHODOLOGY

The paper attempt to explore the concepts, obviously it's an exploratory research where earlier studies on the subject matter has been readdressed to give insight to phenomenon.

CHARACTERISTICS OF ENTREPRENEURS

To be successful entrepreneurs one has to acquire and develop certain qualities, namely:

- 1) High motivation for achievement of goal,
- 2) Insatiable drive and persistent enthusiasm,
- 3) Ready to take risk and face challenge,
- 4) Technical expertise,
- 5) Spirit of innovation,
- 6) Hard working, dedication, commitment and self – confidence,
- 7) Willingness to take advice/ learn from the failure and use of Feedback,
- 8) Effective management of time

WOMEN ENTREPRENEURS IN INDIA

In India, women comprise 40% of the population. Yet they have secondary position in the society. Their role is confined within the four walls of the household activities. In the male dominated society discrimination against the fair sex is still being practiced in different forms. At this juncture can we expect that a woman can act as an entrepreneur? In yester-years the life of Indian women was like a well – defined predictable master plan. It began with a girl playing with dolls and built to the crescendo of marriage. However, in this modern age things have been changed a lot. Spread of education coupled with a revolutionary change in the field of information and technology brings a significant change of the status of women in the society.

REASONS FOR BOOSTING WOMEN ENTREPRENEURSHIP

The role of women entrepreneurs in the process of economic development has been recognized form nineties in various parts of the world. Today, in the world of business, women entrepreneurship has become an essential movement in many countries and has been accepted in all areas of working. The United Nations report has also concluded that economic development is closely related to the advancement of women. From the Table given below, it may be observed that in nations where women have advanced, economic growth has usually been steady. By contrast, in countries where women have been restricted, the economy has been stagnant. The data on correlation between Gender related development index and GDP per capital reinforces the above fact.

TABLE 1

Gender related development index and its component rank	Country	Gender related development index	As a per % of HDI	GDP per Capital (US\$)
1	Australia	0.966	98.9	34923
2	Norway	0.961	99.6	53433
3	Iceland	0.959	99.0	44613
4	Canada	0.959	99.2	35812
5	Sweden	0.956	99.3	36712
6	France	0.956	99.4	33674
7	Netherland	0.954	98.9	38694
8	Finland	0.954	99.5	34526
9	Spain	0.949	99.4	31560
10	Ireland	0.948	98.2	44613
114	India	0.594	97.1	4102

Source: UNDP Report on Economic Development

'Entrepreneurship is the professional application of knowledge, skills and competencies and/or of monetizing a new idea, by an individual or a set of people by launching an enterprise de novo or diversifying from an existing one (distinct from seeking self-employment as in a profession or trade), thus to pursue growth while generating wealth, employment and social good'. It is in the creation of more wealth, and in the constant innovation from prevailing to the next best practices, that the significance and importance of Entrepreneurship lies.

Statistics on the growth of India's technology driven entrepreneurship are telling. In a recent survey by the Deloitte group, India ranks 2nd globally as home to the fastest growing technology firms. 82 Indian companies entered the Deloitte Technology Fast 500 list of Asia-Pacific Companies in 2007 and the companies that have made it to the Technology Fast 50 of India have an average three-year revenue growth of 489%. In this respect, particularly in high skill innovation driven Entrepreneurship, the opportunities offered by complex and interconnected global networks are also relevant. The ability to 'adapt to changing market conditions and anticipate future technologies and economic trends' and leverage across a large number of markets provide 'opportunities for exploiting economies of scale.'

WOMEN ENTERPRISES IN PRACTICE

The Government of India has defined women enterprise as "an enterprise owned and controlled by women having a minimum financial investment of 51 % of capital and Giving following features have been found in respect of woman entrepreneurship.

- 1) Women account for only 5.2% of the total self-employed persons in the country.
- 2) There were more than 1, 53,260 woman entrepreneurs claiming 9.01% of the total entrepreneurs in India during 1998-99.
- 3) Decision relating to site selection for establishment of enterprise of for women is based on proximity to home.
- 4) Women entrepreneurs face more difficulties than their male counterparts in the startup stage of enterprise due to lack of experience of technical training and marketing.
- 5) Self-assessment by woman entrepreneurs shows great differences from the characteristics normally associated with male entrepreneurs such as: passive vs. active; private vs. social.

In past rural women concentrated on traditional activities, but now due to spread of education and favorable government policies towards self - employment and skill development, women have changed their attitude and diverted towards non-traditional activities too. We find woman entrepreneurs engaged themselves in different type of at list 51 % of the employment generated in the enterprise to women." In India the activities such as: Engineering, Electronics, Readymade Garments, Textile Designing, Jewelers, Designing, Handicrafts, Doll-making, Toy- making, Painting, Knitting, Plastics, Soap, Ceramics, Crèches, Canning, Leaf Paper Products, Mushroom farming, Beekeeping, Duckery, Poultry, Dairy, Fishing and Dry-fishing, Livestock Management and Floriculture, etc.

PROBLEMS FACED BY WOMEN ENTREPRENEURS

The problems faced by woman entrepreneurs are briefly analyzed below:

- 1) **Access to Start-up Finance:** Access to start-up finance is the greatest single issue faced by women entrepreneurs. It is observed that women entrepreneurs face greater problems in this regard than small business in general. As family members are not in favour of supporting their ladies to take up the business in which they have skills, naturally they will be unwilling to support with the finance required for starting a business unit.
- 2) **Working Capital Management:** Another key disturbing factor for women entrepreneur is managing the working capital. Working capital is required for maintaining finished stock to meet the market demand, for production and meeting marketing and other administrative expense. It will be very difficult for women entrepreneurs to avail such loan facilities from financial institutions as they are unable to provide security.
- 3) **Marketing Skills:** Regarding marketing skills, women entrepreneurs have the problem of access to markets as their marketing skills are weak compared to male entrepreneurs. Maintaining existing business and access to fresh business requires strategic marketing skills. This is the most commonly repeated problem faced by women entrepreneurs after finance.
- 4) **Access to Technology:** Co-coordinating factors of production is really a challenge to woman entrepreneurs. Woman entrepreneurs cannot easily coordinate the production process particularly with the ever changing technology. Very few women can sustain such production instants. Women who aspire to become entrepreneurs cannot keep pace with technology advancement. This puts down their initiative to become entrepreneurs.
- 5) **Regulatory Requirements:** Regarding administrative and regulatory requirements may face that this is a significantly greater problem for women entrepreneurs than their male counterparts. Micro- enterprises of every type experience these problems. It is because of the disproportionate effect of compliance costs on small companies compared with large firms. Inspire of this, women entrepreneurs do not face that it, is a major issue.
- 6) **Management Skills:** Another vital problem encountered by woman entrepreneurs is lack of management skills. In majority of the cases woman entrepreneurs lack management skills because they have lower propensity of previous business experience. Besides this, support providers discriminate against women entrepreneurs to a greater extent providing these skills.
- 7) **Lack of Confidence:** Other problems' like society's attitude towards woman entrepreneurs, unequal opportunities between women and men and very important amongst all the 'Lack of Confidence' in women are also haunting entrepreneurs.

ASSOCIATION PROMOTING WOMEN ENTREPRENEURS

A brief analysis of various associations and agencies that are functioning at State and national levels to promote women entrepreneurs are discussed as follows:

1. **Self-Help Groups (SHGs):** This is an association of small group of self-employed rural or urban women entrepreneurs who join together to take care of group welfare. The group with the help of financial institutions and other NGOs get their needs satisfied. This is a voluntary association. Each member contributes little amount of cover seed money. Rest will be taken care off by NGOs and Government.
2. **Federation of Indian Women (FIWE):** It is the outcome of resolution passed in 4th International Conference Women Entrepreneurs held at Hyderabad. This was founded in the year 1993. It mainly interacts with various women association of the country through network to facilitate the member in diversified activities.

3. **Women's India Trust (WIT):** This trust was established in 1968. The trust was started with the main objective of helping woman entrepreneurs. Establishing Kamila Trust in U.K. in 1994 to market the products of WIT members a shop in London under the name "Kashi" and extended export activities to Australia, Europe and Germany from 1995.
4. **SIDBI:** Small Industries Development Bank of India (SIDBI) is institution established at the national level to provide facilities so small scale industries. As a part of developing small industries by woman entrepreneurs, SIDBI has introduced two special schemes for women; (i) Mahila Udyam Nidhi to provide equity to women entrepreneurs and (ii) Mahila Vikas Nidhi to provide development assistance for pursuit of income generating activities to women.
5. **SIDO:** Small Industries Development Organization (SIDO) is conducting various Vol. I, Issue:1, April 2011 to Sept. 2011 156 Half programmes including Entrepreneurship Development Programmes (DEPs) for women. To later she needs of potential women entrepreneurs, who may not have adequate educational background and skills; SIDO has introduced product orient EDPs in areas like TV repairing, printed circuit boards, leather goods, screen printing etc.
6. **Consortium of Women Entrepreneurs in India (CWEI):** The CWEI is a voluntary organization consisting of NGOs, SHGs, voluntary Organization and individual business units. This came into being in 2001. The objective is to be providing technology up gradation facilities to women entrepreneurs and other facilities in marketing, finance, HRD and production. The consortium is also having international business connections and provides its members marketing and export support through this connection.
7. **NABARD:** National Bank of Agriculture and Rural Development (NABARD) is an autonomous financial institution provides liberal credit to rural women entrepreneurs.
8. **Central and State Government Schemes:** State Government has come out with several schemes to develop women entrepreneurs. Development of Women and Children in Rural Areas (DWCRA) a scheme designed for State governments were implemented in 1982-83. Uncountable women throughout the country have availed the facilities to develop themselves as entrepreneurs.
9. **Self-employed Women's Association (SEWA):** SEWA is a trade union of women which was registered in 1972 under Trade Union Act. The members of SEWA has extended its operations to the global level and has the opportunity of receiving grants from international organizations such as Ford Foundation, UNICEF, ILO, etc. and Government of India is also providing funds to this organization.

ROLE OF GOVERNMENT TO DEVELOP WOMEN ENTREPRENEURS

The Government of India has also formulated various training and development-cum- employment generation programmes for the women to start their ventures. These programmes are as follows: Steps taken by Government during Seventh Five- year Plan In the 7th Five-year Plan, a special chapter on the "Integration of Women in Development" (IWD) was introduced by Government with following suggestions:

- (i) It was suggested to treat women as a specific target groups in all major development programmes of the country.
- (ii) It is also suggested in the chapter to devise and diversity vocational training facilities for women to suit their changing needs and skills.
- (iii) Efforts should be made to increase their efficiency and productivity through appropriate technologies, equipment's and practices.
- (iv) It was suggested to provide the required assistance for marketing the products produced by women entrepreneurs.
- (v) It was also suggested to involve the women in decision-making process.

SUGGESTION FOR THE DEVELOPMENT OF WOMEN ENTREPRENEURSHIP

Thus we can say that women face lots of problems in the male dominated society. There are many unwritten rules, which the society scrupulously follows. Most of the rules pertain to women and encompass a wide variety of social activity like women's education, their employment hours of work, dress outing, and the like can interact only with known persons. The following suggestions are made to solve the problems of women entrepreneurs.

- 1) Central and State governments should assist woman entrepreneurs to participate in international trade fair, exhibition and conferences.
- 2) Several policy initiatives have been made by the government like Manila smoky, Swarnajayanthi, Gram Swarojgar Yojna (SGSY), Development of Women and Children of Rural Areas (IAY) and many other policies. Recently, the government has enacted the national policy for the empowerment of women: 2001. The goal of the policy is to bring about the advancement development and empowerment of women.
- 3) The family members of woman entrepreneurs should also activity participate and extended all possible support in the matter of managing units set up at by woman entrepreneurs.
- 4) Efforts should be made in the direction of simplification of the procedures. Formalities, rules and regulations, etc. required to be fulfilled by the women entrepreneurs in all matter of registration of their and seeking assistance, subsidies, concessions, relief etc, from different departments and governments sponsored organization involved in providing a variety of services to women entrepreneurs.

CONCLUSION

In present scenario due to modernization, urbanization, globalization and development of education, with increasing awareness, women are now seeking gainful participation in several fields. The entrepreneurship among women will help them in earning money and becoming economically independent. Due to social networking women will develop self-confidence, awareness and ability to marshal environmental support. This will lead to an improvement is not only the women, from the point of view of better health, education and skill but an improvement in her living condition also by being able to use cleaner fuel, better house, better sanitation, facilities and. infrastructural facilities. This will lead to saving of resources like time, energy, transforming women into stronger personality and an overall improvement in her quality of life.

REFERENCES

1. A Hand Book on Forming of Self Help Group, NABARD, India Charantimath. M., Poornime, Entrepreneurship development and small business enterprise: for VTU, India, Pearson Education
2. Akhauri, M.M.P and S.P. Mishra, "Entrepreneurship education, a concept of approach and methodology", *Indian Management*, 29 (11-12), November-December 1990
3. Dasgupta 2000. An informal journey through SHG's, *Indian Journal & Agricultural Economics*, Vol. 56(3), July-Sept., 2001
4. Gupta, C.B., and Shrinivasan, N.P. (2005), *Entrepreneurship Development in India*, Sultan Chand and Sons, New Delhi.
5. Kiranjot Sidhu, Sukhjeet Kaur, (2006). Development of entrepreneurship among rural women, *J. Soc. Sci.*, 13(2): 147-149
6. Raheem, A. Abdul and C. Prabhu Women entrepreneurs: Problems and Prospects. India: Economic empowerment of Women. New Century Publications, New Delhi, India-2007.
7. Ramya, N. "Problems of women entrepreneurs", Third concept, August 2006.p.39
8. Saritha, R., "Women Entrepreneurship: Problem and Need for Environmental Alterations India" *Economic Empowerment of Women*, P.57, 2007.
9. Sharma, Anjali, Vandana Kaushik, *Indian Rural Women and Entrepreneurship*. Third Concept November, 2007. p. 51.
10. Siva Loganathan, K, "Women Entrepreneurs: Problem and Prospects" *Indian Economic Panorama*. 12(2), July 2002.
11. Sugura, B., "Planning for Economic Empowerment of Women" *Social Welfare*, 2001.

WEBSITES

12. <http://www.sidbi.in/> - The Small Industrial Development Bank of India works towards empowering Micro, Small and Medium Enterprises.
13. www.ediindia.org/ - The Entrepreneurship Development Institute of India (EDI), setup in 1983 fosters entrepreneurship through various programmes and courses.

CAPITAL STRUCTURE AND PROFITABILITY: A STUDY ON SELECTED CEMENT COMPANIES

DR. BRAJABALLAV PAL
ASST. PROFESSOR
DEPARTMENT OF BUSINESS ADMINISTRATION
VIDYASAGAR UNIVERSITY
PASCHIM MEDINIPUR

SILPI GUHA
ALUMNI
DEPARTMENT OF COMMERC WITH FARM MANAGEMENT
VIDYASAGAR UNIVERSITY
PASCHIM MEDINIPUR

ABSTRACT

The major objective of this paper is to examine the impact of capital structure on profitability of the firm. This paper investigates the relationship between the Debt-Equity Ratio and the Earning Per Share and how effectively be able to debt financing. It attempts to describe how the earning capacity of the firm is influenced by the operating and the fixed financial charges. In this study, selected cement companies are taken for analysis and hypotheses are examined with the help of one way ANOVA. Apart from that, other tools like Central tendency, Standard deviation, Karl Pearson's co-efficient and multiple regressions are applied to examine that capital structure and profitability and growth are related and the capital structure is having an impact on profitability of the firm.

KEYWORDS

Capital structure, profitability.

INTRODUCTION

The capital structure decision is a very crucial factor for any business organization. Generally, when a firm expands, it requires capital, and that capital can be sourced from debt or equity. Debt instrument has two important advantages. First, interest paid is tax deductible, which lowers debt's effective cost. Second, debt holders get a fixed return, so stockholders do not have to share their profits if the business is extremely successful.

A firm should try to maintain an optimum capital structure with a view to maintain financial stability. The optimum capital structure is obtained when the market value per equity share is the maximum. It may, therefore, be defined as that relationship of debt and equity which maximizes the value of a company's share in the stock exchange. In practice, it is difficult to specify an optimal capital structure – indeed, managers even feel uncomfortable about specifying an optimal capital structure range. Thus, financial managers worry primarily about whether their firms are using too little or too much debt. Second, even if a firm's actual capital structure varies widely from the theoretical optimum, this might not have much effect on its stock price. Overall, financial managers believe that capital structure decisions are secondary in importance to operating decisions especially those relating to capital budgeting and the strategic direction of the firm.

Capital structure is one of the most important domains of financial decision making because of its interrelationship with other financial decision variables. Wrong capital structure decisions can result in a high cost of capital thereby lowering the net present values of proposals and making more of them non-profitable. Effective capital structure decisions can lower the cost of capital, resulting in higher NPVs and more acceptable projects and thereby increasing the value of the firm.

Capital structure is the mixture of debt and preferred and common stock on a company's balance sheet. In theory, one can speak of an optimum capital structure, but, in practice it is very difficult to design one. There are significant variations among industries as also among individual companies within the same industry in respect of capital structure. There are a number of factors, both quantitative and qualitative, including subjective judgment of financial managers which determine the capital structure. These factors are highly complex and cannot suit entirely into a theoretical framework. From the operational standpoint, therefore what should be attempted is an appropriate capital structure, given the facts of a particular case.

Keeping in mind the importance of capital structure decision and its bearing on the profitability of the company, the study examines the impact of capital structure on profitability. To be specific the study examines the impact of financial leverage, return on capital employed and asset leverage on return on equity of sample companies and Indian large cement industry as a whole.

OBJECTIVE OF THE STUDY

The main objective of the study is to show the impact of capital structure on profitability. Specific objectives are:

1. To find out how the profitability of any cement company is related with its capital structure.
2. To determine how a slight change in the ratio of debt and equity would affect the profitability of the company.
3. To differentiate the profitability of a company with other company which is more levered i.e. which more include a greater percentage of debt capital in its total capital structure.

LITERATURE REVIEW

The most important financial decisions facing companies is the selection between debt and equity capital. This decision can effectively and efficiently be taken when managers are first of all aware of how capital structure influences firm profitability. In the corporate finance literature, it is believed that this decision differs from one economy to another depending on country level characteristics.

Hoje and Yong (2008) examined the financial structure of Japanese companies in order to determine the compatibility with agency predictions and identified that debt equity ratio could get influenced by the growth rate, the size of the firm and agency costs of the firm.

Sanjay .J. Bhayani (2009) identified that there is no relationship between financial leverage and cost of capital while there was positive correlation between degree of leverage and cost of capital. This study revealed that financial leverage does not influence price earnings ratio and total value of the firm.

Ali .K Ozdagli (2009) presented a dynamic model to test the relationship between financial leverage, corporate performance and stock returns of various companies. The study reveals significantly financial leverage affects investments and business risk in turn.

According to Monica and Abir (2010) there was an inverse relationship between financial leverage and growth prospects of companies whereas their existed positive correlation between debt ratio and size of the company.

Slim and Fathi (2010) found that operating leverage and business risk could explain the variations in the return and the value of the firm. The degree of financial leverage was found to be having greater impact on the value of the firm.

Investigating the relationship between corporate governance and leverage decisions, Christopher (2010) et al found out that the firms were more inclined to use debt component in the capital structure when corporate governance weakens.

Wenjuan Ruan et al (2011) found out that capital structure of the companies gets affected by managerial ownership and the firm's value thereby.

Studying the triangle relationship among firm size, capital structure and financial performance of Turkey based companies, Erol Muzir (2011) found that the impact of firm size on performance and sustainability would vary in line with the expansion is financed. The study revealed that debt financing increases the risk exposure of the firm.

RESEARCH METHODOLOGY

SAMPLE COMPANIES

The scope of the study is confined to Indian large scale cement sector. The rationale behind choosing this industry is that, as in case of any other manufacturing industry, cement industry is largely capital intensive, perhaps apart from being labor intensive, requiring the corporate to be exploring appropriate sources of funds to meet with growing needs of capital expenditure. Unlike service sectors, manufacturing sectors warrant for huge capital expenditure both in the initial period and in the times of growth. The need for such capital expenditure is also long term in nature requiring funds to be blocked in fixed assets almost permanently. Therefore decision with respect to choosing of appropriate mix of funds in case of capital intensive industries like cement sector is very crucial as it would affect the liquidity and profitability position of the company. Though Indian large cement sector constitutes twenty four companies according to Centre for Monitoring Indian Economy (CMIE), but I have taken the first three companies according to their sales volume as the sample size and eliminated other companies due to insufficiency and inadequacy.

- ULTRATECH CEMENT
- ACC CEMENT
- AMBUJA CEMENT

STUDY PERIOD

The study period is selected from year ended 31st March, 2002 to the year ended 31st March 2011 i.e., a time span of 10 years. This period is considered in the study so as to grab the impact of most recent changes surrounding the Indian economy in general and Indian corporate sector in particular.

DATA SOURCES

For this study most of the data have been collected from the financial data base package "www.Capitaline .com", manufactured, maintained and marketed by Capital Market Publishers Pvt. Ltd., Mumbai and other company website.

TOOLS USED FOR ANALYSIS PURPOSE

MAIN TOOLS

- Debt Ratio = Total debt / (Total Capital Employed)
- Debt Equity Ratio = Total Debt / Shareholders' Net worth
- Coverage Ratio = PBIT / Interest
- Return on Capital Employed = PBIT / Capital Employed
- Financial Leverage = PAT/ PBIT
- Assets Leverage = Capital Employed / Shareholders' Net worth
- Return on Equity = PAT / Shareholders' Net worth

Apart from analyzing the above stated metrics, the study runs the following multiple regressions model and analyses the results thereof for every sample company and the industry

$$ROE = \alpha + \beta1ROCE + \beta2FL + \beta3AL$$

Where:

ROE = Return On Equity

α = Intercept

β1 = Coefficient of Return on Capital Employed

β2 = Coefficient of Financial Leverage

β3 = Coefficient of Assets Leverage

The above model is partially in line with popularly known DuPont model of ROE decomposition. As a part of the study I have chosen the variable pertaining to capital structure and leverage analysis in DuPont model.

OTHER TOOLS

- ❖ Central tendency.
- ❖ Risk measures.
- ❖ Karl Pearson's co-efficient of correlation.
- ❖ Multiple regression analysis.
- ❖ ANOVA.

ANALYSIS OF THE STUDY

For the analysis and interpretation purpose I have used firstly the capital structure position of sample companies and the industry in terms of Debt ratio and Debt- Equity ratio. Secondly I used the profitability position in terms of Return on capital employed and Return on Equity. It may be noted that while analyzing the performance of the sample companies from the view point of shareholders, it is essential to know the impact of Financial and Asset Leverage on the return on equity.

1) CALCULATION OF DEBT RATIO OF SAMPLE COMPANIES (in percentage)

	COMPANY	ULTRATECH CEMENT	ACC CEMENT	AMBUJA CEMENT	AVERAGE
YEAR					
2002		N/A	60.9	52.64	56.77
2003		N/A	58.15	52	55.08
2004		60.33	51.6	38.57	50.17
2005		58.93	48.58	34.1	47.20
2006		58.3	22.57	19.87	33.58
2007		47.23	6.87	6.62	20.24
2008		39.23	8.91	4.84	17.66
2009		37.3	8.61	2.5	16.14
2010		25.82	7.49	0.879	11.40
2011		27.98	6.63	0.607	11.74
AVERAGE		35.51	28.03	21.26	32
S.D		22.39	23.72	21.28	18.68
C.V		0.63	0.85	1	0.58

As it is depicted from the above table that Debt ratio of Indian large cement sector was highest of 56.77% in the year 2002 and lowest in the year 2010 Of 11.40%. When we look in to the Debt ratio of individual selected companies ACC cement has employed highest debt component in the year 2002 to the extent of 60.9%, while Ambuja cement employed lowest debt component of 0.607% in the year 2011. while there is no company which maintained consistency in employing the debt capital, Ultratech cement relied more on debt component, ACC cement and Ambuja cement have significantly reduced the debt component in the same period except the last year. The ten year average value of the debt ratio of all the sample companies reveal that Ultratech and ACC cement could be categorized as highly levered companies which employed the debt component of 35.51% and 28.03% while Ambuja cement seen to be low levered company as the debt component below the industry average . Standard deviation and co-efficient of variation reveal that, in the case of ACC cement , the volatility in the debt component was highest and lowest in the case Ultratech cement as compared to industry.

The debt ratio of sample companies has been compared using one-way ANOVA and is tested by the following hypothesis. The result shown in the following table:

H₀₁: The debt ratio of the sample companies does not vary significantly.

ANALYSIS OF ANOVA TABLE				
Source.of variation	Sum..of squares(ss)	Degree.of freedom(d.f)	Mean square(MS)	Test statistic
Between sample	1016.73	2	508.037	F=508.04/505.57=1.005
Within sample	13,650.35	25	505.569	
Total	14,666.423	27=N-1		

From the table given at the end of the book, the value of F for v₁=2 and v₂=25 at 5% level is 3.39. We see that calculated value 1.005 is lower than the tabulated value 3.39. Hence, we accept the null hypothesis at 5% level and conclude that the debt ratio of the sample companies does not vary significantly.

2) CALCULATION OF DEBT-EQUITY RATIO OF THE SAMPLE COMPANIES (in percentage)

	COMPANY	ULTRATECH CEMENT	ACC CEMENT	AMBUJA CEMENT	AVERAGE
YEAR					
2002		N/A	1.52	1.1	1.31
2003		N/A	1.47	1.1	1.29
2004		1.52	1.21	0.83	1.19
2005		1.48	1	0.57	1.02
2006		1.42	0.4	0.35	0.72
2007		1.08	0.17	0.15	0.47
2008		0.74	0.09	0.06	0.30
2009		0.62	0.1	0.04	0.25
2010		0.46	0.09	0.02	0.19
2011		0.38	0.08	0.01	0.16
AVERAGE		0.96	0.61	0.42	0.69
S.D		0.47	0.61	0.45	0.47
C.V		0.45	1	1.07	0.68

Table 2 reveals that debt to equity of the cement sector industry was highest in the year 2002 of 1.31 times and lowest in the year 2011 of 0.16 times, whereas amongst the sample companies Ultratech cement and ACC cement stands first with debt to equity of 1.52 times in the year 2004 and 2002 when compared to other sample companies. Ten years average value of the debt equity ratio of the sample companies reveal that Ultratech cement is highly levered while other two companies employed below the industry average of 0.74. Standard deviation is high in case of ACC cement of 0.61 which mean that ACC cement involve more risk than other two companies and co-efficient of variation reveal that in the case Ambuja cement the volatility in the leverage was highest and lowest in the case of Ultratech cement.

The debt equity ratio of sample companies has been compared using one-way ANOVA and is tested by the following hypothesis. The results are shown in the following table.

H₀₂: The debt equity ratio of the sample companies does not vary significantly.

ANALYSIS OF ANOVA TABLE				
Source.of variation	Sum.of squares(ss)	Degree.of freedom(d.f)	Mean square(MS)	Test statistic
Between sample	1.310	2	0.655	F=0.655/0.27 = 2.43
Within sample	6.755	25	0.270	
Total	8.064	27=N-1		

From the table given at the end of the book, the value of F for v₁=2 and v₂=25 at 5% level is 3.39. We see that calculated value 2.43 is lower than the tabulated value 3.39. Hence, we accept the null hypothesis at 5% level and conclude that the debt equity ratio of the sample companies does not vary significantly.

3) CALCULATION OF COVERAGE RATIO OF THE SAMPLE COMPANIES IN TIMES

	COMPANY	ULTRATECH CEMENT	ACC CEMENT	AMBUJA CEMENT	AVERAGE
YEAR					
2002		N/A	2.12	2.97	2.55
2003		N/A	1.88	3	2.44
2004		1.43	3.26	4.38	3.02
2005		0.69	5.61	6.65	4.32
2006		4.19	22.54	17.26	14.66
2007		14.43	27.13	36.76	26.11
2008		19.31	44.46	62.44	42.07
2009		11.84	28.22	81.40	40.49
2010		14.51	26.74	35.13	25.46
2011		7.44	16.90	33.36	19.23
AVERAGE		9.23	17.89	28.34	18.04
S.D		6.82	14.41	27.03	15.32
C.V		0.74	0.81	0.95	0.85

From the above table it is seen that Ambuja cement maintained highest coverage ratio in the year 2009 of 81.40 times. A closer look into the table reveal that Ultratech cement and ACC cement also maintained a reasonably high coverage ratio maintaining its position to be able to take care of interest obligation. Comparing the coverage ratio of sample companies with that of the industry, we understand that ACC cement and Ambuja cement were able to take care of interest obligation during the review period. On an average it is found that all the sample companies were able to maintain sufficient coverage ratio to meet interest obligation. However the standard deviation and co-efficient of variation reveal that coverage ratio of ACC cement and Ambuja cement varied more than Ultratech cement.

The coverage ratio of the sample companies has been tested using one-way ANOVA and is tested by the following hypothesis. The results are shown below.

H₀₃: The coverage ratio of the sample companies does not vary significantly.

ANALYSIS OF ANOVA TABLE				
Source.of variation	Sum.of squares(ss)	Degree.of freedom(d.f)	Mean square(MS)	Test statistic
Between sample	1646.870	2	823.435	F=823.435/350.72 =2.35
Within sample	8767.970	25	350.719	
Total	10,414.839	27=N-1		

The table value of F for v₁=2 and v₂=25 at 5% level is 3.39. We see that calculated value 2.35 is lower than the tabulated value 3.39. Hence, we accept the null hypothesis at 5% level and conclude that the coverage ratio of the sample companies does not vary significantly.

4) CALCULATION OF RETURN ON CAPITAL EMPLOYED OF THE SAMPLE COMPANIES (in percentage)

	COMPANY	ULTRATECH CEMENT	ACC CEMENT	AMBUJA CEMENT	AVERAGE
YEAR					
2002		N/A	11.93	10.30	11.115
2003		N/A	9.81	11.29	10.55
2004		6.06	13.09	15.12	11.42
2005		2.82	17.4	18.46	12.89
2006		15.07	41.76	44.88	33.90
2007		37.49	44.95	55.86	46.1
2008		35.81	32.84	33.58	34.08
2009		25.89	36.13	27.51	29.84
2010		27.44	21.71	23.13	24.09
2011		13.92	21.26	21.62	18.93
AVERAGE		20.56	25.09	26.18	23.29
S.D		13.06	12.87	14.81	12.34
C.V		0.64	0.51	0.57	0.53

The performance in terms of ROCE, of sample companies and the industry has been analyzed with the help of the information captured in the above table 4. Among all the companies during the study period, ACC cement and Ambuja cement registered the highest ROCE of 44.95% and 55.86% in the year 2007. In the case of Ultratech cement it is high of 37.49% and lowest of 2.82%. Though the average of ACC and Ambuja cement were higher than Ultratech cement and the industry, it is found that ROCE of these two companies started declining in the later years. Co-efficient of variation reveal that the rate of volatility in ROCE of Ultratech cement and Ambuja cement were higher than of the ACC cement and the industry, thus it is found that only these companies carries higher risk. Whereas ACC cement make an average return of 25.09% on its total capital with the lowest co-efficient of variation of 0.51.

The return on capital employed of the sample companies has been tested using one-way ANOVA and is tested by the following hypothesis. The results are shown below:

H₀₄: The return on capital employed ratio of the sample companies does not vary significantly

ANALYSIS OF ANOVA TABLE				
Source.of variation	Sum.of squares(ss)	Degree.of freedom(d.f)	Mean square(MS)	Test statistic
Between sample	152.735	2	76.368	F=76.368/186.29 =0.41
Within sample	4657.290	25	186.29	
Total	4810.025	27=N-1		

The table value of F for v₁=2 and v₂=25 at 5% level is 3.39. We see that calculated value 0.41 is lower than the tabulated value 3.39. Hence, we accept the null hypothesis at 5% level and conclude that the return on capital employed of the sample companies does not vary significantly.

5) CALCULATION OF FINANCIAL LEVERAGE OF THE SAMPLE COMPANIES IN TIMES

	COMPANY	ULTRATECH CEMENT	ACC CEMENT	AMBUJA CEMENT	AVERAGE
YEAR					
2002		N/A	0.42	0.53	0.475
2003		N/A	0.41	0.58	0.495
2004		0.24	0.55	0.68	0.49
2005		0.04	0.7	0.77	0.50
2006		0.61	0.73	0.77	0.70
2007		0.62	0.72	0.63	0.66
2008		0.63	0.68	0.70	0.67
2009		0.66	0.68	0.68	0.67
2010		0.64	0.74	0.74	0.71
2011		0.68	0.81	0.70	0.73
AVERAGE		0.52	0.64	0.68	0.61
S.D		0.24	0.14	0.08	0.11
C.V		0.46	0.22	0.12	0.18

From the above table it is found that financial leverage of ACC cement and Ambuja cement has been exceptionally high when compared to the rest of the years. In the case of Ultratech cement it was almost in line with the rest of the year. A closer look into the data would reveal that all sample companies and the

industry could make profit after tax less than one time during the year 2004 through 2011. The volatility of financial leverage was low in the case of Ambuja cement while that of industry and highest in the case of Ultratech cement.

The financial leverage of the sample companies has been tested using one-way ANOVA and is tested by the following hypothesis. The results are shown below:

H₀₅: The financial leverage of the sample companies does not vary significantly.

ANALYSIS OF ANOVA TABLE				
Source.of variation	Sum.of squares(ss)	Degree.of freedom(d.f)	Mean square(MS)	Test statistic
Between sample	0.128	2	0.064	F=0.064/0.25 = 2.56
Within sample	0.623	25	0.025	
Total	0.751	27=N-1		

The table value of F for v₁=2 and v₂=25 at 5% level is 3.39. We see that calculated value 2.56 is lower than the tabulated value 3.39. Hence, we accept the null hypothesis at 5% level and conclude that the financial leverage of the sample companies does not vary significantly.

6) CALCULATION OF ASSET LEVERAGE OF THE SAMPLE COMPANIES IN TIMES

	COMPANY	ULTRATECH CEMENT	ACC CEMENT	AMBUJA CEMENT	AVERAGE
YEAR					
2002		1	2.56	2.11	0.19
2003		1	2.40	2.08	1.83
2004		2.52	2.07	1.63	2.07
2005		2.44	1.94	1.52	1.97
2006		2.40	1.29	1.23	1.64
2007		1.90	1.07	1.07	1.35
2008		1.65	1.1	1.05	1.23
2009		1.59	1.09	1.03	1.24
2010		1.35	1.08	1.01	1.15
2011		1.39	1.07	1.01	1.16
AVERAGE		1.72	1.57	1.37	1.38
S.D		0.57	0.61	0.47	0.54
C.V		0.33	0.39	0.34	0.39

Asset leverage positions of the sample companies and the industry has been captured in the above table. Among all the companies ACC cement employed the least amount of shareholder's funds to fund the total assets which in turn implies that it employed more debt. Ultratech cement and Ambuja cement maintain consistency in equity proportion in the total capital though it was slightly higher in the later year. On an overall basis, the average asset leverage of Ultratech cement is the highest at 1.72.

The asset leverage of the sample companies has been tested using one-way ANOVA and is tested by the following hypothesis. The results are shown below:

H₀₆: The asset leverage ratio of the sample companies does not vary significantly.

Source.of variation	Sum.of squares(ss)	Degree.of freedom(d.f)	Mean square(MS)	Test statistic
Between sample	0.615	2	0.307	F=0.307/0.297 = 1.03
Within sample	8.011	27	0.297	
Total	8.626	29=N-1		

The table value of F for v₁=2 and v₂=25 at 5% level is 3.35. We see that calculated value 1.03 is lower than the tabulated value 3.35. Hence, we accept the null hypothesis at 5% level and conclude that the asset leverage of the sample companies does not vary significantly.

7) CALCULATION OF RETURN ON EQUITY OF THE SAMPLE COMPANIES IN PERCENTAGE

	COMPANY	ULTRATECH CEMENT	ACC CEMENT	AMBUJA CEMENT	AVERAGE
YEAR					
2002		N/A	12.79	15.23	14.01
2003		N/A	9.65	17.24	13.44
2004		3.61	14.8	18.83	12.41
2005		0.27	23.69	24.72	16.23
2006		22.13	39.2	37.97	33.10
2007		44.35	34.64	43.07	40.69
2008		37.37	24.61	21.50	27.83
2009		27.14	26.71	15.66	23.50
2010		23.72	17.31	13.74	18.26
2011		13.17	18.43	11.62	14.41
AVERAGE		21.47	22.18	21.96	21.39
S.D		15.36	9.49	10.55	9.66
C.V		0.72	0.43	0.48	0.45

A closer look into table reveals that from the year 2002 to 2011, ROE of all sample companies and industry was appreciably positive. Return on equity of all the sample companies are high in the year 2007 of 44.35%, 34.64% and 43.07% but among themselves Ultratech and Ambuja stand first position. In the case of Ultratech cement it is extremely low in the year 2005. Higher ROE reveals that firm has the capability to meet the demand of equity shareholder. The volatility in ROE was also higher in case of Ultratech cement and Ambuja cement of 15.36% and 10.55%. Co-efficient of variation of ACC cement (0.43) indicates per unit volatility in their ROE was lower when compared to that of Ultratech cement and Ambuja cement.

H₀₇: The return on equity ratio of the sample companies does not vary significantly.

Source.of variation	Sum.of squares (ss)	Degree.of freedom (d.f)	Mean square(MS)	Test statistic
Between sample	2.314	2	1.157	F=1.157/138.546 = 0.008
Within sample	3463.639	27	138.546	
Total	3465.953	29=N-1		

The table value of F for $v_1=2$ and $v_2=25$ at 5% level is 3.35. We see that calculated value 0.008 is lower than the tabulated value 3.35. Hence, we accept the null hypothesis at 5% level and conclude that the return on equity of the sample companies does not vary significantly.

Multi-Regression Model Between Return on equity, Return on capital employed, Financial leverage and Asset leverage.

Apart from the above equations, I have also use the concept of Multi-Regression and correlation to understand the relationship between Return on equity, Return on capital employed, financial leverage and Asset leverage and also find out how ROE are affected by ROCE , FL & AL.

In the Multi –Regression model I have taken the Return on equity as dependent variable and the Return on capital employed, financial leverage and Asset leverage as an independent variable.

$$y=a+b_1X_1+b_2X_2+b_3X_3$$

Where,

Y = Return on equity.

a =intercept.

b_1 =Coefficient of Return on capital employed.

X_1 = Return on capital employed.

b_2 = Coefficient of financial leverage.

X_2 = Financial leverage.

b_3 = Coefficient of Asset leverage.

X_3 = Asset leverage.

**ULTRATECH CEMENT
MODEL SUMMARY**

Model	R	R Square	Adjusted R ²	Std. Error of the Estimate
1.	0.993	0.986	0.976	2.37646

COEFFICIENT

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1.	(Constant)	-30.009	7.871		-3.812	.019
	ROCE	1.135	0.102	0.965	11.131	.000
	FL	17.510	6.650	0.272	2.633	.058
	AL	10.038	2.821	0.317	3.559	.024

Therefore,

$$Y = -30.009 + 1.135 X_1 + 17.510 X_2 + 10.038 X_3$$

$$ROE = -30.009 + 1.135 ROCE + 17.510 FL + 10.038 AL$$

**ACC CEMENT
MODEL SUMMARY**

Model	R	R Square	Adjusted R square	Std. Error of the Estimate
2.	0.993	0.987	0.980	1.34435

COEFFICIENT

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
2.	(Constant)	-56.070	8.350		-6.715	.001
	ROCE	0.902	0.057	1.223	15.919	.000
	FL	49.984	7.393	0.722	6.761	.001
	AL	14.953	2.066	0.957	7.237	.000

Therefore,

$$Y = -56.70 + 0.902 X_1 + 49.984 X_2 + 14.953 X_3$$

$$ROE = -56.70 + 0.902 ROCE + 49.984 FL + 14.953 AL$$

**AMBUJA CEMENT
MODEL SUMMARY**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
3.	0.987	0.974	0.961	2.07205

COEFFICIENT

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
3.	(Constant)	-62.744	11.335		-5.536	.001
	ROCE	0.921	0.063	1.292	14.713	.000
	FL	47.083	11.781	0.351	3.996	.007
	AL	20.876	2.642	0.867	7.901	.000

Therefore,

$$Y = -62.744 + 0.921 X_1 + 47.083 X_2 + 20.876 X_3$$

$$ROE = -62.744 + 0.921 ROCE + 47.083 FL + 20.876 AL$$

MULTI – REGRESSION OF ALL THE SAMPLE COMPANIES

COMPANY	Multiple regression equation	Multiple ' R'	R ²	Adjusted R ²	Std Error
Ultratech cement	ROE = -30.009 + 1.135 ROCE + 17.510 FL + 10.038 AL	0.993	0.986	0.976	2.37646
ACC cement	ROE = -56.70 + 0.902 ROCE + 49.984 FL + 14.953 AL	0.993	0.987	0.980	1.34435
Ambuja cement	ROE = -62.744 + 0.921 ROCE + 47.083 FL + 20.876 AL	0.987	0.974	0.961	2.07205

As stated earlier multiple regression models has been applied to test and analyze how ROE of each sample company has been affected by ROCE, Financial leverage and Asset leverage. We have seen from the above table that ROE of the Ultratech cement highly depend on the financial leverage than asset leverage and ROCE. The beta –coefficient of financial leverage is higher as compared to the asset leverage and ROCE. The intercept in multi-regression of Ultratech cement is -30.009 which indicate that when all the three independent variable are zero then return on equity works out to be negative. In the case of ACC cement and Ambuja cement, ROE is highly depended on the financial leverage and asset leverage but the beta-coefficient of financial leverage is more than the asset leverage in both the cases. The intercept of both ACC cement and Ambuja cement seem to negative (-56.70 & -62.744) which mean that when all the three independent factors are zero then return on equity must be zero.

Therefore, finally we can say that the financial leverage and the asset leverage are the major determinant which affects the return on equity. A closer look into the co-efficient of ROCE proves the technical inference that ROCE will always positively impact on return on equity. The value of 'R' and 'R²' implies that the relationship between dependent variable (ROE) and independent variable (ROCE, FL, AL) is very high. The value of standard error in case of Ultratech cement (2.37646) is very high which stands for high volatility of sampling fluctuation than the other two companies.

PEARSON'S CORRELATION (BETEEN ROE & ROCE)

ULTRATECH CEMENT

		ROE	ROCE
ROE	Pearson Correlation	1	0.978(**)
	Sig. (2-tailed)		.000
	N	10	10
ROCE	Pearson Correlation	0.978(**)	1
	Sig. (2-tailed)	.000	
	N	10	10

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

From the above table we can say that the relationship between return on equity and return on capital employed is highly significant because the correlation value(0.978) is much more higher than the significant value(0.01) and also there is a positive correlation which implies when return on capital employed increase then return on equity also increase or vice versa.

ACC CEMENT

		ROE	ROCE
ROE	Pearson Correlation	1	0.930(**)
	Sig. (2-tailed)		0.000
	N	10	10
ROCE	Pearson Correlation	0.930(**)	1
	Sig. (2-tailed)	0.000	
	N	10	10

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

From the above information we can say that the relationship between return on equity and return on capital employed is highly significant because the correlation value(0.930) is much more higher than the significant value(0.01) and also there is a positive correlation which implies when return on capital employed increase then return on equity also increase or vice versa.

AMBUJA CEMENT

		ROE	ROCE
ROE	Pearson Correlation	1	0.837(**)
	Sig. (2-tailed)		0.003
	N	10	10
ROCE	Pearson Correlation	0.837(**)	1
	Sig. (2-tailed)	0.003	
	N	10	10

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

In the case of Ambuja cement we can say that the relationship between return on equity and return on capital employed is highly significant because the correlation value (0.837) is much more higher than the significant value (0.01) and also there is a positive correlation which implies when return on capital employed increase then return on equity also increase or vice versa.

PEARSON'S CORRELATION (BETWEEN ROE & FL)

ULTRATECH CEMENT

		ROE	FL
ROE	Pearson Correlation	1	0.828(**)
	Sig. (2-tailed)		0.003
	N	10	10
FL	Pearson Correlation	0.828(**)	1
	Sig. (2-tailed)	0.003	
	N	10	10

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

In the case of Ultratech cement ,we can say that the relationship between return on equity and the financial leverage is highly significant because the correlation value(0.828) is much more higher than the significant value(0.01) and also there is a positive correlation which implies when financial leverage increase then return on equity also increase or vice versa.

ACC CEMENT

		ROE	FL
ROE	Pearson Correlation	1	0.630
	Sig. (2-tailed)		0.051
	N	10	10
FL	Pearson Correlation	0.630	1
	Sig. (2-tailed)	0.051	
	N	10	10

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

In the case of ACC cement we can say that the relationship between return on equity and the financial leverage is highly significant because the correlation value(0.630) is much more higher than the significant value(0.01) and also there is a positive correlation which implies when financial leverage increase then return on equity also increase or vice versa.

AMBUJA CEMENT

		ROE	FL
ROE	Pearson Correlation	1	0.189
	Sig. (2-tailed)		0.602
	N	10	10
FL	Pearson Correlation	0.189	1
	Sig. (2-tailed)	0.602	
	N	10	10

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

In the case of Ambuja cement we can say that the relationship between return on equity and the financial leverage is highly significant because the correlation value(0.189) is much more higher than the significant value(0.01) and also there is a positive correlation which implies when financial leverage increase then return on equity also increase or vice versa.

PEARSON'S CORRELATION (BETWEEN ROE & AL)

ULTRATECH CEMENT

		ROE	AL
ROE	Pearson Correlation	1	0.073
	Sig. (2-tailed)		0.841
	N	10	10
AL	Pearson Correlation	0.073	1
	Sig. (2-tailed)	0.841	
	N	10	10

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

From the given data we can say that the relationship between return on equity and the asset leverage is significant but not to that extent because the correlation value(0.073) is small higher than the significant value(0.05) and also there is a positive correlation which implies when asset leverage increase then return on equity also increase or vice versa.

ACC CEMENT

		ROE	AL
ROE	Pearson Correlation	1	-0.633(*)
	Sig. (2-tailed)		0.049
	N	10	10
AL	Pearson Correlation	-0.633(*)	1
	Sig. (2-tailed)	0.049	
	N	10	10

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

From the given information we can conclude that the relationship between return on equity and the asset leverage is not significant because the correlation value(-0.633) is small than the significant value(0.05) and also there is a negative correlation between them which implies when asset leverage increase then return on equity also decrease or vice versa.

AMBUJA CEMENT

		ROE	AL
ROE	Pearson Correlation	1	-0.200
	Sig. (2-tailed)		0.579
	N	10	10
AL	Pearson Correlation	-0.200	1
	Sig. (2-tailed)	0.579	
	N	10	10

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

From the given information we can conclude that the relationship between return on equity and the asset leverage is not significant because the correlation value (-0.200) is small than the significant value (0.05) and also there is a negative correlation between them which implies when asset leverage increase then return on equity also decrease or vice versa.

CONCLUSION

From the above analysis we can conclude that the capital structure decision is a very crucial factor for any business organization. The study primarily attempted to show as to how return on equity of sample companies and the industry got affected by independent variables like return on capital employed, financial leverage and assets leverage. The study disclosed very interesting outcomes, some of which are in line with theoretical propositions. The study revealed that debt ratio, coverage ratio, return on capital employed, financial leverage, assets leverage and return on equity of the sample companies does not vary significantly. Multiple regression analysis revealed that ROE was very much significantly dependent on independent variables (i.e., ROCE, FL and AL) in case of all sample companies and the industry. But the financial leverage and assets leverage are the major determinant which affects the return on equity. A closer look into the coefficient of ROCE proved the technical inference that ROCE will always positively impact on return on equity. The value of 'R' and 'R²' implied that the relationship between dependent variable and independent variables is very significant. Karl Pearson's coefficient revealed that ROCE and FL had significant

impact on ROE, but AL had negative impact on ROE. This study thus established statistically tested relationship between capital structure decisions and profitability of sample companies and the industry in Indian cement sector.

REFERENCES

1. Ali K. Ozdagli (2009), **Financial Leverage, Corporate Investment and Stock Returns**, *Research Review*, pp. 9-13.
2. B.Banerjee, **Fundamentals of Financial Management**, PHI, 2008.
3. Christopher F. Bauma, Atreya Chakraborty and Boyan Liud (2010), **The Impact of Macroeconomic Uncertainty on Firms' Changes in Financial Leverage**, *International Journal of Finance and Economics*, pp.22-30.
4. Erol Muzir, Turkey (2011), **Triangle Relationship among Firm Size, capital Structure Choice and Financial Performance: Some Evidences from Turkey**, *Journal of Management research*, Vol. 11, No. 2, pp.87-98.
5. Hoje Jo, Santa Clara University and Monterey Institute of International Studies, USA, Yong H. Kim, University of Cincinnati, Cincinnati, Ohio, USA (2008), **Financial Leverage and Growth Opportunities in Japan**, *International Journal of Business Research*, Vol. 8, No.5, pp.1-15.
6. James C, Van Horne, **Financial Management and Policy**, Prentice Hall of India, 12th Edition.
7. Khan and Jain, **Financial Management**, Tata McGraw-Hill Publishing Company Ltd., 5th Edition.
8. Monica Singhanian, Abir Seth (2010), **Financial Leverage and Investment Opportunities in India: An Empirical study**, *International Research Journal of Finance and Economics*, Issue 40, pp.217-230.
9. Prasanna Chandra, **Financial Management**, McGraw-Hill, 8th Edition.
10. Sanjay J. Bhayani (2009), **Impact of Financial Leverage on Cost of Capital and Valuation of Firm: A Study on Indian Cement Industry**, *Paradigm*, Vol.XIII, No.2, pp.43-51.
11. Slim Mseddi, Fathi Abid, University of Sfax, Tunisia(2010), **The impact of Operating and Financial Leverages and Intrinsic Business Risk on Firm value**, *International Journal of Finance and Economics*, Issue 44, pp.134-149.
12. Wenjuan Ruan, Gray Tian and Shiguang Ma, Murdoch University, Australia, University of Wollongong, Australia (2011), **Managerial Ownership, Capital structure and Firm value: evidence from China's Civilian run Firms**, *AAFBJ*, Vol.5, No.3, pp.73-94.

MUTUAL FUND INDUSTRY IN INDIA: RECENT TRENDS AND PROGRESS

BHARGAV PANDYA
ASST. PROFESSOR
FACULTY OF MANAGEMENT
MARWADI EDUCATION FOUNDATION'S GROUP OF INSTITUTIONS
RAJKOT

ABSTRACT

Indian mutual fund sector has gone a long way since the inception of Unit Trust of India, the first mutual fund of the country set up in 1963. The basic objective of this paper is to highlight the performance of mutual fund sector during the last decade. Data for the research pertains to the period 1999-00 to 2009-10. Descriptive analysis of data has been done using measures like mean, standard deviation and standard error. T-Statistics has been used to test the hypotheses. The study reveals that gross mobilization by mutual fund and redemption are statistically significant which implies that there has been a significant increase in gross mobilization and redemption over the years. Whereas it reveals that increase in net inflows and assets at the end of the year are not statistically significant. Study also finds that turnover of mutual funds (measured as net purchases/sales) in the debt and equity market is statistically not significant which implies that mutual funds were equally active in equity and debt segments. In nutshell, the study finds that mutual fund sector in India has grown significantly during the study period.

JEL CLASSIFICATION

E440, C120.

KEYWORDS

mutual fund, gross mobilization, net inflow, redemption.

1. INTRODUCTION

The Indian financial system based on four basic components like Financial Market, Financial Institutions, Financial Service, Financial Instruments. All are play important role for smooth activities for the transfer of the funds and allocation of the funds. The main aim of the Indian financial system is that providing the efficiently services to the capital market. The Indian capital market has been increasing tremendously during the second generation reforms. The first generation reforms started in 1991 the concept of LPG. (Liberalization, privatization, Globalization)

Then after 1997 second generation reforms was started, still the it's going on, its include reforms of industrial investment, reforms of fiscal policy, reforms of exp-imp policy, reforms of public sector, reforms of financial sector, reforms of foreign investment through the institutional investors, reforms banking sectors. The economic development model adopted by India in the post independence era has been characterized by mixed economy with the public sector playing a dominating role and the activities in private industrial sector control measures emaciated form time to time. The last two decades have been a phenomenal expansion in the geographical coverage and the financial spread of our financial system.

The spared of the banking system has been a major factor in promoting financial intermediation in the economy and in the growth of financial savings with progressive liberalization of economic policies, there has been a rapid growth of capital market, money market and financial services industry including merchant banking, leasing and venture capital, leasing, hire purchasing. Consistent with the growth of financial sector and second generation reforms its need to fruition of the financial sector. Its also need to providing the efficient service to the investor mostly if the investors are supply small amount, in that point of view the mutual fund play vital for better service to the small investors. The main vision for the analysis for this study is to scrutinize the performance of five star rated mutual funds, given the weight of risk, return, and assets under management, net assets value, book value and price earnings ratio.

2. CONCEPT OF MUTUAL FUND

A Mutual Fund is a trust that pools the savings of a number of investors who share a common financial goal. The money thus collected is then invested in capital market instruments such as shares, debentures and other securities. The income earned through these investments and the capital appreciation realized is shared by its unit holders in proportion to the number of units owned by them. Thus a Mutual Fund is the most suitable investment for the common man as it offers an opportunity to invest in a diversified, professionally managed basket of securities at a relatively low cost. The flow chart below describes broadly the working of a mutual fund:

The Securities and Exchange Board of India (mutual Funds) Regulations, 1996, defines a mutual fund as 'a fund established in the form of a trust to raise money through the sale of units to the public or a section of the public under one or more schemes for investing in securities, including money market instruments'.

3. HISTORY OF MUTUAL FUNDS IN INDIA

The mutual fund industry in India started in 1963 with the formation of Unit Trust of India, at the initiative of the Government of India and Reserve Bank of India. The history of mutual funds in India can be broadly divided into four distinct phases

FIRST PHASE – 1964-87

Unit Trust of India (UTI) was established on 1963 by an Act of Parliament. It was set up by the Reserve Bank of India and functioned under the Regulatory and administrative control of the Reserve Bank of India. In 1978 UTI was de-linked from the RBI and the Industrial Development Bank of India (IDBI) took over the regulatory and administrative control in place of RBI. The first scheme launched by UTI was Unit Scheme 1964. At the end of 1988 UTI had Rs.6,700 crores of assets under management.

SECOND PHASE – 1987-1993 (ENTRY OF PUBLIC SECTOR FUNDS)

1987 marked the entry of non- UTI, public sector mutual funds set up by public sector banks and Life Insurance Corporation of India (LIC) and General Insurance Corporation of India (GIC). SBI Mutual Fund was the first non- UTI Mutual Fund established in June 1987 followed by Canbank Mutual Fund (Dec 87), Punjab National Bank Mutual Fund (Aug 89), Indian Bank Mutual Fund (Nov 89), Bank of India (Jun 90), Bank of Baroda Mutual Fund (Oct 92). LIC established its mutual fund in June 1989 while GIC had set up its mutual fund in December 1990.

At the end of 1993, the mutual fund industry had assets under management of Rs.47,004 crores.

THIRD PHASE – 1993-2003 (ENTRY OF PRIVATE SECTOR FUNDS)

With the entry of private sector funds in 1993, a new era started in the Indian mutual fund industry, giving the Indian investors a wider choice of fund families. Also, 1993 was the year in which the first Mutual Fund Regulations came into being, under which all mutual funds, except UTI were to be registered and governed. The erstwhile Kothari Pioneer (now merged with Franklin Templeton) was the first private sector mutual fund registered in July 1993.

The 1993 SEBI (Mutual Fund) Regulations were substituted by a more comprehensive and revised Mutual Fund Regulations in 1996. The industry now functions under the SEBI (Mutual Fund) Regulations 1996.

The number of mutual fund houses went on increasing, with many foreign mutual funds setting up funds in India and also the industry has witnessed several mergers and acquisitions. As at the end of January 2003, there were 33 mutual funds with total assets of Rs. 1,21,805 crores. The Unit Trust of India with Rs.44,541 crores of assets under management was way ahead of other mutual funds.

FOURTH PHASE – SINCE FEBRUARY 2003

In February 2003, following the repeal of the Unit Trust of India Act 1963 UTI was bifurcated into two separate entities. One is the Specified Undertaking of the Unit Trust of India with assets under management of Rs.29, 835 crores as at the end of January 2003, representing broadly, the assets of US 64 scheme, assured return and certain other schemes. The Specified Undertaking of Unit Trust of India, functioning under an administrator and under the rules framed by Government of India and does not come under the purview of the Mutual Fund Regulations.

The second is the UTI Mutual Fund, sponsored by SBI, PNB, BOB and LIC. It is registered with SEBI and functions under the Mutual Fund Regulations. With the bifurcation of the erstwhile UTI which had in March 2000 more than Rs.76,000 crores of assets under management and with the setting up of a UTI Mutual Fund, conforming to the SEBI Mutual Fund Regulations, and with recent mergers taking place among different private sector funds, the mutual fund industry has entered its current phase of consolidation and growth.

4. LITERATURE REVIEW

Deutsche Bank Research (2007) paper follows an analysis of supply (bonds, equities and derivatives) and demand conditions (household and institutional investors) in India's capital markets. Some stylized facts regarding India's capital market infrastructure and corporate governance are first presented, followed by an analysis of its fixed income, equity and derivatives markets. Later, the paper discusses the classes of investors in India's markets and the constraints they face in optimizing the risk/return objectives of their portfolios. Finally, some brief comments regarding the link between economic growth and capital markets reform conclude the paper.

Tetsuya Kamiyama (2007) carried out a study on India's mutual fund industry. The assets managed by India's mutual funds have shown impressive growth, and had totaled 3.3 trillion rupees (Rs 3.3 trillion) as of the end of March 2007. India's middle class, who are prospective investors in mutual funds, has been growing, and we expect to see further growth in the mutual fund market moving forward. In this paper, the researcher first provides an overview of the assets managed within India's mutual fund market, both now and in the past, and of the legal framework for mutual funds, and then discuss the current situation and recent trends in financial products, distribution channels and asset management companies.

Narayan and Ravindra (2007) studied performance of mutual funds using monthly closing NAV for the period September 98-April 02 with a sample of 269 open ended schemes. The results of performance measures suggest that most of the mutual fund schemes in the sample of 58 were able to satisfy investor's expectations by giving excess returns over expected returns based on both premium for systematic risk and total risk.

Making Mutual Fund Work for You

(June 2008, AMFI in association with Price Waterhouse LLP/FIRE Project funded by USAID and Ogilvy & Mather, Financial & Business Communications)

This guide on the concept, operations and advantages of mutual funds and the rights of mutual fund unit holders was produced by AMFI to promote financial literacy among public regarding Indian Mutual fund Industry. This guide explains the concept of mutual fund, its advantages and risks associated with the mutual funds. The main aim of this guide was to spread awareness among investors regarding their rights as mutual fund unit holders.

Soumya Guha Deb & Ashok Banerjee (2009) attempt to highlight the importance of VaR as a measure of 'downside risk' for Indian equity mutual funds, an aspect which is completely ignored for performance reporting in Indian mutual fund industry. The study used three parametric models and one non parametric model and weekly returns of a sample of equity mutual fund schemes in India, to predict their weekly VaR on a 'rolling' basis and also tested the robustness and predictive ability of the models by employing two popular 'back testing' approaches. Overall the analysis shows that the Indian equity mutual funds have exhibited considerable downside risk in terms of VaR measures. Back testing of the models suggest that the 'random walk' and the 'moving average' models suffer from a downward bias and err by underestimating the VaR frequently. The EWMA and historical simulation models are free from that bias, but these two models, particularly the later, show tendency of providing too conservative estimates of VaR.

KPMG and CII report (2009) report highlighted the following findings. Low customer awareness levels and financial literacy pose the biggest challenge to channelizing household savings into mutual funds. Further, fund houses have shown limited focus on increasing retail penetration and building retail AUM.

Customer awareness is the pre-requisite for the achievement of the industry growth potential, there is a need for planning, financing and executing initiatives aimed at increasing financial literacy and enhancing investor education across the country through a sustained collaborative effort across all stakeholders, which is expected to result in a massive increase in mutual fund penetration.

Distributors and the mutual fund houses have exhibited limited interest in continuously engaging with customers post closure of sale as the commissions and incentives have been largely in the form of upfront fees from product sales.

The next phase in the industry is likely to be characterized by a stronger focus on customer centricity, cost management and robust governance and regulatory framework – all aimed at enabling the industry to achieve sustained, profitable growth, going forward.

Gayathri, S., Karthika, S. and Kumar, Gajendran Lenin (2010) made a study on emerging issues and challenges faced by mutual fund industry in India. They identified right mix of growth versus governance, investor education, diminishing talent pool as emerging challenges before the Indian mutual funds industry.

5. RESEARCH METHODOLOGY

This paper aims analyzing the progress of mutual funds industry during the last decade. Research would be thus descriptive and analytical in nature as it aims at analyzing the growth a pattern of mutual fund industry during the reference period. Data for the study were taken from SEBI annual report for the year 2009-10. The study covered the period beginning from 1999- 2010.

5 A. RESEARCH OBJECTIVES

This paper aims at achieving following research objectives.

- To statistically analyze the trend in gross mobilization, redemption, net inflow and assets held at the end of year during the study period
- To compare and analyze equity and debt market transactions of mutual funds

5 B. HYPOTHESES

H₁: There is no significant increase in gross mobilization over the years

H₂: There is no significant increase in redemption mobilization over the years

H₃: There is no significant increase in net inflow over the years

H₄: There is no significant increase in assets held at the end of each year of study.

H₅: There is a significant difference between net purchases/sales turnover of equity and debt market

6. DATA ANALYSIS AND HYPOTHESIS TESTING

This section discusses the growth pattern in gross mobilization, redemption, net inflows and assets at the end of the during the study period.

As shown in the chart-1 there has been a tremendous increase in the gross mobilization by mutual funds during the last decade. It has increased from Rs. 61241 crore in 1999-00 to 10019022 crore in 2009-10

TABLE-I: MOBILIZATION OF RESOURCES BY MUTUAL FUNDS (Rs. crore)

Period	Gross mobilization	Redemption	Net Inflow	Assets at the End of Period
1999-00	61,241	42,271	18,970	1,07,946
2000-01	92,957	83,829	9,128	90,587
2001-02	1,64,523	1,57,348	7,175	1,00,594
2002-03	3,14,706	3,10,510	4,196	1,09,299
2003-04	5,90,190	5,43,381	46,808	1,39,616
2004-05	8,39,708	8,37,508	2,200	1,49,600
2005-06	10,98,149	10,45,370	52,779	2,31,862
2006-07	19,38,493	18,44,508	93,985	3,26,292
2007-08	44,64,376	43,10,575	1,53,802	5,05,152
2008-09	54,26,353	54,54,650	-28,296	4,17,300
2009-10	1,00,19,022	99,35,942	83,080	6,13,978

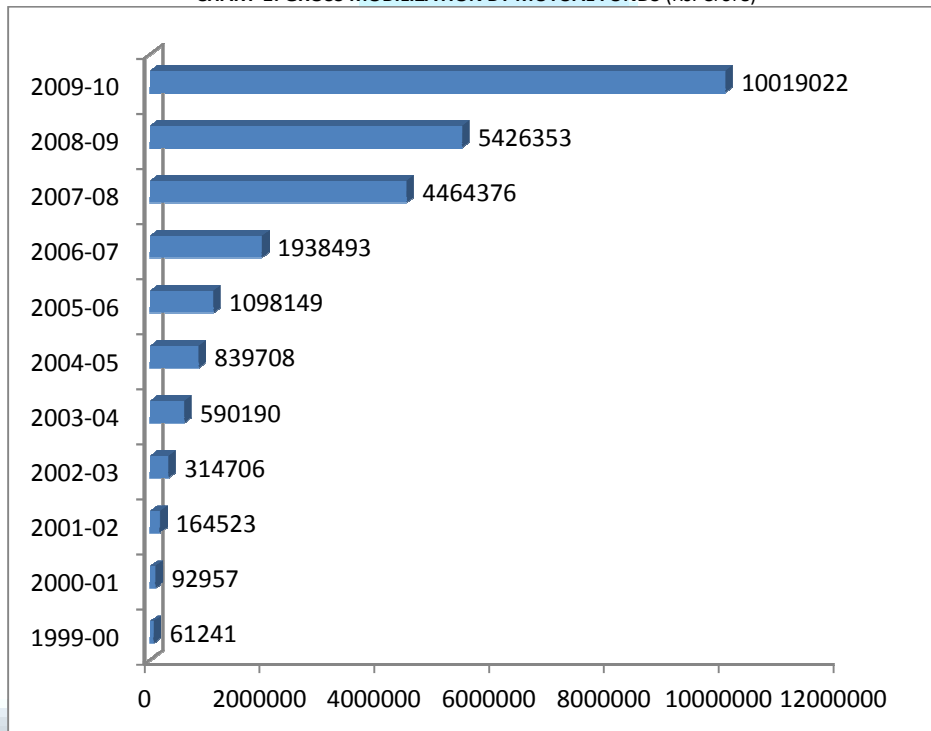
Source: SEBI Annual Report, 2009-10

TABLE II: TRENDS IN TRANSACTIONS ON STOCK EXCHANGES BY MUTUAL FUNDS (Rs.Crore)

Year/Moth	Equity			Debt			Total		
	Gross purchase	Gross sales	Net Pur- chase/ Sales	Gross purchase	Gross sales	Net Pur- chase/ Sales	Gross purchase	Gross sales	Net Pur- chase/ Sales
2004-05	45,045	44,597	448	62,186	45,199	16,987	1,07,232	89,796	17,435
2005-06	1,00,436	86,134	14,302	1,09,805	73,004	36,801	2,10,241	1,59,137	51,103
2006-07	1,35,948	1,26,886	9,062	1,53,733	1,01,190	52,543	2,89,681	2,28,075	61,606
2007-08	2,17,578	2,01,274	16,306	2,98,605	2,24,816	73,790	5,16,183	4,26,090	90,095
2008-09	1,44,069	1,37,085	6,984	3,27,744	2,45,942	81,803	4,71,815	3,83,026	88,787
2009-10	1,95,662	2,06,173	-10,512	6,24,314	4,43,728	1,80,588	8,19,976	6,49,901	1,70,076

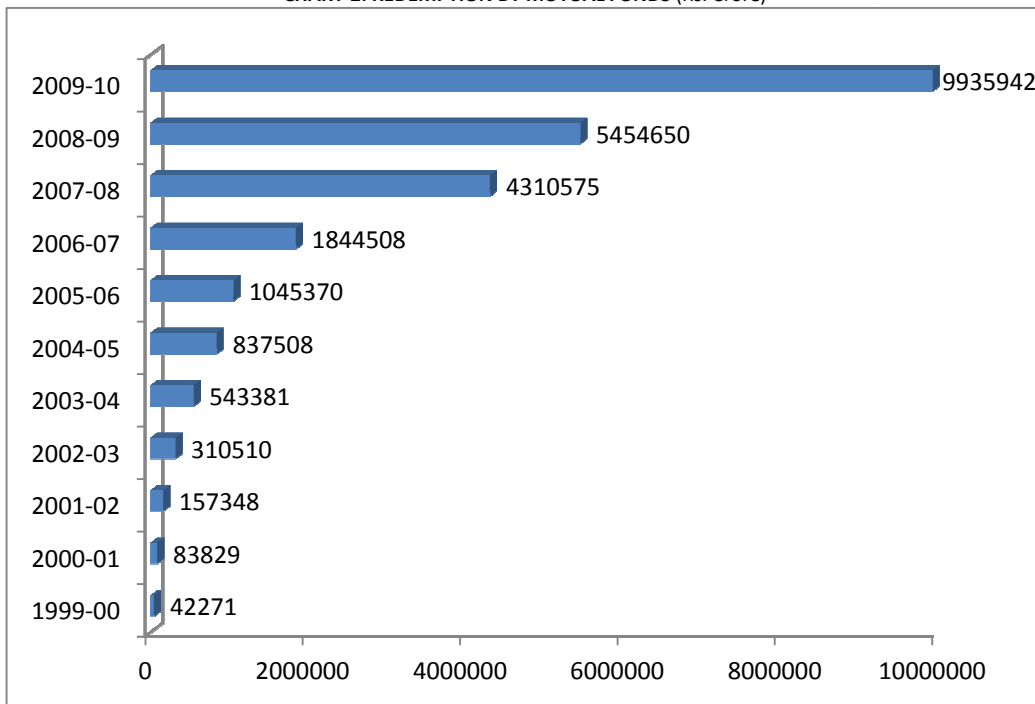
Source: SEBI Annual Report, 2009-10

CHART-1: GROSS MOBILIZATION BY MUTUAL FUNDS (Rs. Crore)



As evident from chart-2, redemption by mutual funds has increased considerably during the period 1999-00 to 2009-10 showing quantum jump in the turnover of mutual funds.

CHART-2: REDEMPTION BY MUTUAL FUNDS (Rs. Crore)



It is clearly depicted in chart-3 that net inflow of mutual funds has jumped from only 18970 crore in 1999-00 to 83080 crores in 2009-10. However net inflow has been quite volatile as it reduced to all time low level of 2200 crores in the year 2004-05

CHART-3: NET INFLOW (Rs. Crore)

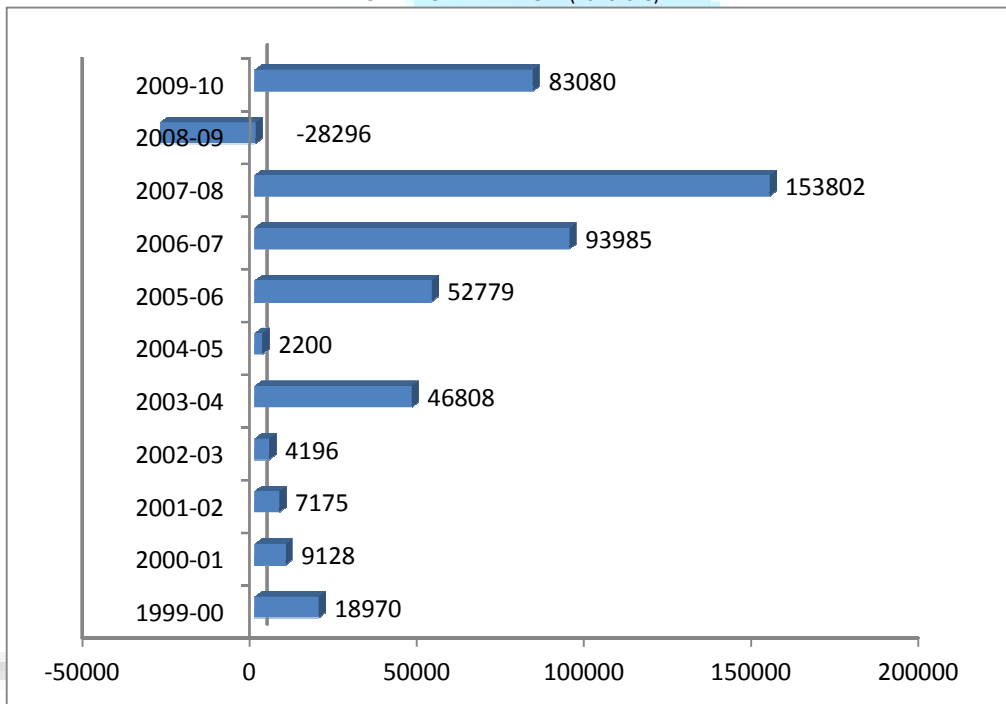


Chart-4 depicts that assets held at the end of each year during has increased significantly from Rs. 107946 crore in 199-00 to Rs.613978 in the year 2009-10 witnessing almost a jump of six fold during this period.

CHART-4 ASSETS AT THE END OF YEAR (Rs. Crore)

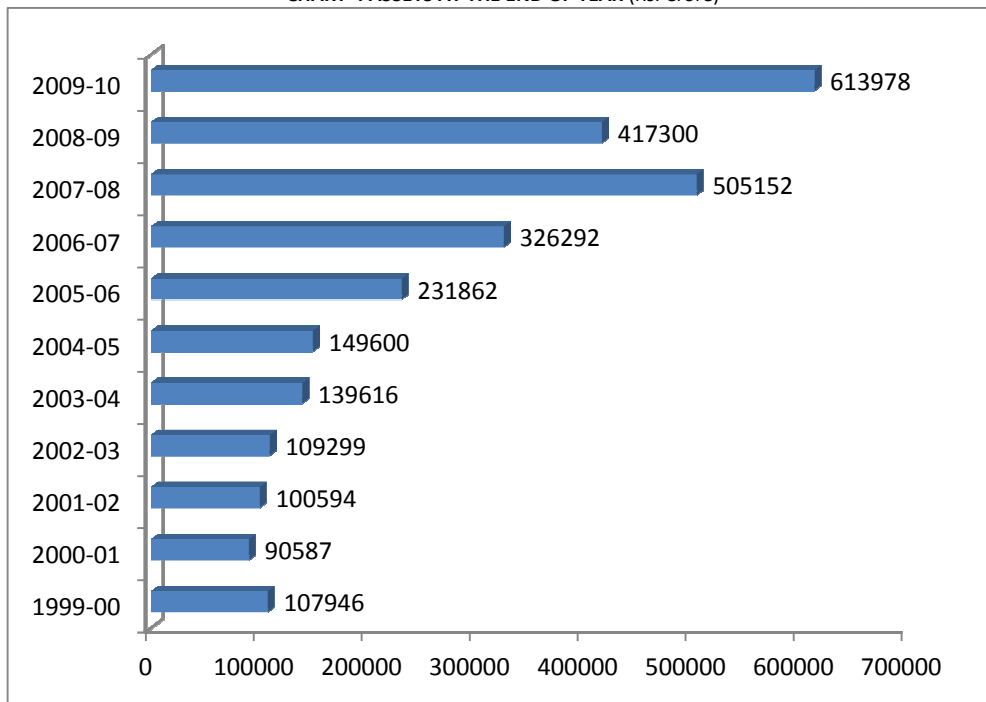


TABLE-III: DESCRIPTIVE STATISTICS

	Gross Mobilization	Redemption	Net Inflow	Assets at the end of year
Mean	2273610.727	2233262.909	40347.90909	253838.7273
Standard Error	948922.9201	942997.1137	15890.93911	55721.28164
Standard Deviation	3147221.281	3127567.604	52704.28258	184806.584
Sum	25009718	24565892	443827	2792226
t-distribution (Calculated value)	3.33	3.99	1.07	1.11
d.f.=n-1	11-1=10	11-1=10	11-1=10	11-1=10
t critical value t (0.05, 10)	2.23	2.23	2.23	2.23

TABLE-IV: T-TEST: PAIRED TWO SAMPLE FOR MEANS (NET PURCHASES/SALES)

	Equity Variable 1	Debt Variable 2
Mean	6098.333333	73752
Variance	97778754.27	3303242850
Observations	6	6
Hypothesized Mean Difference	0	
df	5	
t Stat	-2.579913656	
t Critical one-tail	2.015048372	
t Critical two-tail	2.570581835	

7. RESULTS AND DISCUSSION

Gross mobilization by mutual funds averaged Rs 2273610.727 crore for the period 1990-00 to 2009-10 with the standard deviation of 3147221.281. It thus indicates that mutual fund have witnessed quantum jump in the mobilization of funds during the study period. Calculation of t statistics proves that gross mobilization by mutual fund is statistically significant and hence it can be concluded that gross mobilization has increased over period of time. Redemption by mutual funds averaged Rs. 2233262.909 crore with a standard deviation of Rs.3127567.604. Statistical calculations prove that in increase redemptions is also statistically significant leading to a conclusion that redemptions by mutual funds have increased significantly over the years. Mutual fund witnessed an average net inflow of Rs. 40347.90909 crores with a standard deviation of Rs. 52704.28258 crores. Statistical calculation proves that in case of net inflow difference is not statistically significant meaning that there has not been a significant increase in the net flows during the period. Assets at the end of the year averaged Rs. 253838.7273 crore with a standard deviation of Rs. 184806.584 crores. Statistical analysis proves that increase in assets at the end of the year is statistically not significant which implies that they have not grown over the period. As shown in table-IV, turnover of mutual funds (measured as net purchases/sales) in the debt and equity market is statistically not significant which implies that mutual funds were equally active in equity and debt segments.

8. FUTURE OUTLOOK

According to KPMG study (2009) industry AUM is likely to continue to grow in the range of 15 per cent from the period 2010 to 2015 based on the pace of economic growth. Industry profitability may reduce further as revenues shrink and operating costs escalate. Product innovation is expected to be limited. Market deepening and widening is expected with the objective of increased retail penetration and participation in mutual funds. The regulatory and compliance framework for mutual funds is likely to get aligned with the other framework across the financial service sector.

9. CONCLUSION, LIMITATIONS OF THE STUDY AND SCOPE FOR FUTURE RESEARCH

This paper reveals that mutual funds in India have grown significantly in term of their gross mobilization and redemptions. During the last ten years the growth in mutual fund has been quite impressive. Despite having witnessed significant increase on year on year basis in gross mobilization and redemption, there has been a great volatility in the net inflows of the mutual fund which is worrying factor for the industry. A further study can thus be undertaken to identify the

reason behind the fluctuations in net inflow. Mutual funds showed equal turnover as measured in terms of net purchases/sales in equity and debt market which can also be probed further to get more insights into the turnover pattern of mutual funds in these markets.

This study analyzed the progress of mutual fund industry based on five to six parameters. It would be thus quite difficult to analyze the progress of the entire industry based on the few parameters. More parameters could be used to get further insights into the growth pattern of the sector. Moreover, the study did not reveal the segment wise performance i.e performance of private mutual funds and public mutual funds which could be an area of further research.

REFERENCES

1. Deutsche Bank Research (2007), India's Capital Markets: Unlocking the door to future growth February,
2. Gayathri , S., Karthika, S. and Kumar, Gajendran Lenin, Mutual Funds in India – Emerging Prospects, Issues and Challenges (July 3, 2010). Available at SSRN: <http://ssrn.com/abstract=1634302>
3. History of Mutual fund Industry 92012) available at www.amfiindia.com viewed on January 7, 2012.
4. Kamiyama, Tetsuya, India's Mutual Fund Industry (2007), Nomura Capital Market Review, Vol. 10, No. 4, Winter. viewed at SSRN: <http://ssrn.com/abstract=1103758>
5. KPMG & CII Study (2009), Indian Mutual Fund Industry – The Future in a Dynamic Environment ,
6. Pathak Bharati V (2010), Indian Financial System, 2nd Edition Pearson Education Publishing, New Delhi.
7. Ramola K.S (1992). "Mutual Fund and the Indian Capital Market' Yojana, Vol. 36, No.11.
8. Sagar, Narayan Rao and Madava, Ravindran, Performance Evaluation of Indian Mutual Funds. viewed at SSRN: <http://ssrn.com/abstract=433100> or doi:10.2139/ssrn.433100
9. SEBI annual report, year 2009-10 available at www.sebi.com viewed on January 5,2012
10. Soumya Guha Deb & Ashok Banerjee (2009). Downside Risk Analysis of Indian Equity Mutual Funds: A Value at Risk Approach International Research Journal of Finance & Economics, Issue 23,
11. Vyas, B.A (1990) ."Mutual Funds- Boon to the Common Investors" Fortune India, July 16, 1990.

CHALLENGE OF ATTRITION: A CASE STUDY OF BPO INDUSTRY IN CHANDIGARH REGION

MANJIT KOUR
ASST. PROFESSOR
SRI GURU GOBIND SINGH COLLEGE FOR WOMEN
CHANDHIGARH

ABSTRACT

The period of 2003-2006 witnessed the peak of growth in the BPO industry in India. Several employment opportunities opened up for the Indian qualified youth, as there was a new growing market that had just got created for them. The call centers and the BPO industry took off in a big and promising way thus creating a rush for the most talented among the huge number of graduates available in India. But this increase in number of call centers and BPOs also led to job hopping and poaching. This gave rise to problem of attrition in Indian BPO industry. Chandigarh being a big and advanced city also witnessed boom of BPO industry. BPO industry in Chandigarh region is also facing problem of attrition and the problem is so severe that it led to shut down of many small call centers in area. Present study was conducted in Chandigarh area to understand the level of attrition problem in the region, its reasons and suggestions.

KEYWORDS

BPO industry, Chandigarh.

INTRODUCTION

The period of 2003-2006 witnessed the peak of growth in the BPO industry in India. Several employment opportunities opened up for the Indian qualified youth, as there was a new growing market that had just got created for them. The call centers and the BPO industry took off in a big and promising way thus creating a rush for the most talented among the huge number of graduates available in India. But this increase in number of call centers and BPOs also led to job hopping and poaching. This gave rise to problem of attrition in Indian BPO industry. Chandigarh being a big and advanced city also witnessed boom of BPO industry. BPO industry in Chandigarh region is also facing problem of attrition and the problem is so severe that it led to shut down of many small call centers in area. As discussed with some of the HR managers in BPO industry in Chandigarh region the attrition rate in small BPOs is approximately 40%. The problem of attrition is so severe that even some small Call centers had to shut down their operations. The problem of attrition has been aggravated by the entry of big giants like DELL and IBM. Agents from small call centers move leave their jobs to work in these big companies in the hope of having growth opportunities, better environment and lucrative pay packages. But they find it difficult to cope up with competition and work pressure in such companies. So they leave that job also. There are other major reasons also which lead to attrition in BPO industry. Attrition is a menace for BPO industry which causes monetary, effort as well as time loss to companies. Present study throws light on reasons for attrition in BPO industry and suggestions to minimize this problem.

RESEARCH METHODOLOGY**OBJECTIVES**

- To identify the reasons for high attrition in BPO Industry in Chandigarh area.
- To suggest measures to curb the menace of attrition.

RESEARCH METHOD

The research techniques adopted for this study is "Telephonic interview Method" and "direct interview method" wherein detailed Questionnaire have been prepared for carrying out a detail survey of employees of BPOs who left their jobs for different reasons. List of the agents who left the job was taken from the HR departments and their telephone numbers were collected from their concern Team leaders.

SAMPLE SIZE

A sample 50 of the agents from different call centers from the Chandigarh area who left their job in the month of January-May 2013 was taken.

LIMITATIONS OF THE STUDY

The main limitation of this study was that it was an exit interview so some of the respondents answers might be biased. Some respondents were not interested in giving answers about their previous jobs so they gave answers uninterestingly.

RESULTS AND DISCUSSION**TABLE 1: PRIMARY REASON**

Primary reason	Respondents	%age
Better Opportunity	7	14
Stress	7	14
Health Problems	2	4
Parental pressure	2	4
Education	4	8
Time pass	4	8
Shift timings	8	16
Less growth opportunities	6	12
Company policies and environment	6	12
Other reasons	3	6
Total	50	100

The first question was asked about primary reason for leaving the job. In response to the first question above data was collected. The primary reason for attrition was found to be shift timings followed by high stress level and better job opportunity. The other prominent reasons were less growth opportunities and company policies. The same was analyzed further through a series of questions which followed in the questionnaire.

TABLE 2: POSITIVE POINTS

Positive points	Respondents	% age
Work Environment	13	26
Salary	15	30
Job itself	7	14
Incentives	6	12
Nothing	4	8
No comments	5	10
Total	50	100

The next question asked was about the best thing they liked about working in BPO Company they left. Most of them i.e. 30% said salary followed by work environment. 4% even said they liked nothing about their job.

TABLE 3: NEGATIVE POINTS

Negative Points	Respondents	%age
Shift timings	14	28
Supervision	8	16
Company Policy	11	22
Salary issues	12	24
Work environment	4	8
Technology problems	1	2
Total	50	100

The next question asked was about the worst thing about working in BPO Company they left. 28% said that shift timing was the main negative point about the job. 24% had salary issues as negative point, 22% blame unfriendly company policies to be demerit in working in their company.

FINDINGS

From this study it was found that the main reason for attrition in BPO was shift timing, stress, better opportunity, less growth opportunities and Company policies. The reason agents were attracted towards call centers was found to be high salary and the negative point was found to be erratic shift timings.

CONCLUSION & SUGGESTIONS

- Growth opportunities should be provided through internal job promotions
- Recreational activities should be introduced to reduce stress levels
- Team building activities to be created
- Time management skills to be inculcated among agents
- BPO's should introduce flexible working timings and styles
- Proper sales and process training
- Good rapport between team leader and agents should be established
- Employees in this should be provided with lot of personal space and a well thought-out career growth plan
- HR practices are needed to be fine-tuned so as to get the right kind of employees
- A long term relationship needs to be established between Company and its employees.

REFERENCES

1. <http://www.coolavenues.com>
2. <http://www.sourcingnotes.com>

GOOD GOVERNANCE IN INDIA: NEED FOR INNOVATIVE APPROACHES

PARDEEP KUMAR CHAUHAN
ASST. PROFESSOR
GURU NANAK KHALSA COLLEGE
KARNAL

ABSTRACT

This paper is an attempt to provide a framework for good governance in India by identifying its essential features and shortcomings in its working and emphasizes need for innovative approaches. No theory of governance could be intelligible unless it is seen in the context of its time. India's democratic experience of the past six decades has clearly established that good governance must aim at expansion of social opportunities and removal of poverty. Good governance, according to the author, means securing justice, empowerment, employment and efficient delivery of services. The paper deals with these subjects in detail and also analyses administrative and political fault lines. It identifies criminalization of politics and corruption as two major challenges. It also highlights shifts in meaning and content of national values of the freedom movement particularly those of nationalism, democracy, secularism, non-alignment, and mixed economy and its impact on the nitty gritty of administration as well as on the intellectual buildup of the organs of the Indian State. The paper lists several areas of concern that need to be addressed energetically and calls for synergy of efforts between government, the market and the civil society. Innovations are generally taking place. There are, however, two areas that need special attention by innovators, namely, economic empowerment of women and livelihood programmes based on local resources and upgraded skills. The need is to formulate a national strategy that accords primacy to the Gandhian principle of 'antodaya' without sacrificing growth and by making instruments of State accountable for good governance.

KEYWORDS

Good governance, innovative approaches.

1) INTRODUCTION

Good governance is an indeterminate term used in international development literature to describe how public institutions conduct public affairs and manage public resources. Governance is "the process of decision-making and the process by which decisions are implemented (or not implemented)". The term governance can apply to corporate, international, national, local governance or to the interactions between other sectors of society. The concept of "good governance" often emerges as a model to compare ineffective economies or political bodies with viable economies and political bodies.^[2] The concept centers on the responsibility of governments and governing bodies to meet the needs of the masses as opposed to select groups in society. Because the governments treated in the contemporary world as most "successful" are often liberal democratic states concentrated in Europe and the Americas, those countries' institutions often set the standards by which to compare other states' institutions when talking about governance. Because the term good governance can be focused on any one form of governance, aid organizations and the authorities of developed countries often will focus the meaning of good governance to a set of requirement that conform to the organization's agenda, making "good governance" imply many different things in many different contexts.

**2) MAJOR CHALLENGES TO GOOD GOVERNANCE**

At the obvious risk of generalization, I would like to refer to criminalization of politics and corruption as major challenges to good governance.

i) CRIMINALIZATION OF POLITICS

The Criminalisation of the political process and the unholy nexus between politicians, civil servants, and business houses are having a baneful influence on public policy formulation and governance. Political class as such is losing respect.

The Indian State is facing a serious challenge to its authority from lawless elements. The jihadi terrorism in Jammu & Kashmir and its ad hoc but frequent spread to other parts of India, the insurgency in the North-East, and rapidly expanding base of naxalite movement in mainland India constitute grave challenge to democratic governance. Fortunately, one sees national consensus against jihadi terrorism and it is for the Indian State to deal firmly with this menace. Insurgency in India's North-East is largely confined now to Nagaland, Manipur and Assam and these are being tackled by democratically elected state governments with full support from the Centre. Of late, one sees a political resolve to deal with naxalites as well. Dialogue process alone would provide the final answer but in every eventuality the State has to be continually firm in order that it discharges its basic responsibility of protecting life and property of its citizens. The more insidious threat to India's democratic governance is from criminals and musclemen who are entering into state legislative assemblies and national Parliament in sizeable numbers. A political culture seems to be taking roots in which membership of state legislatures and Parliament are viewed as offices for seeking private gain and for making money. Such elements have also found place in Council of Ministers and a Prime Minister or a Chief Minister in an era of coalition politics cannot take strong action for that might lead to the fall of the government itself. The Gandhian values of simple living and self-less service to public causes are rapidly vanishing. The dictum that 'howsoever high, the law is above you' is sought to be replaced by rule of men. It is true that public is not a mute spectator to this phenomenon nor is the media. The process of judicial accountability has succeeded in sending several legislators and ministers to jail. But new methods have also been devised to fiddle away with the processes of law. Criminals facing prosecution get out on bail and even go scot-free. During the period of consideration of their bail petition as well as trial, the doctor invariably finds a serious ailment that enables the accused to escape discomforts of jail by admitting himself in a 5-star hospital. The question staring all of us is how to close the gate of the portals of democracy for criminals. At the behest of the Election Commission, the Indian Parliament has enacted certain law that makes it obligatory on the candidate contesting an election for Parliament or State Assembly to declare as to whether he is accused for any offence punishable under law for two years or more, for which charges have been framed. Candidates would also have to disclose whether he has been convicted for any offence in which the punishment has been awarded for one year or more for the information of the voter. All these have created a favourable environment for curbing criminalization of politics. But it is necessary to move further to debar criminals from contesting elections. It is imperative, therefore, to amend Section 8 of the Representation of the People's Act 1951 to disqualify a person against whom the competent judicial authority has framed charges that relate to grave and heinous offences and corruption. It is one of the marvels of parliamentary democracy in India that notwithstanding entry of criminal elements in the Lok Sabha and in Vidhan Sabhas we have a Prime Minister of high integrity and scholarship and

several Chief Ministers whose honesty is beyond any iota of doubt. Would this category of persons among political leaders transcend narrow loyalties and cleanse the political class of criminal elements?

ii) CORRUPTION

The high level of corruption in India has been widely perceived as a major obstacle in improving the quality of governance. While human greed is obviously a driver of corruption, it is the structural incentives and poor enforcement system to punish the corrupt that have contributed to the rising curve of graft in India. The complex and nontransparent system of command and control, monopoly of the government as a service provider, underdeveloped legal framework, lack of information and weak notion of citizens' rights have provided incentives for corruption in India. A conscious programme for strengthening of public awareness and also empowering the existing anti-corruption agencies would be required. The statutory right to information has been one of the most significant reforms in public administration. The Right to Information Act provides a strong national framework within which public awareness programmes could take place. Corruption takes place within a frame. Accordingly, basic reforms in file management, government rules and regulations, provision of public expenditure review could provide the concerned citizens the relevant knowledge to hold service providers accountable. This would ensure that the resources that belong to people are used in the right way. One of the recent sources of corruption at political level relates to schemes of MPLADS and MLALADS and this need to be abolished. In any case these are no legislative functions.

iii) CORRUPTION AND ELECTORAL REFORMS

The hitherto laissez-faire system of funding of elections is the biggest countervailing factor in the emergence of democratic India as an honest state. It is widely agreed that state funding of elections/parties will provide a certain degree of financial independence to parties and their candidates and that in turn will help reduce the incentives to raise party/election funds through corrupt means. Public financing holds great promise because it levels the playing field and gives candidates an incentive to accept spending limits. With public financing, poorer candidates can challenge well-funded ones, enlivening the debate and opening up the system. Public financing should be accompanied by free media space. The state funding of elections regime should be accompanied by strict accounting procedures including rules to internally democratise parties. All these will improve the image of political parties in the eyes of the public and help create a virtuous cycle of democratic competition within political parties for election nominations in which candidates exposed to be corrupt can expect to be weeded out over time. It will also encourage honest persons from various walks of life to join the electoral battlefield. The state funding of elections in India would also go a long way in reducing the clout of religious, ethnic and some business houses on the government.

3) OVERVIEW

Religion and culture play an important role in social cohesion. The religious attitude of tolerance and peace and cultural values of pluralism are conducive to good governance. And yet there is no casual relationship between religion and democracy. For democracy does not belong to any faith. Equally, no particular faith is synonymous with democracy. A look at South Asian scene would reveal that Islam did not make Pakistan a natural democracy; nor did Hinduism turn Nepal into one. Buddhism has not ensured democracy in Burma. Indian democracy is a product of freedom movement which gave primacy to values of pluralism and equal treatment to people of different faiths and ethnic backgrounds.

The constitution guarantees, the judiciary upholds it and the leadership believes in this value system. India's democracy is at the center of governance architecture. It creates opportunities, sustains leadership and generates hope. Good governance being central to the Indian democratic experience could be seen more clearly when we look at what is happening in our part of the world. Pakistan is making experiment with various forms of governance, democracy as well as military dictatorship, and merely succeeding in saving the nation-state from being a failed one. The Bangladesh Army seeks similar justification in managing and calibrating the transition to democracy, as does the Gayoom regime in the Maldives. In Sri Lanka, notwithstanding high rates of literacy and economic growth through decades-old democracy, it has not been able to secure cooperation of the Tamil minority, with the result that democracy thrives side by side with a bloody civil war. In Nepal, democratic institutions which have been undergoing serious strain under the Maoist threat are trying to resurrect under a fledgling inclusive republican order. The major shifts in India's national value system made impact both on the nitty gritty of administration as well as the intellectual build up of the civil service, the police and the judiciary. This is not the occasion to analyse how it came in the way of India's successes and failures in the social, economic and political domains, but whenever there is a major shift in political discourse governance gets affected both in its content and emphasis. The shift in national values corresponded with new democratic experiences and change in regional and global environment.

The geography of nationalism got restricted with partition in 1947 itself. The meaning and context of nationalism and non-alignment underwent major transformation on account of the Chinese perfidy in 1962. The reassertion of democracy became evident during 1975-77. India shifted from the commanding heights of the public sector economy policy and slowly opted for integration of markets and moved on the path of capitalism beginning from 1991. It is true that capitalism is not the accepted creed of the Indian nation-state. In an era of coalition governments, the national government has had to use ingenuous methods to push economic reforms to usher in rapid economic growth. This is also true of foreign 18policy arena. For our purpose, it suffices to say that the concept of good governance though in vogue all the world over, the Indian product has its own special features and flavour. In an era of shift in values, governance is marked by trial and error and new rules of the game are getting formulated as we move along. It is being widely appreciated that good governance is dependent not merely upon good policy advises but more importantly on the processes and incentives to design and implement good policies themselves. Dysfunctional and ineffective public institutions are increasingly seen to be at the heart of the economic development challenge. Misguided resource allocations, excessive government interventions, and widespread corruption have helped in perpetuation of poverty. The weak institutions of governance make an adverse impact on service delivery. Poverty reduction depends on improvements in the quality and timely delivery of services to poor people of basic education, health, potable water and other social and infrastructure requirements.

The major challenge is to put in place institutional arrangements for service delivery that are workable in a particular district or a region and are made to function in a manner that are intelligible to the local people and that also encourages them to participate. Such institutions would be responsive to the citizenry and reasonably efficient in the delivery of public services. Scholars as well as administrators agree that participation of civil society in decision-making, public sector capacity building and rule of law are essential for quality and timely delivery of services. The concept and practice of good governance in a country demands that there should be constructive mechanisms and procedures that will enable the three principal actors – government, market and civil society – to play in concert and to supplement each other's capability. The working of all governments at the Centre and in the States has clearly revealed the existence of powerful interest groups who have a strong vested interest in preserving the status quo. This comes in the way of government becoming the effective agent of change and guarantor of social justice. The entrenched power group always resists attempts to alter the status quo and that too in favour of disadvantaged and poor. The poor are largely unorganized and cannot be mobilized easily because of their large numbers.

The leadership at various levels placed in the task of striking a balance between the demands of the powerful interest groups and voiceless poor have rarely gone against the powerful. There is no doubt that market has better delivery of services. Moreover, in a competitive environment, the market can be both cheaper and more effective than the government in providing certain types of services. However, the markets, controlled as it is by businessmen, operate for profits and the poor have little or no voice in the regulation of its operations. Thus, the failure of the government and the profit motive of 19the market have led to distorted developments in which the rich have become richer and the poor poorer. Market is an integral part of social order but the truth is that principles of market cannot be allowed to govern society and polity. Accordingly, no democratic government can leave market uncontrolled and free from regulations.

The poor are poor of course because of historical inequities but also on account of failure of the State to empower them adequately to get their entitlements. Democratic governance demands that the State cannot for long serve the demands of the rich and organized sectors of the society and ignore the dalits, the minorities and the women because they are unorganized and poor. It is true that despite security of tenure the permanent services including the IAS, IPS and the IFS are marked by decline in idealism of early years of the Republic. It is no denying that if political leadership becomes corrupt or apathetic to good governance, the permanent services may not remain idealistic or efficient for long. And yet the senior leadership of the All India and Central Services need to look within and develop themselves professionally and in ethical terms to fulfill the ambition of the new generation to build a strong India. How and whether the services would

rise to this challenge needs to be both posed and watched? Placed in these circumstances, a multi-sectorial approach to governance that serves the cause of growth as well as equity alone can help in achieving the goal of good governance. \

It is precisely here that NGOs, self-help groups, women's groups, legal assistance organizations and several other civil society instruments can play an influential role. In fact, most of these organizations are addressing specific concerns and know the ground realities. These organizations are at the center where they frequently interact with the government and the market. Just as the government regulates the market from committing misuses that are detrimental to society as a whole, the role of the civil society is to ensure that government is not only accountable and responsive to the citizens but it also performs its essential role as the guarantor of social justice. In the emerging multifaceted nature of governance, the civil society institutions can play a constructive role not only in harnessing the resources of the government but also in tapping the structure and resources of the market to give a fair deal to the people, and in creating an environment where sustainable development takes place. Fortunately, one clearly sees the determination of national and several state governments to provide a safety net at the bottom of economic pyramid. The middle class is a major beneficiary of new economic initiatives in the post-permit, license, quota raj. The need to awaken social consciousness of captains of industry too is being increasingly addressed. The need to accelerate the pace of these changes is obvious.

CONCLUSION

A major shift from or even collapse of core values of freedom movement are making adverse impact on institutions of the republic and functioning of government. The new Indian republic was not always market friendly. It was expected that the state shall supersede the market by generating a system of control so that it produced a result that it would not have produced itself. In practice it degenerated into 'license permit raj' and 'inspector raj'. We are entering into an era of capitalist innovation. It leaves a lot of people out and the market laws even threaten to dominate natural environment. But as luck would have it, fear of losing control of the circumstances and routines of one's daily life and growing inequity is bringing the State back. Fear of terrorism too has contributed to the view for strengthening of the nation-state. Although a return of 'licence-permit' era is ruled out for ever as we are getting increasingly linked to the global market, good governance that people need in order to improve their lives depends, in a larger measure, on government activities and approaches. In this backdrop, India's democratic institutions are required to address the following areas of concern energetically:

1. State-sponsored development programmes must aim at reduction in poverty and improvement in productivity levels of workers. Towards these, poor people need to be directly involved.
2. Public Expenditure Review meets should be organized periodically at village, sub district and district levels to ensure proper utilization of funds and ownership of development programmes by the people.
3. Civil service should be given clear responsibility for delivery of services in respect of approved schemes and held accountable.
4. One third of seats in Assemblies and Parliament should be reserved for women.
5. Persons charge sheeted by a competent court for heinous offences and corrupt practices should be debarred from contesting elections.
6. Partial State funding of elections should be commenced urgently.
7. MPLADS and MLALADS schemes should be abolished.

The quality of democracy and the commitment and caliber of public servants both in the executive and in the judiciary would determine the outcome of the country's performance in key areas – empowerment, employment and effective delivery of services. The instruments of the State and the civil society need to be guided by the Talisman that Mahatma Gandhi prescribed for social, political and religious leadership of 21 independent India in August 1947. It reads: "I will give you a talisman. Whenever you are in doubt, or when the self becomes too much with you, apply the following test. Recall the face of the poorest and the weakest man whom you may have seen, and ask yourself if the step you contemplate is going to be of any use to him. Will he gain anything by it? Will it restore him to a control over his own life and destiny? In other words, will it lead to swaraj for the hungry and spiritually starving millions? Then you will find your doubts and yourself melting away." This is relevant today as well, as in the name of rapid economic growth policy decisions are increasingly being taken giving regard to the interest of the market and big business. Could we reverse this process to give primacy to the principles of 'antodaya' without sacrificing growth? If that happens, good governance could be better ensured. Such governance under a sensitive leadership could provide capacity to build our inclusive polity and a future full of possibilities for everyone.

In the post Gandhi-Nehru era, the involvement of civil society in governance has become crucial. Civil groups like NGO's, women's groups, trade unions, cooperatives, guilds, faith organizations are all essential to buildings of inclusive growth. Without the involvement of the people, without their voices, without their participation and representation, a programme can only be implemented mechanically. Today, we need innovators in two areas in particular: women and livelihood programmes. Women are key to good governance. Their increasing representations in democratic institutions have provided stability to Indian polity. Women can bring constructive, creative and sustainable solutions to the table. Women participation in economic programmes needs to be augmented for in women we get expendable providers, educators, caretakers and leaders. Second relates to livelihood. Livelihood does not only mean factory jobs. It should relate to social economy and local resources as well. It should also mean upgrading of existing and traditional skills that people have possessed from time immemorial in agriculture, in animal husbandry, in fishing, in textiles and so on. Investment in up gradation of such skills would lead to harmonious relationships with nature. My own experience tells me that when you provide productive work on a regular basis to a couple, their children would automatically go to schools and shall refuse to entertain persuasions of naxalite and insurgent groups to indulge in violent acts. It is through work that a person can plan the way in which his ambition can be fulfilled.

With regular work life is no longer just about survival, but about investing in a better future for the children. Above all, when one has regular work, there is incentive to maintain a stable society. In view of deep-rooted social and economic inequities of centuries, India can not blindly follow capitalist model of growth that puts excessive reliance on market forces. For such a model would fail to provide stability to Indian polity. And yet rapid economic growth is essential to meet aspirations of the Indian youth. Placed in these circumstances, the innovators have to devise ways and means that secures both fast growth and an approach that combines Gandhian ethics with democratic temper. Innovations are taking place in the government, in the market and in the civil society. Social and political processes are getting increasingly interlinked changing the character of the elites in the countryside. In the process the high caste elites of 1950's have increasingly yielded space to intermediate caste landholders and businessmen and also holders of administrative and political offices. The nature and content of good governance would undergo changes in tune with rising expectations and fresh demands of the people. Democratic governance would expect and secure from its leadership to be alive to such aspirations and to continually tune institutions of polity to be effective instruments of citizens' welfare. One is aware that 'million mutinies' are taking place almost on a daily basis in the country. The need is to go for 'million negotiations' that would ensure that government, market and civil society work together for the poor.

REFERENCES

1. A.R. Marriott, (Second Chambers, Oxford, 2nd ed., 1927)
2. Amartya Sen, (Identity and Violence: The Illusion of Destiny, Allen Lane an imprint of Penguin Books, London, 2006).
3. D.D. Basu, (Commentary on the Constitution of India, 2 Vols., S.C. Sarkar and Sons Ltd., Calcutta, 1955-56.)
4. Devesh Kapur and Pratap Bhanu Mehta (eds.), (Public Institutions in India: Performance and Design, Oxford University Press, New Delhi, 2005).
5. Francine Frankel, Zoya Hasan, Rajeev Bhargava, and Balveer Arora (eds.), (Transforming India: Social and Political Dynamics of Democracy, Oxford University Press, New Delhi, 2000).
6. G.D.H. and Margaret Cole, (A Guide to Modern Politics, Gollanez, 1934).
7. Granville G. Austin, (The Indian Constitution: Cornerstone of a Nation, Clarendon Press, Oxford, 1966).
8. H. Finer, (The Theory and Practice of Modern Government, Vol.I, Pt.IV, Methuen, 1932).
9. H.J. Laski, (A Grammar of Politics, Ch. II, Allen & Unwin, 5th ed., 1952).
10. Ivor Jennings, (Cabinet Government, Cambridge University Press, Cambridge, 1951.)

11. J.J. Rousseau, (The Social Contract, Bk.III, Ch.iii to viii, in Social Contract, 'World's Classics', No. 511, Oxford).
12. Lloyd Rudolph and Suzanne Hoeber Rudolph, (In Pursuit of Lakshmi, University of Chicago Press, Chicago, 1987.)
13. M.P. Singh and Rekha Saxena, (Indian Politics: Contemporary Issues and Concerns)
14. Partha Chatterjee, (Nationalist thought and the Colonial World: A Derivative Discourse, Zed Books for the U N University, 1986).
15. Rajni Kothari, (Politics in India, Orient Longman Ltd., New Delhi, 1970 and Rethinking Democracy, Orient Longman Ltd., New Delhi, 2005).
16. T.H. Green, (Lectures on the Principles of Political Obligation, pp. 93-141, Longmans, 1921.)



RESPONSE OF PEASANT FARMERS TO SUPPLY INCENTIVES: AN INTER-REGIONAL ANALYSIS OF COTTON CROP IN SINDH, PAKISTAN

DR. MOHAMMAD PERVEZ WASIM
RESEARCH ECONOMIST
APPLIED ECONOMICS RESEARCH CENTRE
UNIVERSITY OF KARACHI
KARACHI

ABSTRACT

Trends in the acreage of cotton, has not been uniform or steady in Sindh and fluctuations in both acreage and production have been considerable from year to year. Fluctuations in crop acreage mainly occur due to relative price structure, owing to varying profitability from crop to crop. Any development programme envisaged in the primary sector is aimed at increasing the overall production of the economy and the success or failure of this programme is mainly dependent on the response of farmers to such programme. The decision of farmers regarding allocation of land and other resources to increase production is directly or indirectly influenced by policies formulated by the government and the economic and climatic factors which are highly operative in production of crops. This study attempts to explain the acreage allocation behavior of cotton cultivators in terms of their response to price and non-price factors. The study is based on secondary data at zonal and provincial levels. The data covers a period of 28 years spanning from 1979-80 to 2006-07. The basic model used in this study is the improvised Nerlovian partial adjustment lagged model. The result of analysis reveals that in the process of making area decisions for cotton cultivation, all variables (relative profitability, irrigation, price and yield risk, area under plant protection measures, cotton ginning capacity by ginning factories and lagged acreage) are more or less equally important. The study indicates the significance of relative profitability, in explaining the variations in acreage under cotton crop across all zones of Sindh. The results of the study indicate a positive response of land resource allocation to relative profitability. This means that farmers can find it possible to make adjustments on the acreage allocation under cotton cultivation through manipulation of relative profitability of cotton and the substitute crops. In order to bring an effective adjustment in acreage allocation, the support price for various crops must be announced well before the sowing season; and the prices thus announced, should carry a long-run guarantee.

GEL CLASSIFICATION

Q 11

KEYWORDS

Coefficient of variation, cotton ginning capacity, h-statistic, Nerlove adjustment log model, relative profitability.

INTRODUCTION

Agriculture plays an important role (directly and indirectly) in generating the economic growth. It contributed 20.9 percent of the Gross Domestic Product (GDP) in 2010-11. The contribution of the Agricultural sector to the Gross Domestic Product (GDP), though declined gradually since Pakistan came into being from a level of over 59.9 percent in 1949-50 to 20.9 percent in 2010-11 but it still is the major sector of the GDP composition. The sector provides employment to 45 percent of the labor force (Economic Survey, 2010-11). This sector supplies raw materials to many major industries. The value added and employment opportunities provided by these industries make major contributions to the Pakistan's GNP. In turn, it consumes a large part of the industrial finished goods.

REVIEW OF LITERATURE

Like other developing countries, the topic of supply response has been discussed in Pakistan by various authors, such as (Krishna 1963), (Falcon 1964), (Hussain 1964), (Cummings 1975a, 1975b) and many others. Most of these studies are three decades old and since then many technical, institutional and economic changes have taken place in Pakistan's agriculture sector. However, recent efforts have been made by (Ashiq 1981), (Tweeten 1986), (Ali 1988), (Khan and Iqbal 1992), (Naqvi and Burney 1992), (Wasim 1996-97), (Himayatullah 1994), (Chaudhry 2000), (Khan, et al., and Kalsoom, 2008), (Nosheen and Iqbal, 2008). Using Nerlovian Adjustment Lag Model, Ashiq, Tweete, Himayatullah, Chaudhry, Wasim, Khan, Ikram, Kalsoom, and Nosheen and Iqbal found that farmers of Sindh, Pakistan are rational and respond positively to economic incentives. Contrary to this, Ali concluded that price support policy of the government has little potential to increase overall agricultural production. Khan and Iqbal (1992), on the other hand, used Nerlove's partial adjustment adaptive expectational model for ten major crops of Pakistan. They concluded that farmers in Pakistan tends to behave "rationally" in general. Although, it is found that farmers are price-responsive, but the degree of responsiveness differ from crop to crop. Naqvi and Burney (1992) estimated the supply and output demand functions based on the profit function approach¹. Their estimation confirmed that Pakistani farmers respond to changes in the output prices.

IMPORTANCE OF THE STUDY

The study of farmer's supply/acreage response is of considerable importance for devising a suitable policy for the agricultural sector of any economy, particularly in Pakistan where agriculture is by far the most important sector in the national economy. Developing economies needs to understand the supplying phenomenon of crops in order to implement viable policies. Even in developed countries, understanding the supply phenomenon is of crucial importance in controlling surplus for raising the farm income and resource productivity (Heady, 1961).

THE STATEMENT OF THE PROBLEM

Trends in the acreage of cotton, has not been uniform or steady in Sindh and fluctuation in both acreage and production have been considerable year to year. Fluctuations in cotton acreage have always been a matter of concern to ginning factories, exporters of raw cotton and importers of cotton, and have recently assumed to grave dimensions. Fluctuation in crop acreage mainly occurs due to relative price structure, owing to varying profitability from crop to crop. In every economy shift in the acreage under different crops is very obvious. Agricultural economists have, therefore, naturally been interested in identifying the important factors causing shift in the acreage of individual crops. Whether and to what extent Sindh farmers are influenced in their production decisions by economic stimuli is a question of central importance for agricultural planning in Pakistan. In a developing economy like ours, the overall economic development depends to a greater extent inter-alia on the rate of growth in agriculture. Any development programme envisaged in the primary sector is aimed at increasing the overall production of the economy and the success or failure of this programme is mainly dependent on the reaction of the farmers to such programmes. The decision of farmers regarding allocation of the land and other resources to increase production is directly or indirectly influenced by the policies formulated by the government, in addition to the economic and climatic-factors which are highly operative in production.

All earlier studies on Pakistan (except Wasim 1996-97) have primarily focused either on Punjab or at the national level. The estimates of supply elasticities have been on the aggregate or at macro-level, implicitly assuming that various regions/sub-regions producing one or more commodities possess homogeneous

characteristics; and the level of supply and the nature of producer's response everywhere would be same. This is questionable; firstly, because when there are inter-regional differences in resource endowments including agro-climatic conditions (i.e., soil, climate, physiography, irrigation facilities, etc.) and the managerial skills, the macro supply response relationship may not provide a true picture of the resource allocative decision of the farmers. Secondly, all studies have considered price as an important factor for decision. Price may be the only consideration if the yield rate of crops remains unchanged over the period. But, as we know the yield of the crops in Pakistan, mostly varies due to unavoidable circumstances (i.e., floods, pest attack, etc.). In such a situation price may not be the sole decisive factor. In fact, when technological development take place, the year to year change in land allocation reflect change in the farmers decision not only due to variation in price but also because of variation in yield rates (as cotton yield in Sindh). In such a situation, the relative price variable is inappropriate to assess farmers response to change in the commercial policy. Instead "relative profitability/net return per unit of land" is a much better choice as a key determinant of farmer's production decision. None of the studies (except Wasim, 1996-97) have included this variable in their model specification. Thirdly, none of these studies (except Wasim) include the element of risk in the supply response studies, thereby ignoring the risk-minimizing tendency of farmers in developing countries. It is also well known that risk arising from price and yield variations may influence the farmers decision regarding the choice of crops to be cultivated. Fourthly, none of the studies have included "area under plant protection measures" in their model specification. Though, we know that in most of the year the production of crops fell due to the pest attack. Fifthly, the studies have failed to include cotton ginning capacity by cotton ginning factories as an independent variable in their model specifications. This variable must be included in the model to see whether growers are influenced by variation in the factory output.

Although, cotton is also cultivated in other provinces, the province of Sindh was selected for the analysis as it recorded relatively better yield per acre of cotton as compared to other provinces and also due to the availability of data on more independent variables. Sindh also exhibited a yield pattern similar to the national trend.

On the basis of distinct characteristics of topography (climate and soil), the province of Sindh can be divided into six ecological zones², viz., northern zone, central zone, southern zone, Kohistan and adjacent area, Thar desert and saline alkali area. These zones possess distinctly different characteristics that clearly differentiate them from one another.

The estimation of acreage function for the micro producing zones, where each zone represents more or less homogenous agricultural conditions would help envisage better the possible effects of a macro level policy at the zonal level.

OBJECTIVES

This study attempts to explain the acreage allocation behavior of cotton cultivators in terms of their responsiveness to price and non-price factors. The main objectives of the study are:

- i) to test whether the farmers of Sindh respond to price/relative profitability movements,
- ii) to estimate elasticities of acreage with respect to cotton crop; (a) relative profitability, (b) irrigation, (c) risk variables arising from price and yield, (d) area under plant protection measures, and (e) cotton ginning capacity by ginning factories.
- iii) to make a comparison of short-run and long-run price/relative profitability elasticities with that of other underdeveloped and developed countries.
- iv) to identify policy measures in respect of price, yield, irrigation, plant protection measures etc., so that production of cotton can be increased in order to increase the export of raw cotton, and cotton manufactured goods and it can also be exported to increase trade balance in favor of export.

STUDY AREA AND DATA SOURCES

To build up an economic model on the objectives given above, it is necessary to have adequate data relating to the area under cotton and the said Stimuli in order to make a quantitative assessment possible. The study is based on secondary data at the zonal and provincial levels³. After losing three years due to the calculation of price risk, (past three-year prices) the cotton data covers a period of 28 years⁴. The study mainly depends upon the availability of data.

RESEARCH METHODOLOGY

The farmer allocates his land to different crops, depending on his expected revenue from them. Assuming that the input cost is either the same or more uniformly distributed overtime for different crops, the expected revenue depends on the expected price. It is very seldom that they are able to make hundred per cent adjustment while responding to various economic factors, or adjust instantaneously. In Pakistan cotton cultivation decisions are made in January-February while government announces the support price⁵ for that as well as for substitute crops much earlier. This indicates that, cultivators do not have to form any expectations about future output prices, but they might experience some technological and institutional constraints in the procurement of requisite inputs in such cases. Under these conditions the Nerlove's partial adjustment lag model is considered appropriate for cotton growers and is widely used by majority of researchers for measuring the farmers' response behavior. Therefore, the basic model used in this study is the improvised Nerlovian partial adjustment lagged model⁶ (Nerlove 1958).

Since the price of cotton seed is announced before cultivation time, cotton growers can easily formulate their desired acreage. Assuming that the desired acreage is linearly related to the price of seed cotton, a typical specification comes up as follows:

$$A_t^* = a + bP_{t-1} + U_t \quad (1)$$

where A_t^* is a desired or long-run acreage and P_{t-1} is the lagged price of cotton seed. Since the desired acreage, A_t^* , is an unobservable variable, Nerlove formulation suggests that it can be specified as:

$$A_t - A_{t-1} = \beta(A_t^* - A_{t-1}) \quad 0 < \beta \leq 1 \quad (2)$$

then the current supply is:

$$A_t = A_{t-1} + \beta(A_t^* - A_{t-1}) \quad (3)$$

β is the coefficient of adjustment, which accounts for forces which cause the difference between the short-run and long-run supply-price elasticities. $A_t - A_{t-1}$ is actual change and $A_t^* - A_{t-1}$ is desired or long-run change. The first equation is a behavioral relationship, stating that the desired acreage under the crop studied depends on the relative farm prices in the preceding year. Equation (2) states that the actual planted area of cotton in period t is equal to the previous actual planted area plus a proportion of difference between the desired planted area in period t and actual planted area in period t-1. This hypothesis implies that farmers cannot fully adjust their actual planted area to the desired area in response to changes in the explanatory variables due to constraint, such as fixity of assets, physical land conditions, habitual production patterns of the farmers, etc.

' β ' is, therefore, an indication of how fast the farmers make adjustments to their expectations. The value of ' β ' close to zero would mean that the farmers are slowly adjusting to the changing prices, yield, etc. The value of ' β ' close to one would mean that the farmers are quickly adjusting to the changing levels of prices, yield, etc., almost instantaneously. When adjustment is perfect $\beta=1$. In real world however, the value of β lies between 0 and 1.

Relations with Equations (1) and (2) give the reduced form, which eliminates the unobserved variable (A_t^*) by an observed variable (A_t):

$$A_t = A + BP_{t-1} + CA_{t-1} + V_t \quad (4)$$

where,

$$\begin{aligned} A &= a\beta, \\ B &= b\beta, \\ C &= (1-\beta), \\ V_t &= \beta U_t \end{aligned}$$

Equation (4) provides a simple version of partial adjustment model and the parameters of this model can be estimated using OLS if the original U_t 's are serially uncorrelated (Gujrati, 1995). There are also other Autoregressive models other than the partial adjustment model, such as, Koyck and Adaptive expectation. In

the Koyck model as well as the adaptive expectations model the stochastic explanatory variable Y_{t-1} is correlated with the error term V_t ? If an explanatory variable in a regression model is correlated with the stochastic disturbance term, the OLS estimators are not only biased but also not even consistent; that is even if the sample size is increased indefinitely, the estimators do not approximate their true population values⁷. Therefore, estimation of the Koyck and adaptive expectation models by the usual OLS procedure may yield seriously misleading results. However, the partial adjustment model is different. In this model V_t of equation 4 is βU_t . Therefore if U_t satisfies the assumptions of the classical linear regression model, such as zero mean value of U_t , no autocorrelation between the U 's, Homoscedasticity or equal variance of U_t , and zero covariance between U_t and x_t , so will βU_t . Therefore, OLS estimation of the partial adjustment model will yield consistent estimates although the estimates tends to be biased (in finite or small samples)⁸. Although A_{t-1} depends on U_{t-1} and all previous disturbance term, it is not related to the current error term U_t . Therefore, as long as U_t is serially independent A_{t-1} will also be independent or at least uncorrelated with U_t , thereby satisfying an important assumption of OLS, namely, non-correlation between the explanatory variable(s) and the stochastic disturbance term (Gujrati 1995). The reduced form would basically remain the same, if we include more independent variables than these included in equation (4), which is the basic frame of our model, but more independent variables are included in it. The model will be in log form. The logarithmic form provides estimates of short-run and long-run supply elasticities directly.

Using the Adjustment lag model as the basic frame for analysis, the response relationship in the study will be estimated more or less with the help of the following short-run equation.

$$\log A_t = \log C_0 + C_1 \log RP_{t-1} + C_2 \log I_{t-1} + C_3 \log CV_p + C_4 \log CV_y + C_5 \log PP_{t-1} + C_6 \log GC_{t-1} + C_7 \log A_{t-1} + \log V_t \tag{5}$$

where,

- A_t = Acreage under cotton in year t.
- RP_{t-1} = Relative profitability⁹ of the crop in year t-1.
- I_{t-1} = Irrigated area under Kharif crops in year t-1;
- CV_p = Coefficient of variations¹⁰ of the prices of cotton for the years t-1, t-2, t-3 is used as a measure of price risk;
- CV_y = Coefficient of variations of the yields of cotton for years t-1, t-2, t-3 is used as a measure of yield risk;
- PP_{t-1} = Area under plant protection measures for cotton in year t-1;
- GC_{t-1} = Cotton ginning capacity by cotton factories in year t-1;
- A_t^* = Desired or long-run area under cotton which will be different from the planned area in the period due to the partial accounting of farmer's expectations in the planning;
- V_t = Error term in year t;
- β = Adjustment coefficient

Other inputs like labor utilization and fertilizer consumption per hectare and per crop was also considered important but due to non-availability of data it was not possible to capture their effects. Because of the presence of lagged value of the dependent variable on the right hand side of equation (5), the Cochrane-Orcutt technique will be employed in the Ordinary Least Square (OLS) regression procedure, in order to account for possible auto-correlation problems. The time-series data for the relevant districts in the zone were pooled for the purpose of estimating the above equation for the four zones. Such disaggregated results provide a better understanding of the factors which influence the farmer's acreage decisions because they highlight the inter-zonal differences in response behavior.

We have estimated the equation with all variables in their log-linear form. The log form of the function was chosen because it yielded consistently better results with respect to signs, values and levels of significance of the regression coefficients. Besides, the logarithmic forms also provide readymade estimates of short-run elasticities.

The Long-run elasticities are calculated by using the short-run elasticities.

$$\frac{\text{Short run elasticity}}{\text{Coefficient of adjustment}}$$

Long-run price elasticity of acreage =

Whether this model suffers from the auto-correlation problem or not, it can not be tested by using the DW d-statistic, since it includes a lagged-dependent variable (lagged acreage in this case) in a regression equation, the DW d-statistic is likely to have reduced power and is biased toward the value 2, (Durbin 1970) and (Nerlove 1958). For such an equation, Durbin has suggested an alternative test statistic known as Lag range Multiplier Test or the h-statistic¹¹, defined as:

$$h = \left(1 - \frac{1}{2}d\right) \sqrt{\frac{n}{1 - n\hat{v}(\hat{c}_7)}} \tag{6}$$

where,

- $\hat{v}(\hat{c}_7)$ = least squares estimate of the variance of c_7
- d = usual DW d-statistic
- n = number of observations

Under the null hypothesis of no autocorrelation, h is asymptotically normal with zero mean and unit variance. The test statistic can also be used to test the hypothesis of no serial correlation against first-order auto-correlation, even if the set of regressor in an equation contains higher order lags of the dependent

$$\hat{v}(\hat{c}_7) > \frac{1}{n}$$

variable. However, if $\hat{v}(\hat{c}_7) > \frac{1}{n}$, it cannot be computed, (Green, 1990). Cochrane-Orcutt iterative process was applied where the existence of autocorrelation was detected. "Intercorrelation of variables is not necessarily a problem unless it is high relative to the overall degree of multiple correlation" (Klein 1962). If there are a strong interrelationships among the independent variables, it becomes difficult to disentangle their separate effects on the dependent variable. If there are more than two explanatory variables, it is not sufficient to look at simple correlations. Thus, the term "intercorrelations" should be interpreted as multiple correlation of each explanatory variable with the other explanatory variables. Thus, by Klein's rule multicollinearity would be regarded as a problem only if $R^2 < R^2_i$, where $R^2 = R^2_{y.x_1x_2...x_k}$ and $R^2_i = R^2_{y.x_i}$ other x 's. With the non-experimental data, it would be impractical to ascertain a priori that the multicollinearity problem among the explanatory variables is not severe. Therefore, a categorical test of intercorrelations among the explanatory variables is conducted and results are presented in Appendix (Table 2). All these ensures the best linear unbiased estimates.

For empirical research, the model has to be not only logically sound but also computationally feasible.

JUSTIFICATION OF THE VARIABLES

The estimating Equation (5) indicates that acreage under cotton in a given period is a log-linear function of a constant term, seven variables and an error term. The theoretical justification for different variables being included as arguments in equation is as follows. The second term in the right hand side of the equation refers to relative profitability of the crop. Most of the earlier studies have considered price [except (Wasim, 1996-97) and (Kainth, 1986)], as an important factor of decision. Price may be the only consideration if the yield rate remains unchanged over the period. But, as we know that the yield of crops (in our case the yield of cotton fluctuated in Sindh during the study period) in Pakistan mostly vary due to unavoidable circumstances i.e., floods, pest attacks, etc. In such a situation price may not be the sole decisive factor. In fact, when technological development takes place, the year to year change in land allocation reflect

changes in the farmers' decision not only due to variations in prices but also because of variations in the yield rate. In such a situation, "relative profitability/net return per unit of land", instead "relative price" variable is a much better choice to assess farmer's response to changes in the commercial policy. Increases in the relative profitability, (other things remaining the same) would provide an incentive to farmers to allocate more land to that crop. We would expect, and the model yields, the coefficient c_1 to be positive. Negative relative profitability, on the other hand, will encourage farmers to produce more competing crops. In other words, we expect a negative sign of the coefficient c_1 . Increase in relative profitability will increase acreage, therefore, we expect a positive relationship between these two variables. The third term on the right hand side is lagged irrigation. As we know that better production of cotton depends on better irrigation facilities and farmers will shift to cotton cultivation if irrigation facilities are improved. Therefore we would expect the coefficient c_2 to be positive. A negative sign of the coefficient, on the other hand, would mean that (for a farmer) to grow competing crops means more profitable. The fourth and fifth terms are price risk and yield risk variables. It is also well known that the risk arising from price and yield variations may influence the farmer's decision regarding the choice of crops to be cultivated. Fluctuation in prices reflects conditions of demand and supply including uncertainties and imperfections in the marketing systems. Variability in yield, on the other hand, is caused by weather conditions as in the case of most cereal crops in Pakistan or by changes in production technology. As far as the two risk variables are concerned, assuming that farmers are risk-averse, (putting less acreage under the crop) we expect, a priori, a negative sign for these two variables. The sixth term is the area under plant protection measures. This variable indicates that whether the cotton growers altogether ignore or do not ignore the effects of plant protection measures while allocating the land to the crop, we expect a positive/negative response of the variable. Cotton ginning capacity is included to see whether cotton growers are influenced by variations in the factory output. We expect a positive/negative sign of the coefficient c_6 . The coefficient of lagged acreage is included in the model to see whether the farmers are adjusting slowly or quickly. We expect a positive sign of the variable. Its large value generally indicates the farmer's slow adjustment, while a small value generally indicates their quick adjustment.

CRITERIA FOR CHOOSING THE COMPETING CROPS

In selecting the competing crops, we prefer to select only the important crops per district, per zone and province. As far as the mode of selection of competing crop is concerned, we have taken into account the sowing and growing period of different crops in the (Kharif) season, their percentage share in the total crop area of the zone and information contained in the past literature on competing crops. An intercorrelation matrix of change in the area under cotton and its competing crops is fitted for different zones and province, and these results were also taken into account while selecting these crops. Another consideration is the selection of crops which should be a major crop in the respective zone and province.

COMPETING CROP (S) FOR COTTON

Competing crop(s) for cotton are given in Table 1:

TABLE – 1: COMPETING CROP SELECTED IN EACH ZONE FOR COTTON CROP

Zone/Province	Major Competing Crop
Northern	Jawar
Central	Jawar
Thar Desert	Chilli
Southern	Sugarcane
Sindh Province	Rice

The competing crop for cotton is jawar in the northern and central zones, chilli in Thar desert, sugarcane in southern zone, and rice in Sindh province. More than one competing crops were also taken in the equation but it yielded consistently poor results with respect to signs, values and level of significance of the regression coefficients.

Zone-wise estimated results for cotton crop are presented in Table 2. The estimating equation indicates that the acreage of a crop in a given period is a log-liner function of a constant term, seven variables and an error term. The equations were estimated in logarithmic forms. The log-linear form of variables gave higher coefficients of determination, expected signs and highly significant values of T-statistics as compared to linear form. The coefficient of determination R^2 (adjusted to degrees of freedom) is between 0.81 and 0.93. The results of the multicollinearity indicated that there was no serious problem of multicollinearity

(Klein rule) in any one of the equation. Since $\hat{V}(\hat{B}_7)$ is $(1/n)$, the computation of 'h' statistic is possible, the 'h' statistic ($<\pm 1.645$) is within the acceptable range. Hence, the null hypothesis was accepted in favor of absence of serial correlation in any of the zone and province.

TABLE – 2: ZONE-WISE ESTIMATED REGRESSION COEFFICIENTS OF ACREAGE RESPONSE FUNCTIONS FOR COTTON IN THE PROVINCE OF SINDH FOR THE PERIOD 1979 TO 2007

Zone/Province	Major Competing Crops	Constant	Regression Coefficients							Coefficient of Adjustment	Multiple Coefficient of Determination	Durbin 'h' Statistic	Relative Profitability	
			Relative Profitability in t-1	Irrigated Area in t-1	Price Risk	Yield Risk	Area Under Plant Protection Measures in t-1	Cotton Ginning Capacity in t-1	Cotton Acreage in t-1				Short-Run Elasticity	Long-Run Elasticity
			RP _{t-1}	I _{t-1}	CV _p	CV _y	PP _{t-1}	GC _{t-1}	A _{t-1}				β	R ²
Northern Zone	Jawar	6.365	0.226 (2.275)**	0.137 (1.943)***	-0.013 (1.713)	-0.011 (0.791)		0.217 (2.516)**	0.843 (3.316)*	0.157	0.901	0.417 (NSC)	+0.226**	+1.439**
Central Zone	Jawar	3.981	0.236 (2.947)*	1.179 (5.517)*	-0.016 (2.151)**	-0.032 (2.433)**		0.329 (3.169)*	0.765 (2.859)**	0.235	0.926	0.311 (NSC)	+0.236*	+1.004*
Thar Desert	Chilli	-2.416	0.260 (1.763)***	0.315 (2.219)**	-0.035 (2.132)**	0.033 (1.743)		0.154 (2.010)***	0.824 (2.564)**	0.176	0.812	0.119 (NSC)	+0.260***	+1.477***
Southern Zone	Sugarcane	4.310	0.286 (2.231)**	0.305 (5.381)*	-0.177 (1.796)***	-0.061 (2.161)**		0.230 (2.515)**	0.825 (2.231)**	0.175	0.854	0.510 (NSC)	+0.286**	+0.634**
Sindh Province	Rice	2.161	0.230 (2.516)**	0.319 (2.610)**	-0.141 (1.985)***	-0.335 (2.141)**	0.173 (2.716)**	0.468 (2.591)**	0.863 (2.947)*	0.137	0.886	0.315 (NSC)	+0.230**	+1.679**

Note: Figures in parentheses are 't' values.

- * = Significant at 1 percent level.
- ** = Significant at 5 percent level.
- *** = Significant at 10 percent level.
- NSC = No serial correlation

RESULTS AND THEIR INTERPRETATIONS IN DIFFERENT ZONES

The results of cotton crop in Table 2 are discussed as under.

RELATIVE PROFITABILITY

The impact of the economic incentives on cotton acreage is found significant, as evident from the significant positive impact of relative profitability on cotton acreage. The variable is significant at 5 percent level in northern zone, southern zone and the Sindh province; while in the Thar desert it is significant at 10 percent level. In central zone the coefficient is significant at 1 percent level. This suggests that additional income from the crop in the preceding year was generally led to higher investment in the acreage of cotton crop in all zones and the province under study. It may be due to suitable agro-economic conditions which prevail and for the successful propagation of the HYV's, hence, additional investment is profitable. In a way it suggests that for the producer, growing competing crops mainly for family consumption is of little importance. The farmers would generally like to meet his subsistence requirement out of their own farm to feel secure. An excess of production over subsistence requirement in a good year of the competing crop is generally saved for future consumption rather than to sell it out; which means that farmers in Pakistan do respond to economic incentives. The price support policy of the government also has potential to increase cotton production. Therefore, the conclusion does not support the widely prevalent notion that peasants in poor countries (like ours) do not respond, or respond very poor, or respond negatively, to the price movements¹².

IRRIGATED AREA

Regarding this supply shifter, with expansion in irrigation, the acreage under cotton crop has tended to increase as indicated by significantly positive coefficients for this variable in all zones and the province. Among these crops the effect of irrigated area on acreage allocation needs to be examined in light of the total water available for irrigation and the water required for crop consumption. In principle, the annual acreage of high water delta crops may not show a wide variation because their full potential cannot be realized without an assured irrigation in adequate quantities. The crops with relatively low consumption of water requirements can on the other hand, lend themselves for acreage adjustment more readily in response to water availability reflected in the form of total irrigated area in the country. Cotton is less irrigation-intensive and is also relatively short duration crop. The extent of the impact of irrigation variable differs between zones to crop. The coefficient is significant at 1 percent level in the central and southern zone, 5 percent level in Thar desert and Sindh province and 10 percent level in the northern zone. The values of coefficient are higher for Sindh province, Thar desert and southern zone than those for the central and northern zones. This may be taken to indicate that the Sindh farmers will shift to cotton cultivation if irrigation facilities are improved. The farmers of Sindh province, Thar desert and the southern zone appear to be more responsive if irrigation facilities are improved than those in the northern and central zones.

RISK VARIABLES

Changes in acreage allocation and cropping pattern involve risk. Generally, such changes give rise to two major sources of risk, one, the price, and the other is the yield. Depends how farmers have varied acreage under crops. Response to the risks of variations in yield and price; is important to be known. Fluctuation in price reflects conditions of demand and supply including uncertainties and imperfections in the marketing systems. Variability in yield, on the other hand, is caused by weather conditions as in most of the crops in Pakistan and/or by changes in production technology. The relative incidence of these risks may differ in individual crops and zones. The variability due to price and yield gives expected negative signs in all zones, except the Thar desert where it is positive. The price risk coefficient is significant at 5 percent level in the central zone and the Thar desert, and at 10 percent level in the southern zone and Sindh province. In northern zone the price risk coefficient is negative but statistically it is insignificant. The negative sign of the price risk variable indicates that cotton growing farmers appear to be risk-lovers by putting less acreage under the crop. The variability due to yield also upholds our expectation (negative signs) in the northern, central and southern zones and the province of Sindh. The coefficient is significant at 5 percent level in central and southern zones and Sindh province. In Thar desert the coefficient is positive but statistically insignificant. In northern zone the coefficient is though negative but statistically insignificant. The positive coefficients for both the risk variables are not in line with our expectations. The signs opposite to our expectation in the model for yield and price risk (not in our case) variables may be due to continuous trend in the yield and price levels of cotton. The negative and significant signs of the price risk variable indicates that cotton growing farmers appear to be risk-lovers by farming less acreage under the crop. The positive sign of price risk variable (not in our case) means that farmers appear to be risk-averse by putting more acreage under the crop. The sign opposite to expectation in the model for yield and price risk variable may be due to continuous trend in the yield and price levels of cotton. In fact, the total variability considered by us consists of expected and unexpected variability and it is the latter which actually accounts for risk. If some crops have continuous expected trend in yield or price, the expected variability may predominate the total variability and so the sign opposite to the expected one may occur for the risk variable. For example, the variability in the price and yield of cotton may increase, but if the increase is always upward in the price and yield, the resulting effect of this variability will not be negative as the variability (as expected).

PLANT PROTECTION MEASURES

The regression coefficient for the area under plant protection measures¹³ variable turns out to be positive and significant at 5 percent level in the province. The positive response of farmers, indicates that cotton growers do not ignore the effects of plant protection measures, while allocating the land to the crop concerned.

COTTON GINNING CAPACITY

This variable¹⁴ is included in the model to see whether cotton growers are influenced by variations in the factory output. Ginned or raw cotton production by cotton ginning factories in all the zones and province do have a direct positive bearing on an acreage under cotton, because the coefficient of this variable is significant. In the northern zone, Southern zone and Sindh province, it is significant at 5 percent level; at 1 percent level in central zone, and 10 percent level in Thar desert. This means that the factory price is attractive to the producer and there is a significant regulation in cotton supply to cotton ginning factories in all zones and the province.

COTTON ACREAGE

The elasticity estimates of lagged cotton acreage are found to be consistently positive and highly significant. It is significant at 1 percent level in northern zone and Sindh province, while it is at 5 percent level in central zone, Thar desert, and southern zone. The magnitude of coefficients of this variable varied in the province of Sindh from 0.767 and in the central zone to 0.863 in the province. Its large value generally indicates the farmer's are slow at adjustments. The coefficient of adjustment is very low (0.14) like, adjustment between the desired and actual level of acreage; or in other words, we can say that various technical, institutional and subjective factors seem to have a great deal of influence on the farmers' decision like cotton crop in the province.

ADJUSTMENT BEHAVIOUR, SHORT-RUN AND LONG-RUN RELATIVE PROFITABILITY/ PRICE ELASTICITIES

As our model is based on the Nerlove's adjustment hypothesis, it will be interesting to know how far the estimated equations for actually planted area, support this argument. The rapidity with which the farmers adjust the acreage under a crop in response to movements in factors discussed above, is seen from the numerical values of the coefficient of adjustment (β). For cotton crop, lagged dependent variable (A_{t-1}) is entered positively in all zones and the province. The coefficient of lagged acreage is significant at 1 percent level in the northern zone and the Sindh province, while in the central zone, Thar desert, and southern zone, it is significant at 5 percent level. The adjustment coefficient obtained for this crop ranges from 0.137 in Sindh province to 0.235 in the central zone. Thus, both the extreme values are within the assumed range of zero to one. This low rate of adjustment coefficient points out that cotton farmers in Sindh are significantly influenced by institutional and technological constraints, while, slow/gradual expansion or contraction of area under cotton cultivation depends on inducement of cotton price.

As it is obvious, the long-run elasticity with respect to relative profitability is higher than the short-run elasticity in all the zones and the province for both the crops. This is because cotton growers of Sindh have more time to adjust their areas under crop cultivation for long-run than in the short-run.

COMPARISON OF RELATIVE PROFITABILITY/PRICE ELASTICITIES OF COTTON IN SOME DEVELOPED/UNDERDEVELOPED COUNTRIES

To make a relative comparison of Relative Profitability/Price elasticities of cotton acreage obtained, the elasticities of acreage estimated by other researchers in some developed and developing countries of the world are presented in Table 11. The results of our study show that cotton farmers respond to relative profitability changes, positively. Degree of this positive responsiveness, however, depends on positions of individual crops in the national economy, degree of

commercialization, availability of resources and alternatives, development of transport and monetization and the degree of risk and uncertainty; involved in crops cultivation. Results of Table 3 indicate that our estimated acreage elasticity with respect to relative profitability in the Short and Long-run compares favorably with Khan and Iqbal (Pakistan) estimates. Since no study relating to the topic on Sindh province has been undertaken in the past, therefore, an exact comparison can not be made.

TABLE – 3: COMPARISON OF RELATIVE PROFITABILITY/PRICE ELASTICITIES OF COTTON IN SOME DEVELOPED/UNDERDEVELOPED COUNTRIES

Province/State/ Region/Country	Period	Relative Profitability/ Price Elasticity		Source
		Short-Run	Long-Run	
U.S.A.	1909-32	+0.34	+0.67	Mare Nerlove
U.S.A.	1882-1914	+0.08 to +0.34	+0.23 to +0.85	DeCanio
Sindh (Pakistan)	1979-2006	+0.23 ^a	+1.68	Our Estimates
Pakistan	1956-87	+0.24	+1.70	Khan and Iqbal
Pakistan	1957-86	+0.71	+1.34	Mubarak Ali
Pakistan	1933-59	+0.40	–	Walter P. Falcon
Pakistan	1949-68	+0.40	0.47	John Thomas Cummings
Pakistan	1957-79	+0.12	–	Mohammad Ashiq
Pakistan	1962-82	+0.10	0.54	L. Tweeten
Pakistan	1972-91	+0.65	1.14	Himayatullah
Punjab (India)	1922-41	+0.72	+1.62	Raj Krishna
Haryana (India)	1960-77	+0.79	+1.30	S.S. Sang Wan
Punjab (India)	1960-69	+0.68	+1.17	Kaul and Sidhu
Tamil Nadu (India)		+0.31	+0.54	M.C. Madhawan
Gujrat (India)	1954-68	+0.05	+0.08	J.T. Cummings
Punjab (India)	1967-96	+0.23 ^A +0.45 ^D	– –	Sundeep Kumar, R.S. Sidhu and J.S. Sidhu
Sudan	1951-65	+0.39	+0.50	Medani
Nigeria	1948-67	+0.38	+0.28	Oni
Uganda	1945-66	+0.50	+0.63	Alibaruho
Bangladesh	1972-81	+0.14	+6.80	Sultan H. Rehman
Bangladesh	1972-89	+0.16	+0.16	M.Yunus

^a Relative Profitability (Price * Yield)

^A American Cotton

^B Desi Cotton

The estimated elasticities as presented here will (it is hoped), be a useful addition to the existing repertory of the elasticities of acreage of cotton in different parts of the world. The estimates will also be useful for cross-checking the acreage forecasts for crops as well.

SUMMARY AND CONCLUSIONS

The study of farmer's acreage/supply response is of considerable importance for devising a suitable policy for the agricultural sector of any economy, particularly, in Sindh, Pakistan, where agriculture is by far the most important sector in the national economy. The decision of farmers regarding allocation of land and other resources to increase production is directly or indirectly influenced by policies formulated by the government and the economic and climatic factors which are highly effective in production.

The present study has been directed to identify the economic and non-economic factors responsible for variations in cotton acreage over the period from 1979-80 to 2006-07 in the major growing zones of Sindh and changes therein over the period. To test the hypothesis relating to the factors influencing the farmers acreage allocation, the Nerlove adjustment lagged model has been used. The result of the analysis reveals that in the process of making decisions for cotton cultivation area all the variables (relative profitability, irrigation, price and yield risk, area under plant protection measures, cotton ginning capacity and lagged acreage) are more or less equally important. The cotton growers of all the zones and province responded positively and significantly to the relative profitability. This suggests, that additional income from the crop in the preceding year generally lead to higher investment in cotton acreage in the northern zone, central zone, Thar desert, southern zone and Sindh province. This, in a way, suggests that for a producer, growing competing crops, mainly for family consumption, is of little importance. This lends support to the general view that supply of cash crops is more responsive to price changes than the largely cultivated crops for subsistence¹⁵ needs of the farmers. Even in the case of cotton, the relative profitability varied over zones of the province. It is also revealed that some of the zones have recorded more higher increase in the cotton acreage where the positive impact of both the price and yield variable was more. It supports the widely held view that the profitability is the main concern of farmers while allocating acreage under individual crops.

Irrigation, the potential variable for adoption of modern inputs with positive and significant impact in all zones and the province. This points to the fact that farmers will shift to cotton crops if irrigation is improved.

Being a commercial crop, cotton is highly vulnerable to price level and thereby yields changes. Cotton and readymade garments are main export of Pakistan. If in any year the crop is damaged due to flood or pest attack, the yield of crop deteriorates, and the export declines. In the some years when cotton crops were damaged its effect was felt. The results reveal that cotton farmers appear to be risk-averters (price and yield) rather than the risk takers in their attitudes in most of the zones. The price risk variables in northern zone had no effect on the acreage allocation decisions of farmers as the regression coefficient of this variable was found to be negative but statistically non-significant. Similarly, the yield risk variable in the northern zone and Thar desert had no effect on the acreage allocation decisions of farmers because the coefficient is statistically insignificant.

The cotton growers in Sindh consider and are aware of the effects of plant protection measures. For cotton growers the factory price is attractive¹⁶ and there is significant regulation in the cotton supply to cotton ginning factories in all zones and the province. Cotton lagged acreage is found to be positive and significant in all zones and the province. The main reason for this may be that cotton farmers follow some traditions and do not easily decide to reduce the area under the crop in comparison with the area they sowed in the preceding year. In this connection their own requirements of food, ignorance about determining the appropriate cropping pattern due to illiteracy and the other social and traditional standards adopted by farmers and the lack of suitable competing crops are the possible causes. The coefficient of adjustment is very low (0.14), suggesting that adjustment between the desired and actual level of acreage is low. In other words we can say that various technical, institutional and subjective factors seem to have a great deal of influence on farmers decision regarding the cotton crop in the province.

The adjustment coefficients obtained are in the range of 0.137 for Sindh province and 0.235 for central zone. Thus, both the extreme values are within the assumed range of zero to one. This low rate of adjustment coefficient points out that cotton farmers in Sindh are significantly influenced by institutional and technological constraints while expanding or contracting the areas for cotton crop and the price inducement operate slowly and gradually.

The long-run elasticity with respect to relative profitability is higher than the short-run elasticity in all the zones and the province, for both crops. This means that cotton growers of Sindh have more time to adjust their areas under the crop in the long-run than in the short-run.

Our estimated acreage elasticities with respect to relative profitability in the short and long-run compares favorably with Khan and Iqbal's (Pakistan) estimates. Since no study in Sindh province has been undertaken on this topic for any of the crop, therefore, an exact comparison can not be made.

Finally, it should be noted that the conclusions drawn here are based on the data from 1979-80 to 2006-07. Further, we can say that in the absence of any significant change in the cotton; ginning factory, these conclusions may be still valid. However, further research could be undertaken to investigate whether there is any significant structural change in cotton area after since 2006-07.

POLICY IMPLICATIONS

The results obtained in this study leads to important implications that seems relevant from the point of the policy formulation.

1. The results of the study indicate a positive response of land resource allocation to relative profitability for cotton crop under study. This means that farmers can make adjustments on the acreage allocation under cotton cultivation through manipulation of the relative profitability of cotton and its competing crops. It also means that there exists more potential to increase the production of cotton by increasing their support prices in Sindh. In order to bring about an effective adjustment in acreage allocation, the support prices for various crops must be announced well before the sowing season and the prices thus announced, should carry a long-run guarantee¹⁷. The imperative need is to secure varietal improvement for minor crops to compete with major crops in terms of stable revenue. Price support for one crop will adversely affect the production of other crops. For example, price support policy for cotton may reduce the production of rice in Sindh. This policy will not only enable farmers to plan their production programmes better but might also help to correct the inter-commodity imbalance to some extent. The result also indicate that the yield per hectare of cotton has to be increased up to the international standard. For this purpose drought resistant and pest resistant high-yield varieties should be developed for different zones. Proper doses of fertilizers, timely supply of irrigation water and latest farm technology are also needed.
2. The study shows that there is a positive association between irrigation and acreage of the crop. It means that farmers of cotton will increase acreage of the crop, if irrigation facilities are improved. Waterlogging and salinity, over exploitation of fresh groundwater, low efficiency in delivery and use, inequitable distribution, unreliable delivery, and insufficient cost recovery are the major problems in Pakistan's irrigation system. Again, there is an inequality in distribution of water within a water course. Farmers at the head get 2 percent more water as compared to middle and tail and inequality in water distribution at the tail ends may vary up to 50 percent. Some farmers at the tail-end do not receive any water in Sindh where powerful feudals and influentials at the head and middle ends use all the water. This is, off-course, done with the connivance of corrupt persons in the irrigation department. Therefore, the irrigation department must be strongly directed to see that there is an equity of water distribution in canals and minors. They should be provided protection from the powerful influentials who often threaten them. The equity of water distribution must be monitored and those found guilty should be punished irrespective of their social status.
3. The coefficient of risk factors registered its negative and significant influence on cotton acreage in most of the zones and the province. Therefore, price and yield risk factors need to be considered to provide necessary incentives to the producers to maintain cotton acreage at the desired levels.
4. The result of the study indicates that cotton growers do not ignore the effects of plant protection measures while allocating the land to the concerned crop. The farmers should apply pesticides to the crop in the required quantity. It is a fact that use of insecticides can increase crop yield by reducing the level of damage caused by insect pests. However, there is a great deal of evidence to suggest that injudicious use of pesticides is responsible for causing irreparable damage to the crop eco-systems through killing crop pollinators, pest predators, and parasitoids, and poison the environment as well. Besides, heavier pesticide applications can accelerate the evolution of resistance or induce new pest problem as natural enemies are depleted. Thus, it is necessary that farmers, as a group, decide whether they would bear some losses now or face more loss at the later stage. This is mainly due to illiteracy of the farmers. So there is a need to educate farmers through adult education programs and training by the government extension and field workers.
5. The study indicates that cotton growing farmers are positively influenced by variations in the factory output. It means that the mill price is attractive to the producer and accordingly they bring their cotton to the cotton ginning factories in large quantity. The cotton ginning factories are required to purchase their cotton at the price announced by the government. The mill owners shall not make the farmers conscious¹⁸. Trading corporation of Pakistan (TCP) must collect cotton from the start.

ENDNOTES

1. Short-run and long-run price elasticities and related information in some developed and underdeveloped countries are reported in the Appendix, Table 1.
2. A detailed description about the Ecological zones of Sindh is presented in the research report no.13, of Applied Economics Research Centre with the title "A Study of Cropping Pattern in Sindh Province".
3. The analysis is mainly based on the data drawn from various issues of the Development Statistics of Sindh, published by the Government of Sindh and the Agricultural Statistics of Pakistan, published by the Government of Pakistan.
4. The support prices of cotton starts from 1976) spanning from 1979-80 to 2006-07.
5. The price of agricultural commodities plays a vital role in the resource allocation improving farm incomes. The open market price during the immediate post-harvest period is generally depressed particularly in years of bumper harvest. The farmers, in general and small farmers in particular, neither have adequate storage facilities nor sufficient staying power to hold their marketable surplus. In order to counter the adverse effects of fluctuating prices, the government has instituted the support price programme for the important crops. The support price acts as minimum guaranteed price for growers and safeguards their interest if the open market price tend to fall during the post harvest. Support price is generally announced before the sowing time. In recommending the support prices to the government the Agriculture Price Commission (APCOM) considers a number of criteria, including cost of production, domestic and world demand and supply situation, market price, international prices and (import and export parity prices).
6. Research workers have preferred to use the Adjustment Lag Model instead of the Traditional Model because it is said to present a more realistic picture by incorporating distributed lags and thereby introduce a realistic assumption about farmers adjustment behavior (if the traditional model adjustment is assumed to be instantaneous). The advantage of such adjustment lag model as claimed by Nerlove is, that, as compared to the traditional model it explains the data better by yielding coefficients, more reasonable in sign and magnitudes, and thereby, provides better estimates of supply elasticities.
7. The proof may be found in Griliches, (1967), op.cit., pp.36-38.
8. For proof see Johanston, (1989), *Econometric Methods*, (1984), 3rd edition.
9. The prices of cotton/sugarcane are not taken but a measure of relative profitability is used instead, and is used as a variable instead of relative price.

$$\text{Relative profitability} = \frac{\text{Support price of cotton x per acre yield}}{\text{Support/wholesale price of competing crop(s) x per acre yield}}$$

See also Kainth and Gupta (1978).

10. Coefficient of variation was used to measure the risk because its distribution is normal and yields statistically unbiased estimates compared with standard deviation which does not follow normal distribution. For details see M.G. Kendall and A. Stuart, 1961, *Advanced Mathematical Statistics*, London, Charles Griffen and Co.
11. The serial correlation is tested through 'h' statistics and the use of classical Linear Regression Model (CLRM) incorporating the assumption that U_t is distributed identically and independently with zero mean and constant variance (Jaikrishna and Rao, 1967; Swant, 1978).
12. Mahesh Chand, "Agricultural Terms of Trade and Economic Growth", *Indian Journal of Agricultural Economics*, 1958, pp.191-192. B. Misra and S.P. Sinha, "Agriculture and its Terms of Trade with Special Reference to India", *Indian Journal of Agricultural Economics*, 1958, 196-197. B.K. Madan, "Presidential Address", *Proceedings of the Eighteenth Conference of the Indian Society of Agricultural Economics*, 1958, pp.13-14. Walter C. Neale, "Economic

Accounting and Family Farming in India", Economic Development and Cultural Change, Part I (April 1959), pp.297-298. R.O. Olson, "Discussion: Impact and Implications of Foreign Surplus Disposal on Underdeveloped Economies," Journal of Farm Economics, December 1960, pp.1043-1044.

The last three references contain very pointed opinion in favor of negligible or negative supply response.

13. Zone/District-wise area under plant protection measures was not available, therefore this variable is taken only for the province.
14. The ginning operation produce ginned or raw cotton/and cotton seed. When picked from the field, the raw cotton usually contains lint, hulls, some leaves and other material which must be removed before lint is separated from the seed. Both, cleaning and ginning are mechanically. The dried seed and cotton lint is separated either manually or by a suction system conveyed to the cleaning machines. In Pakistan, there are two types of cleaners attached to the ginning machines: (1) Feeder Extractor and Cleaner (FEC), and (2) Willow. The main function of these machines is to feed the seed cotton into the gin-stands at uniform rate. Secondly, it performs the function of fluffing up the seed cotton for ginning and at the same time extract foreign matter from the seed cotton. The ginning process may either be roller-ginned or saw-ginned. In a roller the main components are: (a) a fixed knife, (b) moving knife, and (c) leather roller. The seed cotton is fed into the gin-stand manually. The moving knife with a vertical action against the fixed knife shaves the cotton fibre from the seed. The cotton is then engaged by the revolving leather rollers, which carry it and drop it in front of the gin. One single roller-gin has a capacity to produce about 25 Lbs. of lint per hour, while a double roller may produce upto 80 lbs.
15. In our earlier studies of rice and wheat acreage response the short-run and long-run relative profitability/price elasticities were +0.208 and +0.635 and +0.218 and +0.386, respectively.
16. In the year 2000 the cotton farmers in Sindh faced many problems in selling their cotton to Ginning factories, because the ginner did not maintained the price which the government announced before the sowing of the crop. The cotton farmers had to bear much loss because they were compelled to sell their crops at half the price. The reason was the import of raw cotton at less prices as compared to governments announced price.
17. Not like the cotton support price announced by the government in 1999 when the Trading Corporation of Pakistan did not purchase cotton from the growers.
18. In 2000 the Ginning factories were not purchasing cotton at the government announced prices. The cotton growers in Sindh were helpless to sell their cotton at low price.

REFERENCES

1. Ali, M (1988), "Supply Response of Major Crops in Pakistan: A Simultaneous Equation Approach", Special Report Series No.11, Pakistan Economic Analysis Network Project, Islamabad.
2. Ashiq, M (1981), "Area Allocation Decision: A Study of Pakistani Farmer's Responsiveness to Changes in Prices", Publication No.186, Punjab Economic Research Institute, Lahore.
3. Ashiq, R.M (1992), "Supply Response of Wheat and Rice Crops in Pakistan, Pakistan Journal of Agricultural Economics", Vol.1, No.1, pp.81-98.
4. Bapna, S.L H.P Biswanger, and J.B Quizan (1984), "Systems of Output Supply and Factor Demand Equations for Semi-Arid Tropical India", Indian Journal of Agricultural Economics, Vol.39, No.2, April-June, pp.179-202.
5. Bhambhro, S.A (1996), Judicious Use of Pesticides, DAWN Economic and Business Review, August 31 – September 6.
6. Chaudhry, M.A (2000), "Economic Analysis of Supply Response in Pakistan's Agriculture", Pakistan Journal of Agriculture Economics, Vol.5, No.2.
7. Cochrane, D and Orcutt. G.H (1949), "Application of Least Squares Regressions to Relationships Containing Autocorrelated Error Terms", Journal of the American Statistical Association, Vol.44, pp.32-61.
8. Cummings, J.T (1974), "The Supply Responsiveness of Bangalee Rice and Cash Crop Cultivators", The Bangladesh Development Studies, Vol.2, No.4, October, pp.857-866.
9. Cummings, J.T (1975a), "Cultivator Market Responsiveness in Pakistan Cereal and Cash Crops", The Pakistan Development, Review, Vol.14, No.3, pp.261-273.
10. Cummings, J.T (1975b): "The Supply Responsiveness of Indian Farmers in the Post-Independence Period: Major Cereal and Cash Crops", Indian Journal of Agricultural Economics, Vol.30, No.1, pp.25-40.
11. Daily Dawn, (2001): Tuesday, August 28.
12. Daily Jung, (1999): Monday, 8 November.
13. DeCanio, S.J (1971), Tenancy and the Supply of Southern Cotton 1882-1914. A paper given at the Econometrics Conference in Madison, university of Wisconsin, April.
14. Durbin, J (1970), "Testing for Serial Correlation in Least Squares Regression when Some of the Regressors are Lagged Dependent Variables", Econometrica, Vol.38, No.3, pp.410-421.
15. Falcon, W.P (1964), "Farmer Response to Price in a Subsistence Economy: The Case of West Pakistan", The American Economic Review, 54(2), pp.580-591.
16. Faruqee, R (1999), Pakistan's Agriculture in 21st Century", 14th Annual General Meeting, Pakistan Institute of Development Economics, 28-31 January, Islamabad.
17. Frederick, K.D (1969), "The Role of Market Forces and Planning in Uganda's Economic Development 1900-1938, Eastern African Economic Review", Vol.1.
18. Government of Pakistan, 50 years of Pakistan, Federal Bureau of Statistics, Statistics Division, Islamabad.
19. Government of Pakistan, Agricultural Statistics of Pakistan, (1980, 1985, 1989-90, 1997-98, 1999-2000, 2009-2010): Ministry of Food, Agriculture & Livestock, Food, Agriculture & Livestock Division, Economic Wing, Islamabad.
20. Government of Pakistan, Economic Survey, (1978-79, 1988-89, 1997-98, 1998-99, 1999-2000, 2009-2010, 2002-03): Economic Adviser's Wing, Finance Division, Islamabad.
21. Government of Pakistan, Pakistan, (2000): An Official Handbook on Statistics, Federal Bureau of Statistics, Statistics Division, Islamabad.
22. Government of Sindh, Development Statistics of Sindh, 1975-76, 1979-80, 1984-85, 1989-90, 1993-94, 1996-97, 1999-2000, 2009, Bureau of Statistics, Planning and Development Department, Karachi.
23. Green, W.H (1990), Econometric Analysis, New York.
24. Griliches, Z (1967), "Distributed Lags: A Survey", Econometrica, Vol.35, No.1, January, pp.16-49.
25. Gujarati, N.D (1995), Basic Econometrics, McGrawHill Book Company, Singapore.
26. Hafeez, S (1978), Agriculture in Pakistan, Press Corporation of Pakistan, P.E.C.H.S., Karachi.
27. Heady, E.O (1961), Uses and Concepts in Supply Analysis, in Earl O. Heady et al., Agricultural Supply Function: Estimating Technique and Interpretation, Iowa, Iowa State University Press.
28. Himayatullah, P (1994), "Supply Response of Major Crops in Pakistan Agriculture: An Updated Analysis, Institute of Development Studies", NWFP Agricultural University, Publication No.238.
29. Hussain, C.M (1968), Irrigation Soil Salinity and Plant Interaction in West Pakistan, NESI, Regional Irrigation Practices Seminar, Lahore.
30. Hussain, Ishrat, (1981), Economy of Modern Sind, Institute of Sindhology, University of Sind.
31. Hussain, S.M.E (1964), "A Note on Farmer Response to Price in East Pakistan", The Pakistan Development Review, Vol.4, No.1, pp.93-106.
32. Jehangir, A.W.M Mudasser and Zakir Hussain Rana (1999), Participatory Irrigation Management and Its Financial Viability During 21 Century: A Case Study of Hakra 4-R Distributary, Punjab – Pakistan, 15th Annual General Meeting, Pakistan Institute of Development Economics, 5-8 November, Islamabad.
33. Jha, D (1970), "Acreage Response of Sugarcane in Factory Areas of North Bihar", Indian Journal of Agricultural Economics, Vol.25, No.1, January-March, pp.79-90.
34. Johnston, J (1984), Economics Methods, Third Edition, McGraw-Hill Book Co., Singapore.

35. Kadri, A.H M Sajidin, and Akhtar Hai (1978), A Study of Cropping Patterns in Sind Province – Phase I, Research Report No.13, Applied Economics Research Centre, University of Karachi, Karachi.
36. Kainth, G.S and R.K. Gupta, (1978), “The Wheat Acreage Supply Response under the Changing Farm Programme in Punjab”, Social Sciences Research Journal, Vol.3, No.3, November.
37. Kalusra, M.R (1996), Where to Sell Cotton and at What Rates?, DAWN, Sunday, September 1.
38. Kaul, J.L and D.S Sidhu (1971), “Acreage Response to Prices for Major Crops in Punjab – An Econometric Study”, Indian Journal of Agricultural Economics, Vol.26, No.4, pp.427-434.
39. Kendall, M.G and A. Stuart (1961), Advanced Mathematical Statistics, London, Charles Griffen and Co.
40. Khan, A.H and Iqbal, Z (1991), “Supply Response in Pakistan’s Agriculture”, International Journal of Development Planning Literature, Vol.6, No.1-2, pp.45-56.
41. Khan, A.H and Z Iqbal (1992), “Rainfall, Risks and Production Responses in Pakistan’s Agriculture”, Pakistan Economic and Social Review, Vol.30, No.2, pp.161-180.
42. Khan, M.H (1982), Agriculture in Sind, A Report to Sind Regional Plan Organisation, Applied Economics Research Centre, University of Karachi, Karachi.
43. Khan, N.Z Ikram, M Kalsoom S (2008), “Impact of Support Price on Cotton Production in Punjab, Pakistan”, Pakistan Journal of Agricultural Economics, Vol.6, pp.33-47.
44. Klein, R.L (1962), An Introduction to Econometrics, Prentice-Hall Inc., New Jersey.
45. Koyck, M.L (1954), Distributed Lags and Investment Analysis, North-Holland Publishing Company, Amsterdam.
46. Krishna, R (1963), “Farm Supply Response in India – Pakistan: A Case Study of the Punjab Region”, The Economic Journal, Vol.73, No.291-292, pp.477-487.
47. Kumar, S R.S Sidhu, and J.S Sidhu (2002), “Supply Response of Cotton in Punjab: An Econometric Analysis”, PSE Economic Analyst, Vol.XXII, No.1 and 2.
48. Madhavan, M.C (1972), “Acreage Response of Indian Farmers: A Case Study of Tamil Nadu”, Indian Journal of Agricultural Economics, Vol.27, No.1, January-March, pp.67-86.
49. Memon, A.M and Khalid (1968), Cotton Cultivation in Sind, Sindhi Pamphlet.
50. Naqvi, S.N.H and Burney A (1992), Food Situation and Outlook for Pakistan, Pakistan Institute of Development Economics, Islamabad.
51. Neale, W.C (1959), “Economic Accounting and Family Farming in India”, Economic Development and Cultural Change, Part I, April, pp.297-298.
52. Nerlove, M (1958), “Distributed Lags and Estimation of Long-run Supply and Demand Elasticities: Theoretical Considerations”, Journal of Farm Economics, Vol.40, No.2, pp.301-311.
53. Nosheen, M. and Iqbal, J (2008), “Acreage Response of Major Crops in Pakistan 1970-71 to 2006-07”, ARPN Journal of Agricultural and Biological Science, Vol.3, No.5 and 6, September-November, pp.55-64.
54. Nowshirvani, V (1962), Agricultural Supply in India: Some Theoretical and Empirical Studies, Ph.D. dissertation, Massachusetts Institute of Technology.
55. Parikh, A (1972), “Market Responsiveness of Peasant Cultivators: Some Evidence from Prewar India”, The Journal of Development Studies, Vol.8, No.2, pp.291-306.
56. Rabbani, A.K.M.G (1965), “Economic Determinants of Jute Production in India and Pakistan”, Pakistan Development Review, Vol.5, No.2, pp.191-228.
57. Read, M.R. and Steven K. Riggins, (1981), “A Disaggregated Analysis of Corn Acreage Response in Kentucky”, American Journal of Agricultural Economics, November, pp.708-711.
58. Rehman, S.H (1986), “Supply Response in Bangladesh Agriculture”, The Bangladesh Development Studies, Vol.14, No.4, pp.57-100.
59. Revell, B.J (1974), “A Regional Approach to the Potato Acreage Planting Decision”, Journal of Agricultural Economics, Vol.25, No.1, January, pp.53-63.
60. Sangwan, S.S (1985), “Dynamics of Cropping Pattern in Haryana: A Supply Response Analysis”, The Developing Economies, Vol.23, No.2, June, pp.173-186.
61. Saxena, A.K and Viond K.K (1988), “Farmers Decision Regarding Acreage Allocation: A Case Study of Groundnut”, Economic Affairs, Vol.33, Qr.4, December, pp.273-281.
62. Sikka, S.M and Dastur R.H (1960), “Climate and Soils, Cotton in India”, Vol.1, No.XIV, Indian Central Cotton Committee, pp.474-659.
63. Stern, R (1962), “The Price Responsiveness of Primary Producers”, Review of Economics and Statistics, Vol.44, pp.202-207.
64. Swant, S (1978), Supply Behaviour in Agriculture: An Econometric Analysis, Himalaya Publishing House, Bombay.
65. Tweeten, L (1986), Supply Response in Pakistan, Agricultural Policy Analysis Project, USAID, Washington, D.C.
66. Wasim, M.P (1996-97), “Sugarcane Acreage Response in Sindh – Pakistan”, Pakistan Journal of Applied Economics, Vol.12, No.2, Winter 1996 and Vol.13, No.1, Summer 1997, pp.143-156.
67. Wasim, M.P (2003), Farmers Response to Economic Incentives: An Analysis of Inter-Regional Acreage Response of Major Cash Crops in Sindh, M.Phil. Dissertation, Karachi University.
68. William, V.R (1954), The Agriculture Resources of the World, pp.101-109.
69. Yunus, M (1993), “Farmer’s Response to Price in Bangladesh”, The Bangladesh Development Studies, Vol.XXI, No.3, September, pp.101-109.

APPENDIX

TABLE – 1: ESTIMATED RELATIVE OWN AND CROSS PRICE ELASTICITIES IN SOME DEVELOPED AND UNDERDEVELOPED COUNTRIES AND RELATED INFORMATION

	Author	Province/State/Region/Country	Crop	Period	Model Used	SRRE (Short-Run Relative Elasticity)	LRRE (Long-Run Relative Elasticity)	SROE (Short-Run Own Elasticity)	LROE (Long-Run Own Elasticity)	SRCE (Short-Run Cross Elasticity)	LRCE (Long-Run Cross Elasticity)	Method of Estimation
1.	Nerlove (1958)	USA	Cotton Wheat	1909-32 1909-32	Nerlove adjustment lag-model	0.34 0.48	0.67 0.93					OLS
2.	DeCanio (1971)	USA	Cotton	1882-1914	Nerlove adjustment lag model	0.08 to 0.34	0.23 to 0.85					Logarithmic
3.	Read and Riggins (1981)	England	Corn	1960-79	Multiple regressions model			0.34 to 0.54	0.93 to 2.07	-0.54 to -1.00	-1.78 to -4.17	SUR
4.	Revell (1974)	England	Potato	1957-70	Simple Acreage Model			0.1 to 0.2	0.14 to 0.43	-0.21 to -0.07	-0.20 to -0.12	OLS
5.	Frederik (1969)	Uganda	Cotton	1922-38	Simple Price Model			0.25		-0.31		OLS
6.	Raj Krishna (1963)	Punjab (India) – Pakistan	Cotton (A) Cotton (D) Sugarcane	1922-41 1922-43 1915-43	Nerlove adjustment lag-model	0.72 0.59 0.34	1.62 1.08 0.60					OLS

	Author	Province/State/ Region/Country	Crop	Period	Model Used	SRRE (Short- Run Relative Elasticity)	LRRE (Long- Run Relative Elasticity)	SROE (Short- Run Own Elasticity)	LROE (Long- Run Own Elasticity)	SRCE (Short- Run Cross Elasticity)	LRCE (Long- Run Cross Elasticity)	Method of Estimation
7.	Jha (1970)	Bihar (India)	Sugarcane	1950-64	Nerlove adjustment lag-model	0.65	0.79					OLS
8.	Kaul and Sidhu (1971)	Punjab (India)	Wheat Paddy Cotton (D)	1960-69	Nerlove adjustment lag-model	0.24 0.190 0.683	0.151 0.635 1.174					OLS
9.	Parikh (1972)	Uttar Pradesh (India)	Sugarcane	1900-39	Nerlove adjustment lag-model	0.399	0.906					OLS 2SLS
10.	M.C. Madhawan (1972)	Tamil Nadu (India)	Sugarcane Cotton		Production function	0.63 0.31	0.76 0.54					OLS
11.	Cummings (1975)	Punjab (India)	Cotton	1950-68	Nerlove adjustment lag-model	0.37						OLS
12.	Bapna, Binswanger and Quizon (1984)	India	Wheat Rice Cotton	1955-73	Profit function approach	0.33 0.47 0.70						
13.	S.S. Sang Wan (1985)	Haryana (India)	Sugarcane Cotton (A) Wheat Groundnut	1960-77	Nerlove partial adjustment adaptive expectational model	0.44 0.79 0.25 0.40	-6.29 1.30 0.25 0.46					OLS
14.	Saxena and Khare (1988)	Uttar Pradesh (India)	Groundnut	1950-84	Nerlove adjustment lag-model	0.08 – 0.55						OLS
15.	Stern (1962)	India	Jute	1893- 1938	Simple Model	0.68	1.03					OLS
16.	Savadatti and Narappanavar (1996-97)	India	Gram	1963-88	Nerlove adjustment lag model	0.02	0.03					OLS
17.	Nowshirvani (1962)	Uttar Pradesh (India)	Rice Wheat	1953-62	Nerlove adjustment lag- model		-0.11 to +0.27 -0.13 to +0.76					OLS
18.	Falcon (1964)	Pakistan	Cotton Wheat	1933-59	Partial adjustment model	0.40 0.1 to 0.2	-					OLS
19.	Hussain (1964)	East Pakistan (Pakistan)	Rice (Aus only)	1948-63	Simple Regression Model	0.12						OLS
20.	Cummings (1975)	Pakistan	Wheat Cotton (A) Rice	1949-68	Nerlove partial adjustment adaptive expectational model	0.10 0.40 0.12	0.22 0.47 0.17					OLS C-O
21.	Ashiq (1981)	Pakistan	Wheat Rice Cotton Sugarcane	1957-79	Nerlove adjustment lag-model	0.25 0.14 0.12 0.45						OLS
22.	Ahmad (1986-87)	Punjab (Pakistan)	Rice	1952-80	Nerlove adjustment lag-model	0.28	0.53					OLS
23.	Ali (1988)	Pakistan	Cotton Sugarcane	1957-87	Simultaneous equation model			0.71 0.52	1.34 0.81	-0.33 -0.15		GLS
24.	Khan and Iqbal (1992)	Pakistan	Cotton Sugarcane	1956-87	Partial adjustment and expectational model			0.24 0.06	1.70 1.88	-0.17 -0.13	-1.21 -4.40	OLS
25.	Naqvi and Burney (1992)	Pakistan	Wheat Rice Maize		Profit function approach	0.09 0.04 0.07						
26.	Wasim (1996-97)	Sindh (Pakistan)	Sugarcane	1972-93	Nerlove adjustment lag-model	0.216*	1.091					OLS
27.	Ghulam Rabbani (1965)	Pakistan – India	Jute	1931-61	Nerlove adjustment lag model	0.40 0.70	0.65 0.74					OLS
28.	Ashiq (1992)	Punjab, Sindh (Pakistan)	Wheat	1975-87	Nerlove partial adjustment model			0.17 0.18	0.46 0.49	-0.19 -0.28	-0.40 -0.58	3SLS

	Author	Province/State/Region/Country	Crop	Period	Model Used	SRRE (Short-Run Relative Elasticity)	LRRE (Long-Run Relative Elasticity)	SROE (Short-Run Own Elasticity)	LROE (Long-Run Own Elasticity)	SRCE (Short-Run Cross Elasticity)	LRCE (Long-Run Cross Elasticity)	Method of Estimation
29.	Tweeten (1986)	Pakistan	Cotton Sugarcane	1963-83	Nerlove adaptive expectation and partial adjustment model	0.10 0.22	0.54 0.70					C – O
30.	Himayatullah (1994)	Pakistan	Cotton Sugarcane	1972-91	Nerlove partial adjustment model			0.65 0.63	1.14 1.05			OLS
31.	Wasim (1997)	Sindh (Pakistan)	Onion	1950-83	Nerlove adjustment lag model	0.38	3.61					OLS
32.	Chaudhry (2000)	Pakistan	Wheat Sugarcane Cotton Rice	–	Nerlove adjustment lag model	0.03 0.04 0.11 1.74	0.10 0.10 0.31 3.07					OLS
33.	J.T. Cummings (1974)	Dacca (Bangladesh)	Rice	1949-68	Nerlove partial adjustment adaptive expectational model			0.13	0.19			OLS
34.	Sultan Rahman (1986)	Bangladesh	Sugarcane Cotton	1972-81	Nerlove adjustment lag-model	0.34 0.14	0.51 0.80					OLS
35.	Jaforullah (1992)	Bangladesh	Sugarcane	1947-81	Partial adjustment model	0.360	0.435					OLS
36.	M. Yunus (1993)	Bangladesh	Rice (Aman) Wheat Cotton Sugarcane Jute	1972-89	Nerlove adjustment lag-model	0.36 0.61 0.16 0.15 0.49	0.55 5.24 0.16 0.73 0.68					OLS
37.	Nosheen and Iqbal (2008)	Pakistan	Cotton Wheat Sugarcane	1971-07 1971-07 1971-07	Nerlove adjustment lag-model			+0.26 +0.04 +0.23	+1.09 +0.10 +0.65			OLS
38.	Khan, Ikram and Kalsoom (2008)	Punjab (Pakistan)	Cotton	1976-02	Nerlove adjustment lag-model			+0.40	+0.63			OLS

A = American
 D = Desi
 * = Relative profitability

TABLE – 2: TEST OF MULTICOLLINEARITY OF THE EXPLANATORY VARIABLES (BY KLEIN’S RULE) USED IN THE REGRESSION ANALYSIS OF COTTON

Zone/Province	Crop	Total R ²	Partial R ² (Each explanatory variable as a dependant variable)							
			Relative Profitability	Irrigated Area	Price Risk	Yield Risk	Area Under Plant Protection Measures	Cotton Ginning Capacity	Sugar Production by Factories	Cotton/ Sugarcane Acreage
Northern Zone	Cotton	0.90	>0.40	>0.36	>0.33	>0.46	–	>0.39	–	>0.59
Central Zone	Cotton	0.93	>0.35	>0.26	>0.61	>0.42	–	>0.50	–	>0.48
Thar Desert	Cotton	0.81	>0.46	>0.40	>0.45	>0.45	–	>0.41	–	>0.61
Southern Zone	Cotton	0.85	>0.53	>0.54	>0.49	>0.34	–	>0.59	–	>0.63
Sindh	Cotton	0.89	>0.41	>0.38	>0.52	>0.48	>0.58	>0.45	–	>0.59

Note: Each explanatory variable used as dependant variable, in turn, on other explanatory variables (according to the model type of the Table Equation). If the partial R² is greater (>) than the total R², then there is harmful multicollinearity of the variable on the other variables. Conversely, (i.e. R² total > R² partial), the collinearity problem is not serious (see Maddala, 1977). The associated symbol of the explanatory variables, i.e. > indicates that the total R² is greater than the partial R². All the variables are in natural logarithms.

EFFECTS OF INTEREST RATE DEREGULATION ON DEPOSIT MOBILIZATION IN THE NIGERIAN BANKING INDUSTRY

SAMUEL, KEHINDE OLUWATOYIN

LECTURER

DEPARTMENT OF ACCOUNTING & FINANCE

AJAYI CROWTHER UNIVERSITY

OYO

OKE, MARGARET ADEBIPE

LECTURER

DEPARTMENT OF ECONOMICS

AJAYI CROWTHER UNIVERSITY

OYO

ABSTRACT

This paper examines the effect of interest rate deregulation on deposit mobilization in the Nigerian Banking Industry. The study employed the ordinary least square method by using relevant data and information from 1993 to 2010. It was found out that real interest rate is a critical factor determining savings in the country. It was equally revealed that inflation has a negative effect on deposit mobilization while income was found to be the greatest determinant of saving and deposit mobilization. The study therefore recommends that there is an urgent need, for the government to review its interest rate policy and consistently pursue effective monetary policy and reforms aimed at enhancing the workings of this policy variable (interest rate). The study equally recommended a broad based main economic policy geared towards improved and sustainable income level, which has to be rigorously and persistently, pursued especially its economic and banking sector reforms.

KEYWORDS

Effect, Interest rate deregulation, Deposit mobilization and Nigerian Banking Industry.

1.0 INTRODUCTION

According to Soyibo and Olayiwola, the Nigerian economy witnessed financial repression in the early 1980s. There were rigid exchange and interest rate controls resulting in low direct investment. Funds were inadequate as there was a general lull in the economy. Monetary and credit aggregates moved rather sluggishly. Consequently, there was a persistent pressure on the financial sector, which in turn necessitated a liberalization of the financial system. The Nigerian government deregulated interest rate in 1987 as part of the Structural Adjustment Programme (SAP) policy package introduced in 1986. The official position then was that interest rate liberalization would among other things; enhance the provision of sufficient funds for investors, especially manufacturers, who are considered to be prime agents, and by implication, promoters of economic growth. However, in a dramatic policy reversal, the government in January, 1994 out-rightly introduced some measures of regulation into interest rate management. It was claimed that there were "wide variations and unnecessarily high interest rates" under the complete deregulation of interest rates (CBN, 2010) and Onwumere, etal. 2012).

The Central Bank of Nigeria embarked on liberalisation of interest rate and adopted the policy of making only its minimum rediscount rate to indicate the desired direction of interest rate. This was further modified in 1989, when the CBN issued further directives on the required spreads between deposit and lending rate. A maximum margin between individual bank average cost of fund and the maximum lending rate was prescribed in 1991. Another regulation came later in the year, which specified saving deposit rate and the maximum lending rate. The removal of the maximum lending rate ceiling in 1993 saw interest rates rising to high roof levels in sympathy with rising inflation rate, which rendered bank's high lending rates negative in real sense. A direct interest rate control was however restored in 1994. Because of the negative reactions to interest regulations instituted in 1995, total deregulation of interest rates was again adopted in the last quarter of 1996. All these have effects on volume of deposits in the system and interest rate on deposit impacts positively on the level of deposits being mobilised in the system (Siyanbola, Sobande and Adedeji, 2012)

However, experience has shown that government's intervention in the operation of financial market does not often achieve the intended policy or reform objectives. Instead, it results in distortion like suppression of equality markets and inducement of present consumption at the expense of savings. To remove or minimize these distortions, economist and financial experts called for the deregulation of financial system. Price distortion in the financial market is judged by how far the interest rate is negative in real terms i.e. disincentive to save and misallocation of funds or by excessive high value of interest in nominal terms i.e. discouragement to invest. (Agarwala, 1985).

The Nigerian government in 1986 adopted a comprehensive economic policy measure the Structural Adjustment Programme (SAP). One of its cardinal philosophies was comprehensive restructuring of the economy aimed at efficient mobilization and allocation of scarce resource through free operation of the market forces. An important element of SAP is the liberalization of interest rate and general banking structure.

Based on the afore-mentioned, the Central Bank of Nigeria (CBN) announced the deregulation of interest rate primarily as follows, effective from 1st August 1987; to

- a. Serve as incentive to savers and investors;
- b. Reduce capital flight and to some extent boost capital inflow;
- c. Allow for market forces of demand and supply to determine the rate of interest;
- d. Improving the overall economic efficiency by eliminating distortion and other restriction on capital movement (Oyejide 1996). It should be noted that, prior to the year of the adoption of SAP in 1986, interest rate were pegged and administered by the CBN as a matter of deliberate policy, even in the face of high inflation rate which persistently presented negative real rate of interest. This grossly discouraged savings mobilization and overall investment in the economy. The policy of interest rate deregulation was received with mixed feelings. The official view expressed was that, the interest rate deregulation **would** enable banks to compete for and raise their deposit liabilities in order to stimulate savings and consequently economic growth. It is against this background that this study seeks to examine the effect of interest rate deregulation on the deposit mobilization in the Nigerian Banking Industry. To this end, the paper is structured into four major parts. Section one is the Introduction, section two which follows this introduction present, the literature review and theoretical framework, section three discusses the methodology, while section four presents the conclusion and some recommendations.

2.0 LITERATURE REVIEW AND THEORETICAL FRAMEWORK**2.1 CONCEPTUAL ISSUES ON INTEREST RATE**

Interest rate can be defined as the return or yield on equity or opportunity cost of deferring current consumption to the future. Examples of interest rate are savings rate, discount rate lending rate and Treasury bill issue rate. The rate of return is sometimes associated with interest free banking. The basic difference between savings rate and rate of return on equity is that the future yield of the first type is known in the current period while for the other it is known when the investment matures (Khan, 1986).

Irving Fisher developed the idea of real interest rate when he tried to establish the trade-offs between consumption today and that in the future. The marginal rate that equilibrates the economic agent's time preference in the primary market {indifference to the consumption of a good today or to tomorrow} ability to borrow or lend is the real interest rate. Additionally, the real rate equals the rate that brings equilibrium in the primary market {new lending and borrowing} for new assets and the secondary market where old assets are traded.

In practice the form of interest rate observed and recorded in the economy is the normal interest rate, which incorporates monetary effects. Nominal interest rate is normally equal or greater than the real interest rates. Inflation, risk, taxes, government and institutional investment policy affect the difference between the two; assets market characteristics and investor preference as well as term of maturity.

2.2 PROFILE OF INTEREST IN NIGERIA

The Nigerian economy witnessed financial repression in the early 1980s. There were exchange and interest rate control resulting in low direct investments. Funds were inadequate as there was a general lull in the economy. Monetary and credit aggregates moved rather sluggishly. Consequently there was a persistent pressure on the financial system. In response to these developments, the government deregulated interest rates in 1987 as part of SAP policy package, the official position then was that interest rate liberalization would among other things enhance the provision of sufficient funds for investors especially manufacturers, who are considered to be the prime agent and by implication promotes economic growth.

Prior to introduction of SAP in 1986, the Nigerian financial system was tightly regulated. Thus, entry of institutions into the system was restricted and the main instruments are interest rates and rediscount rate. The rediscount rate is the rate at which the Central Bank (lender of last resort) is willing to provide loan accommodation to commercial and merchant banks remained relatively fixed in the period between 1970 and 1981 and was 4.5 percent from 1970 and 1975, while falling marginal in 1976 to 3.5 percent and it rose to 4 percent in 1977. This rate rose from 5% in 1978 to 10% in 1984. It remained at the level of 10% from 1984 to 1986 (see table 1).

However the CBN in 1987 liberalized interest rate and the minimum rate on savings and the time deposit were 12% while the Minimum Rediscount Rate (MRR) was 12.8% percent (See table 1). However, the associated high bank-lending rate attracted loud complaints from various sources. While analysts hinted at the possible adverse effects of high bank lending rate on cost of production.

Deregulation of interest rates however continued in 1989. During this period the banks remained free to set their deposit and lending rates. Therefore, government at that time embarked on ultra-restrictive monetary policies. The MRR was also raised from 12.8% to 18.5% by March 1989. Evidence also shows that between 1987 and 1991, government pursued a basically high interest rate policy. Available data revealed that during this period, the banks increased their interest rates on deposits and studies have also shown that this may have enabled them to mobilized savings for investment purposes. (Ndekwa; 1989, Soyibo and Adekanye; 1992).

The gap between saving-deposit rate and the maximum lending rate widened further in 1992. In fact the margin between the two rates reached a climax in 1992 when the spread was about 15.1%. Thus, interest rates regime of 1993 and 1994 discouraged investment in the productive sector while volatile inter-bank rates fuelled by many banks undermined the general stability in the financial system. The implication was the glaring failure of controls re-introduced during the period up to 1995. The controls also had negative economic effects and total deregulation of interest rates was again adopted in October 1996.

The margin between the two rates was relatively stable from 1994 to 1996 because of the change in interest rate regime from a deregulated interest rate regime to a guided deregulated regime. However, since 1997 the gap between the two rates continued to widen. For instance, the spread was as high as 20% in 1999 and 2000 respectively. These high interest rates induced high cost of inputs in the economy. In addition, the sector is believed to have been affected by the haphazard implementation of interest rate regulation, the continued prevalence of directed credit policies and in particular, the monetary authorities incessant use of stabilization securities in managing liquidity in the system (Sobodu and Akiode, 1995, Sobodu, 1996; and Osayameh, 1994). The spread between savings deposits rate and the maximum lending rate reduced to 20.3 percent in 2010.

TABLE 1: TREND IN INTEREST RATES IN NIGERIA (1970-2010)

Year	(1) Savings Deposit Rate (%)	(2) Maximum Lending Rate (%)	(3) Spread between (1) & (2)	(4) % Change in the spread	(5) Minimum Rediscount Rate (MRR) %	(6) Treasury Bills Rate (%)	(7) Treasury Certificate Rate (%)
1970	3.0	8.0	5.0	-	4.5	4.0	4.6
1971	3.0	10.0	7.0	40.0	4.5	4.0	4.6
1972	3.0	10.0	7.0	0	4.5	4.0	4.6
1973	3.0	10.0	7.0	0	4.5	4.0	4.6
1974	3.0	10.0	7.0	0	4.5	4.0	4.6
1975	4.0	9.0	5.0	28.6	4.5	3.5	4.6
1976	4.0	10.0	6.0	20.0	3.5	2.5	3.6
1977	4.0	6.0	2.0	66.7	4.0	3.0	3.6
1978	5.0	11.0	6.0	200.0	5.0	4.0	4.6
1979	5.0	11.0	6.0	0	5.0	4.0	4.6
1980	6.0	9.5	3.5	41.7	6.0	5.0	6.0
1981	6.0	10.0	4.0	14.3	6.0	5.0	6.0
1982	7.5	11.75	4.3	8.75	8.0	7.0	8.0
1983	7.5	11.50	4.0	8.0	8.0	7.0	8.0
1984	9.5	13.00	3.5	12.5	10.0	8.5	9.5
1985	9.5	11.75	2.3	34.3	10.0	8.5	9.5
1986	9.5	11.5	2.0	13.0	10.0	8.5	9.5
1987	12.0	19.20	3.5	75.0	12.8	11.5	12.8
1988	12.1	17.3	5.2	48.6	12.8	11.5	12.8
1989	16.5	25.7	9.2	76.9	18.5	17.5	18.5
1990	18.0	27.3	9.3	1.1	18.5	17.5	18.5
1991	13.8	20.7	6.9	25.8	14.5	15.5	15.5
1992	16.1	31.20	15.1	11.88	17.50	21.0	23.0
1993	16.7	36.09	1.6	89.3	26.0	26.9	27.0
1994	13.5	21.0	7.5	36.30	13.5	12.5	13.0
1995	12.6	20.79	8.2	9.2	13.5	12.5	13.5
1996	11.7	20.86	9.2	11.8	13.5	12.3	13.5
1997	4.8	23.32	18.5	102.1	13.5	12.0	-
1998	5.5	21.34	15.9	14.1	14.31	13.0	-
1999	5.7	27.19	20.0	25.8	18.0	17.0	-
2000	5.0	21.55	21.7	8.5	13.5	12.0	-
2001	5.5	21.34	15.84	27.0	14.31	13.0	-
2002	4.2	30.19	18.27	15.3	19.00	18.9	-
2003	4.1	22.88	18.4	0.7	15.75	15.0	-
2004	4.2	20.82	16.6		15.00	14.2	-
2005	3.8	19.49	15.7		13.00	7.0	-
2006	3.1	18.70	15.6		12.25	8.8	-
2007	3.6	18.36	14.8		8.75	6.9	-
2008	2.8	18.70	15.9		9.81	4.5	-
2009	2.9	22.90	20.0		7.44	1.3	-
2010	2.2	22.51	20.3		6.13	1.0	-

Source: Central Bank of Nigeria Statistical Bulletin Annual Reports Various Issues

2.3 TREND OF COMMERCIAL BANK DEPOSITS AND SAVINGS MOBILIZATION IN NIGERIA

The adoption of SAP in 1986 brought dramatic change in the financial system in +general and commercial banking in particular. Consequently, the banking environment became more competitive as a result of these developments. The banks therefore became more aggressive in their business because of the ensuring competitive environment. New product were introduced by the Commercial Banks, advertisement of services became more aggressive and price competition in term of differential interest payments on savings and lending was introduced.

Generally, Commercial Banking became more creative than before. But of course, profitability and liquidity remained the dominant philosophy of banks. Also, in spite of the financial distress in the Banking System, the amount of deposit mobilized from the economy continued to increase.

TABLE 2: COMMERCIAL BANK DEPOSITS (1970-2010) N million

Year	Demand Deposit	Savings Deposit	Time Deposits	Foreign exchange	Total deposit
1970	288.1	207.0	129.7	-	624.8
1971	285.3	211.4	160.4	-	657.1
1972	336.9	255.9	200.9	-	793.7
1973	430.7	357.8	224.5	-	1013.0
1974	720.7	686.5	286.7	-	1693.9
1975	1266.8	1051.1	521.3	-	2839.2
1976	2185.2	1270.0	709.2	-	4164.4
1977	2980.1	1325.0	930.1	-	5235.2
1978	2700.9	1526.0	1075.7	-	5302.6
1979	3265.7	2418.3	2418.3	-	6967.8
1980	4845.9	3573.7	1589.5	-	10009.1
1981	4880.9	1979.2	3816.8	-	10676.9
1982	5180.7	2321.2	4517.0	-	12018.9
1983	5855.6	2879.3	5203.6	-	13938.5
1984	6343.5	3361.3	6030.0	-	15734.8
1985	7046.2	3699.9	6851.0	-	17597.1
1986	6649.8	4270.2	7217.6	-	18137.6
1987	7998.0	5206.7	9882.0	-	23086.7
1988	10667.7	7122.7	11274.5	-	29065.1
1989	10188.0	9237.8	7739.1	-	27164.9
1990	15588.8	13073.5	10175.0	-	38777.3
1991	22049.0	19395.3	10964.4	-	55208.7
1992	33263.5	26071.1	15713.1	-	75047.7
1993	49923.6	37091.8	23475.2	-	110453.6
1994	65348.7	49601.1	25889.5	1698.2	142537.5
1995	79469.4	62135.0	29965.4	7392.3	198962.1
1996	95904	68776.9	43999.8	5679.1	214359.8
1997	133335.9	84099.5	52076.2	5507.6	280,028.7
1998	142252.1	101373.5	61263.2	9414.7	314303.5
1999	202152.1	128365.8	110765.1	35067.9	476350.9
2000	345001.4	164624.2	154406.0	38072.9	651222.3
2001	448021.4	216509.4	235453.7	47198.4	734842.5
2002	503870.4	244064.1	300140.1	109037.0	954628.5
2003	577663.7	312368.9	324676.4	122587.2	1446344.3
2004	728552.0	359311.2	401080.6	172538.3	1661482.1
2005	946639.6	401986.8	498952.4	188511.1	2036089.9
2006	1497903.7	592514.8	852358.0	302380.0	3245156.5
2007	2307916.2	753868.8	1465281.5	474404.1	5001470.6
2008	3650643.9	1091812.2	2293605.8	924105.0	7960166.9
2009	3447099.9	1169543.1	2323644.6	214653.1	7154940.7
2010	3679093.6	1371283.6	3090557.3	1465667.3	9606601.8

Source: Central Bank of Nigeria Statistical Bulletin Annual Reports Various Issues

As shown in table 2, the phenomenal growth in the amount of savings mobilized is instructive of the expected contributions of the savings institutions to the economy. The growth in the absolute size of total deposit mobilized by Commercial Banks has been tremendous.

Table 3 below shows that Nigeria's real domestic savings have been low and inadequate to sustain the level of investment that is consistent with the country's economic growth targets and potential. The savings rate rose consistently from 17.3 percent in 1970 to 35.7% in 1974 because of the improvements in economic activities. Therefore, the performance of the savings rate was very dismal (see table 3). In fact, between 1981 and 1984, it continuously decelerated, perhaps, due to the serious economic recession of the time. The same experience was recorded between 1992 and 1995 partly as a result of other indices of macroeconomic instability in the system e.g. inflation.

TABLE 3: NIGERIA'S SAVINGS GROWTH TREND

Year	Real GDP Growth Rate	Gross National Savings (% Share of GDP)
1970	-	17.3
1971	21.3	21.0
1972	5.5	2.8
1973	6.4	30.3
1974	11.7	35.7
1975	-3.0	27.1
1976	11.1	31.8
1977	8.2	30.5
1978	-7.4	18.7
1979	9.4	24.5
1980	4.1	25.9
1981	-2.6	18.8
1982	-0.3	12.3
1983	-5.4	9.3
1984	-5.1	9.3
1985	5.9	11.0
1986	2.2	4.4
1987	-0.3	9.3
1988	7.0	6.1
1989	7.3	11.7
1990	8.2	14.5
1991	4.8	22.3
1992	3.0	13.4
1993	2.1	8.8
1994	1.3	3.6
1995	2.2	3.6
1996	3.4	13.2
1997	3.2	11.1
1998	2.4	9.9
1999	2.8	18.3
2000	5.4	12.3
2001	4.6	11.3
2002	3.5	15.6
2003	10.2	13.6
2004	10.6	28.9
2005	5.4	29.3
2006	6.2	49.2
2007	7.0	41.6
2008	6.0	39.8
2009	7.0	40.9
2010	8.7	31.1

Source: Compiled from CBN Annual Reports and Statement of Account and Statistical Bulletin, Various issues.

2.4 THE LINK BETWEEN INTEREST RATES DEREGULATION AND DEPOSIT MOBILIZATION: EVIDENCE FROM NIGERIA AND OTHER COUNTRIES

In most countries, the withdrawal by the monetary authorities from a direct determination of lending and deposit rates was the major reform in the financial sector. Thus, banks were expected to set lending and deposit rates in response to credit supply and demand conditions. While the process of interest rate liberalization varied considerably among countries in terms of aspect and degree, the outcomes were not too different (Soyibo/Adekanye, 1992).

Using cross-country analysis, Robert King and Ross Levine (1993) found a significant, robust and positive correlation between higher levels of financial development and faster growth, physical capital accumulation and economic efficiency. Alan Gelb found a positive correlation between real interest (used as proxy for financial intermediation) and growth for 34 countries for the period 1965-1985, while Jose De Gregerio and Rablo Guidotti reported a positive relationship between credit to the private sector and the growth for a sample of 98 countries for 1960-1985s and 1960s.

However, their regression for 12 Latin American countries for 1950-1985 found that credit had a significant negative correlation with growth. The correlation was not significant in the 1950s and 1960s but became strongly negative in the 1970s and 1980s.

The literature on correlation between financial liberalization and saving is equally ambiguous with contradictory evidences. Nureddein Hussain in his own research maintained that, in the three years following liberalization, financial savings in Egypt increased by 6% of GDP over the level that would have occurred in the absence of financial liberalization. On the other hand, Tamim Bayomi (1991) finds that both household and corporate savings rate has fallen steadily since the 1980 deregulation in the same United Kingdom around the same time.

Uygun in his own personal research found that econometric estimates of determinants of the ratio of private savings to disposable income in Turkey from 1971 to 1990 indicate that a negative income effect from higher interest rates off sets or exceeds the positive substitution effect of the private savings ratio. There is also evidence of lower savings rate following liberalization in Argentina Colombia and Philippines.

Three separate studies by Lopez-Meya, Bayomi and Darby and Ireland show that financial liberalization resulted in a consumption boom in the United Kingdom in the late 1980s. Studies by John Harris Fabio Schiaterelli and Miranda Siregar found that, after liberalization, the more technologically the efficient firm, the greater the proportion of new credit it received. For Korea, Atiyas (1992) presents evidence start small firms gained improved access to external finance after liberalization. Credit flows moved from light industrial manufacturing to services utilities and construction. In a similar study Gastin Gelos (1977) provides econometric evidence that financial constraints were eased for small firms in Mexican manufacturing sector following financial liberalization.

Soyibo and Adekanye (1992) examined the Nigerian Banking System in the conduct of policies of financial regulation and deregulations. They argued that policy of financial liberalization has changed the face of the Nigerian Banking System. They established that there is a positive relationship between savings mobilization and financial liberalization in Nigeria. They concluded that the apparent decline in some indices of financial liberalization in Nigeria. They concluded that the apparent decline in some indices of financial liberalization during the era of relaxed control/deregulation is due mainly to conflict of policies rather than the policy of liberalization perse.

2.5 THEORETICAL FRAMEWORK

The classic McKinnon-Shaw thesis which in principle, is a repudiation of the mainstream theoretical postulate of negative correlation between real interest rate and investments also contends that high real interest rate relative to the marginal productivity of capital will raise the volume of both real and financial savings. However, empirical evidence fails to authenticate this relationship. To paraphrase, Schmidt Hebbel and Serven (1996) "financial liberalization and interest rate deregulation often as part of structural adjustment programme have had very little effect on improving the size and allocation of savings".

Using a theoretical model and comparative static, Molho (1986) investigated the Mckinnon-Shaw Hypothesis that high real deposit rates encourage savings accumulation which will encourage investment from own sources (McKinnon) and external borrowing (Shaw). He specified an aggregate saving function of the form.

$$S_t = f(rdt, rkt, Lt, rd_{t-1}, rk_{t+1})$$

Where

- rd = Deposit rate
- rk = Rate of return on capital
- L = Stock supply of loans
- K = Capital formation

Applying partial derivatives on the aggregate savings function, he concluded that the effects of future rate of return on capital and current deposit rate on savings are in determinant while past deposit rate and current supply of loans negatively affect current savings. He also assumed a positive relationship between the stock of deposits and the supply of loans.

Riechel (1991) while investigating the empirical relationship between the real interest rate and savings in Nigeria specified the following models.

First, he specified that gross domestic savings is a function of real interest rate which is stated as:

$$S/Y = f(r) \dots\dots\dots(i)$$

Secondly, he accounted for Keynesian absolute income hypothesis by including real income index Y, to obtain

$$S/Y = f(r) \dots\dots\dots(ii)$$

Hence gross savings rate specification by including last period's gross savings rate due to adjustment of lags gives

$$S/Y = f(y; r, s/y_{t-1}) \dots\dots\dots(iii)$$

Reichel (1991) regressed real growth rate of time and savings deposits (grts) on real interest per capita real income (y) and real interest rate, taking into account the transitory income.

The following equations resulted grts- f(r)(iv)

$$grts = f(y, r) \dots\dots\dots(v)$$

$$grts = f(y, r, D) \dots\dots\dots(vi)$$

His regression results showed a positive relationship between gross domestic savings and financial savings and that output is significantly and positively related to gross domestic savings but only positively related to financial savings. Under the assumption that Gross Domestic Savings (GDS) is a residual from the agricultural, industrial, mining, and petroleum, retail trade and other sectors of the economy and that GDS is affected by economic activities, GDP, opportunity cost of deferring present consumption to the future represented by real savings rate (RSR) and the complementary effect of foreign savings (Fs), then

$$GDS = f(GDP, RSR, FS) \dots\dots\dots(viii)$$

$$\text{Where } \frac{dGDS}{dGDP} > 0, \frac{dGDS}{dRSR} > 0, \frac{dGDS}{dFS} > 0 \dots\dots\dots(ix)$$

Hence the financial saving rate according to Uchendu (1974) is given by

$$\frac{dTFS}{dGDP} = f(SR) \dots\dots\dots(x)$$

dGDP

Where TFS = Total financial savings and

SR = Nominal saving rate.

$$dTFS > 0$$

$$dSR$$

Uchendus findings showed that:

- i. Nominal savings interest rate is the main determinant of financial savings in Nigeria
- ii. Gross national savings is positively and significantly explained by real savings rate and other variables.
- iii. Financial savings explained 98.3% of the variation in bank loans and advances

3.0 METHODOLOGY

3.1 MODEL SPECIFICATION

We formulated model suitable for this study by adopting and modifying Uchendu's models as follows:

$$GDS = f(RSR) \dots\dots\dots(1)$$

$$GDS = f(RLR) \dots\dots\dots(2)$$

$$GDS = f(NSR) \dots\dots\dots(3)$$

$$GDS = f(NLR) \dots\dots\dots(4)$$

$$GDS = f(INF) \dots\dots\dots(5)$$

$$GDS = f(RGDP) \dots\dots\dots(6)$$

$$GDS = f(NGDP) \dots\dots\dots(7)$$

$$GDS = f(RSR, RLR, INF, RGDP) \dots\dots\dots(8)$$

$$GDS = f(NSR, NLR, INF, NGDP) \dots\dots\dots(9)$$

Where GDS - Gross Domestic Savings

- RSR = Real Savings Rate
- RLR = Real Lending Rate
- NSR = Nominal Savings Rate
- NLR = Nominal Lending Rate
- INF = Inflation Rate
- RGDP = Real Gross Domestic Product (Real Income)
- NGDP = Nominal Gross Domestic Product (Nominal Income)

4.0 RESULTS AND DISCUSSION

The linear equation obtained from the first model is

$$GDS = 356295.7 + 17509.82RSR$$

$$T - Stat: (2.195) \quad 2.741$$

$$R - squared = 0.47 \quad DW = 1.20$$

This implies that savings rate has a statistically significant positive effect on gross domestic savings as anticipated. The coefficient of determination, R^2 is approximately, 47% which implies that real saving rate explain 47% of the total variation in gross domestic savings in Nigeria.

From the third model, we obtained

$$GDS = 315022.5 + 14872.19 \text{ RLR}$$

$$T\text{-stat: } (2.518) \quad (2.363)$$

$$R\text{-squared} = 0.43, \text{ D.W.} = 1.35$$

This shows that real lending has a statistically significant positive effect on gross domestic savings. This is contrary to the apriori expectation. The explanatory power of the model is fair judging by the coefficient of determination of R^2 which is 43%.

The relationship between gross domestic savings and nominal savings rate is expressed by the linear equation form:

$$GDS = 812695.9 - 50109.45 \text{ NSR}$$

$$T\text{-Stat: } (3.149) \quad (-2286)$$

$$R\text{-squared} = 0.45, \text{ D.W.} = 1.58$$

This indicated that nominal savings rate has a statistically significant negative effect on gross domestic savings as expected. The R^2 is fair showing that nominal savings rate explains approximately 45% of the total variation in gross domestic savings.

The equation below specifies the relationship between gross domestic savings and the nominal lending rate:

$$GDS = 1.776 + 4.093 \text{ NLR}$$

$$T\text{-Stat: } (0.3) \quad (2,059)$$

$$R\text{-squared} = 0.35 \quad \text{D.W.} = 0.48$$

This indicated that nominal savings rate has a statistically significant positive association with gross domestic savings as expected by the apriori expectation. The coefficient of determination (R^2) of the model reveals that a nominal lending rate explains 35% of the total variation in gross domestic savings in Nigeria within the period of the study.

The relationship between Gross Domestic Savings and Inflation Rate is expressed in linear form as:

$$GDS = 463008.6 - 7186.61 \text{ INF}$$

$$T\text{-stat: } (2.364) \quad (-1.196)$$

$$R\text{-squared} = 0.08, \text{ D.W.} = 1.29$$

From the above results there was a statistically insignificant negative relationship between inflation rate and gross domestic savings. This was consistent with the apriori expectation. The coefficient of determination (R^2) reveals that inflation rate approximately explains 8% of the total variation in gross domestic savings.

The relationship between the Gross Domestic Savings and the real Gross Domestic Product is presented linearly as thus:

$$GDS = 11018320.0 + 22.4435 \text{ RGDP}$$

$$T\text{-stat: } (-1.775) \quad (4.266)$$

$$R\text{-squared} = 0.64, \text{ D.W.} = 1.53$$

This shows that real income has a statistically significant positive effect on gross domestic savings. This finding conforms with the apriori expectation. This explanatory power of the model is high judging by the coefficient of R^2 of 64%. This implies that real income explains 64% of the variation in the gross domestic savings.

The equation below expresses the regression results of the relationship between gross domestic savings and nominal gross domestic product:

$$GDS = 15.6370 + 1.4905 \text{ NGDP} - 0.9384 \text{ INF} + 25177 \text{ NLR} + 0.6956 \text{ NSR}$$

$$T\text{-stat: } (-3.347) \quad (4.628) \quad (2.728) \quad (2.476) \quad (0.743)$$

$$R\text{-squared} = 0.91, \text{ } R^2 = 0.87, \text{ F-stat} = 77.02, \text{ DW} = 3.18$$

The estimations above shows the aggregative effects of nominal income, nominal lending rate, inflation and nominal savings rate on gross domestic savings. It was found that nominal income lending rate have statistically significant positive effects on gross domestic savings, although a negative association was anticipated between real lending rate and gross domestic savings. More so, real saving rate has a statistically significant negative effect on savings though a positive relationship was expected. It should be noted that inflation has a negative relationship with domestic savings. The adjudged R^2 suggests that the four exogenous variables explain 86% of the total variation in gross domestic savings. The F-statistic indicates that the model is statistically significant.

The result obtained above is inconsistent with that of Khathate (1988) but corroborates Riechel (1991) who investigated the empirical relationship between real interest rate and savings in Nigeria. The result is also in lien with that of Soyibo and Adekanye (1991) who tested the determinant of savings in Nigeria using variants of fry (1978), MFM, Yusuf and Peters (1984) MYMP, and Leite and Mokannen (1986). MLM models. The empirical evidence suggesting the negative effect of inflation on deposit mobilization in Nigeria is also consistent with the empirical findings of Adeoye (2003) who examined the determinant of credit flow from the Nigerian Banking Industry.

5.0 CONCLUSION AND RECOMMENDATIONS

The empirical results generated in the analyses above show that real interest rates is a critical factor determining behaviour of savings in Nigeria. Also, inflation was found to be depressing the aggregate level of savings in the country as high inflation rate is unhealthy for effective savings mobilization. The study equally found out that savings mobilized is strongly influenced by the level of income in the country.

The general conclusion that emerges from the theoretical and empirical analysis of the effect of interest rate deregulation on savings mobilization in the banking system is that interest rate policy in the country has performed fairly in the area of mobilizing sustainable deposit from the domestic economy.

That is, going by the results of the regression analysis carried out, the major determinants of savings in Nigeria are interest and level of real income.

Following from our study, the need to review interest rate policy is inevitable. Among the policy recommendations emanating from the study include:

- i) Effective monetary policy should be designed to enhance the working of the policy variable of this study (i.e. interest rate) which should be consistently and rigorously pursued;
- ii) Income as a good determinant of savings in Nigeria requires a broad-based macro economic policy geared towards improved and sustainable income level necessary to motivate domestic savings.
- iii) Since negative association is obtained between inflation and savings, it follows that, complementary fiscal and monetary policy that will ensure a moderate inflation rate should be of policy priority to the relevant authorities in view of the negative effect of inflation on savings.
- iv) The review of the income of workers under the new reform is a welcome idea, which if carried out by all tiers of government will not only improve the welfare of Nigerian workers but also improve the level of savings necessary for investment in the economy. This will promote growth and sustainable development.

REFERENCES

1. Agarwala (1985) "Investment Decision and Interest Rate and Exchange Rate Liberalization in Nigeria" NISER Monograph, Ibadan.
2. Atiyas (1992): Financial Liberalization and Endogenous Growth: The Case of Korea.
3. CBN (2010) "Monetary Policy" <http://www.cenbank.org/supervision/bsdpublicatotions.asp>
4. Central Bank of Nigeria Economic and Financial Review, 31 (3): 34-52.
5. Gastin Gelos (1977) Macroeconomic Determinant of Private Savings in Mexico. Research Monograph Series.
6. Khan (1986): How Interest Rate Charged Under Financial Liberalization. A Cross-Country Review. Development Research Group.

7. Molho (1986): "Financial Liberalization Development and facility. Evidence from African Countries AERC Monograph Series No 12.
8. Ndeku (1989): Financial Sector Reforms, Macroeconomics Instability and the Order of Economic Liberalization. The Evidence from Nigeria. Africa economic research Consortium Research Paper 12.
9. Onwumere, J.U.J., Okore, A.O & Imo, G. I. (2012): The Impact of Interest Rate Liberalization On Savings and Investment: Evidence From Nigeria, Research Journal of Finance and Accounting, Vol.3, No. 10, pp 130-136
10. Osayemeh (1994): Interest Liberalization, Savings, Investment, and Growth, the case of Nigeria Savings Development Vol. 26.
11. Oyejide (1996) "Financial Liberalization and Economic Growth under Structural Adjustment in Nigeria". African Journal of Economic Policy Vol. 1, No. 1.
12. Riechel (1991): "Savings, Investment and Growth Patterns in Developed and Developing Countries NCEMA Monography Series No. 3.
13. Schmidt Hebbel and Serven (1996): Determinant of Credit Flow from European Banking System." An Empirical Analysis.
14. Simeon Chappel (1991): "Interest Rate Policy, Savings and Investment in Nigeria"
15. Siyanbola, T.T., Sobamde, D. & Adedeji, S. B. (2012), Effect of Interest Rate Deregulation on Banks Deposit Mobilization in Nigeria, International Journal of Marketing and Technology, Vol. 2, No.9, pp 194 - 203
16. Sobodu and Akiode (1995): Interest Rate Deregulation and Structural Shift in the Demand Function for Commercial Banks Deposit, Evidence from the Nigerians Financial Sector Since 1996" NES Annual Conference.
17. Soyibo and Adekanye (1992): Financial System Regulation, Deregulation and Savings Mobilization in Nigeria "African Economic Research Consort paper.
18. Tamim Bayomi (1993): Financial Liberalization and Interest Rates Risk Management in Sub-Saharan Africa. "Centre for the Study of African Economic Institute of Economics and Statistics, Oxford University.

APPENDIXES

TABLE 4

OBS	C	GDS	INF	NGDP	NLR	NSR
1993	1.00000	1494.700	5.400000	71859.00	10.50000	9.500000
1994	1.00000	3573.700	10.20000	108183.0	17.50000	14.00000
1995	1.00000	361.1000	38.30000	142618.0	16.50000	14.50000
1996	1.00000	48586.90	40.90000	220200.0	26.80000	16.40000
1997	1.00000	61785.20	7.500000	271908.0	25.01000	18.80000
1998	1.00000	56601.60	13.00000	316670.0	20.01000	14.29000
1999	1.00000	57119.10	44.50000	536305.1	29.80000	16.10000
2000	1.00000	63408.90	57.20000	688136.6	36.09000	16.66000
2001	1.00000	58987.70	57.00000	904004.7	21.00000	13.50000
2002	1.00000	173984.1	.30000	1934831.	20.18000	12.61000
2003	1.00000	114411.4	.30000	2703809.	19.74000	11.69000
2004	1.00000	215394.9	.30000	2801973.	13.54000	4.800000
2005	1.00000	-168126.1	.30000	2721178.	20.46000	5.750000
2006	1.00000	942399.5	.30000	3313563.	21.3200	5.330000
2007	1.00000	2036352	.30000	4727523.	21.33000	4.880000
2008	1.00000	740593.1	.30000	5374335.	26.00000	5.000000
2009	1.00000	-71517.70	.30000	6232244.	20.60000	3.700000
2010	1.00000	736740.0	.30000	6061700.	19.60000	3.200000

OBS	RESID	RGDP	RLR	RSR
1993	-0.828536	71075.90	5.100000	
1994	0.380915	70740.60	7.300000	
1995	-2121507	77752.30	-21.80000	
1996	1.504384	83495.00	-14.10000	
1997	0.770618	90342.00	18.00000	
1998	0.596956	94614.10	7.010000	
1999	0.047050	97431.40	-14.70000	
2000	-0.607828	100015.2	-21.11000	
2001	0.136894	101330.0	-36.00000	
2002	0.871501	103510.0	52.62000	
2003	0.298048	107020.0	-9.560000	
2004	-0.094948	110400.0	5.040000	
2005	NA	112950.0	10.46000	
2006	0.168667	116400.0	14.72000	
2007	0.572217	121207.8	14.43000	
2008	-0.616122	126323.8	7.100000	
2009	NA	131489.8	-7.700000	-9.200000
2010	-1.078309	136470.0	5.600000	-10.80000

Dependent Variables GDS

Method: Least Squares

Sample 1993-2010

Included observations: 18

Variable	Coefficient	Std. Error	t-Statistic	Prb.
RSR	17509.81	6875.873	2.741115	0.0174
C	356295.7	162345.0	2.194682	0.0433

R-squared	0.473313	Mean dependent var	281786.3
Adjusted R-squared	0.453272	S.D dependent var	533586.3
S.E of regression	540504.0	Akaike info criterion	29.34394
Sum Squared resid	4.68E+12	Schwarz criterion	29.44287
Log likely hood	-262.0955	F-statistic	21.549225
Durbin-Waston Stat	1.204968	Prob (F-statistic)	0.0001146

Dependent Variable: GDS

Method: Least Squares

Sample 1993-2010

Included observations: 18

Variable	Coefficient	Std. Error	t-Statistic	Prb
RLR	14872.19	6511.655	2.362510	0.0286
C	315022.5	125115.4	2.517856	0.0228
R-squared	0.431039	Mean dependent var	281786.3	
Adjusted R-squared	0.404796	S.D dependent var	533586.3	
S.E of regression	520633.1	Akaike info criterion	29.26792	
Sum Squared resid	4.34E+12	Schwarz criterion	29.36685	
Log likelihood	-1.354953	F-statistic	17.85943	
Durbin-Waston Stat	1.354953	Prob (F-statistic)	0.001819	

Dependent Variable: GDS

Method: Least Squares

Sample 1993-2010

Included observations: 16

External observation: 2

Variable	Coefficient	Std. Error	t-Statistic	Prb
LOG (NLR)	4.092625	1.942881	2.059177	0.0613
C	1.776004	5.917417	0.300132	0.7685
R-squared	0.353247	Mean dependent var	11.15278	
Adjusted R-squared	0.332764	S.D dependent var	2.355426	
S.E of regression	2.243518	Akaike info criterion	4.570436	
Sum Squared resid	70.46719	Schwarz criterion	4.667009	
Log likelihood	-34.56348	F-statistic	12.53374	
Durbin-Waston Stat	0.477783	Prob (F-statistic)	0.007813	

Dependent Variables GDS

Method: Least Squares

Sample 1993-2010

Included observations: 18

Variable	Coefficient	Std. Error	t-Statistic	Prb.
INF	-7186.609	6007.133	2.741115	0.0174
C	356295.7	162345.0	-1.196346	0.2490
R-squared	0.473313	Mean dependent var	281786.3	
Adjusted R-squared	0.024740	S.D dependent var	533586.3	
S.E of regression	526944.6	Akaike info criterion	29.29202	
Sum Squared resid	4.44e+12	Schwarz criterion	29.39095	
Log likely hood	-261.0955	F-statistic	1.431243	
Durbin-Waston Stat	1.290322	Prob (F-statistic)	0.248990	

Dependent Variable: GDS

Method: Least Squares

Sample 1993-2010

Included observations: 18

Variable	Coefficient	Std. Error	t-Statistic	Prb
RGDP	22.44357	5.931851	4.266336	0.003
C	-1101832.	620840.5	-1.774742	0.0950
R-squared	0.643008	Mean dependent var	281786.3	
Adjusted R-squared	0.615696	S.D dependent var	533586.3	
S.E of regression	478536.3	Akaike info criterion	29.09929	
Sum Squared resid	3.66E+12	Schwarz criterion	29.19822	
Log likelihood	-259.8936	F-statistic	45.13627	
Durbin-Waston Stat	1.528444	Prob (F-statistic)	0.000007	

Dependent Variables GDS

Method: Least Squares

Sample 1993-2010

Included observations: 18

Excluded observation: 2

Variable	Coefficient	Std. Error	t-Statistic	Prb.
LOG(NGDP)	1.405985	0.191975	7.323788	0.0000
C	-8.012595	2.631518	-3.044856	0.0078
R-squared	0.793015	Mean dependent var	11.15278	
Adjusted R-squared	0.778231	S.D dependent var	2.355426	
S.E of regression	526944.6	Akaike info criterion	3.161671	
Sum Squared resid	4.44e+12	Schwarz criterion	3.258244	
Log likely hood	-261.0955	F-statistic	53.63787	
Durbin-Waston Stat	1.290322	Prob (F-statistic)	0.000004	

Dependent Variable: GDS

Method: Least Squares

Sample 1993-2010

Included observations: 16

Excluded observation: 2

Variable	Coefficient	Std. Error	t-Statistic	Prb
LOG(NGDP)	1.490490	0.322043	4.628228	0.0007
LOG(INF)	-0.938435	0.344026	-2.727799	0.0197

LOG(NSR)	2.517702	1.017027	2.475551	0.0308
LOG(NSR)	0.695626	0.936507	0.742788	0.4732
C	-15.63702	4.672519	-3.46593	0.0065
R-squared	0.907623	Mean dependent var		11.15278
Adjusted R-squared	0.874031	S.D dependent var		2.355426
S.E of regression	0.835991	Akaike info criterion		2.729909
Sum Squared resid	7.687695	Schwarz criterion		2.971343
Log likelihood		-16.83927	F-statistic	77.01916
Durbin-Waston Stat	3.184455	Prob (F-statistic)		0.000000

Dependent Variables LOG(GDS)

Method: Least Squares

Sample 1993-2010

Included observations: 16

Excluded observation: 2

Variable	Coefficient	Std. Error	t-Statistic	Prb.
LOG(NGDP)	8.608022	0.191975	7.323788	0.0000
LOG(INF)	-0.805042	0.858901	-0.937292	0.3687
RLR	0.083419	0.070102	1.189973	0.2400
C	-86.66494	26.86323	-3.226155	0.0081
R-squared	0.859509	Mean dependent var		11.15278
Adjusted R-squared	0.803421	S.D dependent var		2.355426
S.E of regression	1.030964	Akaike info criterion		3.149171
Sum Squared resid	11.69174	Schwarz criterion		3.390605
Log likely hood	-20.19337	F-statistic		16.82417
Durbin-Waston Stat	2.475432	Prob (F-statistic)		0.000117



AN E-3 VALUE MODEL FOR ASSESSING e-COMMERCE PARTNERSHIP PROFITABILITY TO SMEs IN GHANA**AMANKWA, ERIC****LECTURER****PRESBYTERIAN UNIVERSITY COLLEGE****GHANA****KEVOR MARK-OLIVER****LECTURER****PRESBYTERIAN UNIVERSITY COLLEGE****GHANA****ABSTRACT**

E-Commerce adoption in Ghana has been slow due to certain perceived barriers. In overcoming the perceived barriers, a model has been developed that consists of a value web of a Small and Medium Enterprise, Mobile Network Operator, a Courier Service Provider, a Certificate Authority and a Broker. The survivability of such a partnership depends on whether the participating actors generate profits. This paper proposes an e3-value model that can be used to assess the profitability of the e-Commerce partnership. Through interviews of managers of the various actors and a description of the abstract actors from literature, the value activities performed by the various participating actors and the value exchanges between them were identified. An e3-value model that could be used to assess the profitability of the partnership was developed. A case study of a bookshop, which is a typical Small and Medium scale Enterprise, was used to confirm that, participating actors in the model are able to make profit.

KEYWORDS

e-commerce, e3-value model, assessing profitability, partnership, SME, Ghana.

INTRODUCTION

Governments at all levels have undertaken initiatives to promote the growth of Small and Medium Scale Enterprises (SMEs) (Feeney and Riding, 1997). SMEs represent over 90% of private businesses and contribute to more than 50% of employment and GDP in most African countries (UNIDO, 1999). Small enterprises in Ghana are said to be a characteristic feature of the production landscape and have been noted to provide about 85% of manufacturing employment of Ghana (Steel and Webster, 1991; Aryeetey et al, 1994) and forms 70% of enterprises in Ghana (Frempong, 2007).

According to Addo (2012), e-Commerce adoption by SMEs in Ghana has been slow due to certain perceived barriers. These perceived barriers such as efficient e-payment penetration, trust, high ICT cost, effective delivery system has been identified (Addo, 2012; Amoako, 2012; Kapurubandara and Lawson, 2006; Frempong, 2007, Boateng et. al, 2011) and confirmed in Amankwa and Kevor(2013).

In overcoming the barriers, Amankwa and Kevor (2013) proposes an e-Commerce partnership consisting of a Vendor, a Mobile Network Operator (MNO), a Certificate Authority (CA), a Courier Service Provider(CSP) and a Broker. The survival of each of the actors in the partnership, and by extension, the model depends on if they make profit.

The e3-value is a requirement engineering methodology to model an e-Commerce idea from an economic perspective with the aim to understand such an idea thoroughly and to evaluate it for potential profitability (Akkermans and Gordijn, 2003). Complex ideas can be clearly represented using the e3-value methodology, which is capable of expressing and analyzing several general mechanisms that are important in e-business, including revenue streams, value objects, customer ownership, price setting, alternative actors, and partnership issues.

LITERATURE REVIEW**SMEs IN GHANA**

SMEs form about 70% of all enterprises in Ghana (Frimpong, 2007) and contribute to about 40% of the country's Gross National Income (Ghana Government, 2003). These SMEs are engaged in manufacturing, retailing, agro processing, etc. SMEs in Ghana are generally characterized by low numbers of employee size (Osei et. al., 1993). The most efficient business processes must therefore be adopted by SMEs to enable them survive. This include the adoption of information and communication technologies.

ELECTRONIC COMMERCE (e-COMMERCE)

e-Commerce has been defined differently by various researchers. For example, one group of researchers define e-commerce as the sharing of business information, exchange of goods and services, payments, the creation and maintaining of business relationships and conducting business transactions by means of telecommunications network (Zwass, 1996; Fruhling and Digman, 2000; Mahadavan, 2000 and Laudon and Laudon, 2006). E-commerce is also defined by Lee, Viehland et al (2008) as the process of buying, selling, transferring, or exchanging products, services, and/or information via computer networks, including the Internet. Authors in recent times have begun to define more explicitly the difference between e-commerce and e-business. E-commerce is emerging as the term used when discussing the process of transacting business over the Internet. E-business, on the other hand, involves the fundamental reengineering of the business model into an Internet based networked enterprise. The difference in the two terms is the degree to which an organization transforms its business operations and practices thorough the use of the Internet (Hackbarth & Kettinger 2000, Mehrtens et.al. 2001, Poon 2000, Poon & Swatman 1997). Whiles the above definitions suggest all those processes should be done through telecommunication network and may restrict transactions to digital goods, we consider in this paper e-commerce to be the ordering and paying for goods and services via telecommunication network (Amankwa and Kevor, 2013). Delivery of the goods could be made physically by the organization, picked up physically by the customer or outsourced to a third party Courier Service.

A number of research on e-Commerce adoption by SMEs in developing countries have focused on the extent of adoption (Addo 2012, Amoako 2012, Faisal 2012), potential benefits (Hasan and Tibbits 2000, Kuan and Chau 2001, Straub et. al. 2002, Bynoe 2002) and perceived barriers (Addo, 2012; Amoako, 2012; Kapurubandara and Lawson, 2006; Frempong, 2007, Boateng et. al, 2011)

Amankwa and Kevor (2013) propose a model that could be implemented to overcome the identified barriers to e-commerce adoption by SMEs in Ghana.

AMANKWA AND KEVOR EXTENDED E-COMMERCE MODEL

In an attempt to overcome the perceived barriers to e-Commerce adoption by SMEs in Ghana, Amankwa and Kevor (2013) proposes a network model that consists of:

- A vendor, which is typically an SME that has some products or service to offer for sale.
- A customer who is willing to pay for a product or service offered by a vendor
- A Mobile Network Operator that offers mobile money payment services
- A Courier Service Provider that efficiently delivers physical products from vendors to customers.
- A Certificate Authority that acts as a trusted third party to provide security credentials to brokers and or mobile network operators

- A broker that provides an electronic market place for vendors to advertise and sell their products to customers.

The partnership is shown in fig 1 below

In other for the partners in the model to survive, each of the service providers must be seen to be making profit and the customer must be satisfied with the product and service provided. **How can one then assess the profitability of the model?**

THE e3-VALUE METHODOLOGY

According to Gordijn and Akkermans (2003), e3-Value is an ontology-based methodology for modelling and designing business models for business networks. Unlike other models, the e3-value model looks at how objects of economic value is created, exchanged and consumed in a multi-actor network. The model can be used to assess the profitability of actors in an e-Commerce partnership model. Some concepts in the e3-value methodology are described in table 1.

TABLE 1: e3-VALUE CONCEPTS

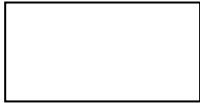


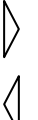
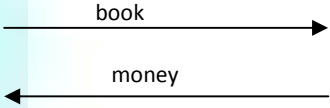
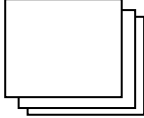
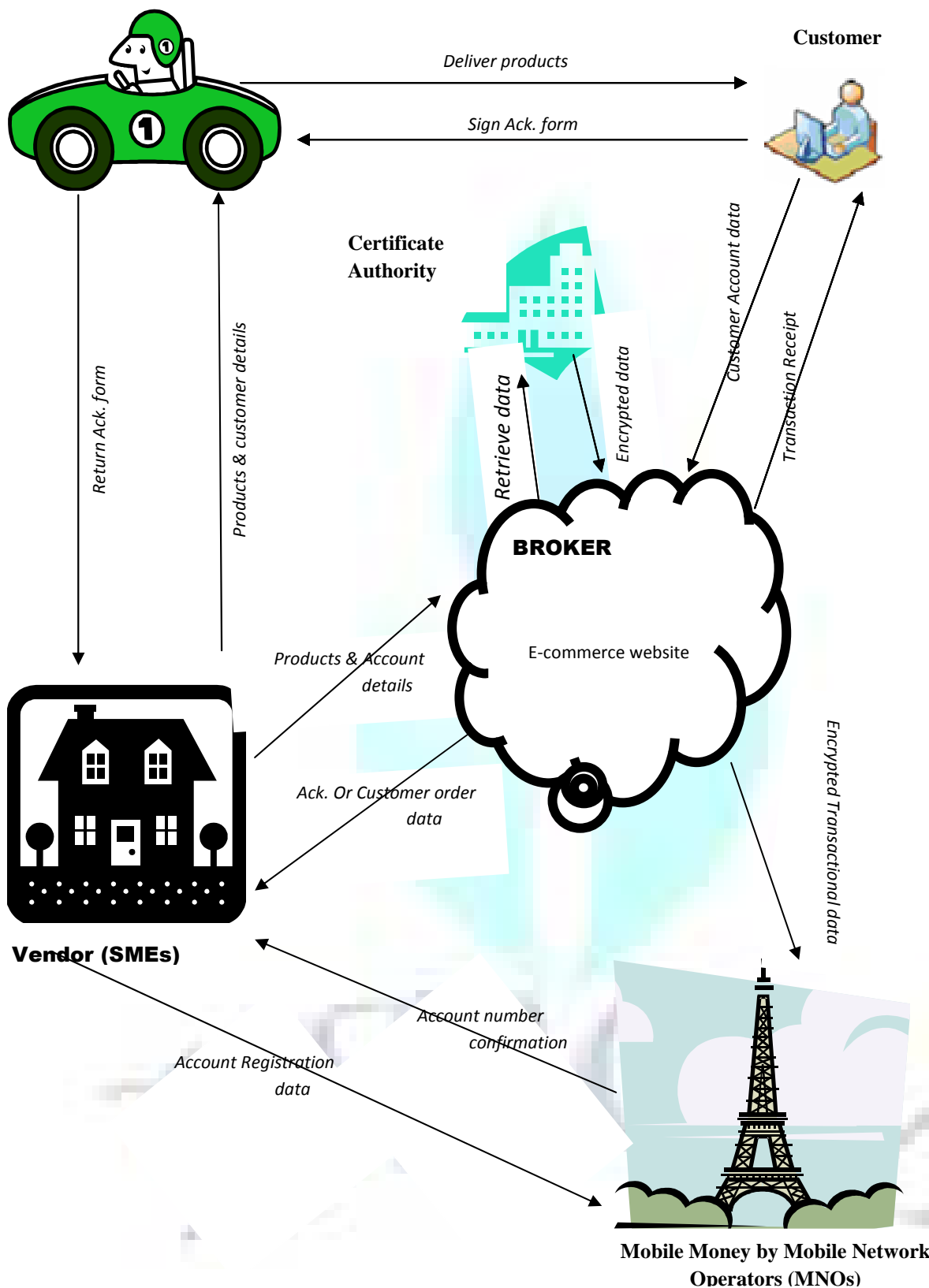
Concept	Description	Graphical Notation
Actor	These are parties engaged in value exchanges. An enterprise actor is interested in profitability while a consumer actor is interested in maximising its economic utility	
Value Activity	These are activities performed by actors, which can give profits to an actor or increase its economic utility.	
Value Objects	These are material, such as physical goods, products or money, or non-material (e.g. services, capabilities or experience) that is beneficial to an actor in the network. value objects are exchanged among actors.	money, book, transport, etc
Value Interfaces	These are used by actors to signal a request or to provide value objects. A typical value interface will consist of two or more ports for giving and receiving value objects	
Value Ports	value ports serve as connection point between two actors. It enables an actor to be concerned with the value object they receive without being concerned with the value activity that produced it.	
Value Exchange	These are used to connect value ports to each other. Typically, every value object given must be exchanged with another value object. This is economic reciprocity	
Market Segment	A market segment consists of one or more actors who provide or receive the same value objects. They place the same economic value on the objects they exchange.	

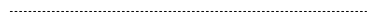

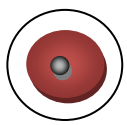
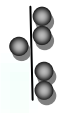
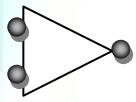


FIG 1: RICH PICTURE DIAGRAM OF THE e-COMMERCE NETWORK MODEL FOR AN SME (Amankwa and Kevor, 2013)



These e3-value concepts described in table 1 are used together with Use Case Maps (UCMs) (Buhr 1998), which show which value exchanges should occur as a result of a consumer need (which we call a start stimulus), or as a result of other value exchanges. These are also summarised in table 2.

TABLE 2: USE CASE MAPS

Concept	Description	Graphical Notation
Scenario Path	A scenario path consists of one or more scenario segment, related by connection elements, start and stop stimuli. A path indicates via which value interfaces objects of value must be exchanged, as a result of a start stimulus, or as result of exchanges via <i>other</i> value interfaces.	 is used to connect scenario segments
Stimulus	A scenario path starts with a start stimulus , which represents a consumer need (in the model, the need for a specific good). The last segment(s) of a scenario path is connected to a stop stimulus . A stop stimulus indicates that the scenario path ends.	start stimulus  Stop stimulus 
Scenario Segment	A scenario path has one or more segments. Segments are used to relate value interfaces with each other (e.g. via connection elements) to show that an exchange on one value interface causes an exchange on another value interface.	
Connection Element	Connections are used to relate individual scenario segments. An AND fork splits a scenario path into two or more sub paths, while the AND join collapses sub paths into a single path. An OR fork models a continuation of the scenario path into one direction that is to be chosen from a number of alternatives. The OR join merges two or more paths into one path. Finally, a value interface itself is seen as a connection element, so it is for instance possible to connect two value interfaces by a scenario segment	AND FORK/JOIN  OR FORK/JOIN 

IMPORTANCE OF THE STUDY

It is not enough to have an e-Commerce idea. It is important to have participating stakeholders buy into the idea. This can be done if there is evidence of its profitability. The e3-value methodology has been used to exploit several e-commerce ideas for their profitability and this paper is no exception. This research also looks at integrating a secondary value object in a form of mobile money which has not been fully modelled in the original e3-value methodology.

STATEMENT OF PROBLEM

There are attempts by researchers to find ways of overcoming barriers to e-Commerce adoption by SMEs in developing countries. Amankwa and Kevor (2013) propose an e-Commerce partnership that overcomes the perceived barriers of SMEs in Ghana. The question now is how to determine whether such partnership is profitable to the participating actors. This paper answers the questions:

1. What are the value activities of the e-Commerce partners in Ghana?
2. How will the profitability of such a partnership be assessed?
3. Are participating actors able to make profit?

OBJECTIVES

The objective of this paper is to identify the value activities performed by participating actors in an e-Commerce partnership for SMEs in Ghana as proposed in Amankwa and Kevor (2013) and to develop an e-3 value model that can be used to assess the profitability of each participating actor.

METHODOLOGY

Using the proposed model in Amankwa and Kevor (2013), the managers of the participating actors were interviewed to elicit for the various value activities the actors perform. The various value exchanges were also identified. The e3-value editor was used to develop a value model that could be used to assess the profitability of the various actors. A case study of a bookshop is selected as a typical SME and based on historical and recent market data, a profitability sheet was then generated for each participating actor.

FINDINGS/RESULTS AND DISCUSSIONS

From the Amankwa and Kevor (2013) e-Commerce model and interviews conducted with various stakeholders, the following actors, their value activities, value objects and exchanges were identified.

The Customer: A customer is identified as an actor. It consumes goods as value objects offered by other actors in the model. The customer also pays for the goods using mobile money. The customer receives the goods directly through a courier service provider. A customer is modelled as a market segment since there could be more than one instance.

The Vendor: The vendor is the SME who has some goods to offer. The vendor pays registration fee to the broker in exchange of a market space on its e-Commerce website. The Vendor is also modelled as a market segment since there are a number of SMEs who may register with the broker. The vendor also pays the courier service provider in exchange of transport service.

The Broker: The broker offers market space on its e-Commerce website to vendors in exchange of registration fees paid by those Vendors. In order to be seen as a trusted website, the broker pays license fees to a certificate authority in exchange of a license. The broker is modelled as an actor for this particular scenario. Over time, there could be more brokers.

The Certificate Authority (CA): The certificate authority is a trusted third party that generates unique security credentials to the broker as a license and receives in return a licence fee from the broker. The CA is modelled as an actor since there is one CA in Ghana now. The National IT Agency is designated by law as the Certificate Authority in Ghana.

The Mobile Network Operator (MNO): The MNO provides mobile money payment services for the payment of goods and services. Vendors and Customers register with MNOs for the mobile money payment services. The MNO takes money from a vendor for each successful mobile money transaction effected by a customer. In Ghana, three MNOs offer mobile money payment services hence they are modelled as a market segment.

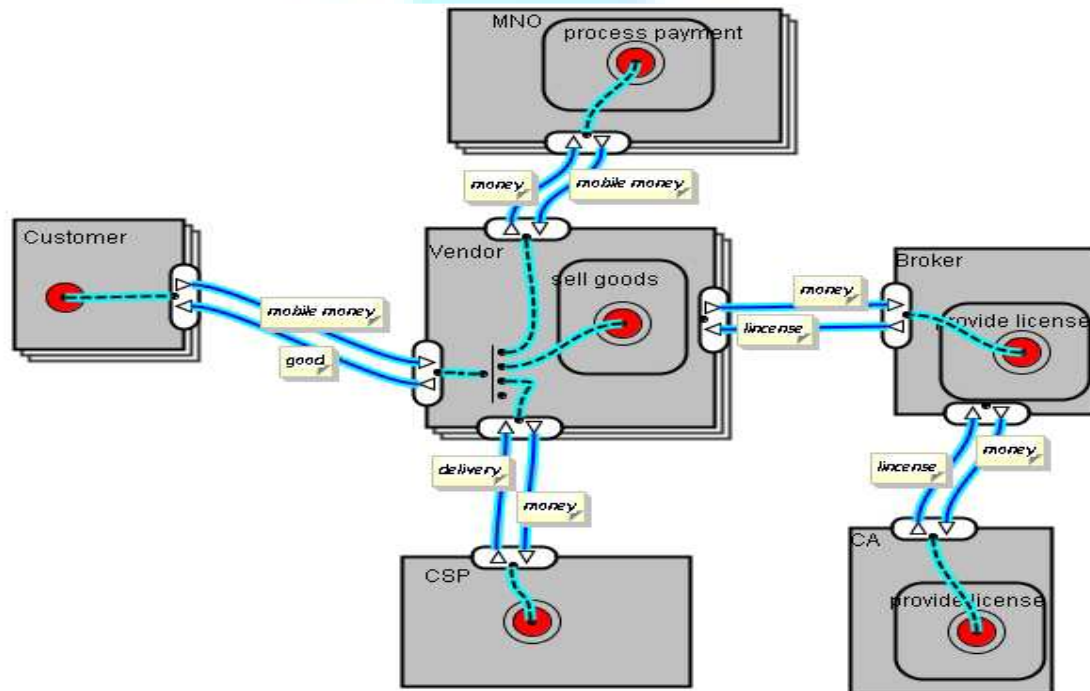
The Courier Service Provider (CSP): The CSP offers delivery service to the customer on behalf of the vendor in exchange of money. The actors, value activities, and value objects are summarised in table 3 below:

TABLE 3: SUMMARY OF ACTORS, VALUE ACTIVITIES AND VALUE OBJECTS

Actor	Value Activity	Value Object out	Value object in
Vendor	sell goods	goods	money
Customer	Buy goods	money	goods
CSP	deliver goods	delivery	money
Broker	provide market space	market space	money
CA	provide license	license	money
MNO	process payment	mobile money	money

The information in table 3 was then used to develop the e3-value model in fig 2 using the e3-value editor.

FIG 2: AN e3-VALUE MODEL OF THE PROPOSED e-COMMERCE IDEA



In the e3-value model in fig 2, there are three scenario Segments. The first is where a CA provides license to a broker in exchange for money (license fee). The second is where a broker provides license to a vendor in exchange for money (license fee). The third is where in a reaction to a start stimulus which is need of a customer for goods, the vendor must supply the goods AND the CSP makes delivery AND there exist a mobile network operator to offer money payment service. The vendor pays the CSP money for delivery and also pays the MNO money for Mobile Money Services. The customer then pays some money in a form of mobile money to the vendor.

PROFITABILITY ANALYSIS

The e3-value model can be used to perform a quantitative profitability analysis which is also part of the e3-value methodology. It is possible to generate for each actor, an expected Net Cash flow based on the value exchanges and the consumer need. Gordijn and Akkermans (2003) discuss more detail the profitability analysis. The Net Cash is calculated as the Cash Value In – Cash Value Out.

THE CASE STUDY

The Challenge bookshop, Abetifi Branch, is selected as a typical case of an SME. Ghana Post’s Express Mail Service is also selected as the CSP and MTN, the Mobile Network Operator. Since the broker concept is still abstract, we rely on a conservative market cost of owning a website in Ghana. It is expected that the actual figure in the conceptual model would be lower since SMEs would share marketplace in the concept. From historical data collected from the participating actors, MTN charges recipients of mobile money 1% of transaction value for every successful transaction. The Challenge bookshop sells on average 80 books a day to customers. The average cost of a book is GHc10.50. Ghana post charges an average GHc6.50 per 0.5g parcel for its EMS service. On average, an SME will pay GHc500.00 per year for a website and an Organization would pay GHc500.00 per year for license from a CA. In the case of the customer, the value of goods consumed is equivalent to the cash given away and therefore has a net cash of zero. Yearly(30 days/month, 12 month/year) Profitability sheet for each of the actors is written in table 4, table 5, table 6, table 7 and table 8. All values are in Ghana Cedis.

TABLE 4: PROFITABILITY SHEET FOR THE CUSTOMER

Exchanged with Actor	Value In	Value Out
Vendor	book	16.50
Net	0	

TABLE 5: PROFITABILITY SHEET FOR VENDOR

Exchanged with Actor	Value In	Value Out
Customer	475,200	Book
Broker	License	500
MNO	mobile money	4,752
CSP	Delivery	187,200
Net	282,748	

TABLE 6: PROFITABILITY SHEET FOR MNO

Exchanged with Actor	Value In	Value Out
Vendor	4,752	mobile money
Net	4,752	

TABLE 7: PROFITABILITY SHEET FOR BROKER

Exchanged with Actor	Value In	Value Out
Vendor	500	licence
CA	license	300
Net	200	

TABLE 8: PROFITABILITY SHEET FOR CA

Exchanged with Actor	Value In	Value Out
Broker	300	license
Net	300	

TABLE 9: PROFITABILITY SHEET FOR CSP

Exchanged with Actor	Value In	Value Out
Vendor	187,200	delivery
Net	187,200	

The gross profit for each actor is given in table 10.

TABLE 10: GROSS PROFIT FOR PARTICIPATING ACTORS

Customer	Vendor	MNO	Broker	CA	CSP
0.00	282,748.00	4752.00	200.00	300.00	187,200.00

It is observed from table 10, that all the actors participating in the model, apart from the customer, makes positive profit. The customer is seen to have made zero profit because he consumes the worth of what he pays for.

CONCLUSIONS AND RECOMMENDATION

This paper proposed an e3-value model for assessing the profitability of each participating actor in the e-commerce model proposed by Amankwa and Kevor (2013) for Ghanaian SMEs. The study elucidated the value activities of the proposed e-commerce model (Amankwa and Kevor e-commerce model, 2013) actors as shown in table 3 above. The result showed that, a vendor's value activity in the model, is to sell goods, a Customer buys goods and a Courier Service Provider (CSP) delivers the goods. A Broker's value activity in the model is to provide the market space, a Certificate Authority to provide licence and a Mobile Network Operator provides payment mechanisms.

The study in its attempt to assess the profitability of such an e-commerce partnership developed an e3-value model with the following actors; vendor, broker, customer, courier service provider, certificate authority and mobile network operator. The e3 model showed the value exchanges between the different actors of the e-commerce model. Data collected through the empirical study for evaluating the profitability levels of the actors also showed that all actors in the model are profitable. Although the e3 model proposed in this research is useful for evaluating the profitability of ecommerce models for possible adoption or rejection, it is also imperative to use the model with care due to its total dependence on the actors.

LIMITATIONS OF THE RESEARCH

This study is limited by the different service charge of the participating actors. For example, there are different service charges for the different Mobile Network Operator providing mobile money as a payment option, and this difference could have a material effect on the profitability analysis proposed in this model. Moreover, a single case study has been used which makes generalization difficult.

SCOPE FOR FURTHER RESEARCH

This study provides a basis for assessing the profitability of e-commerce models for developing countries. The limitations highlighted in the previous paragraph nevertheless uncover potential areas of research. Further research could also be undertaking to extend the model to cover other developing countries without mobile money adoption. A multiple case study approach can be used to enhance generalization of the model. An empirical study is also needed to investigate the factors for successful implementation.

REFERENCES

1. Addo, A. (2012) "The Adoption, Usage and Functions of the Internet and E-Commerce among SMEs in Ghana", International Journal of Business and Management Tomorrow Vol. 2 No. 9.
2. Amoako, A. (2012), "Assessing the Impact of Mobile Commerce (M-Commerce) On Financial Services in Ghana (The Case of Ezi Savings and Loans Limited)", International Journal of Business and Management Cases Vol. 1 No. 1
3. Aryeetey, E., A. Baah-Nuakoh, T. Duggleby, H. Hettige, and W. F. Steel, (1994). "Supply and Demand for Finance of Small Scale Enterprises in Ghana", Discussion Paper No. 251, World Bank, Washington, DC.
4. Boateng, R. Molla, A., Heeks, R. and Hinson, R. (2011). "Advancing E-commerce Beyond Readiness in a Developing Economy: Experiences of Ghanaian Firms", Journal of Electronic Commerce in Organizations, 9 (1) 1-16.
5. Buhr, R.J.A.: Use Case Maps as Architectural Entities for Complex Systems. IEEE Trans. Softw. Eng. 24(12) (1998)

6. Faisal, I.(2012), "Adoption of E-Commerce Solutions in Small and Medium-Sized Enterprises in Ghana", *European Journal of Business and Management*, Vol. 4, No. 10, pp48 – 57.
7. Feeney, L. S. and A. L. Riding, (1997) *Business Owner's Fundamental Tradeoff: Finance and the Vicious Circle of Growth and Control*, Canadian Business Owner, November.
8. Frempong, G (2007) "Trends in ICT Usage by Small and Medium Scale Enterprises in Ghana" *ATDF Journal* (2007) 4 (1) 3-10.
9. Fruhling, A.L. and L.A. Digman. (2000). "The Impact of Electronic Commerce on Business Level Strategies." *Journal of Electronic Commerce Research*, 1(1): 13-22.
10. Ghana Government (2003) *An Agenda for Growth and Prosperity: Ghana Poverty Reduction Strategy (2003-2005)*, Accra
11. Gordijn, J., Akkermans, H.(2001), "E3-value: Design and Evaluation of e-Business Models.", *IEEE Intelligent Systems* 16(4)
12. Hackbarth, G. & Kettinger W.J. (2000) Building an e-business strategy. *Information Systems Management* 17(3), 78-94.
13. Hasan, H. & Tibbits, H. (2000) Strategic management of electronic commerce: An adaptation of the balanced scorecard. *Internet Research*, 10(5), 439-450.
14. Kapurubandara M. and Robyn Lawson, (2006). Barriers to adopting ICT and e-commerce with SMEs in Developing Countries: An Exploratory study in Sri Lanka.
15. Kuan, K.K. Y. & Chau, P.Y.. (2001) "A perception-based model for EDI adoption in small businesses using a technology-organization-environment framework." *Information & Management*, 38(8), 507.
16. Laudon C. Kenneth and Laudon P. Jane. (2006) *Management Information Systems: Managing the Digital Firm: Ninth Edition*.
17. Mahadavan B. (2000). Business models for Internet-based e-commerce. *California Management Review* 42(4): p55–69.
18. Mehrtens, J., Cragg, P.B. & Mills, A.M.. (2001) A model of Internet adoption by SMEs. *Information & Management*, 39(3), 165-176.
19. Osei, B., A. Baah-Nuakoh, K. A. Tutu, and N. K. Sowa, (1993). "Impact of Structural Publications, London. (eds.), *Structural Adjustment, Financial Policy and Assistance Programmes in Africa, IT Adjustment on Small-Scale Enterprises in Ghana*", in Helmsing, A. H. J. and Kolstee, T. H. 228 *International Research Journal of Finance and Economics - Issue 39* (2010).
20. Poon, S. & Swatman, P.M.C. (1997) Small business use of the Internet: Findings from Australian case studies. *International Marketing Review*, 14(4-5), 385-203.
21. Poon, S. (2000) Business environment and internet commerce benefit – a small business perspective. *European Journal of Information Systems*, 9(2), 72-82.
22. Steel. F. and Webster, L. M. (1991), *Small Enterprise under Adjustment in Ghana*; world Bank Technical paper No 138: Washington D.C.
23. Straub, D.W., Hoffman, D.L., Weber, B.W., & Steinfield, C. (2002) Measuring e-commerce in Net-enabled organizations: An introduction to the special issue. *Information Systems Research*, 13(2), 115-124.
24. Turban. E., King D., McKay J., Marshall P., & Lee J., & Viehland D., (2008) *Electronic Commerce: A managerial Perspective* Prentice Hall, (5 ed.).
25. UNIDO (1999) *SMEs in Africa Survive against all odds* http://www.org/doc/view?document_id=3927&language_code=en.
26. Zwass, V., (1996). *Electronic commerce: Structure and Issues*: *International Journal of Electronic Commerce*, 1(1), 3-23.



A STUDY ON PERFORMANCE OF CONSUMER DISPUTES REDRESSAL AGENCIES IN STATE OF HIMACHAL PRADESH

GURLEEN KAUR
ASST. PROFESSOR
GURU NANAK KHALSA COLLEGE
KARNAL

ABSTRACT

This paper attempts to study working and performance of Himachal Pradesh State Consumer Disputes Redressal Commission, Shimla and 4 whole time and 8 part time District Consumer Disputes Redressal Forums working in state. These 4 whole time District Consumer Disputes Redressal Forums are established by Himachal Pradesh Government in Kangra, Mandi, Shimla and Una Districts. Although disposal percentage of cases is satisfactory in both Himachal Pradesh State Consumer Disputes Redressal Commission and District Consumer Disputes Redressal Forums of Himachal Pradesh but, if we talk about disposal of cases with in stipulated time then performance of both Himachal Pradesh State Consumer Disputes Redressal Commission and District Consumer Disputes Redressal Forums of state is poor, which is a area of concern and necessary steps like starting evening shifts ,creation of additional benches and filling vacant post of presidents and members must be done at the earliest to ensure quick justice to consumers.

KEYWORDS

Consumer protection, CPA, CDRA.

INTRODUCTION

Central Government of India enacted Consumer Protection Act,1986 which facilitated setting up Consumer Disputes Redressal Agencies at District, State and National level for providing simple, speedy and inexpensive redressal to aggrieved consumers and according to provisions of this Act, Himachal Pradesh Government has established Himachal Pradesh State Consumer Disputes Redressal Commission in state capital Shimla and four whole time District Consumer Disputes Redressal Forums in four different districts of Himachal Pradesh to ensure speedy justice to aggrieved consumers. Shimla District Consumer Disputes Redressal Forum have jurisdiction over Shimla, Solan, Sirmour and Kinnaur Districts of state. Mandi District Consumer Disputes Redressal Forum have jurisdiction over Mandi, Kullu and Lahaul Spiti Districts of state. Una District Consumer Disputes Redressal Forum have jurisdiction over Una, Hamirpur and Bilaspur districts of state. Kangra District Consumer Disputes Redressal Forum have jurisdiction over Kangra and Chamba Districts of state.

TYPE OF RESEARCH

The present study is descriptive cum exploratory in nature.

OBJECTIVES OF STUDY

It attempts to elaborate the state of affair of the cases filed/disposed of at the Himachal Pradesh State Consumer Disputes Redressal Commission and District Consumer Disputes Redressal Forums working in state of Himachal Pradesh. The study points out various problems being faced by these Consumer Disputes Redressal Agencies and suggest their possible solutions.

RESULTS AND DISCUSSION

TABLE 1.1: STATEMENT OF CASES FILED/DISPOSED OF IN HIMACHAL PRADESH STATE CONSUMER DISPUTES REDRESSAL COMMISSION AND DISTRICT CONSUMER DISPUTES REDRESSAL FORUMS OF HIMACHAL PRADESH (As on 31.12.2012)

Agency	No. of cases filed since inception	No. of cases disposed of since inception				Total No. of pending cases
		Cases Disposed of Within stipulated time	% Cases Disposed of Within stipulated time out of Total cases Disposed of	Total cases Disposed of	%	
State Commission	22576	14884	67.24	22134	98.04	442
District Forums	56918	30626	57.22	53523	94.03	3395

Source: Unpublished records of Himachal Pradesh State Consumer Disputes Redressal Commission (2013)

- Analysis of Table 1.1 shows that 22576 cases were filed since inception till 31.12.12 in Himachal Pradesh State Consumer Disputes Redressal Commission out of which 22134 cases (98.04%) were disposed of till 31.12.12. Statistics shows that only 14884 cases (67.24%) out of total disposed of cases were disposed off with in stipulated time.
- Analysis of Table 1.1 shows that 56918 cases were filed since inception till 31.12.12 in District Consumer Disputes Redressal Forums of Himachal Pradesh out of which 53523 cases (94.03%) were disposed of till 31.12.12. Statistics shows that only 30626 cases (27.70%) out of total cases disposed of cases were disposed off with in stipulated time.
- Although disposal percentage is satisfactory in both Himachal Pradesh State Consumer Disputes Redressal Commission and District Consumer Disputes Redressal Forums of Himachal Pradesh but, if we talk about disposal of cases with in stipulated time then performance of both Himachal Pradesh State Consumer Disputes Redressal Commission and District Consumer Disputes Redressal Forums of Himachal Pradesh is poor which is a area of concern and necessary steps like starting evening shifts, creation of additional benches must be done at the earliest to ensure speedy justice to consumers.
- Government of Himachal Pradesh must establish whole time District Forums in eight districts of state i.e. Solan, Sirmour, Kinnaur, Kullu, Lahaul Spiti, Hamirpur, Bilaspur and Chamba Districts of state.
- Three post of member are vacant in District Consumer Disputes Redressal Forums of Himachal Pradesh. Himachal Pradesh Government must immediately fill these posts to ensure speedy justice to consumers.

CONCLUSION

This paper attempts to study working and performance of Himachal Pradesh State Consumer Disputes Redressal Commission and District Consumer Disputes Redressal Forums working in Himachal Pradesh. Although disposal percentage is satisfactory in both Himachal Pradesh State Consumer Disputes Redressal Commission and District Consumer Disputes Redressal Forums of Himachal Pradesh but, if we talk about disposal of cases with in stipulated time then performance of both Himachal Pradesh State Consumer Disputes Redressal Commission and District Consumer Disputes Redressal Forums of Himachal Pradesh is poor which is a area of concern and necessary steps like starting evening shifts, establishment of whole time District Forums in eight districts of state i.e.

Solan, Sirmour, Kinnaur, Kullu, Lahaul Spiti, Hamirpur, Bilaspur and Chamba Districts of state and filling vacant post of members of District Forums must be done at the earliest to ensure quick justice to consumers.

REFERENCES

1. Mehta, D.S. (1992), "Changing Faces of Indian Consumers", Hindustan Times, May 2, p. 20.
2. Tangade, F. Shrimant and Basavaraj, C. S. (2004), "Awareness and Perception of Educated Consumer about Consumer Protection Laws", Indian Journal of Marketing, April, pp.3-6
3. Unpublished records of Himachal Pradesh State Consumer Disputes Redressal Commission (2013)



A STUDY OF SELECTED ENTREPRENEURIAL DIMENSIONS IN INDIA: AN EXPLORATORY STUDY

JAINENDRA KUMAR VERMA
RAJIV GANDHI NATIONAL FELLOW
DEPARTMENT OF APPLIED ECONOMICS
UNIVERSITY OF LUCKNOW
LUCKNOW

ABSTRACT

This paper is an attempt to explore few selected entrepreneurial dimensions in Indian context. These selected dimensions are need for entrepreneurship and self-employment development, trend in entrepreneurship in India, role of the banks in entrepreneurial development in the liberalized Indian economy, new challenges of entrepreneurship development in India and impact of government policies on entrepreneurship development in India. These dimensions are, of course, not exhaustive, but this paper takes only these dimensions for study. Since entrepreneurship is very complex phenomenon and difficult to accumulate conceptually but practically an entrepreneur have to go through all these dimensions successfully in order to become a successful entrepreneur. This paper is an attempt to build up strong insight among entrepreneurs regarding dimensions under study.

KEYWORDS

Entrepreneurial dimensions, Need for entrepreneurship, Trend in entrepreneurship, Entrepreneurial development, Challenges, Impact of government policies, India

INTRODUCTION

In the contemporary age the economic growth and development of every nation depends upon the capital formation and employment generation. This objective can be best realized by the business activities which usually demand establishment of new business units and activities. This fact demands that new individuals should participate in business activity in a dynamic manner. This action on the part of business people can be termed as entrepreneurship. Usually these people lack background and family support system in terms of business activity. This class of people makes a consistent attempt to identify and develop business enterprise building opportunities. They are first class innovators as their major activity rest upon the novel ideas. In this background the concept of entrepreneurship assumes much importance. This is a comprehensive term which needs a proper definition. According to Knowledge Commission Report, 2008 'entrepreneurship is the professional application of knowledge, skills and competencies and/or of monetizing a new idea, by an individual or a set of people by launching an enterprise *de novo* or diversifying from an existing one (distinct from seeking self employment as in a profession or trade), thus to pursue growth while generating wealth, employment and social good'.¹

Thomas R. Eisenmann of Harvard University has defined in different manner. He has taken its operational aspect as a core of its definition. In his opinion 'the word "entrepreneurship" is elastic. For some, it refers to venture capital-backed startups and their kin; for others, to any small business. For some, "corporate entrepreneurship" is a rallying cry; for others, an oxymoron'.²

Professor Howard Stevenson is revered as the godfather of entrepreneurship studies at level of scholarship in United States. Many leading universities including Harvard Business School have based their teaching programme upon his definition and research work. According to Stevenson, '*entrepreneurship is the pursuit of opportunity beyond resources controlled*'.³

If these definitions are analyzed it becomes clear that entrepreneurship is a modern, novel active phenomenon in which its practitioners play an important role. Entrepreneurs are risk takers. They are people who recognize well the Strengths, Weaknesses, Opportunities and Threats (SWOT) of a business/enterprise building opportunity. Their decisions are based on better information and experience than an average observer. What is perceived as risky by others may not be as great a risk to those who have more information.

Entrepreneurs are 'free thinkers' which implies a combination of a large element of creativity coupled with experience, the knowledge of economic, social, psychological and demographic trends, plus the experience base for comparison and being comfortable with new technology and change. They are also the visionary. They are people with business acumen and have the capacity to analyze the future trends and opportunities. Their heuristic sense is much advanced.

OBJECTIVES OF THE STUDY

- To explore the need for entrepreneurship and self-employment development.
- To explore the trend in entrepreneurship in India.
- To explore role of the banks in entrepreneurial development in the liberalized Indian economy.
- To explore new challenges of entrepreneurship development in India.
- To explore impact of government policies on entrepreneurship development in India.

METHODOLOGY

The paper is an attempt to explore selected entrepreneurial dimensions. It's an exploratory research where entrepreneurial dimensions have been studied in objective manner to give insight to the phenomenon.

NEED FOR ENTREPRENEURSHIP AND SELF-EMPLOYMENT DEVELOPMENT

There is a great debate about the utility of entrepreneurship. In every country, academic, research and teaching institutions at present pay much premium to this development. If analyzed there are multiple benefits of entrepreneurship.

GOVERNMENT'S INTEREST

To meet several socio economic needs, the government of India is evincing lot of interest in the Entrepreneurship Development Programmes (EDPs). With this many people gets employment and capital formation is increased. In USA the government has taken this task among the people who have developed certain disabilities. These people not only help the US economy to grow but also help these people to lead a good, satisfying life. US governments agencies as 'ODEP encourages and supports self-employment and entrepreneurship among individuals with disabilities and has helped foster an array of partnerships at the Federal, state and local levels to encourage access to funding and resources to assist individuals with disabilities interested in these alternatives to traditional employment'.⁴

TO REMOVE REGIONAL DISPARITIES

With more facilities available in urban areas, there will be on the part of entrepreneurship start enterprises and around big cities, causing migration of rural manpower. This creates an imbalance in growth of urban and rural areas.

ADVANTAGES TO ENTREPRENEURS

There are many advantages to those who are involved in this activity. They have better view of life and are more comfortable with the problems arising in their life and environment. 'In a paper titled "Life satisfaction and self-employment: a matching approach", Alex Coad and Martin Binder showed, using a 10-year panel dataset from the UK, that entrepreneurs (the self-employed) enjoyed significantly higher life satisfaction than people who were in wage employment. "In our analysis we found that individuals moving from regular employment into self-employment experience a positive and significant increase in life satisfaction, which actually increases from the first year of self-employment to the second."⁵

In similar fashion in a paper on "Determinants of job satisfaction: a European comparison of self-employed and paid employees", José María Millán and co-authors confirm that entrepreneurs enjoy greater job satisfaction in terms of work than salaried employees, "Self-employment has advantages in providing autonomy as compared to paid employment. Self-employed individuals are in charge and therefore capable of (re)defining their work, suggesting that introducing entrepreneurial aspects (i.e., autonomy, independence, etc.) to paid employed jobs may help to increase the job satisfaction of paid employees with their respective type of work."⁶

INCREASE IN NATIONAL PRODUCTION

National Production is mainly to cater to the local and external needs. India's competitive advantage in manufactured goods such as chemical product, handicraft, textiles etc is significant. In this decade electronic, processed food and mineral based items are presenting tremendous opportunities in export generation. With the development of entrepreneurs, there will be an overall increase in production and productivity both for internal and international market. The role of entrepreneurship has been recognized in case of South East Asian Countries. Research has been conducted at the comparative level in between the developing countries and the South East economies. The positive role of the entrepreneurship has widely been recognized in both areas. 'Recent developments in South East Asia have already shown other third World Countries like Nigeria that a nation's progress and economic development is not essentially constrained by the levels of natural resources it possesses, but by the human capacity and capability in responding to challenges in the environment. The Asia Tigers have developed and equipped their human assets with orientation and capacity for spontaneous responses to opportunities of wide ranging patterns both near and far. Because of appropriate entrepreneurial education, training and development, right from childhood every six out of ten people in Indonesia are entrepreneurs. The truth is that entrepreneurship has become a culture of that country and indeed all the Asian Tigers. That is why their economies is the fastest growing and developing ones in the world today. Consequently, entrepreneurship development has equipped the Asian Tigers with the competencies of turning their economies to very dynamic ones for national development. For Nigeria and other sub-Saharan Africa countries to move into the club of great and dynamic economies, there must be massive evangelistic entrepreneurial training and development."⁷

TREND IN ENTREPRENEURSHIP IN INDIA

Our current educational system has adopted western pattern and it still remains un-acclimated to the Indian Socio-Political fiscal environment. India needs much skill development in entrepreneurship. 'The salience of Entrepreneurship in India has intensified in recent times, particularly with the rise in knowledge-intensive services. New entrepreneurs who do not belong to traditional business communities have begun to emerge in large numbers. Entrepreneurship has grown rapidly, visibly so, creating wealth and generating employment, especially in the past twenty years. Crucial efforts initiated after economic liberalization — including systematic attempts to reduce the 'License Raj', greater efforts to make finance more easily accessible to entrepreneurs and other institutional support to 'techno-preneurs'— have helped improve the climate for Entrepreneurship."⁸

ROLE OF THE BANKS IN ENTREPRENEURIAL DEVELOPMENT IN THE LIBERALIZED INDIAN ECONOMY

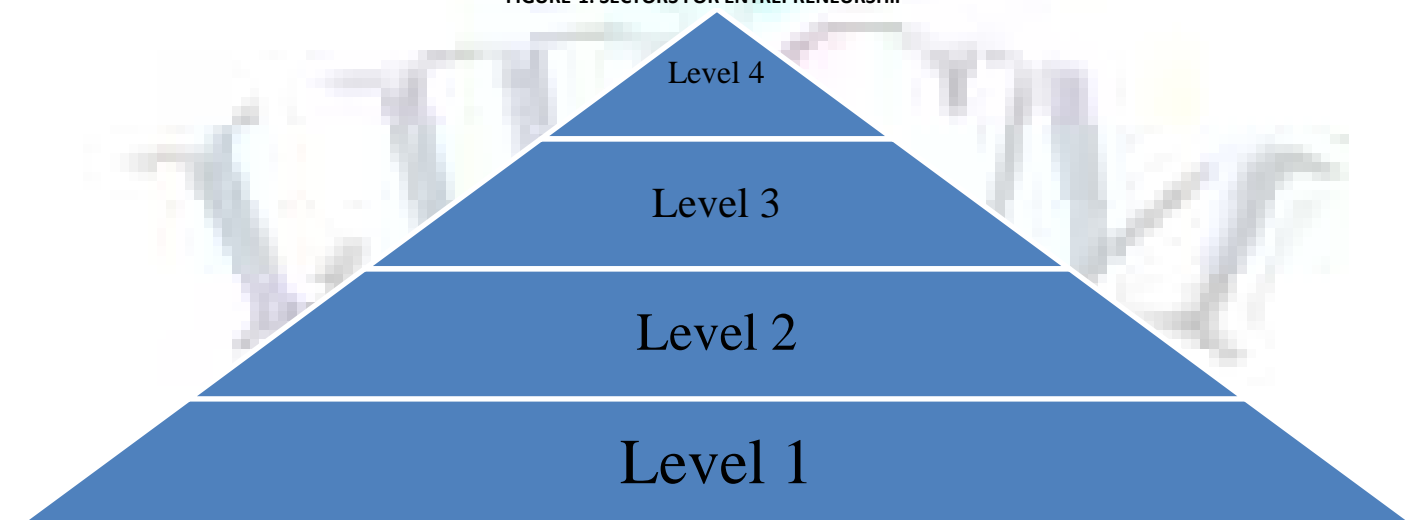
Indian banking industry has been going phase through rapid changes about by financial sector reforms which are being implemented phased manner. The year 1992-93 was marked by another historical phase in the development of banking in the country. Implementation of the financial sector reforms on the lines suggested by Narasimhan committee in phased manner has already made the Indian banks to reorient their operations to manage the challenges which are full of challenges.

NEW CHALLENGES OF ENTREPRENEURSHIP DEVELOPMENT IN INDIA

In India in most developing countries, only a fraction of new jobs can be employed in agriculture. Due to scarcity of capital in industry, it is not possible to create new jobs equal to the increase of unemployment. The government of India has taken many steps to solve the problem of unemployment. An entrepreneur has to face many crises during the life time of his business like that cash crises, leadership crises, prosperity crises, financial crises. There is a great need of solve this many type problem.

If an analysis is to be made to identify the structure of entrepreneurship development in the country, then it may be revealed in 'the Entrepreneurship 'Pyramid' in India (in terms of sectors and numbers of people engaged) which is made up of the following:

FIGURE-1: SECTORS FOR ENTREPRENEURSHIP



Note: Area of the pyramid section represent weight of that sector.

Where,

Level 1: Agriculture and other activities: Crop production, Plantation, Forestry, Livestock, Fishing, Mining and Quarrying.

Level 2: Trading services: Wholesale and Retail trade, Hotels and Restaurants.

Level 3: Old economy or traditional sectors: Manufacturing, Electricity, Gas and Water supply.

Level 4: Emerging sectors (including knowledge intensive sectors): IT, Finance, Insurance and Business services, Construction, Community, Social & Personal Services, Supply Chain, Transport-Storage-Communications etc.⁹

These sectors have potential to develop as new centre and hubs of entrepreneurship development but government, financial institutions support is primary requirement in this activity.

IMPACT OF GOVERNMENT POLICIES ON ENTREPRENEURSHIP DEVELOPMENT IN INDIA

The government of India has been planning various schemes and policies to develop the favorable environment for the new entrepreneurs in India from time to time. The result of these economic policy interventions is very favorable. Liberalization in Indian industry has given a big boost to new entrepreneurship by various rules. By globalization of business, there are better prospects for Indian entrepreneurs to expend their business in the international market. Multinational companies will require a large number of units for their operation which will provide the opportunities to the new entrepreneurs. Government of India has initiated many programmes for this purpose and major focus has been in the field of small and medium level industries where entrepreneurship is being mainly emphasized. 'World over, Micro and Small Enterprises (MSEs) are recognized as an important constituent of the national economies, contributing significantly to employment expansion and poverty alleviation. Recognizing the importance of micro and small enterprises, which constitute an important segment of Indian economy in terms of their contribution to country's industrial production, exports, employment and creation of entrepreneurial base, the Central and state Governments have been implementing several schemes and programmes for promotion and development of these enterprises. Among the six basic principles of governance underlying the National Common Minimum Programme (NCMP) of the Government, "sustained economic growth in a manner that generates employment" has a pride place. The NCMP also describes the MSEs as "the most employment-intensive segment".¹⁰

CONCLUSION

The economic reform of Indian government has given new turn to the development of new entrepreneurship. The globalization and opening up the economy and liberalization policy has the scope of entrepreneurship in domestic market as well as International market. In order to develop the Indian economy in the modern world it is very essential to promote the concept of self-employment rather than the wage employment. In addition to the various schemes having been planned by the Government, its implementation in true spirit need further deliberation. On the part of executive organization and various other institutions, there may be the requirement of separate private government organization to deal with the entrepreneurship development moment in India.

REFERENCES

1. Annual Report, National Knowledge Commission, 2008, Govt. of India
2. Annual Report, National Knowledge Commission, 2008, Govt. of India
3. Ibid
4. Ibid
5. Ibid
6. O. J. K. Ogundele, Entrepreneurship And National Development: A Proposal For Evangelistic Agenda, European Scientific Journal, Vol. 8, No.6, March,2011
7. Self-Employment And Entrepreneurship, ODEP, US Governments Office of Labour, Government of USA
8. Support for Entrepreneurial and Managerial Development of SMEs: Through Incubators, A Policy Statement By Office of The Development Commissioner (MSMEs) Ministry of Micro, Small & Medium Enterprises, Government of India
9. Thomas R. Eisenmann, Entrepreneurship: A Working Definition, Harvard Business Review, January 10, 2013
10. Wim Naude, Happiness and entrepreneurship: New Research Insights, UN University Research Publication, 3rd May 2012

REQUEST FOR FEEDBACK

Dear Readers

At the very outset, International Journal of Research in Commerce, IT and Management (IJRCM) acknowledges & appreciates your efforts in showing interest in our present issue under your kind perusal.

I would like to request you to supply your critical comments and suggestions about the material published in this issue as well as on the journal as a whole, on our E-mail i.e. infoijrcm@gmail.com for further improvements in the interest of research.

If you have any queries please feel free to contact us on our E-mail infoijrcm@gmail.com.

I am sure that your feedback and deliberations would make future issues better – a result of our joint effort.

Looking forward an appropriate consideration.

With sincere regards

Thanking you profoundly

Academically yours

Sd/-

Co-ordinator

ABOUT THE JOURNAL

In this age of Commerce, Economics, Computer, I.T. & Management and cut throat competition, a group of intellectuals felt the need to have some platform, where young and budding managers and academicians could express their views and discuss the problems among their peers. This journal was conceived with this noble intention in view. This journal has been introduced to give an opportunity for expressing refined and innovative ideas in this field. It is our humble endeavour to provide a springboard to the upcoming specialists and give a chance to know about the latest in the sphere of research and knowledge. We have taken a small step and we hope that with the active co-operation of like-minded scholars, we shall be able to serve the society with our humble efforts.

Our Other Journals

