

INTERNATIONAL JOURNAL OF RESEARCH IN COMPUTER APPLICATION & 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 2718 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.	IMPACT OF THE URBAN INFORMAL SECTOR IN THE URBAN RESIDENTIAL PROPERTY MARKET <i>MOHAMMED YAHAYA UBALÉ, DAVID MARTIN & DR. SEOW TA WEE</i>	1
2.	COMPARISON OF PCA AND LDA BASED FACE RECOGNITION TECHNIQUE IN NOISY ENVIRONMENT <i>MEETA DUBEY & PRASHANT JAIN</i>	9
3.	A STUDY ON WORKER'S EMOTIONAL INTELLIGENCE IN SIPCOT INDUSTRIAL ESTATE, RANIPET <i>REV. FR. ANGELO JOSEPH, SDB, R. VEERAPPAN, A. STEPHENRAJ, L. MARY EZHILARASI & A. ANTONY MUTHU</i>	14
4.	TERRORISM: A BIG THREAT FOR TELECOM AND INTERNET BASED COMMUNICATION <i>VISHAL KAUSHIK, DR. AVINASH GAUR & DR. ASHISH MANOHAR URKUDE</i>	18
5.	STUDY OF PERCEPTIONS OF INDIVIDUAL INVESTORS TOWARDS INVESTMENT <i>DR. KANCHAN NAIDU & HETAL GAGLANI</i>	23
6.	A STUDY ON TRAINING NEEDS FOR EXECUTIVES IN SMALL AND MEDIUM ENTERPRISES AT SALEM DISTRICT <i>S. SUSENDIRAN, DR. T. VETRIVEL & M. CHRISTOPHER</i>	28
7.	NONFINANCIAL REWARD SYSTEM IN NIGERIAN PUBLIC AND PRIVATE ORGANISATIONS <i>DR. A. M. ABU-ABDISSAMAD</i>	32
8.	WORKING CAPITAL EFFICIENCY AND CORPORATE PROFITABILITY: EMPIRICAL EVIDENCE FROM INDIAN AUTOMOBILE INDUSTRY <i>DR. A. VIJAYAKUMAR</i>	35
9.	EFFECTIVENESS OF RESPONSIBILITY ACCOUNTING SYSTEM OF THE ORGANIZATIONAL STRUCTURE AND MANAGER'S AUTHORITY <i>ALI AMIRI, HOJJATALLAH SALARI, MARYAM OMIDVAR & JACOB THOMAS</i>	44
10.	A STUDY ON APPLICATION OF DATA AND WEB MINING TECHNIQUES TO ENRICH USER EXPERIENCE IN LIBRARIES AND ONLINE BOOK STORES <i>A. PAPPU RAJAN, DR. G. PRAKASH RAJ & ROSARIO VASANTHA KUMAR.P.J</i>	47
11.	IMPACT OF SIX SIGMA IMPLEMENTATION: A CASE STUDY OF A PHARMACEUTICAL COMPANY <i>N. VENKATESH & DR. C. SUMANGALA</i>	51
12.	A STUDY ON EVALUATING THE EFFECTIVENESS OF TUTORIAL PROGRAMS IN QUANTITATIVE TECHNIQUES <i>DR. ROSEMARY VARGHESE & DEEPAK BABU</i>	54
13.	PROFITABILITY ANALYSIS OF REGIONAL RURAL BANKS IN INDIA: WITH SPECIAL REFERENCE TO WESTERN REGION <i>DR. KAUSHAL A. BHATT</i>	59
14.	A SMALL TRIBUTE TO COMPUTER LEGENDS WHO MADE AN IMPACT ON THE COMPUTER INDUSTRY AND PASSED AWAY IN THE YEAR 2011 <i>PRITIKA MEHRA</i>	65
15.	A STUDY ON MANAGERIAL EFFECTIVENESS <i>ANITHA R & M.P.SARAVANAN</i>	68
16.	COMPARATIVE STUDY ON TALENT MANAGEMENT PRACTICES <i>DR. D. N. VENKATESH</i>	76
17.	REVIEW AND CLASSIFICATION OF LITERATURE ON RURAL CONSUMERS' BUYING BEHAVIOUR FOR MOBILE PHONE IN INDIA <i>CHIRAG V. ERDA</i>	87
18.	MOBILE BANKING IN INDIA: OPPORTUNITIES & CHALLENGES <i>DR. P. AMARAVENI & K. PRASAD</i>	92
19.	THE STUDY OF RELATIONSHIP BETWEEN REFINED ECONOMIC VALUE ADDED (REVA) AND DIFFERENT CRITERIA OF THE RISK ADJUSTED RETURN <i>MOHAMMAD NOROUZI & MAHMOUD SAMADI</i>	97
20.	ONLINE SHOPPING: A NEW TREND OF SHOPPING BEHAVIOUR <i>SANTHOSH J & ANU VARGHESE</i>	101
21.	IMPLEMENTATION OF PCA WITH SVD TO REDUCE PRECISION LOSS <i>AMITPREET KOUR & RAMANDEEP KAUR</i>	104
22.	AN ASSESSMENT OF UNIVERSITY-INDUSTRY RELATIONS FOR COLLABORATIVE TECHNOLOGY TRANSFER: THE CASE OF INSTITUTE OF TECHNOLOGY OF BAHIR DAR AND TECHNOLOGY FACULTY OF GONDAR UNIVERSITY <i>TADESSE MENGISTIE</i>	108
23.	DEMARKETING: A CREATIVE THINKING <i>ANITA KUMARI PANIGRAHI</i>	113
24.	A REVIEW OF ISLAMIC BANKING AND CURRENT ISSUES AND CHALLENGES FACED BY ISLAMIC BANKS ON THE WAY TO GLOBALIZATION <i>UZMA FAZAL, SALMA TARIQ, MUHAMMAD MUMTAZ, MUHAMMAD NAEEM, JUNAID ABBAS & MADIHA LATIF</i>	118
25.	THE IMPACTS OF PRODUCTIVE MARKETING COMMUNICATION ON EMERGING MARKET <i>LOO LAE SYEE, TAN KAI HUN, VIVIAN LEONG & RASHAD YAZDANIFARD</i>	124
26.	HP SUSTAINABILITY AS COMPETITIVE ADVANTAGE <i>RIDHI GUPTA</i>	129
27.	ELECTRONIC HEALTH RECORD IMPLEMENTATIONS AROUND THE WORLD <i>DIANA LÓPEZ-ROBLEDO & SANDRA SANTOS-NIEVES</i>	132
28.	FOREIGN DIRECT INVESTMENT (FDI): AN OBSERVATION ABOUT TOURISM INDUSTRY IN INDIA <i>SANDEEP KUMAR, RAJEEV SHARMA & NAVEEN AGGARWAL</i>	137
29.	A SYSTEMATIC APPROACH FOR DETECTION AND COST ESTIMATION OF CLONING IN VARIOUS PROGRAMMING LANGUAGES <i>ANUPAM MITTAL</i>	142
30.	INTELLIGENT SCADA FOR HOME APPLICATION <i>S. R. KATKAR</i>	147
	REQUEST FOR FEEDBACK	151

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

DR. SAMBHAV GARG

Faculty, Shree Ram Institute of Business & Management, Urjani

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. S. L. MAHANDRU

Principal (Retd.), Maharaja Agrasen College, Jagadhri

EDITOR

PROF. R. K. SHARMA

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

EDITORIAL ADVISORY BOARD

DR. RAJESH MODI

Faculty, Yanbu Industrial College, Kingdom of Saudi Arabia

PROF. PARVEEN KUMAR

Director, M.C.A., Meerut Institute of Engineering & Technology, Meerut, U. P.

PROF. H. R. SHARMA

Director, Chhatrapati Shivaji Institute of Technology, Durg, C.G.

PROF. MANOHAR LAL

Director & Chairman, School of Information & Computer Sciences, I.G.N.O.U., New Delhi

PROF. ANIL K. SAINI

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

PROF. R. K. CHOUDHARY

Director, Asia Pacific Institute of Information Technology, Panipat

DR. ASHWANI KUSH

Head, Computer Science, University College, Kurukshetra University, Kurukshetra

DR. BHARAT BHUSHAN

Head, Department of Computer Science & Applications, Guru Nanak Khalsa College, Yamunanagar

DR. VIJAYPAL SINGH DHAKA

Dean (Academics), Rajasthan Institute of Engineering & Technology, Jaipur

DR. SAMBHAVNA

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

DR. MOHINDER CHAND

Associate Professor, Kurukshetra University, Kurukshetra

DR. MOHENDER KUMAR GUPTA

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

DR. SAMBHAV GARG

Faculty, Shree Ram Institute of Business & Management, Urjani

DR. SHIVAKUMAR DEENE

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

DR. BHAVET

Faculty, Shree Ram Institute of Business & Management, Urjani

ASSOCIATE EDITORS

PROF. ABHAY BANSAL

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

PROF. NAWAB ALI KHAN

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

ASHISH CHOPRA

Sr. Lecturer, Doon Valley Institute of Engineering & Technology, Karnal

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>

MOBILE BANKING IN INDIA: OPPORTUNITIES & CHALLENGES

DR. P. AMARAVENI
ASST. PROFESSOR
SCHOOL OF BUSINESS MANAGEMENT
KAKATIYA UNIVERSITY
WARANGAL

K. PRASAD
RESEARCH SCHOLAR
DEPARTMENT OF COMMERCE & BUSINESS MANAGEMENT
KAKATIYA UNIVERSITY
WARANGAL

ABSTRACT

Mobile banking certainly seems to be one of the biggest innovations along with CBS (Core Business System) and ATM in the field of banking and this will have a long lasting effect on how banking business is conducted. Automation of some routine work processes in banks in the mid-80's has moved on and resulted in business process re-engineering culminating in making banking services branchless, anytime and anywhere, facilitated new product development and enabled near real time service delivery. CBS and ATMs have enabled banks to provide banking services 24x7x365 but not really helped in expanding their reach to the unbanked or reach to the customer wherever she/he. At the end of January 2012 the total wireless subscriber base was 936 million out of which, 313 million subscribers were from rural areas. Even ATM and Internet banking have their limitations when it comes to penetration in rural areas. Mobile as a technology, which is low cost, ubiquitous and efficient with a potential to enable achievement of the goal of deeper financial inclusion, has been recognised across the world. Any system has certain minimum features to attract customers and keep them engaged in the long run, such features are easy of use, safety and security, accessibility and affordability. Mobile Banking meets all these requirements but still the usage is nowhere near its potential.

KEYWORDS

Mobile Banking, Information and Communication Technology (ICT), Mobile Network Operation (MNO), Core Banking System (CBS).

INTRODUCTION

Mobile banking is simply performing bank transactions such as balance checks, account transactions, payment with help of mobile phone. It can also be understood as availing banking and financial services with the help of mobile telecommunication device. The scope of services offered in mobile banking may include getting account information, transferring funds, sending checkbook request managing deposits, taking quick check of transactions and so on. Mobile banking today is most often performed by SMS (Short Message Service) so that it is also known as SMS banking. The very feature of mobile banking 'Anytime- Anywhere Banking' is making it very popular among all the categories. Using mobile phone very common.

In India traditional branch-based banking remains the most widely adopted method of conducting banking transaction, at same time commercial banks are undergoing a rapid change by the information & telecommunication (ITC) technology. ICICI bank pioneered in mobile banking services in India. Among public banks, Union Bank of India was first to introduce mobile banking (Ali et al. 2010). Today many commercial banks have launched mobile banking using ITC technology and now they can reach out to customers and provide them with not only general information about its services but also the opportunity of performing interactive retail banking transactions anytime, anywhere. Mobile Banking refers to provision and availing of banking and financial services with the help of mobile telecommunication devices. The offered services may include facilities to conduct bank transactions, to administer accounts and to access customized information. In the broader sense mobile banking as that type of execution of financial services in the course of which - within an electronic procedure - the customer uses mobile communication techniques in conjunction with mobile devices (Pousttchi and Schurig 2004). Around 1.72 crore people are using mobile banking services in the country and private bank HDFC Bank has the largest number of such customers. As on October 2012, nearly 1.72 crore customers are utilising the Mobile Banking Services among the 42 banks which provide the facility, Finance Minister P. Chidambaram said in a written reply to the Lok Sabha. According to the list, private sector bank HDFC tops with 88.88 lakh customers are using mobile banking services.

OBJECTIVE OF THE STUDY

- 1). To study the need for mobile banking services in India.
- 2). To discuss the customised mobile banking products in India.
- 3). To analyse the current issues in the mobile banking landscape.
- 4). To draw conclusions from the study of mobile banking services in our country.

In olden days getting draft for outstation payment is cumbersome and clearing used to take a lot of time, outstation cheques would take all the more time, reconciliation and maintaining books by the bank branches would require additional manpower and customers were never satisfied. During the last one decade, things have changed at a rapid pace and all because of technology. The initial steps of tapping technology came in the form of adoption of the core banking systems (CBS) which led to near collapse of geographical location of parent branch. Today most of the customers tapping the technology led internet banking and interconnected ATM network to transact the business desktop PCs became our anytime bank branches. Then came the next revolution - mobile banking which added anywhere to the truly anytime banking. Weaning the customer from physical banking and building customer awareness and confidence in these non face-to-face modes of banking has been a herculean task for the banking industry. In this exciting and challenging journey, the Reserve Bank, as a pro-active regulator, has defined enabling policies and, at times, has goaded the industry in achieving the desired results. The Governments, both at the central and the state levels, have also been taking measures in encouraging electronic payments and receipts, such as, electronic money transfers and e-mode of transactions for their receipts and payments.

NEED FOR MOBILE BANKING

Technology adoption has changed the face of banking in India. What started as a mere automation of some routine work processes in banks in the mid 80's has moved on and resulted in business process re-engineering is making banking services branchless, anytime and anywhere, facilitated new product development and enabled near real time service delivery. Technology helped banks to reach the doorsteps of the customer by overcoming the limitations on geographical/ physical reach in branch banking and easing the resource and volume constraints mobile banking will as an important part of the business but also rapidly evolving channel to deliver better customer service, expand product range, retain market-share, enhance revenue, drastically reduce operating expenses and above all remain socially relevant without sacrificing sustainability in ICT based financial inclusion plans.

Mobile banking occupy an important place in banking and in a very short time and is expected to provide much needed platform for taking banking to the unbanked masses. Mobile banking certainly seems to be one of the biggest innovations along with CBS and ATMs in the field of banking and this will have a long lasting effect on how banking business is conducted. CBS and ATMs provided banks the much needed technological fill up to break the shackles of branch banking architecture. CBS and ATMs have enabled banks to provide banking services 24x7x365 but have not really helped in expanding their reach to the unbanked or reach to the customer wherever he/she is. One tends to concur with the view of many academicians and practitioners that this limitation can be overcome to a large extent by leveraging the mobile phone enabled banking or mobile banking. We must see it as the *giant leap* of the banking industry – leveraging technology to promote anytime and anywhere banking and more deeper and sustainable financial inclusion.

GUIDELINES ISSUED BY RBI

Recognizing the potential of mobile banking, Reserve Bank of India issued the first set of guidelines in October 2008. The guidelines defined mobile banking as undertaking banking transactions using mobile phones by bank customers that would involve credit/debits to their accounts. This definition in a sense provided larger canvas to mobile payments which in a narrow sense involved only payment made for a product or service using the mobile phone either remotely or at the point of sale (PoS). These guidelines, which were very broad-based, laid down the technology and security standards pertaining to safety, confidentiality, integrity, authenticity and non-repudiability. As this was a nascent technology and, to build up customer confidence in terms of minimizing frauds, the Reserve Bank mandated that all transactions should be encrypted irrespective of the value. The Reserve Bank also made inter-operability a cornerstone of its policy. After the initial set of guidelines, several policy relaxations have been made to further encourage the use of mobile banking taking into account changing economic environment and feedback of the industry and customers. Some of the significant norms were shown in Appendix-1

Restricted Financial institutions: The guidelines state that only existing financial institutions and banks are allowed to offer mobile banking. Although the guidelines cover Microfinance Institutions (MFIs). Significant economies of scale cannot be achieved by these due to existing large fixed costs. For a very expensive solution, it would have been more effective to allow non-profit organisations or evangelical organisations to build their own MFI without being encumbered by large existing infrastructure.

Rupee transactions: All transactions must be done only in India's national currency, the rupee. While this may not be a threat in the beginning, this may pose a constraint for interoperability between Indian mobile payments and the world. Also it excludes providers from the lucrative remittance market in India and limits areas from which mobile operators can be profitable.

Existing account holders: The guidelines also states that only those have valid account would be allowed mobile banking to the large number of unbanked customers in India.

The growth in mobile banking is rapid but yet to reach the critical mass. It should provide payment services at a cheaper, secure and seamless manner to the existing and potential customers. It is becoming the next wave of financial and technological innovation in banking by universalizing access to banking service without jeopardizing prudential and regulatory framework of the financial sector.

GROWTH OF MOBILE BANKING

In India where a majority of population still lives in rural areas that do not have presence of formal banking and providing banking facility has been a major challenge. Of the 0.6 million villages in India, the total number of villages with banking services through brick and mortar branches and alternate banking channels stands at approximately 0.14 million villages as at end March 2012. India has the highest number of households (approximately 145 million) who are excluded from banking. However, with the growing reach of the mobile, it has now become possible to provide the banking facilities to people who were not able to enjoy this facility so far. At the end of January 2012, the total wireless subscriber base was 936 million out of which, 313 million subscribers were from rural areas. Use of mobile banking services among this huge base of subscribers is, however, very low. Even amongst the existing bank customers less than one percent of them are covered under the mobile banking services. Notwithstanding the existing low base of customers, the growth in mobile banking transactions has shown increasing trend. For example, in the month of June 2012, 3.43 million transactions amounting to ₹3067.10 million were processed as compared to 1.41 million transactions amounting to ₹984.66 million processed in June 2011 - an increase of about 143 per cent in volume and approximately 211 per cent in value terms. It is, however, evident that the potential of mobile banking technology is yet to be fully exploited.

TABLE 1: TOTAL NUMBER OF WIRELESS SUBSCRIBERS IN INDIA

Year	Rural subscribers	Urban subscribers	Total subscribers
Upto June 2012	313 million	623 million	936 million

(Source: Speech of RBI Deputy Governor Harun. R. Khan)

TABLE 2: MOBILE BANKING TRANSACTIONS IN INDIA

Year	Number of transactions	Amount of transaction in Rs.
Upto June 2011	1.41 million	984.66 million
Upto June 2012	3.43 million	3067.10 million

(Source: Speech of RBI Deputy Governor Harun. R. Khan)

Another potential factor that has attracted all the stakeholders including policy-makers to this innovative technology is the lower cost associated with this model in providing banking services both amongst existing customers and in taking banking to the hinterland as well. According to a study, mobile banking based transaction costs about two per cent of the branch banking cost, 10 per cent of the ATM based transaction cost and 50 per cent of the internet banking cost. The main reason for non-availability of banking to a large part of our population is the limited economic viability of the branch banking. Even ATMs and internet banking have their limitations when it comes to penetration in rural areas. Recent guidelines on deployment of White Label ATMs (WLAs) has a very distinct slant towards the deployment of ATMs in the smaller tier 3 to 6 centres. Notwithstanding this, the Reserve Bank, given its constant endeavour to link every citizen of the country with the formal financial system, is keen to expand mobile banking penetration. With the availability of the mobile with almost every household, it has now become possible to make the giant leap to a reality by providing everybody with banking services including payment services. The potential of mobile banking is also underscored by the fact that the consumers are conveniently placed in terms of using the product anytime anywhere and could develop ease of using the product once they are made aware of the same.

PRODUCTS OFFERED BY MOBILE BANKING

The generic definition of mobile banking involving credit/debit to the account of the customer using mobile has been customized in India to provide two rather unique services. These are the Inter-bank Mobile Payment System (IMPS) and the Mobile linked Kisan Credit Card (m-KCC).

Inter-bank Mobile Payment System (IMPS) - mobile based remittance system

The IMPS is a mobile based remittance system which is inter-bank in nature and is owned and operated by the National Payment Corporation of India (NPCI). The IMPS facilitates access to banks accounts and transfer of funds through mobile phones. The system, launched in November 2010, provides real time transfer of funds between the customers of different banks on 24x7 basis. In other words, funds can be transferred any time to the beneficiary who receives the funds instantaneously and both the sender and receiver get the confirmation of debit and credit. 50 banks have started providing IMPS services to their customers so far and as at the end of July 2012, banks have issued 36.32 million Mobile Money Identifiers (MMIDs) to their customers.

Mobile linked Kisan Credit Card (m-KCC)

The mobile linked Kisan Credit Card (m-KCC) launched by NABARD on a pilot basis on October 2, 2011 in Villupuram district of Tamil Nadu for the farmers having KCC accounts with the Pallavan Grama Bank (an RRB sponsored by the Indian Bank). The m-KCC using mobile technology enables farmers to carry out purchase

of agricultural inputs in a cash-less manner. All transactions are carried out through mobile phones of farmers and vendors registered with the bank and the technical service provider (TSP). The transaction is performed through a combination of a secured SIM card and a PIN using an interactive voice recording/SMS system. This enables the farmers to buy agriculture inputs by putting through the transactions through a mobile phone enabled system linked to the banks CBS. NABARD is now encouraging banks, in particular the RRBs, to use this pilot for extending mobile based KCCs to the farmers.

MODELS OF MOBILE BANKING

Models of branchless banking can be classified into three categories. They are explained as follows.

1. Bank-focused model: The bank-focused model emerges when a traditional bank uses non-traditional low cost delivery channels to provide banking services to its existing customers.
2. Bank-led model: The bank-led model offers a distinct alternative to conventional branch-based banking in that customer conducts financial transactions at a whole range of retail agents (or through mobile phone) instead of at bank branches or through bank employees.
3. Non Bank-led model: The non bank-led model is where a bank does not come into the picture (except possibly as a safe-keeper of surplus funds) and the non-bank (e.g. Telco) Performs.

Why a bank led model?

Mobile as a technology, which is low-cost, ubiquitous and efficient with a potential to enable achievement the goal of deeper financial inclusion, has been recognized across the world. Different countries are following different mobile banking models depending upon their requirements and availability of infrastructure. Vision of financial inclusion, provision of payment services is one amongst the four services that we have clubbed under financial inclusion viz., a deposit product, a credit product, a micro-insurance product and a remittance product. Given this orientation, we would all agree that only banks can provide these services while adhering to the KYC/AML requirements. Accordingly, the Reserve Bank of India has consciously adopted the bank-led mobile banking model. The bank led model has also been endorsed by the Inter-Ministerial Group of the Government of India constituted in November, 2009.

There are, however, counter-views within the country and internationally as well suggesting that the non-bank led mobile banking model that have been found to be very successful elsewhere should be tried out here. It is often not appreciated when citing these success stories that only one service, i.e., a remittance product, is being offered and not the complete bouquet of financial services envisaged . The other three products identified under financial inclusion can obviously not be offered by a non-bank. Moreover, particular environments in a few countries enabled the non-bank led model to be successful viz. presence of a monopoly operator, very poor banking infrastructure and availability of a national identification number. Is it not surprising that the same success story has not been repeated by the same service operator in a neighbouring country?

Cross border remittance through mobile banking

Reserve Bank has allowed only few banks and authorized entities to undertake such cross-border transactions. To obviate any operational difficulty in remitting and receiving funds, bank account-to-bank account cross-boarder remittance has been permitted under the money transfer service scheme (MTSS). Realizing the need for facilitating hassle-free withdrawal of funds at the beneficiary end, Reserve Bank has also permitted transfer of funds to the beneficiary's account or to a pre-paid instrument (PPI) issued by banks which could be m-wallet also. The underlying rationale is to ensure flow of cross boarder funds through the banking channel only irrespective of the media, (which could also be mobile sets) opted for undertaking the transactions.

Grievance redressal mechanism

The most often faced problem in mobile banking is as to who owns the customer – the mobile network operator (MNO) or the bank? Whom shall the customer contact in case of any service related grievance? Who is required to resolve the issue? Since India has accepted the bank-led mobile banking model, the customers of the banks get full protection for effecting transactions through this delivery channel as in the case of any other banking transaction. Reserve Bank lays particular emphasis on its continuing pursuit of customer satisfaction and protection and timely resolution of complaints. Accordingly, the customers using mobile banking have recourse to the Banking Ombudsman's customer complaint redressal machinery.

Role of MNOs as Technology Service Provider (TSP)

The MNOs are expected to play the role of a technology service provider while banks are expected to provide banking services. Both the stakeholders should work together to take banking through the medium of the mobile to the masses. The customer vetting including compliance with KYC norms, customer protection, etc. should remain within the domain of the banking sector. It is heartening to note that this unique approach is taking roots with a couple of successful collaborations between banks and MNOs.

Role of MNOs as TSP-cum-BC

You may all be aware that 'for-profit' companies can now be engaged as BCs by banks. This provides another avenue to the MNOs for tapping their reach in taking banking to the masses. MNOs are particularly well placed to make use of this opportunity to become the BCs of banks keeping in view the fact that mobile phones have become ubiquitous. It is glad to note that a few MNOs have indeed become BCs of some banks. It is sure that the nascent strides being taken in this regard are likely to fructify into major achievements soon. Such collaborations between the banks and the MNOs enables each of them to exclusively perform their respective designated roles – as bankers and service providers. Reserve Bank expects that these experiments get upscaled and across the spectrum and result in a win-win partnership for both the parties, leveraging their respective capabilities and reach.

Tapping USSD to expand access to mobile banking services

The common USSD platform is offered by all MNOs, the same is expected to lead to an exponential growth of transactions in the IMPS. Simultaneously, the IMPS platform for person-to-business (P2B) transactions (i.e. in the merchant transactions) has now been enabled. Alongwith it, person-to-person (P2P) remittances can now be made to beneficiaries based on their bank account number or *Aadhaar* number which is mapped to the mobile number of the beneficiary. The requirement of MMID at the beneficiary end, therefore, becomes optional. Further, the non-bank entities like the Pre-Paid Instruments (PPI) issuers have been permitted to join the IMPS network through a sponsor bank for facilitating domestic money transfers. All these measures should lead to an increase in transactions and should significantly contribute to the revenue streams of the MNOs also. With this enabling technology within reach of the stakeholders, they need to work together in a co-operative and collaborative manner to promote and popularize this unique product.

Permitting cash-out in mobile wallets

The mobile wallet is a pre-paid instrument (PPI) issued in electronic form which resides on the mobile phone. The potential of PPIs including mobile wallets, Reserve Bank of India has laid down an enabling regulatory framework for such instruments. Simply put, the mobile wallets being issued in India are e-money products and can be used for purchase of goods & services. Mobile wallets can also be used for funds transfers where the holder has been subjected to a fully compliant KYC. The only difference in mobile wallets issued by non-banks in India and other countries is that cash-out is not permitted in India as it is akin to acceptance of demand deposit. The rationale behind the decision is based on the fact that non-banks are not permitted to accept deposits for maturity less than one year.

Security and acceptability issues

Any system has to have certain minimum features to attract customers and keep them engaged in the long run, such features are: ease of use, safety and security, accessibility and affordability. Mobile banking meets all these requirements but still the usage is nowhere near its potential. In the case of mobile banking, which is a novel product, the customer needs to be assured that it would provide her with the same kind of comfort levels that any other payment mechanism currently makes available. Comfort can be derived by the customers when they are able to put through transactions with ease with a zero-fail rate and not have any concerns regarding security issues. Customers should also be made aware as to whom they should approach in case of a failed transaction and how speedily their grievances are redressed. This is where a lot of work needs to be done to make the public aware of customer friendly as also safety features of mobile banking and engage the customers for a long term relationship. It would also like to inform that recently, the Institute for Development & Research in Banking Technology (IDRBT), established by the Reserve Bank of India launched the Mobile Banking Security Lab (MBSL). The Lab aims at exploring and providing solutions to the much needed safety, security, reliability and inter-operability, for both on low end and high-end mobile sets. The Lab will also provide the

benefit of a common technical centre for all banks and financial institutions. The testing platform of the Lab would help the banks to test their security applications in mobile banking. The Lab will also help in providing education services on security related matters in all Indian language enabling awareness creation amongst the users.

Quality of service – issue of sustainable excellence

TRAI has come out with the “Mobile Banking (Quality of Service) Regulations 2012” specifying the standards for MNOs while facilitating mobile banking which will go a long way in further improving the mobile banking services in the country. The MNOs should strive towards meeting these service standards to the banks to enable the customers to enjoy customer friendly banking services.

Engaged employees

Role of employees in driving any business to reach a critical mass is the most important but the least understood issue. The role of BCs or agents, who are being deployed by banks to expand their reach is, equally important as they represent the banks to the common man and are going to lay down the foundation of bank-customer relationship. It is being assumed that technology will take care of every aspect of banking as most of the processes are being automated. While this is true to a certain extent, it is the combination of frontline human-resources and front-end of technology which acts as the catalyst for service delivery in a nation like India. Employees are expected to help customers to move from being ‘assisted’ initially to becoming ‘self-reliant’ in use of banking related technologies including mobile banking. For the employees to hand-hold the customers, they themselves should be fully conversant with the product. Thus, for mobile banking to grow, the employees would have to strive towards improving customer service, enhancing customer satisfaction and removing any apprehensions regarding the safety and security of mobile banking transactions.

PROSPECTS OF MOBILE BANKING

1. Round the clock availability and ease of transactions attracts customers to Mobile Banking in India.
2. Through Mobile messaging and other such interfaces, banks provide value added services to the customer at marginal costs.
3. The main characteristics of mobile banking is anywhere/any time banking.
4. In India 60% of mobile banking transactions account balances, this is a significant step in building consumer trust.
5. According to the study by SBI maintaining a conventional rural bank branch cost Rs.5,00,000 per year in salaries alone per year in salaries alone which would need about Rs.20 million in deposits to sustain that at a break even point. A typical Indian village with population of 2000 can't support a conventional bank branch. Mobile banking may be the only viable method to extend banking services to rural areas in India.

CHALLENGES OF MOBILE BANKING

Security problem

The security mechanism adopted by the banks face many security issues like being attacked by unauthorised users is of highest priority in terms of security. If the device gets stolen then unauthorised persons may find the password favour saved files. Many customers save their password in their mobile. Uneducated persons are less aware of these issues and thus leading to loss of trust by customers

Virus attacks in Mobile Banking

There are 50,000 different types¹ of computer viruses and trojans are targeted mobile users. Zrus is commonly used to steal mobile transactions no of password.

Confidential information

The biggest challenge for mobile banking services is security. In the past surveys the same has been generalized as the biggest challenges for internet banking also. Security here simply means that nobody else can know the confidential information of customers bank account.

Performance

Mobile banking is anytime and anywhere so that need to ensure that their systems remain ready for the same. As customers will find mobile banking more and more useful, their expectations will increase. If the banks will be unable to meet the performance and they may lose customer confidence.

Official language

India has 18 official languages which are spoken across the country. The state governments also are dictated to correspond in their regional language for official purposes. Additionally two thirds of the population in India is illiterate, creating difficulties in deployment of mobile banking solutions. For Indian mobile banking, this will be cumbersome to overcome.

Valid bank account

The guidelines of RBI states that only those having a valid bank account would be allowed mobile banking. This limits the full potential of mobile banking to extend micro credit and bring banking to the large number of unbanked customers in India.

SERVICES OFFERED BY MOBILE BANKING

Mobile banking services includes account information of ministatments and checking of account history, alerts on account activity or passing of set thresholds, monitoring of term deposits, access to loan statements access to card statements, mutual funds/equity statements, insurance policy management and pension plan management.

Payments & Transfers includes domestic and international fund transfers, micro-payment handling, mobi complaint submission and recharging, commercial payment processing and bill payment processing.

Investments includes portfolio management services, real-stock quotes and bill payment processing.

Supporting service includes status of requests for credit, including mortgage approval, insurance coverage, cheque book and card requests, exchange of data messages and email, including tracking, credit card balance.

Content services are general information such as weather updates, news, loyalty-related offers and location based services.

Push based mobile banking services includes credit/debit alerts, minimum balance alerts and bill payment alerts

Pull based mobile banking services of transaction based are fund transfer, bill payment and other financial services like shares trading and enquiry based services includes account balance enquiry account statement enquiry, cheque book requests and recent transaction history.

CUSTOMER FOCUSED 7 A FRAMEWORK

The 7 A framework provides focus on customer. The seven parameters are Availability, Accessibility, Acceptability, Affordability, Awareness, Assurance and Appropriateness.

Availability implies the availability of technology solutions and wide range of products offering mobile banking services to the customers.

- *Accessibility* of technology is its spread across both rural and urban India irrespective of the mobile handset being used.
- *Acceptability* of the product is dependent on making it available in the local language with easy-to-use operational menu.
- *Affordability* is another benchmark which should guide the product offering as being value for money in providing cost effective and quality services.
- Creating *Awareness* about the availability of the product through financial literacy campaigns to increase the volumes in mobile banking business and generate necessary network effects.
- *Assurance* is an aspect which is related to trust in the products and processes and the security and authenticity relating to the transactions.
- *Appropriateness* is combined effect of all the above features. The mobile banking as a product and as a process scores well on all the above parameters and is, therefore, very appropriate for providing cost effective, easy to use product by both existing and prospective customers.

¹ T. Wilson- Molicious mobile, ode.

2. Internet business,

Accordingly, an appropriate business model taking into account all the above aspects should form part of the corporate plan of the banks as well as the MNOs. Thus, using the 7A framework, the stakeholders can provide mobile banking services which, suits the needs of the customers leading to its widespread adoption and usage.

APPENDIX-1

Some of the significant norms were as under:

October 8, 2008

- Customer complaints and grievance mechanism were laid down.
- Daily cap of `5,000 per customer for funds transfer and `10,000 per customer for transactions involving purchase of goods & services were prescribed.
- Banks to seek one-time prior approval of the Reserve Bank of India after obtaining their respective Board's approval.
- Such services could also be offered through the (Business correspondents) BCs.

December 24, 2009

- Raise in the daily cap transaction limits for funds transfer and for purchase of goods & services to `50,000
- Transactions upto `1,000 can be facilitated without end to end encryption of messages.
- Permitted to provide cash-outs to the recipients through ATMs or BCs subject to a cap of `5,000 per transaction and a maximum of `25,000 per month per customer.

May 4, 2011

- Transaction upto `5,000 can be facilitated without end to end encryption of messages.

December 22, 2011

- Transaction cap limits for funds transfer and for purchase of goods & services of `50,000 per customer per day removed.
- Banks may place their own limits based on their risk perception with the approval of their Board.
- Ceiling on cash-outs to the recipients through ATMs or BCs raised to `10,000 per transaction subject to the existing cap of `25,000 per month.

Appendix 2: Mobile Banking (Quality of Service) Regulations 2012

The Telecom Regulatory Authority of India (TRAI) has issued Mobile Banking (Quality of Service) Regulations 2012 prescribing quality of service standards for mobile banking to ensure faster and reliable communication for enabling banking through the mobile phones.

The salient features of the Regulations are as under:

- Access service providers shall facilitate banks to use SMS, USSD and IVR to provide banking services;
- The response time for delivery of message for mobile banking services generated by the customer or the bank shall be within the prescribed time frame;
- If the SMS sent by the bank is not delivered to the customer due to network or handset related problems, an USSD communication to the customer confirming the completion of the transaction should be sent;
- Service providers have to maintain complete and accurate record of transactions, using mobile banking services through mobile phones.

CONCLUSIONS

The future Mobile banking depends on efforts of all concerned parties the service providers, service facilitators, regulatory system and customers. In India 52 banks have started mobile banking for their customers and, of them, only a few have achieved sufficient traction in mobile banking transactions. This needs to be reviewed by each individual bank at the corporate level and strategy should be worked out to operationalise mobile banking to reap all its benefits. Banks need also have to be proactive in upscaling their mobile banking products and services if they have to safeguard their traditional advantage in the payment system and leverage it to expand their customer base including the tech-savvy

Educating users and potential users, particularly through engaged employees, remains a challenge in the sphere of mobile banking which is true for any new technology based service offering. All the stakeholders need to put in concerted and sustained efforts in spreading awareness about the benefits of mobile banking. Reserve Bank would be happy to collaborate with banks and the Indian Banks' Association (IBA) as part of its e-BAT (electronic Banking Awareness and Training) initiatives to spread retail e-payment awareness. Simulation/training camps, town-hall events and reaching out to schools and colleges across the nation to 'catch them young.' It is expected that these initiatives will bring awareness of the various technology payment products including the mobile banking and the ease with which they can be used to encourage the use of non-cash payment products.

Mobile banking has a great potential. But it is at the initial stage of this development. It should be the earnest endeavour of all the stakeholders - banks, MNOs, technology vendors, NPCI, Reserve Bank, Government of India, IBA, industry associations like the FICCI, and, of course, the customers to make mobile banking as ubiquitous as the mobile itself. It is for us to harness this potential to achieve the objective of reaching to the customer wherever he/she is, deepening the financial inclusion supported by low cost, secured ICT based mobile banking model and moving towards a less-cash society.

REFERENCES

1. Address delivered by Shri Harun R. Khan, Deputy Governor, Reserve Bank of India, at the FICCI-IBA (FIBAC) 2012 Conference.
2. Banzal S. (2010), "Mobile Banking & M-Commerce and Related Issues",
3. Barnes, S.J., Corbitt, B. (2003), "Mobile banking: concept and potential", *International Journal of Mobile Communications*, 1 (3), 273-288.
4. Black, N. J., Lockett, A., Ennew, C., Winklhofer, H. & McKechnie, S. (2002), "Modelling consumer choice of distribution channels: an illustration from financial services", *International Journal of Bank Marketing*, 20 (4), 161-173.
5. Cheong, J.H., & Park, M.C. (2005), "Mobile internet acceptance in Korea", *Internet Research*, 15(2), 125-140.
6. Mobile Banking- The Future (Infogile) August 2007.
7. Mobile Clearing House Network.(MCHN)
8. Mobile Phone Technology in Banking System: Its Economic Effect. August 2009.
9. The Times of India (14-12-2012)
10. www.public.webfoundation.org/.../25.Mobile_banking_M-commerce_15.03.pdf [accessed 10 Jul 2010]

REQUEST FOR FEEDBACK

Dear Readers

At the very outset, International Journal of Research in Computer Application 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 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

