

# INTERNATIONAL JOURNAL OF RESEARCH IN COMPUTER APPLICATION & MANAGEMENT

IJR  
CM



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., Cabell's Directories of Publishing Opportunities, U.S.A., Google Scholar,  
Indian Citation Index (ICI), 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 (2012) & number of libraries all around the world.

Circulated all over the world & Google has verified that scholars of more than 7144 Cities in 197 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**

<b>Sr. No.</b>	<b>TITLE &amp; NAME OF THE AUTHOR (S)</b>	<b>Page No.</b>
<b>1.</b>	<b>A STUDY ON CUSTOMER PREFERENCE TOWARDS ONLINE PAYMENT APPS (APPLICATIONS) IN MADURAI CITY</b> <i>Dr. V. SUGANYA</i>	<b>1</b>
<b>2.</b>	<b>A TREND ANALYSIS ON THE USE OF VARIOUS E-PAYMENT METHODS IN INDIA</b> <i>Dr. ASAD MIRZA &amp; ANKITA DEVI</i>	<b>8</b>
	<b>REQUEST FOR FEEDBACK &amp; DISCLAIMER</b>	<b>13</b>

**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. BHAVET**

Former Faculty, Shree Ram Institute of Engineering & Technology, Urjani

**ADVISOR****Prof. S. L. MAHANDRU**

Principal (Retd.), Maharaja Agrasen College, Jagadhri

**EDITOR****Dr. PARVEEN KUMAR**

Professor, Department of Computer Science, NIMS University, Jaipur

**CO-EDITOR****Dr. A. SASI KUMAR**

Professor, Vels Institute of Science, Technology & Advanced Studies (Deemed to be University), Pallavaram

**EDITORIAL ADVISORY BOARD****Dr. CHRISTIAN EHIOBU CHE**

Professor of Global Business/Management, Larry L Luing School of Business, Berkeley College, USA

**Dr. SIKANDER KUMAR**

Vice Chancellor, Himachal Pradesh University, Shimla, Himachal Pradesh

**Dr. JOSÉ G. VARGAS-HERNÁNDEZ**

Research Professor, University Center for Economic & Managerial Sciences, University of Guadalajara, Guadalajara, Mexico

**Dr. RAJENDER GUPTA**

Convener, Board of Studies in Economics, University of Jammu, Jammu

**Dr. D. S. CHAUBEY**

Professor & Dean (Research & Studies), Uttaranchal University, Dehradun

**Dr. TEGUH WIDODO**

Dean, Faculty of Applied Science, Telkom University, Bandung Technoplex, Jl. Telekomunikasi, Indonesia

**Dr. S. P. TIWARI**

Head, Department of Economics & Rural Development, Dr. Ram Manohar Lohia Avadh University, Faizabad

**Dr. BOYINA RUPINI**

Director, School of ITS, Indira Gandhi National Open University, New Delhi

**Dr. KAUP MOHAMED**

Dean & Managing Director, London American City College/ICBEST, United Arab Emirates

**Dr. MIKE AMUHAYA IRAVO**

Principal, Jomo Kenyatta University of Agriculture & Tech., Westlands Campus, Nairobi-Kenya

**Dr. M. S. SENAM RAJU**

Professor, School of Management Studies, I.G.N.O.U., New Delhi

**Dr. NEPOMUCENO TIU**

Chief Librarian & Professor, Lyceum of the Philippines University, Laguna, Philippines

**Dr. A SAJEEVAN RAO**

Professor & Director, Accurate Institute of Advanced Management, Greater Noida

**Dr. H. R. SHARMA**

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

**Dr. CLIFFORD OBIYO OFURUM**

Professor of Accounting & Finance, Faculty of Management Sciences, University of Port Harcourt, Nigeria

**Dr. SHIB SHANKAR ROY**

Professor, Department of Marketing, University of Rajshahi, Rajshahi, Bangladesh

**Dr. MANOHAR LAL**

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

**Dr. SRINIVAS MADISHETTI**

Professor, School of Business, Mzumbe University, Tanzania

**Dr. VIRENDRA KUMAR SHRIVASTAVA**

Director, Asia Pacific Institute of Information Technology, Panipat

**Dr. VIJAYPAL SINGH DHAKA**

Professor &amp; Head, Department of Computer &amp; Communication Engineering, Manipal University, Jaipur

**Dr. NAWAB ALI KHAN**

Professor &amp; Dean, Faculty of Commerce, Aligarh Muslim University, Aligarh, U.P.

**Dr. EGWAKHE A. JOHNSON**

Professor &amp; Director, Babcock Centre for Executive Development, Babcock University, Nigeria

**Dr. ASHWANI KUSH**

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

**Dr. ABHAY BANSAL**

Head, Department of Information Technology, Amity School of Engg. &amp; Tech., Amity University, Noida

**Dr. BHARAT BHUSHAN**

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

**MUDENDA COLLINS**

Head, Operations &amp; Supply Chain, School of Business, The Copperbelt University, Zambia

**Dr. JAYASHREE SHANTARAM PATIL (DAKE)**

Faculty in Economics, KPB Hinduja College of Commerce, Mumbai

**Dr. MURAT DARÇIN**

Associate Dean, Gendarmerie and Coast Guard Academy, Ankara, Turkey

**Dr. YOUNOS VAKIL ALROAIA**

Head of International Center, DOS in Management, Semnan Branch, Islamic Azad University, Semnan, Iran

**P. SARVAHARANA**

Asst. Registrar, Indian Institute of Technology (IIT), Madras

**SHASHI KHURANA**

Associate Professor, S. M. S. Khalsa Lubana Girls College, Barara, Ambala

**Dr. SEOW TA WEEA**

Associate Professor, Universiti Tun Hussein Onn Malaysia, Parit Raja, Malaysia

**Dr. OKAN VELI ŞAFAKLI**

Professor &amp; Dean, European University of Lefke, Lefke, Cyprus

**Dr. MOHINDER CHAND**

Associate Professor, Kurukshetra University, Kurukshetra

**Dr. BORIS MILOVIC**

Associate Professor, Faculty of Sport, Union Nikola Tesla University, Belgrade, Serbia

**Dr. IQBAL THONSE HAWALDAR**

Associate Professor, College of Business Administration, Kingdom University, Bahrain

**Dr. MOHENDER KUMAR GUPTA**

Associate Professor, Government College, Hodal

**Dr. ALEXANDER MOSESOV**

Associate Professor, Kazakh-British Technical University (KBTU), Almaty, Kazakhstan

**Dr. MOHAMMAD TALHA**

Associate Professor, Department of Accounting &amp; MIS, College of Industrial Management, King Fahd University of Petroleum &amp; Minerals, Dhahran, Saudi Arabia

**Dr. ASHOK KUMAR CHAUHAN**

Reader, Department of Economics, Kurukshetra University, Kurukshetra

**Dr. RAJESH MODI**

Faculty, Yanbu Industrial College, Kingdom of Saudi Arabia

**WILLIAM NKOMO**

Asst. Head of the Department, Faculty of Computing, Botho University, Francistown, Botswana

**YU-BING WANG**

Faculty, department of Marketing, Feng Chia University, Taichung, Taiwan

**Dr. SHIVAKUMAR DEENE**

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

**Dr. TITUS AMODU UMORU**

Professor, Kwara State University, Kwara State, Nigeria

**Dr. BHAVET**

Faculty, Shree Ram Institute of Engineering & Technology, Urjani

**Dr. THAMPOE MANAGALESWARAN**

Faculty, Vavuniya Campus, University of Jaffna, Sri Lanka

**Dr. ASHISH CHOPRA**

Faculty, Department of Computer Applications, National Institute of Technology, Kurukshetra

**SURAJ GAUDEL**

BBA Program Coordinator, LA GRANDIEE International College, Simalchaur - 8, Pokhara, Nepal

**Dr. SAMBHAVNA**

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

**Dr. LALIT KUMAR**

Course Director, Faculty of Financial Management, Haryana Institute of Public Administration, Gurugram

***FORMER TECHNICAL ADVISOR***

**AMITA**

***FINANCIAL ADVISOR***

**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 the 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](mailto: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/Mkt./HRM/General Mgt./Engineering/Economics/Computer/IT/ Education/Psychology/Law/Math/other, please specify)**

**DEAR SIR/MADAM**

Please find my submission of manuscript titled ‘ \_\_\_\_\_ ’ for likely publication in one of your journals.

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

I affirm that all the co-authors of this manuscript have seen the submitted version of the manuscript and have agreed to inclusion of their names as co-authors.

Also, if my/our manuscript is accepted, I agree to comply with the formalities as given on the website of the journal. The Journal has discretion to publish our contribution in any of its journals.

**NAME OF CORRESPONDING AUTHOR** :  
 Designation/Post\* :  
 Institution/College/University with full address & Pin Code :  
 Residential address with Pin Code :  
 Mobile Number (s) with country ISD code :  
 Is WhatsApp or Viber active on your above noted Mobile Number (Yes/No) :  
 Landline Number (s) with country ISD code :  
 E-mail Address :  
 Alternate E-mail Address :  
 Nationality :

\* i.e. Alumnus (Male Alumni), Alumna (Female Alumni), Student, Research Scholar (M. Phil), Research Scholar (Ph. D.), JRF, Research Assistant, Assistant Lecturer, Lecturer, Senior Lecturer, Junior Assistant Professor, Assistant Professor, Senior Assistant Professor, Co-ordinator, Reader, Associate Professor, Professor, Head, Vice-Principal, Dy. Director, Principal, Director, Dean, President, Vice Chancellor, Industry Designation **etc.** The qualification of author is not acceptable for the purpose.

**NOTES:**

- a) The whole manuscript has to be in **ONE MS WORD FILE** only, which will start from the covering letter, inside the manuscript. ***pdf. version is liable to be rejected without any consideration.***
  - b) The sender is required to mention the following in the **SUBJECT COLUMN of the mail:**  
**New Manuscript for Review in the area of** (e.g. Finance/Marketing/HRM/General Mgt./Engineering/Economics/Computer/IT/ Education/Psychology/Law/Math/other, please specify)
  - c) There is no need to give any text in the body of the 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 expected to be below **1000 KB**.
  - e) Only the **Abstract 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 within twenty-four hours** and in case of non-receipt of acknowledgment from the journal, w.r.t. the submission of the manuscript, within two days of its submission, the corresponding author is required to demand for the same by sending a separate mail to the journal.
  - g) The author (s) name or details should not appear anywhere on the body of the manuscript, except on the covering letter and the cover page of the manuscript, in the manner as mentioned in the guidelines.
2. **MANUSCRIPT TITLE:** The title of the paper should be typed in **bold letters, centered and fully capitalised**.
  3. **AUTHOR NAME (S) & AFFILIATIONS:** Author (s) **name, designation, affiliation (s), address, mobile/landline number (s), and email/alternate email address** should be given underneath the title.
  4. **ACKNOWLEDGMENTS:** Acknowledgements can be given to reviewers, guides, funding institutions, etc., if any.
  5. **ABSTRACT:** Abstract should be in **fully Italic printing**, ranging between **150 to 300 words**. The abstract must be informative and elucidating the background, aims, methods, results & conclusion in a **SINGLE PARA. Abbreviations must be mentioned in full.**
  6. **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 stop at the end. All words of the keywords, including the first one should be in small letters, except special words e.g. name of the Countries, abbreviations etc.
  7. **JEL CODE:** Provide the appropriate Journal of Economic Literature Classification System code (s). JEL codes are available at [www.aea-web.org/econlit/jelCodes.php](http://www.aea-web.org/econlit/jelCodes.php). However, mentioning of JEL Code is not mandatory.
  8. **MANUSCRIPT:** Manuscript must be in **BRITISH ENGLISH** prepared on a standard A4 size **PORTRAIT SETTING PAPER. It should be free from any errors i.e. grammatical, spelling or punctuation. It must be thoroughly edited at your end.**
  9. **HEADINGS:** All the headings must be bold-faced, aligned left and fully capitalised. Leave a blank line before each heading.
  10. **SUB-HEADINGS:** All the sub-headings must be bold-faced, aligned left and fully capitalised.
  11. **MAIN TEXT:**

***THE MAIN TEXT SHOULD FOLLOW THE FOLLOWING SEQUENCE:*****INTRODUCTION****REVIEW OF LITERATURE****NEED/IMPORTANCE OF THE STUDY****STATEMENT OF THE PROBLEM****OBJECTIVES****HYPOTHESIS (ES)****RESEARCH METHODOLOGY****RESULTS & DISCUSSION****FINDINGS****RECOMMENDATIONS/SUGGESTIONS****CONCLUSIONS****LIMITATIONS****SCOPE FOR FURTHER RESEARCH****REFERENCES****APPENDIX/ANNEXURE****The manuscript should preferably be in 2000 to 5000 WORDS, But the limits can vary depending on the nature of the manuscript.**



12. **FIGURES & TABLES:** These should be simple, crystal **CLEAR, centered, separately numbered** & self-explained, and the **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.**
13. **EQUATIONS/FORMULAE:** These should be consecutively numbered in parenthesis, left aligned with equation/formulae number placed at the right. The equation editor provided with standard versions of Microsoft Word may be utilised. If any other equation editor is utilised, author must confirm that these equations may be viewed and edited in versions of Microsoft Office that does not have the editor.
14. **ACRONYMS:** These should not be used in the abstract. The use of acronyms is elsewhere is acceptable. Acronyms should be defined on its first use in each section e.g. Reserve Bank of India (RBI). Acronyms should be redefined on first use in subsequent sections.
15. **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 may follow Harvard Style of Referencing. **Also check to ensure that everything that you are including in the reference section is duly cited in the paper.** 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 italic printing. 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 parenthesis.
  - **Headers, footers, endnotes and footnotes should not be used in the document.** However, **you can mention short notes to elucidate some specific point**, which may be placed in number orders before the references.

**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, 19–23

**UNPUBLISHED DISSERTATIONS**

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

**ONLINE RESOURCES**

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

**WEBSITES**

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



## A STUDY ON CUSTOMER PREFERENCE TOWARDS ONLINE PAYMENT APPS (APPLICATIONS) IN MADURAI CITY

**Dr. V. SUGANYA**  
**ASST. PROFESSOR**  
**RESEARCH CENTRE OF COMMERCE**  
**FATIMA COLLEGE**  
**MADURAI**

### ABSTRACT

*The study finds out that Online payment user's awareness spread among the people due to Government policy of demonetization and the usage of various online payment apps (applications). Online payment apps support the customer to transfer their payment with usage of their mobile phones in the easiest way. Online payment apps officers should frequently visit the customers and enquire about their requirements and problems they face. Online payment apps have to increase its advertising in television media to introduce the awareness to the general public. It is concluded that there will be a tremendous growth in adoption of online payment apps in upcoming years. Most of the online payment systems offers a secure means directly related to transfer credit/debit details for settlement in the existing financial systems.*

### KEYWORDS

Madurai, online payments, online payment apps.

### JEL CODES

E42, O32.

### 1.1 INTRODUCTION

A payment system facilitates the acceptance of electronic payment for online transaction. Credit cards have become one of the most common forms of payment for E-commerce transaction. In North America 90% of online retail transaction were made with online payment apps. A sample electronic data interchange (EDI), E-commerce payment systems have become increasingly popular due to the widespread use of the internet-based payment system. The wide change in payment system in India is gaining strength by government accelerating financial inclusion, opening new business model and providing impetus to digital payment system. Digital payment is remarkable momentum particularly after demonetization in India. Presently 60% of the transactions in India are taken place through digital platforms. Through online payment generally accepted by public, there are few criticisms about processing of online payment system. To popularize and speed up of adoption of digital payment, there are many numbers of online payment system are launched in India. With this backdrop, it is imperative to study the customer preference toward online payment system in Madurai city.

### 1.2 STATEMENT OF THE PROBLEM

Online payment is very much used in recent years due to convenience, speedy transaction, saving time, attractive sales promotional offers, etc., Despite these factors, there are various transactional and on-transactional issues involved such as internet user being uncomfortable often, which act as deterrents. The future for online payment looks bright. This is especially true in the context of consumers in small cities, where online payment is still new, consumers are less familiar and often more skeptical towards. This study aims to examine the customer preference towards online payment (apps) applications.

### 1.3 REVIEW OF LITERATURE

Bamasak (2012) carried out study in Saudi Arabia found that there is a bright future for mobile payment. Security of mobile payment transaction and the unauthorized use of mobile phones to make a payment were found to be of great concerns to the mobile phone users. Security and privacy were the major concerns for the consumers which affect the adoption of digital payments solutions.

Doan (2014) illustrated the adoption of mobile wallet among consumers in final and as only at the beginning stages of the innovation-decision process. Doing payments through mobile phones has been in use for many years and is now set to explode. Also, mobiles are increasingly being in used by consumers for making payments. Digital wallet has become a part of consumers which are nothing but smart phones which can function as leather wallets. Digital wallet offered many benefits while transferring money such as convenience, security and affordability.

The economic times discuss the issue of "India leads the world in digital transformation" Nov 10, 2016. The government has been promoting digital transaction since Nov 8 when its announced demonetization. Government is going to create digital transaction index. It will be based on three parameters -1. Total transaction in a state 2. The extent of penetration 3. Usage of different modes of online payments.

Barker (1992) Globalization of credit card and usage: the case of a developing economy" investigate the attitude of consumers towards credit cards, and the approach of card issuers by surveying two samples of 200 card holders and non holders. The better educated, middle aged members of the upper middle class seem to be the prime target: the most important reasons for using a credit card were "cash of payment" followed by "risk of carrying cash", non holders do not carry credit cards because they do not know much about it. Informal sources of information appear to be more influential than the mass media advertising in the market.

Mohammad Auwal Kabir (2015) International conference on E-commerce online payment system is increasingly becoming a daring means of payments in today's business world. This is due to its efficiency, convenience and timeliness. It is payment system that is continuously being embraced and adopted in the financial system of both developed and developing countries with a view to simplify and ease payments of transaction. Many studies were conducted around the globe by e-payment adoption.

### 2.1 OBJECTIVES

1. To analyze the consumer's perception towards usage of electronic payment system.
2. To identify the influencing factors for online payment system.
3. To find out the practical difficulties faced by customers.
4. To offer suggestion to improve the system of online payment system.

### 2.2 SCOPE OF THE STUDY

The scope of work in this project mainly focuses on customer preference towards online payment system in Madurai city. the classification of the different strata of the people in area wise, gender wise, age wise, income wise, educational qualification wise etc. The study will also be helpful in analyzing the customer preference towards the online payment system in Madurai city. It will also help in studying the effect of online or E-payment system towards the customer.

## 2.3 SIGNIFICANCE OF THE STUDY

Online payment is largely depending upon customer's attitudes, preference and their satisfaction. Rapid change in information and communication technology, liberalization, globalization and modernization concept a number of new online payment apps has been introduced. Payment through internet channel plays an important role in present scenario. It is important to study the customer preference towards online payment system in Madurai city.

## 2.4 RESEARCH DESIGN

A research design is the specification of method and procedures for acquiring the information needed. It is overall operation pattern of frame work of the project that stipulated what information is to be collected from which sources and by what procedures.

To examine the customer preference towards online payment system in Madurai city the study was conducted through quantitative phase. Researchers used descriptive research design. The research instruments used is the questionnaire with closed ended questions, multiple choices designed to resolve the purpose of the research. The data for the questionnaire is collected from the respondents.

### METHOD OF DATA COLLECTION

To accomplish the objectives of the study, both primary and secondary data were collected.

#### PRIMARY DATA

Primary data is the data which is collected for the first time. It is original in nature in the shape of raw material for the purpose of collection of primary data a well-structured questionnaire was filled by the respondents. The questionnaire comprises of close ended as well as ended questions.

#### SECONDARY DATA

Secondary data is the data which is collected by someone. They are secondary in nature and area in shape of finished product. Secondary data was collected so as to have accurate results. Required data was collected from various books, magazines, journals and internet.

#### SAMPLING TECHNIQUE

The sampling used for the study is convenience sampling. This sampling is selected by the researcher for the purpose of convenience to access.

#### SAMPLING SIZE

For the study, sample sizes of 100 respondents were selected.

#### QUESTIONNAIRE

This questionnaire is consisting of twenty-three questions. The questionnaires are printed in definite order. Questionnaire includes multiple choices of questions.

#### AREA OF THE STUDY

This study is confined to the local respondents (male and female) within Madurai city.

## 3 ANALYSIS

### 3.1 GENDER OF THE RESPONDENTS

Gender is an important component influencing preference towards usage of online payment apps (applications), hence gender is used for classification of respondents.

**TABLE 3.1: GENDER OF THE RESPONDENTS**

Gender	Frequency	Percent
Male	59	59%
Female	41	41%
Total	100	100

Source: Primary data

Table 3.1 shows that 59% of the respondents are male and 41% of the respondents are female, hence majority of the respondents are male. This is depicted in chart I

### 3.2 AGE OF THE RESPONDENTS

Age is an important component influencing preference towards usage of online payment apps (applications), hence age is used for classification of respondents. Table 3.2 shows the age of the respondents in percentage.

**TABLE 3.2: AGE OF THE RESPONDENTS**

Ages	Frequency	Percentage
20-30	52	52%
30-45	35	35%
45-55	11	11%
55 and above	2	2%
Total	100	100

Source: Primary data

Table 3.2 shows that 52% of respondents fall under the age category from 20-30, 35% of the respondents fall under the category from 30-45, 11% of the respondents fall under the category from 45-55, and 2% of the respondents fall under the age category of above 55, hence majority of the respondents under the age category of 20-30.

### 3.3 EDUCATIONAL QUALIFICATION

Educational qualification is an important component influencing preference towards usage of online payment apps (applications), hence educational qualification is used for classification of respondents. Table 3.3 Educational qualification of the respondents and their frequencies in percentage.

**TABLE 3.3: EDUCATIONAL QUALIFICATION**

Qualification	Frequency	Percentage
Up to 12 <sup>th</sup> std	20	20%
Graduate	35	35%
Post graduate	37	37%
Professional	7	7%
Diploma	1	1%
Total	100	100

Source: primary data

Table 3.3 shows that, 20% of the respondents are up to 12<sup>th</sup> std, 35% of the respondents are Graduate, 37% of the respondents are post graduate, 7% of the respondents are professional, 1% of the respondents are diploma, hence majority of the respondents are post graduate.

### 3.4 FAMILY MEMBERS

Family members are an important component influencing preference towards usage of online payment apps (applications), hence family members is used for classification of respondents. Table 3.4 shows that family member and their frequencies in percentage.

**TABLE 3.4: FAMILY MEMBERS**

Family members	Frequency	Percentage
Less than 3 members	15	15%
3-5 members	58	58%
More than 5 members	27	27%
Total	100	100

Source: Primary data

Table 3.4 shows that 15% of the respondents have less than 3 members in the family, 58% of the respondents have 3-5 members in the family, 27% of the respondents have more than 5 members in the family, hence majority of the respondents have under 3-5 members in the family.

**3.5 MONTHLY INCOME**

Monthly income is an important component influencing preference towards usage of online payment apps (applications), hence monthly income is used for classification of respondents. Table 3.5 shows the monthly income of the respondents in their frequencies and percentage.

**TABLE 3.5: MONTHLY INCOME**

Monthly Income	Frequency	Percentage
Below 15000	39	39%
15000-25000	32	32%
25000-35000	13	13%
Above 35000	16	16%
Total	100	100

Source: Primary data

Table 3.5 shows that 39% of the respondents have monthly income as below 15000, 32% of the respondents have monthly income as 15000-25000, 13% of the respondents have monthly income as 25000-35000, and 16% of the respondents have income as above 35000, hence majority of the respondents have monthly income as below 15000.

**3.6 EMPLOYMENT STATUS**

Employment status is an important component influencing preference towards usage of online payment apps (applications), hence employment status is used for classification of respondents. Table 3.6 shows the employment status of the respondents in their frequencies and percentage.

**TABLE 3.6: EMPLOYMENT STATUS**

Employment status	Frequencies	Percentage
Employed	56	56%
Not employed	44	44%
Total	100	100

Source: Primary data

Table 3.6 shows that 56% of the respondents are employed and 44% of the respondents are not employed, hence majority of the respondents are employed

**3.7 NATURE OF EMPLOYMENT**

Nature of the employment is an important component influencing preference towards usage of online payment apps (applications), hence nature of employment is used for classification of respondents. Table 3.7 shows that the Nature of employment of the respondents and their frequencies in percentage.

**TABLE 3.7: NATURE OF EMPLOYMENT**

Job category	Frequency	Percentage
Government employee	21	21%
Private employee	38	38%
Professional	13	13%
Entrepreneur	14	14%
No job	14	14%
Total	100	100

Source: Primary data

Table 3.7 shows that 21% of the respondents are government employee, 38% of the respondents are private employee, 13% of the respondents are professional, 14% of the respondents are entrepreneur, and 14% of the respondents are unemployed, hence majority of the respondents are private employee.

**3.8 STATUS OF UNEMPLOYED RESPONDENTS**

Table 3.8 shows that the status of unemployed respondents in their frequencies and percentage.

**TABLE 3.8: STATUS OF UNEMPLOYED RESPONDENTS**

Category	Frequency	Percentage
College student	42	42%
Home maker	25	25%
Job seekers	14	14%
Having job	19	19%
Total	100	100

Source: Primary data

Table 3.8 shows that 42% of the respondents are college students, 25% of the respondents are home maker, 14% of the respondents are job seekers, and 19% of the respondents are employed, hence majority of the respondents are college students. This is depicted in chart VIII.

**3.9 USAGE OF ONLINE TRANSACTION**

Usage of online transaction is an important component influencing preference towards usage of online payment apps (applications), hence usage of internet is used for classification of respondents. Table 3.9 shows that usage of online transactions of the respondents in their frequencies and percentage.

**TABLE 3.9: USAGE OF ONLINE TRANSACTION**

Usage of online transaction	Frequency	Percentage
Used	96	96%
Not used	4	4%
Total	100	100

Source: Primary data

Table 3.9 shows that 96% of the respondents are using online transaction and 4% of the respondents are not using online transaction, hence majority of the respondents are using online transaction.

**3.10 FREQUENCY OF USING THE INTERNET**

Frequency of using internet is an important component influencing preference towards usage of online payment apps (applications), hence used for classification of respondents. Table 3.10 shows that the Respondent’s frequency of using the internet in percentage.

**TABLE 3.10: FREQUENCY OF USING THE INTERNET**

Frequency of using the internet	Frequency	Percentage
Daily	42	42%
Couple of times a week	40	40%
Once in a month	12	12%
Rarely	6	6%
Total	100	100

Source: Primary data

Table 3.10 shows that 42% of the respondents are daily using the internet, 40% of the respondents are couple of times a week using the internet, 12% of the respondents are once in a month using the internet, and 6% of the respondents are rarely using the internet, hence 42% of the respondents are daily using the internet.

**3.11 REASON FOR USING THE INTERNET**

Reason for using the internet is an important component influencing preference towards usage of online payment apps (applications), hence reason for using the internet is used for classification of respondents.

**TABLE 3.11: SHOWS THAT THE REASON FOR USING THE INTERNET IN THEIR FREQUENCIES AND PERCENTAGE**

Reason for using the internet	Frequency	Percentage
Collecting information	46	46%
Keeping touch with friends	44	40%
Shopping	8	8%
Any other	2	2%
Total	100	100

Source: Primary data

Table 3.11 shows that 46% of the respondents are using internet for collecting information, 44% of the respondents are using internet for keeping touch with friends, 8% of the respondents are using internet for shopping, and 2% of the respondents are using internet for other purposes, hence majority of the respondents are using internet for collecting information.

**3.12 AWARENESS OF E-WALLETS**

Table 3.12 shows that respondents are aware of E-wallets and their frequencies and percentage.

**TABLE 3.12: AWARENESS OF E-WALLETS**

Awareness of E-wallet	Frequencies	Percentage
Fully aware	25	25%
Partially aware	73	73%
Not aware	2	2%
Total	100	100

Source: Primary data

Table 3.12 shows that 25% of the respondents are fully aware of E-wallets, 73% of the respondents are partially aware of E-wallets, and 2% of the respondents are not aware of the E-wallets, hence majority of the respondents are partially aware of E-wallets.

**3.13. SOURCE OF KNOWLEDGE ON ONLINE PAYMENT APPLICATIONS**

Source of knowledge on online payment applications is an important component influencing preference towards online payment apps (applications), hence the source of knowledge on online payment applications is used for classification of respondents. Table 3.13 shows that respondent’s source of knowledge on online payment applications in their frequencies and percentage.

**TABLE 3.13: SOURCE OF KNOWLEDGE**

Source of knowledge	Frequency	Percentage
Family	37	37%
Friends	53	53%
Others	10	10%
Total	100	100

Source: Primary data

Table 3.13 shows that 37% of the respondents are aware of online payment applications through the family, 53% of the respondents are aware of online payment applications through friends, and 10% of the respondents are aware of the online payment applications through others, hence the majority of the respondents are aware through their friends. This is depicted in chart XIII.

**3.14 MODES OF ONLINE PAYMENT APPLICATIONS**

Mode of online payment application is an important component influencing preference towards usage of online payment apps (applications), mode of online payment is used for classification of respondents. Table3.14 shows that the respondent’s modes of online payment applications are in their frequencies and percentage.

**TABLE 3.14: MODE OF ONLINE PAYMENT APPLICATIONS**

Category	Frequency	Percentage
Paytm	34	34%
Freecharge	14	14%
Braintree	13	13%
Google pay	32	32%
Mobikwik	7	7%
Total	100	100

Source: Primary data

Table 3.14 shows that 34% of the respondents are preferring paytm for online payment application, 14% of the respondents are preferring free charge for online payment application, 13% of the respondents are preferring Braintree for online payment applications, 32% of the respondents are preferring Google pay for

online payment applications, and 7% of the respondents are preferring Mobik wik for online payment applications, hence majority of the respondents are preferring Google pay for online payment applications

**3.15. REASON FOR USING ONLINE PAYMENT APPS**

Reason for using online payment apps is an important component influencing preference towards usage of online payment apps (applications), hence reason for using online payment apps is used for classification of respondents. Table3.15 shows that the reason for using online payment apps in their frequencies and percentage.

**TABLE 3.15: REASON FOR USING ONLINE PAYMENT APPS**

Reason for using online payment apps	Frequency	Percentage
Time saving	45	45%
Ease of use	40	40%
Security	15	15%
Total	100	100

Source: Primary data

Table 3.15 shows that 45% of the respondents are using online payment applications for time saving, 40% of the respondents are using online payment applications for ease of use, and 15% of the respondents are using online payment applications for security, hence majority of the respondents are using online payment apps for the reason of time saving.

**3.16 UTILITY OF ONLINE PAYMENT APPLICATIONS**

Utility of online payment applications is an important component influencing preference towards usage of online payment apps (applications), hence utility of online payment apps is used for classification of respondents. Table 3.16 shows that the utility of using online payment applications of respondent’s frequencies and percentage.

**TABLE 3.16: UTILITY OF ONLINE PAYMENT APPLICATIONS**

Category	Frequency	Percentage
Money transfer	41	41%
Recharge	42	42%
Utility & bill payment	17	17%
Total	100	100

Source: Primary data

Table 3.16 shows that 41% of the respondents are using online payment applications for the purpose of money transfer facility, 42% of the respondents are using online payment applications for the purpose of recharging facility, and 17% of the respondents are using online payment applications for the purpose of utility and bill payment facility, hence majority of the respondents are using online payment applications for recharging facility.

**3.17. FREQUENCY OF USING E-WALLET**

Frequency of using E-wallet is an important component influencing preference towards usage of online payment apps (applications), hence frequency of using E-wallet is used for classification of respondents. Table 3.17 shows that frequency of time using E-wallet of the respondents in their frequencies and percentage.

**TABLE 3.17: FREQUENCY OF USING E-WALLET**

Category	Frequency	Percentage
5-10 times	35	35%
Only once	47	47%
More than 10 times	18	18%
Total	100	100

Source: Primary data

Table 3.17 that 35% of the respondents are frequently using E-wallet for 5-10 times, 47% of the respondents are frequently using E-wallet for only once and 18% of the respondents are frequently using E-wallet for more than 10 times, hence majority of the respondents are frequently using E-wallet for only once.

**3.18. AMOUNT LOADED IN E-WALLET**

Amount loaded in E-wallet is an important component influencing preference towards usage of online payment apps (applications), hence amount loaded in E-wallet is used for classification of respondents. Table3.18 shows that the respondent’s amount loaded in E-wallet in their frequencies and percentage.

**TABLE 3.18: AMOUNT LOADED IN E-WALLET**

Amount loaded	Frequency	Percentage
Less than 500	52	52%
500-1000	33	33%
More than 1000	15	15%
Total	100	100

Source: Primary data

Table 3.18 shows that 52% of the respondent’s amount loaded in E-wallet for less than 500, 33% of the respondent’s amount loaded in E-wallet for 500-1000, and 15% of the respondents are amount loaded in E-wallet for more than 1000, hence majority of the respondent’s amount loaded in E-wallet for less than 500.

**3.19. OBSTACLES FACED IN USING ONLINE PAYMENT APPLICATIONS**

Obstacles faced in using online payment applications is an important component influencing preference towards usage of online payment apps (applications), hence obstacles faced in using online payment apps is used for classification of respondents. Table3.19 shows that obstacles faced in using online payment applications towards the respondents in their frequencies and percentage.

**TABLE 3.19: OBSTACLES FACED IN USING ONLINE PAYMENT APPLICATIONS**

Category	Frequency	Percentage
Yes	48	48%
No	52	52%
Total	100	100

Source: Primary data

Table 3.19 shows that 48% of the respondents are faced obstacles while using online payment applications, 52% of the respondents are not faced obstacles while using online payment applications, hence majority of the respondents are not faced obstacles while using online payment applications.

**3.20. NEGATIVE IMPACT ON ONLINE TRANSACTIONS**

Negative impact on online transactions is an important component influencing preference towards usage of online payment apps (applications), hence negative impact on online transactions is used for classification of respondents.

Table 3.20 shows that the negative impact on online transactions of the respondents in their frequencies and percentage.

TABLE 3.20 NEGATIVE IMPACT ON ONLINE TRANSACTIONS

Negative impact	Frequency	Percentage
Experienced	43	43%
Not experienced	57	57%
Total	100	100

Source: Primary data

Table 3.20 shows that 43% of the respondents had experienced negative impact on online transactions and 57% of the respondents had not experienced negative impact on online transactions, hence majority of the respondents are not experienced negative impact on online transactions.

### 3.21. USES OF ONLINE TRANSACTIONS

Uses of online transaction is an important component influencing preference towards usage of online payment apps (applications), hence used of online transactions is used for classification of respondents. Table 3.21 shows that respondents are using the online transactions in their frequencies and percentage.

TABLE 3.21: USES OF ONLINE TRANSACTIONS

Category	Frequency	Percentage
E-ticket	21	21%
Auction buying	15	15%
Net banking	50	50%
Online trading	14	14%
Total	100	100

Source: Primary data

Table 3.21 shows that 21% of the respondents are using online transaction for E-ticket, 15% of the respondents are using online transaction for Auction buying, 50% of the respondents are using online transaction for net banking and 14% of the respondents are using online transaction for online trading, hence majority of the respondents are using online transactions for net banking.

### 3.22 OPINION ON POSSIBILITY OF CYBER CRIMES

Opinion on possibility of cyber crimes is an important component influencing preference towards usage of online payment apps (applications), hence opinion on possibility of cyber crimes is used for classification of the respondents. Table 3.22 shows the respondent's opinion on possibility of cyber crimes in their frequencies and percentage.

TABLE 3.22: OPINION ON POSSIBILITY OF CYBER CRIMES

Category	Frequency	Percentage
Yes	29	29%
No	39	39%
No opinion	32	32%
Total	100	100

Source: Primary data

The table 3.22 shows that 29% of the respondents has the opinion on possibility of the cyber crimes, 39% of the respondents has not the opinion on possibility of cyber crimes and 32% of the respondents has no opinion on possibility of the cyber crimes, hence majority of the respondents has no opinion on possibility of cyber crimes.

## 4. FINDINGS OF THE STUDY

Findings emerged from analysis of the results pertaining to various aspects of online payment system, few suggestions have been recommended for the efficient functioning of customer preference towards online payment system in Madurai city.

Summary of findings, suggestion and conclusion are given below:

### FINDINGS BASED ON PERCENTAGE ANALYSIS

- ❖ 59 percent of the respondents are male using online payment apps.
- ❖ 52 percent of the respondents are between the ages of 20-30 years.
- ❖ 37 percent of the respondents are post graduate.
- ❖ 58 percent of the respondents have family members 3-5.
- ❖ 39 percent of the respondents having the monthly income of below 15000.
- ❖ 56 percent of the respondents are employed.
- ❖ 38 percent of the respondents are private employee.
- ❖ 42 percent of the respondents are college students.
- ❖ 96 percent of the respondents are using online transaction.
- ❖ 42 percent of the respondents are frequently using the internet for online transaction.
- ❖ 46 percent of the respondents are using online payment apps for collecting information.
- ❖ 73 percent of the respondents are partially aware of E-wallets.
- ❖ 53 percent of the respondents are aware of his/her friends.
- ❖ 34 percent of the respondents are using paytm mode for online payment.
- ❖ 45 percent of the respondents are using online payment apps for time saving.
- ❖ 47 percent of the respondents are frequently using E-wallets for only once.
- ❖ 52 percent of the respondents had loaded less than Rs 500.
- ❖ 52 percent of the respondents have no obstacles faced while using online payment apps.
- ❖ 57 percent of the respondents are not experienced the negative impact on online transaction.
- ❖ 50 percent of the respondents are using online transaction for net banking.
- ❖ 39 percent of the respondents have no opinion on possibility of cyber crimes.

### SUGGESTIONS

On the basis of findings, the following suggestions are given by the government, consumer and society.

#### To the government

The government of India has been taking several measures to promote and encourage digital payments in the country. The government aims is to create a 'Digitally empowered' economy that is 'Faceless, paperless and cashless.

#### To the consumer

The consumer's level of satisfaction is low in the following areas of transaction speed, grievance handling method, service charges. Customer needs grow with no limits, and it is very much evident from the various services offered by online payment systems.

#### To the society

- ✓ Online payment should be given more importance and can be made more preference to customers.

- ✓ The online payment has to design the strong distribution channels to capture by phone pay sector.
- ✓ It may provide good margins compare than other services.
- ✓ In the payment sector need and a nature of work comfortable for customer action throughout the survey and solutions, decision making.
- ✓ Online payment apps are most attractive and reliability to the customer's satisfaction with day to day service activity for their customer service.
- ✓ In the modern world find the online payments technical to the customer's preference.

## 5. CONCLUSION

Online payment user's awareness spread among the people due to Government policy of demonetization and usage of various online payment apps (applications). Online payment apps support the customer to transfer their payment with usage of their mobile phones in an easiest way. It is suggested that the Online payment apps officers should frequently visit the customers and enquire about their requirements and problems they face. Online payment apps have to increase its advertising in television media to introduce an awareness to the general public. It is concluded that there will be a tremendous growth in adoption of online payment apps in upcoming years. Most of the payment systems described in the paper offers a secure means of transfer. The transaction processing cost is low & cost effective in case of online transfer.

## REFERENCES

1. Adirta Goswami, 'Customer satisfaction towards online payment with special reference to teenage group', Indian Journal Research, Vol. 3, No. 1 Jan 2022, pg 1-3
2. Amali, 'A study on online payment in Coimbatore', International journal of Interdisciplinary and Multidisciplinary Studies (IJIMS), 2015, Vol.2, Issue 3, Jan 2021, pp 13-15
3. Bamasak, (2011) 'Exploring consumers acceptance of mobile payments an empirical study', International Journal of Information Technology, Vol XI, Issue number 1, Pg 173-185.
4. Barker, T. and Sekerkaya, A. (1992), "Globalization of Credit Card Usage: The Case of a Developing Economy", International Journal of Bank Marketing, Vol. 10 No. 6, pp. 27-31. <https://doi.org/10.1108/02652329210017299>
5. C. S. Ramagopal, G. Palaniyappan, 'Customer perception towards Electronic payment services' Asian Journal of Business and Economics, Vol. 1, Issue No. 1, March 2019, pp 22-25
6. Doan, 'Effect on payment mechanism', Spending Behavior, Vol XX, Issue number 14, 2014, Page no 133-177.
7. Economic times, 'India leads the world in digital transformation' Vol. VIII, Issue no 17, 2016, Page no 333-337
8. Mohammad Auwal Kabir (2015), 'Online Payment', International conference on E commerce, St. Joseph's College conference proceedings, 2015, pp 3-4



## A TREND ANALYSIS ON THE USE OF VARIOUS E-PAYMENT METHODS IN INDIA

**Dr. ASAD MIRZA**  
**ASST. PROFESSOR**  
**DEPARTMENT OF COMMERCE**  
**SHIA PG COLLEGE**  
**LUCKNOW**

**ANKITA DEVI**  
**RESEARCH SCHOLAR**  
**DEPARTMENT OF COMMERCE**  
**UNIVERSITY OF LUCKNOW**  
**LUCKNOW**

**ABSTRACT**

India is a growing country in terms of its Digital Payment System. For this purpose, various policy initiatives have been started and technological developments have been made by the Government. For example, Digital India Scheme, pushed people to use mobile and internet and they became means to increase the growth of digital payment. The demonetization and COVID-19 pandemic resulted in enormous growth in digital payments. The digital payments are more transparent in their nature and they help in growth and development of Indian economy. In recent scenario, the digital payment system has completely changed like digital wallets, UPI and BHIM apps, introduced for smoothing system of digital payments. The objective of this research paper is to study the growth and recent trends of digital payment system and its methods. Result reveals that digital payments are growing tremendously and UPI is the most used method of electronic payment system. In terms of growth, UPI is the first and IMPS is the second most growing means of digital payments.

**KEYWORDS**

digital payments, demonetization, e-payments, electronic payment system, digital India, covid-19.

**JEL CODES**

E42, O32.

**1. INTRODUCTION****Meaning of E-Payment System**

Electronic payment system means making payment for transactions of goods or services without using cash or cheque but via internet. Electronic payment system includes use of electronic devices, internet, digital platform or websites for making payments. E-Payments can be done by using debit or credit cards, digital wallets, banking apps etc. Overall, we can say that E-Payment System means the system of doing transactions with the use of internet.

Now a days, everyone is busy in their lives and they want to do every work in the shortest possible time even if it is payment. The electronic payment system saves time and energy and it is more convenient to use. It has no boundaries; it can be used for fast money transfers across the whole world. The various methods for electronic payment system currently available are UPI, AEPS, USSD, Card payments and electronic wallets. On the basis of requirement of customers and suitability of transactions, these methods are used all over the world. Electronic payments are used for almost everywhere like daily transactions and sales, ticket bookings and service payments, banking transactions and even street vendors also accepting UPI payments.

**Methods of Electronic Payment System**

- **Real Time Gross Settlement** – Real Time Gross Settlement (RTGS) includes two words i.e., Real time and Gross settlement. Real time means that the instructions are processed at the time they are received; Gross settlement means that instructions for fund settlement occurs individually. From December 14, 2020, RTGS is available 24\*7\*365. RTGS is mainly used for large value transactions. The minimum amount that can be transferred through RTGS is Rs 2,00,000/- with no maximum limit.
- **Electronic Clearing Services** – Electronic Clearing Service (ECS) is one of the methods of electronic payment methods. It is used for those transactions which occurs frequently and on a regular time period. This method is mostly used for making bulk payments or collection of bulk amounts by institutions. It is used for transferring huge amount of money from single user source to many destination account holders. This service is currently available in 15 RBI centers and 21 SBI centers.
- **National Electronic Fund Transfer** – National Electronic Fund Transfer (NEFT) is a method of electronic payment that can be used anytime within the domestic boundaries. NEFT is only operated and owned by RBI. There is no maximum or minimum limit for the transactions done through NEFT. NEFT transactions can be done online as well as offline and there are no charges applicable for online transfers through NEFT. This service can be used on 24\*7\*365 basis.
- **Immediate Payment Service** – Immediate Payment Service (IMPS) is a digital payment service which is used for instant payments by banks for inter-bank transactions of electronic fund transfer. This service can be used through mobile phones, ATMs, internet on all days including bank holidays. This facility is provided and managed by National Payments Corporation of India (NPCI).
- **Unified Payments Interface** – Unified Payments Interface is a digital payment system that allows real-time payments from one bank account to another. In this method multiple bank accounts can be used in a single mobile phone by linking them to UPI app. It can be used anytime throughout the whole year. The transactions can be done by using Virtual Payment Address (VPA) or UPI ID that helps in transferring money by using Know Your Customer (KYC) linked to the account number.
- **National Automated Clearing House** – National Automated Clearing House (NACH) is a centralized clearing service introduced by NPCI which is used for high or low volume transactions that are periodic and repetitive in nature. It is a modified version of ECS. It can be used for transactions of huge amounts for distribution of dividends, interest, subsidy, pension, etc.
- **Aadhaar Enabled Payment System and Aadhaar Payment Bridge System** – AEPS and APBS are also introduced by NPCI for digital payments. Aadhaar Enabled Payment System (AEPS) is used for transactions using Aadhaar authentication of those who have a bank account and their Aadhaar is linked with it. Aadhaar Payment Bridge System (APBS) is a system used by institutions for disbursal of various government benefits to many account holders who have their account with Aadhaar.
- **Prepaid Payment Instruments** – Prepaid Payment Instruments (PPIs) are the methods that are used for purchase of goods or services within the limit of value stored in these instruments. The value may be stored by the holder through cash, debit card or credit card.
- **Banking cards** – Banking cards are cards issued by a bank for payments. These can be debit cards, credit cards, prepaid cards etc. These cards carry a logo of the company that issues it. These cards can be used for withdrawal of money, making payments for purchase or checking bank account balance.

## 2. LITERATURE REVIEW

**Mamta, Tyagi and Dr. Shukla (2016)** in their article the title of which was "The Study of Electronic Payment Systems", had done a study the purpose of which was to spot the problems and challenges of electronic payment systems and suggest some solution to improve the e-payment system quality. They found that the successful implementations of electronic payment systems depend on how the customers would perceive the security and other factors of electronic payment system. When they get confident about it only then this system would grow.

**T S and C D (2017)** in the article the title of which was "Opportunities and Challenges of E-Payment System in India", had done an investigation with the aim to know the issues and challenges of adoption of electronic payment systems and offer some suggestions for improvement in the e-payment system. The author revealed that, Digital revolution had given an easy approach for digital payments. They likewise observed that, the entrance of mobile network, Internet and power pushed digital payments to far off regions. It will help in growth of digital payments.

**Jubair and Yakoob (2017)** in their examination, dissected the mindfulness and reception of advanced wallets in metropolitan and rustic regions. The study uncovered that around 40% individuals knew about digital wallets both in urban and rural areas, but people in urban areas were adopting the digital payments vastly as compared to rural areas.

**David et al. (2018)** inspected the meaning of Distributed Ledger Technology (DLT) inside the area of installments and settlement framework close by valuable open doors, challenges connected with its drawn-out execution and reception. The study reasoned that DLT could be utilized in installments, clearing and settlement including cross boundary installments, move and record the responsibility for resources, accommodate personality the board and other developing tasks through distributed systems administration.

**Ravikumar et al. (2019)** in their review, examined the effect of computerized installments based on financial development in conditions of genuine Gross Domestic Product (GDP). The creators observed that among the distinctive advanced installment techniques, just retail electronic installment influence the genuine GDP in a positive manner, in the short-run, however toward the day's end, it didn't affect the real GDP by any means. Further, over the long haul, advanced installments at large and retail electronic installments didn't contribute straightforwardly to financial development in India.

**Rajat Deb (2020)** concentrated on the effect of utilizing pre and post portable applications with family saving-spending conduct. This study unveiled that there is 50% expansion in saving and spending choices in post-portable application use when contrasted with the pre-versatile application use.

Currently there are over 300 million users of digital or E-payments in India. There is a growth of up to 76% in digital transactions in the last 12 months. (Razorpay reports) As per their reports, the digital transactions are expected to grow up to 700 billion by the end of 2022. In the FY 2021, more than 40 billion digital transactions were recorded across the India.

## 3. OBJECTIVES OF THE STUDY

This paper aims to:

1. Understand the various methods of electronic payment options currently available in the market.
2. Find out the general development of electronic payments in India during the period of study.
3. Assess and analyze the difference in growth among different categories of digital payments.
4. Understand the prospects of E-Payment or Online Payment System in India.
5. Analyze the impact of digital payment system in India.

## 4. SCOPE OF THE STUDY

The scope of this research is limited to the following points:

1. The time period taken for the study is from FY 2016-17 to FY 2020-21.
2. Data analysis has been done for some particular modes of electronic payment system like RTGS, Retail electronic Clearing and Banking cards.
3. The data collection and analysis has been done by using RBI Annual Reports.

## 5. RESEARCH METHODOLOGY

This research paper is based on secondary data and it is reasonable examination paper of Digital Payment system. The data has been collected from various sources like research journals, periodicals, government publications, magazines, newspapers articles and the authenticated websites.

## 6. DATA ANALYSIS AND INTERPRETATION

TABLE 1: MODES OF ELECTRONIC PAYMENT SYSTEM (Value in Billion)

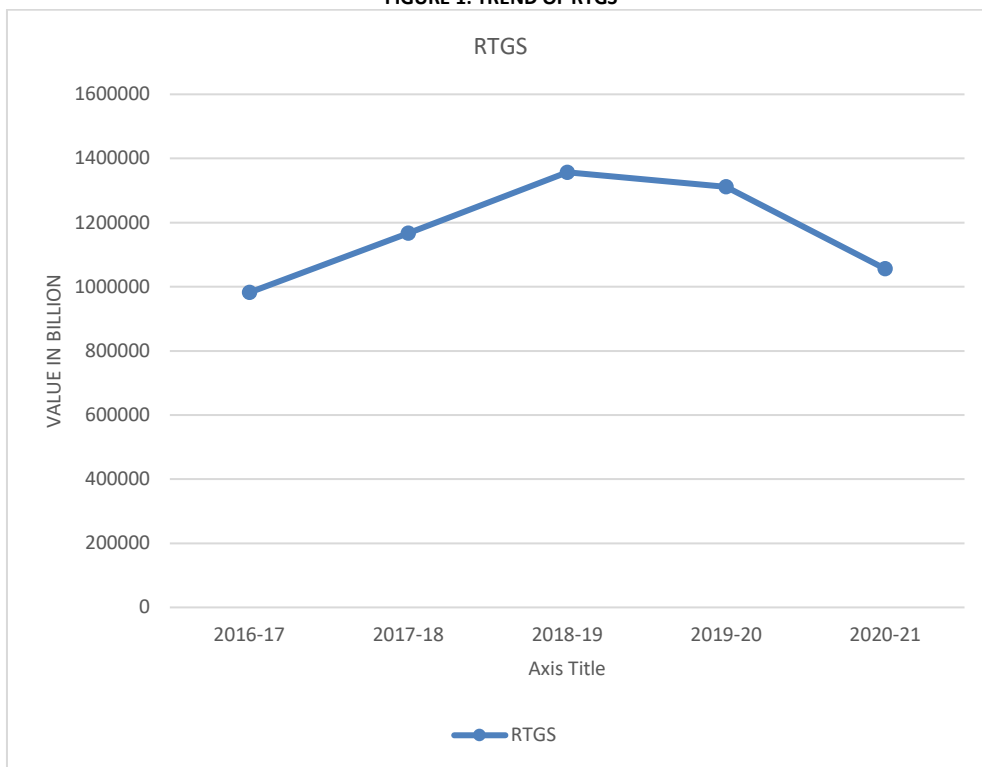
Particulars	2016-17	2017-18	2018-19	2019-20	2020-21
<b>1. RTGS</b>	981904	1167125	1356882	1311565	1055998
<b>2. Retail Electronic Clearing</b>					
a) ECS	105	105	120	51	0
b) NEFT	120040	172229	227936	229456	251309
c) IMPS	4116	8925	15903	23375	29415
d) UPI	69	1098	8770	21317	41037
e) NACH	7916	10736	14762	3250	3638
f) AePS	**	3	5	5	6
g) APBS	**	559	862	992	1127
<b>3. Banking Cards</b>					
a) Credit cards	3284	4590	6033	7309	6304
b) Debit cards	3299	4601	5935	7039	6627
c) PPIs	838	1416	2129	2156	1977

\*source- RBI annual reports

(\*\*Data not available)

**RTGS** – As we can see in the chart below, the usage of RTGS has continuously grown from 2016-17 till 2018-19, after that it has started declining. The value has decreased 19.49% in the last financial year. The chart shows its fluctuating trend but overall, it has grown 7.55% from the first financial year of the study period.

FIGURE 1: TREND OF RTGS



**Retail Electronic Clearing** – In the retail electronic clearing services, various means of payment have transformed drastically. Its growth, whether positive or negative, can be clearly seen from the chart below. During the period of study, ECS has vanished. It totally dropped down to zero.

**NEFT** has been growing continuously and in the last financial year it has shown 9.50% growth as compared to its preceding year. But if we can check from the initial phase (2016-17), it has almost been doubled the value of transactions.

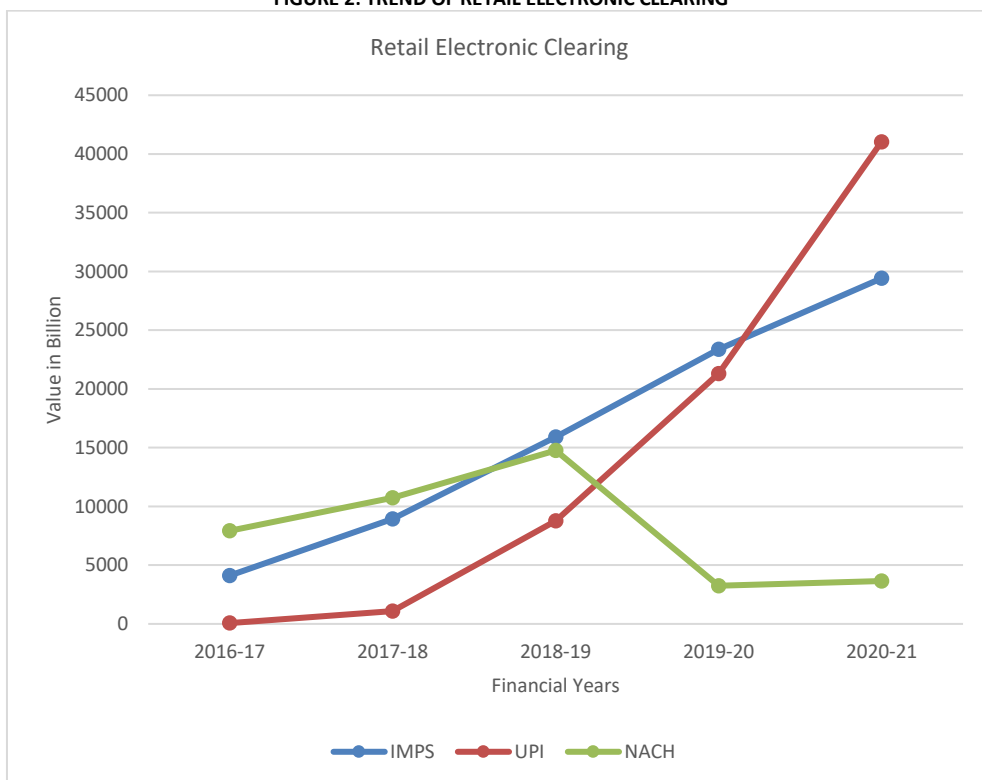
**IMPS** is also one of the most used methods of digital payment. It has grown 25.84% in 2020-21 as compared to 2019-20. In the study period of research, it has shown an overall growth of 614.65% which means it has grown almost seven times.

**UPI** is the most and fastest growing method of electronic payment system. Its value of transactions increased 92.51% more in 2020-21 as compared to 2019-20. In every financial year, it has grown with the speed of five-six times more than the previous year. Overall, it has shown a drastic growth in its value of transactions which almost 60,000 times in just 5 financial years.

**NACH** has shown growth till 2018-19 with good values but after that it starts declining. In 2019-20, it almost decreased by 80%. In the last financial year of study period, it has shown a growth of 11.94% but overall, it came to half of its initial value of transactions.

**AePS** and **APBS**, both have shown an overall growth of 100% which means their value of transactions have just doubled from the period of 2017-18. In 2020-21, AePS and APBS have grown by 20% and 13.61% respectively as compared to 2019-20.

FIGURE 2: TREND OF RETAIL ELECTRONIC CLEARING

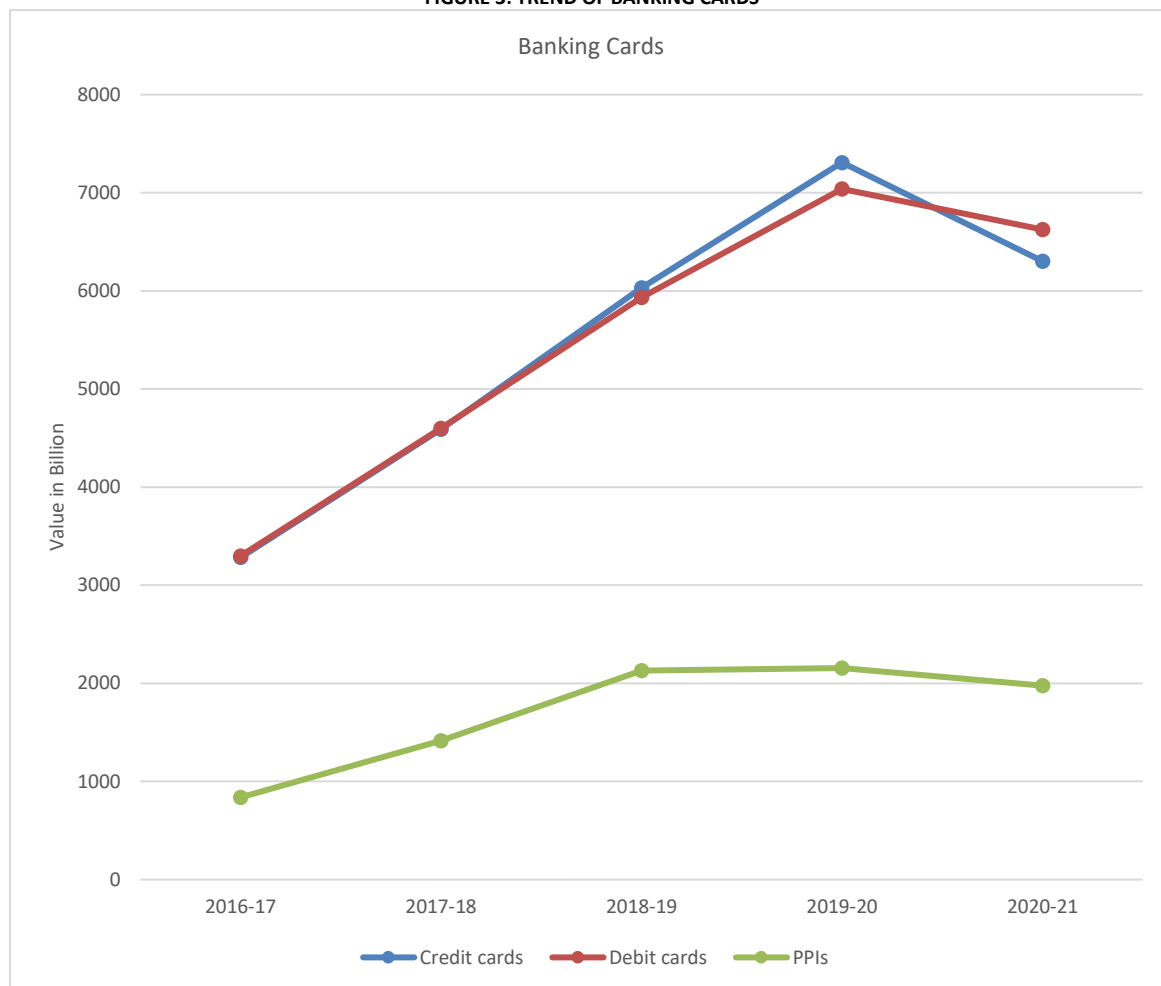


**Banking Cards** – While taking a look at banking cards like credit cards, debit cards, PPIs, etc., we can see that they tend to grow in almost same direction and with the same volume. The value of transactions of Credit cards has been decreased by 13.75% in last year of study period but overall, it has shown a growth of 91.96% which is almost double of its initial value.

In the same way, the value of transactions of Debit cards has been decreased by 5.85% in 2020-21 as compared to 2019-20 but while looking from 2016-17, its value of transactions is also being doubled.

PPIs has shown a decline by 8.30% in 2020-21 as compared to 2019-20 but overall, its growth is 135.92% which is more than double of its initial value of transactions in 2016-17.

FIGURE 3: TREND OF BANKING CARDS



## CONCLUSION

After the analysis of data in this research paper, we can conclude that the digital payments or transactions in India are increasing day by day. The trend of converting to digital system from the cash system is exponentially increased in the year 2020 due COVID-19 pandemic. Now a days, UPI is the most used methods of digital payment and it's also increasing with a very fast pace. There are various reasons for adopting UPI like more than half population of India are youth, they are educated and have digital literacy, they have smartphones and internet connection, what else they need. It's just a matter of one click and the payment is done. It is less time consuming and convenient method, so most people prefer UPI in even daily life. However, it cannot be denied that digital payment system consists some drawbacks because of which full digitalization has been only a dream to achieve. There are number of risks involved in it like cyber threats or fraud risks. But they all can be tackled with the digital literacy and awareness and it will help in growth and development of Indian economy.

## REFERENCES

1. Akhila Pai H. (2018), "Study on Consumer Perception Towards Digital Wallets", *IJRAR*, 3, 385-391.
2. Impact of COVID-19 outbreak on Digital Payments (May,2020) accessed from <https://www.pwc.in/consulting/financial-services/fintech/dp/impact-of-the-covid-19-outbreak-on-digitalpayments.html>
3. Kabir, M. A., Saidin, S. Z., & Ahmi, A. (2017), "Analysis of Factors that Influence Electronic Payment Adoption", *Journal of Engineering and Applied Sciences*, 12(Specialissue3), 6560– 6568. <https://doi.org/10.3923/jeasci.2017.6560.6568>.
4. Mamta, Hariom Tyagi and Dr. Abhishek Shukla (July 2016), "The Study of Electronic Payment Systems", *International Journal of Advanced Research in Computer Science and Software Engineering*, Vol. 6, Issue 7, 297-300.
5. Priyanka Philip (2020), "Consumer Perception towards Internet banking in State Bank of India", *International Research journal of Management Sociology & Humanities*, 11(4), 84- 96.
6. Rajat Deb (2020), "Influence of Mobile Apps on Household Saving-Spending Behaviour", *NMIMS Management Review*, Vol. XXXVIII (2), pp. 68-81.
7. Ravikumar, T., Suresha, B., Sriram, M., and Rajesh, R., (2019), "Impact of Digital Payments on Economic Growth: Evidence from India", *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, Vol. 8(12), pp. 553-557.
8. Richard Reisman (2019), "FairPay Relationship Pricing: An Adaptive, Value-Based Strategy for Consumer Markets", *NMIMS Management Review*, Vol. XXXVII (2), pp. 09-24.
9. S. MD. Shakir Ali, MD Wasim Akhtar and S. K. Safiuddin (June 2017), "Digital Payments for Rural India - Challenges and Opportunities", *International Journal of Management and Applied Science (IJMAS)*, Vol. 3, Issue 6, 35-40.
10. Salloum, S. A., Al-Emran, M., Khalaf, R., Habes, M., & Shaalan, K. (2019), "An innovative study of e-payment systems adoption in higher education: Theoretical constructs and empirical analysis", *International Journal of Interactive Mobile Technologies*, 13(6), 68–83. <https://doi.org/10.3991/ijim.v13i06.9875>.

11. Sujith T S, Julie C D (2017), "Opportunities and Challenges of E-Payment System in India", *International Journal of Scientific Research and Management (IJSRM)*, Vol. 5 No. 7, 6935-6943.

**WEBSITES**

12. Digital Payment Methods, retrieved from [http://cashlessindia.gov.in/digital\\_payment\\_methods.html](http://cashlessindia.gov.in/digital_payment_methods.html) on 27 Nov, 2021
13. Digital Payment, retrieved from <https://www.bankbazaar.com/ifsc/digital-payment.html>, on 3 Dec, 2021
14. E-commerce payment system, retrieved from [https://en.wikipedia.org/wiki/E-commerce\\_payment\\_system](https://en.wikipedia.org/wiki/E-commerce_payment_system) on 5 Dec, 2021
15. RBI Annual Reports, retrieved from <https://rbi.org.in/scripts/AnnualReportPublications.aspx> on 11 Dec, 2021
16. Statistics of National Payments Corporation of India (NPCI), retrieved from <https://www.npci.org.in/statistics> on 11 Dec, 2021

## **REQUEST FOR FEEDBACK**

**Dear Readers**

At the very outset, International Journal of Research in Computer Application & 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](mailto: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](mailto:infoijrcm@gmail.com).

I am sure that your feedback and deliberations would make future issues better – a result of our joint effort.

Looking forward to an appropriate consideration.

With sincere regards

Thanking you profoundly

**Academically yours**

Sd/-

**Co-ordinator**

## **DISCLAIMER**

The information and opinions presented in the Journal reflect the views of the authors and not of the Journal or its Editorial Board or the Publishers/Editors. Publication does not constitute endorsement by the journal. Neither the Journal nor its publishers/Editors/Editorial Board nor anyone else involved in creating, producing or delivering the journal or the materials contained therein, assumes any liability or responsibility for the accuracy, completeness, or usefulness of any information provided in the journal, nor shall they be liable for any direct, indirect, incidental, special, consequential or punitive damages arising out of the use of information/material contained in the journal. The journal, neither its publishers/Editors/ Editorial Board, nor any other party involved in the preparation of material contained in the journal represents or warrants that the information contained herein is in every respect accurate or complete, and they are not responsible for any errors or omissions or for the results obtained from the use of such material. Readers are encouraged to confirm the information contained herein with other sources. The responsibility of the contents and the opinions expressed in this journal are exclusively of the author (s) concerned.



## 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*

