



Paradigms, prospects and linkages of digital payment system: A study of qualitative data analysis using NVIVO

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Abstract

In the world of advanced digital transactions this paper highlights and analyze past researches to establish a link between the variables so that a defined understanding can be generated by giving much emphasis on elements mostly appearing in each study. To achieve the same the study firstly examines existing literature on digital payment and thereafter with the use of NVIVO (software for analysis of literature) interconnectedness between various variables are established in order to understand the current paradigm of digital payment system. The outcome generated is helpful as a foundation work for development of research proposition as well as has scope for validating it empirically. The results thus obtained is after analyzing the relevant research articles (sixty seven) through NVIVO which helped in generating tree map, word chart, nodes comparison, cluster analysis and word frequency.

Keywords: digital payment, consumer behaviour, NVIVO, E- commerce

1. Introduction

Over the years technological progression has provided efficient and effective payment system devoid of cash which is known popularly as digital or electronic payment. Specifically, electronic payment system provides a medium through which economic exchanges take place without visiting brick and mortar banks or with no physical presence of the transacting parties. Despite the growing importance of this mode of payment because of its easy usage, this subject is also important to explore as many eminent researchers have empirically established its link with economic growth. Digital payment has also revolutionized retailing through internet by making consumers to sit in their homes, offices and buy different products and items from all over the globe. Further, India has been using electronic payment systems for many years now still many commercial sectors have a predominance of cash transactions, and payment through digital mode is yet to pick up. Cards (both credit and debit) are one of the most secure and convenient modes of cashless payment in retail market. The aim of any country's payment system is to encourage secure, convenient and affordable modes of payment. The retail payments in India primarily depend on cash and card based payment systems. Just like an ATM card is used to collect money over a machine rather than a bank counter, or transactions carried over the net involve paperless transactions, the question now is how effectively we can encourage usage of plastic money. Furthermore, within the last decade or so, world has become rapidly digitized. For example, we now have internet purchases and social interactions made via social networks on the Internet. Two important factors that have contributed to this development are the use of mobile phones, and the use of the Internet. We are more 'on the go' than ever and get things done while we are on the go via our digital services turning the world to a mobile village. With the preceding challenges, the objectives of this study therefore is to examine the benefits

of digital payment, the essential elements of digital payment along with the review of opportunities and challenges laid down by digital payment system. To achieve the same the study firstly examines existing literature on digital payment and thereafter with the use of NVIVO (software for analysis of literature) interconnectedness between various variables are established in order to understand the current paradigm of digital payment system.

2. Relevance of the Study

India is at the threshold of digitization. As per the recent economic move of the government "Demonization". The concept of digital payment has become even more significant. Through current research the authors attempt to build a structure, paradigm, framework in order to facilitate a deeper understanding of the issue. This research is providing a robust foundation of the concept of digital payment so that future research endeavors can obtain a defined direction of investigation. This research is an attempt of the authors to generate new knowledge & insight about the topic through integrating significant research work by the authors' world over and with the use of qualitative research techniques. The study synthesizes the literature of the topic such that a new framework and perspective on the topic is generated. Synthesizes of knowledge from the existing literature is a significant value added contribution to the body of literature.

3. Objectives of the Study

The Objectives of the study are to

- Explore the advantages, issues, challenges and opportunities of digital payment system through an extensive review of extant literature.
- Identify the patterns, connections and directions of digital payment system.
- Derive the variables that are most dominantly associated with digital payment.

d. Provide a strong foundation for future research endeavors in this arena.

4. Research Methodology

This study adopts qualitative research to analyze digital payment. Firstly, an extensive review of literature was conducted. At this stage initial literature review was carried out, which involved scanning of a wide range of relevant electronic journal databases, academic papers and books to review the works of various researchers. The second stage is exploratory literature review in which all the specific relevant papers, articles and books were selected and the pool of sixty seven research articles, shortlisted as most relevant for the study were analyzed using NVIVO (Software for analysis of literature). The NVIVO analysis was conducted to obtain Tree map, Word chart analysis,

Comparison of nodes, Cluster analysis and Word frequency

5. Literature Review

To determine the current state of research on digital payment systems and their future directions, the study uses meta-analysis technique of research. In statistics, meta-analysis refers to statistical analysis of large collection of analyzed results from individual studies with the aim of integrating such findings (Glass, 1976). In other words, meta-analysis simply means analysis of analyses. This will be completed through the use of NVIVO software. As such, this study provides an extensive literature review search conducted with electronic journal available of Delhi University website and other search engines for e - resources like Google Scholar. Latest research articles on digital payment were shortlisted. Twenty such research papers are presented as below:

Table 1

	Title	Author	Method	Insights	Reference
1	Issues and Challenges of Electronic Payment Systems	Rachna Priyanka Singh	Theoretical Analysis only.	To create awareness about various Methods of online Payments & various frauds of Electronic Payments to motivate people to use online Payments & make online Payments safe & secure.	International Journal for Research in Management and Pharmacy, Vol.2, Issue 9, December 2013 (IJRMP) ISSN: 2320-0901
2	Competition and Innovation in the Consumer e-Payments Market? Considering the Demand, Supply, and Public Policy Issues.	Brian Mantel Federal Reserve Bank of Chicago Timothy McHugh Federal Reserve Bank of Chicago	Data collected from 1300 persons. Survey on consumer Decision Making.	To Analyze why consumers use card Based System of Payment Instruments.	Emerging Payments occasional working Paper series December 2001(EPS-2001-4).
3	An E-payment System: Literature Review	Nuthan K Rashmi P.C	Theoretical Analysis only.	Discussion of E Payment Gateway systems and protocols. Important security requirements of E Payments Analyzed.	The First International conference on Recent advances on science & Engineering 2014 (ISRASE-2014.)
4	Cashless Payment System in India-A Roadmap	Ashish Das, and Rakhi Agarwal.	Analysis of Debit Card Payments Between 2009 to 2010.	An Analysis of card based payment systems in India and practices followed in other countries.	Technical Reports-2010. space.library.iitb.ac.in/jspui/handle/10054/1732 .
5	A Study on usage and satisfaction of credit cards by customers in Krishnagiri District	S.Deviranjitham And Dr.S. Thamilarasan	Therotical Analysis only.	To study awareness, perceptions & satisfaction with credit cards.	International Journal of Business and Administration Research Review, Volume 2.Issue 4. Jan-Mar 2014. Page 160.
6	Trends in mobile payments research: A literature review	Denis Dennehy, David Sammon	An analysis of 20 papers published between 1999 to 2014. These papers were related to various stakeholders in a typical M-payment eco system. Information collected from secondary sources.	Out of 20 papers 9 were theoretical and 11 were empirical analysis. Study used interviews, surveys, and some used mixed Methods (Interviews & surveys) relating to India, Tanzania, Korea, U.S.A & Germany.	Journal of Innovation Management, JIM 3, 1 (2015) 49-61.
7	CASHLESS SOCIETY: DRIVE'S AND CHALLENGES IN NIGERIA	Maitanmi Olusola1, Awodele Oludele2, Ogbonna Chibueze3, and Osundina Samuel4	Sample of 100 respondents was collected using convenient sampling procedure by questionnaire.	Study was conducted to find out about the Issue of Awareness of cashless economy. Whether it would help Nigerian Economy to fight against corruption and money laundering.	International Journal of Information Sciences and Techniques (IJIST) Vol.3, No.2, March 2013
8	Consumers and credit cards: A Review of Empirical Literature.	Phylis M. Mansfield	In order to accomplish Goals conceptual framework was used based on TRY Component Attitude Theory (Lutz) 1991, Fabriger (1997). This Theory poists an Attitude is the way one thinks feels and Acts Towards some Aspects of his Environment, A- stood for effect or emotions about credit cards. B- behaviour related to credit cards. C- Referred to cognition or a person's beliefs about credit cards. The ABC Model comprised core of this consumer framework and surrounded by demographic and	1. To review and integrate the literature surrounding consumer credit cards in various disciplines and offer a series of guiding research opportunities to advance marketing discipline. 2. To Investigate the empirical research conducted over past Four Decades w.r.t Consumer Credit Cards. 3. To Provide Insights for understanding consumers Attitude towards credit cards and the determinants of Credit Cards usage.	Journal of Management and Marketing Research
		Mary Beth Pinto Penn State University – Erie			

			consumer socialise issues related to credit card.		
9	An analysis of growth pattern of cashless transaction system”	Piyush Kumar	Theretical Analysis that cashless system is not only requirement but also the need of Today's Society.	The Aim of this study is to assess the behaviour towards cashless Transaction System and how far they are adopted to this model of cashless society.	IMPACT: International Journal of Research in Business Management (IMPACT: IJRBM) ISSN(E): 2321-886X; ISSN(P): 2347-4572
				Other objective to know the importance of cashless Transaction system,to Assess the customer Trust and confidence in cashless Transaction System.	Vol. 3, Issue 9, Sep 2015, 37-44 © Impact Journals
10	Retail payments: integration and innovation	Santiago Carbó-Valverde and José M. Liñares-Zegarra	The conference paper stressed that requirements for retail payments are strongly influenced by growing demand for alternative banking solutions, The increasing International mobility of individuals and companies. Customers see for more innovative payment solutions. Data collected thru Questionnaire and survey Methods.	The Aim of this conference paper was to better understand the current developments in retail payment markets and to identify future possible trends by bringing together policy, conduct, research Activities and marketing practices. The study considers different Types of rewards to estimate the relative impact of these rewards on preferences for cards relative to cash. It also offers an estimation of agreegate of economic rewards, Problems in use of cards across merchant activities.	The Europeon Central Bank Working paper series No.1142-Dec 2009.
11	India's Progress Towards Cashless Economy	Pardhasaradhi Madasu	The study is explanatory in nature & provides scope for in-depth research .Basic statistical tools have been applied to analyze the data collected from R.B.I data base.	To assess the progress of India towards the cashless Economy. The secondary objective being to provide an overview of the global scenario of Transactions towards cashless Economies.	Gavesana Journal of Management / Vol. 7. Issue 2. July - December 2015.
12	Rising consumer preference for cashless purchasing creates new opportunities	Kasavana, Michael L	Theoretical Analysis.	An analysis of different types of credit Cards,Debit Cards & other Types of Credits.	Automatic Merchandiser. www.Amonline.com. April 2005.
13	Can E-Payment Systems Revolutionize Finance of the Less Developed countries? The case of Mobile Payment Technology.	Helmi Hamdi	Colletion of Data from secondary Sources.	An analysis of importance of mobile Phone Industries and Financial services Transacted.	International Journal of Economics and Financial Issues.
14	Effect of consumer characteristics on the use of payment instruments	Stavins, Joanna	Information collected through secondary sources Auomated clearing House.(ACH) & Thru Questionnaire.	Overview of structure of retail payments in the United States.	New England Economic Review: 2001: 3: ABI/INFORM Collection.Page 19.
15	The evolution of the payments system: A U.S. perspective	Hoening, Thomas M	Theoretical Analysis.	An Analysis of US Payments Systems for online Transactions.	Economic Review - Federal Reserve Bank of Kansas City:
16	Technological Innovations in Indian Banking Sector - A Trend Analysis	Dr. Subhrangshu S. Sarkar	Theoretical Analysis.	To study major Technological Innovations which has Taken place in Indian Banking Sector over Last two Decades. To Study use of Different Technolgical innovations for cashless Payments in India To Study Trend of Different cashless Mode of Payments Systems which have taken place in Recent Past.	Journal of Commerce & Management Thought.
17	Factors affecting consumers' perception of electronic payment: An empirical Analysis.	Wendy Ming-Yen Teoh Jiat Wei Chua	Data collected from secondary sources relating to different banks of Malaysian economy promoting E-Payment Use among Malyasians . This is done by Testing Alternative Hypothesis.	To study security, Trust Benefits, self Efficacy, and ease of use as important Factors influencing perception of Malyashian Economy.	www.emeraldinsight.com /1066.2243/htm.
18	Benefits and challenges of Nigeria's cashless policy.	Osazer Barer,Henry Osahon.Prof Yomcee Gabriel.O.	Data were collected from CBN Database of various issues relating to cashless policy.Income of banks interms of ATM Withdrawals,OT Cash withdrawals Cheques,etc.	The objective of this paper is to fill the perceived knowledge gap existing in the literature on the benefits and challenges of cashless Economy.	New England Economic Review: 2001: 3: ABI/INFORM Collection.Page 19.
19	Cashless policy, users' perception and retail marketing performance	Andy Fred Wali; Len Tiu Wright; Paul Reynolds	An Analysis of Nigerian online Payment System.	The study Population comprises the customers and operators of entire Retail Business in Nigeria. A Random sampling of 500 customers and 50 Managers of 10 Retail firms in Nigeria.	The Business & Management Review, Volume 5 Number 1, June 2014.
20	The Impact of Inequalities in regional Ecomic Development on disparities in spatial Distribution of cashless Payment in	Piotr Bolibok.	Secondary Data Regarding. No of Atm Per 1 million inhabitant. No of points of sale Accepting Payments thru cards per I Million Inhabitants. No of Banks outlets per per I Million	To Quantify the impact of Inequqlities in the level of regional Economic Development on the disparities in spatial distribution of cashless payment infrastructure in polland.	Journal of Economics and Management ISSN 1732-1948.Vol.21(3).2015.

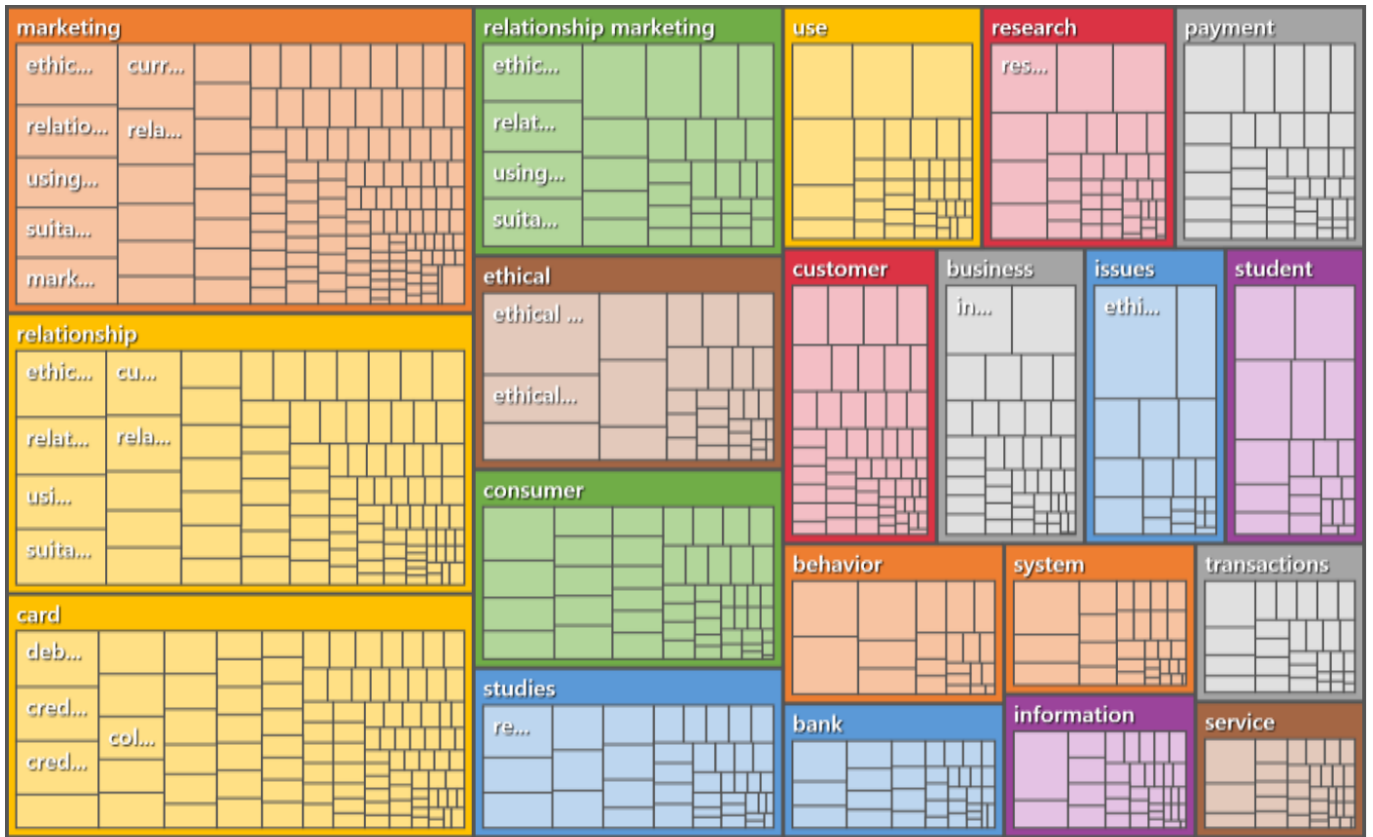
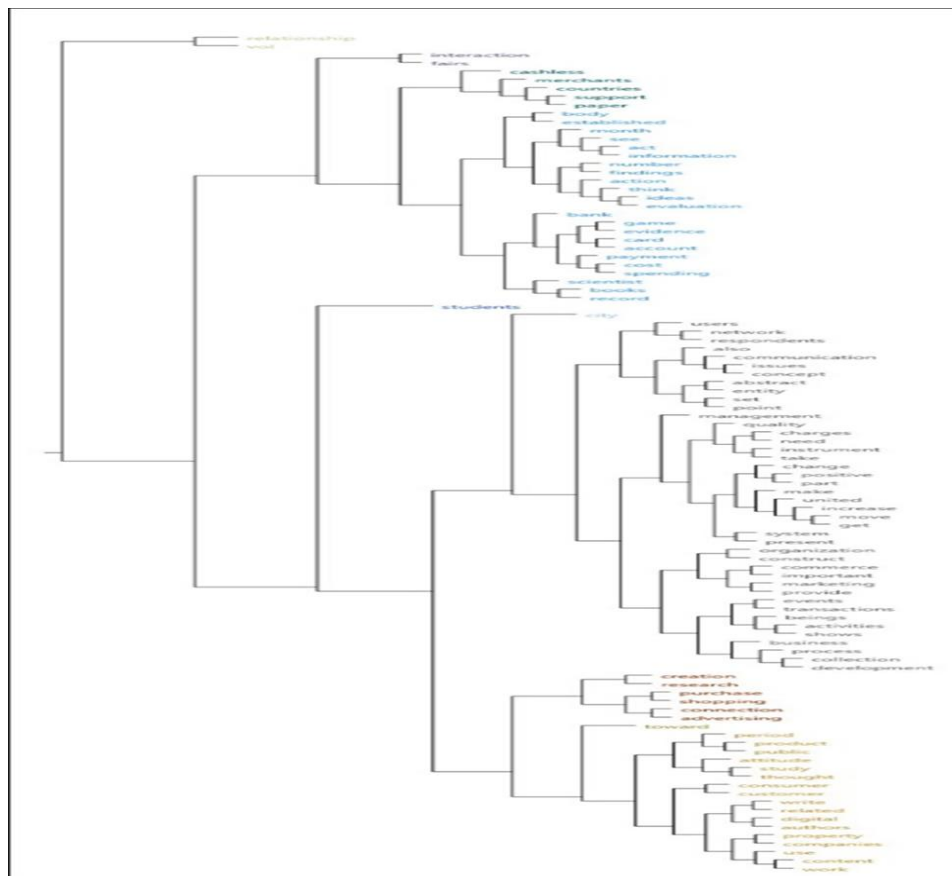


Fig 3: Nodes Compared by Number of Coding References

The above table shows nodes compared by no of coding references highlighting relationship marketing, ethics,

research, payment, studies, information are the leading nodes which have been compared.



Note: Low Visibility due to big size (The analysis conclusion is discussed in ensuing section)

Fig 4: Cluster Analysis

Cluster Analysis is the task of grouping objects in a way that objects in the same group are more similar to each other than those in other group. The cluster analysis here shows

words like users, network, respondents, instrument, part, system etc.

	A: bank	B: behavior	C: business	D: card	E: consumer	F: customer	G: ethical	H: information	I: issues	J: marketing	K: payment	L: relationship	M: relationship marketing	N: research	O: service	P: student	Q: studies	R: system	S: transactions	T: use
1: Internals\\Search Round-3) - paper 4	14	2	9	56	1	2	0	1	8	3	20	0	0	0	5	0	3	5	17	8
2: Internals\\MIP-10-2012-0116	2	2	4	0	0	9	1	2	1	20	0	27	14	4	4	0	13	0	0	0
3: Internals\\Paper 4, search round 4	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
4: Internals\\Paper 5, Search Round 4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0
5: Internals\\Paper 6, Search Round 4	16	0	1	5	0	1	0	1	0	1	8	0	0	2	4	0	2	10	10	2
6: Internals\\Paper 6, Search Round 4 (1)	16	0	1	5	0	1	0	1	0	1	8	0	0	2	4	0	2	10	10	2
7: Internals\\Paper 7, Search Round 4	10	2	2	4	6	2	0	6	1	0	15	1	0	3	5	0	5	14	14	11
8: Internals\\Paper 8, Search Round 4	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
9: Internals\\RM2	0	0	9	0	1	2	1	5	1	10	0	16	4	6	1	0	3	1	0	1
10: Internals\\RM2 (1)	0	0	9	0	1	2	1	5	1	10	0	16	4	6	1	0	3	1	0	1
11: Internals\\RM6	2	2	4	0	0	9	1	2	1	21	0	28	15	4	4	0	13	0	0	0
12: Internals\\RM7	1	0	12	1	2	21	5	10	1	59	0	51	15	11	12	0	2	2	1	1
13: Internals\\RM8	0	0	9	0	0	14	39	2	14	24	0	21	13	4	1	5	2	0	0	3
14: Internals\\Search Round -3) paper 7	4	0	3	9	1	0	0	1	1	0	13	1	0	1	3	0	0	7	1	2
15: Internals\\Search Round -3) paper 8	0	30	0	72	48	1	2	0	11	11	2	2	0	21	0	21	28	0	0	16
16: Internals\\Search Round -3) paper 8 (1)	0	30	0	72	48	1	2	0	11	11	2	2	0	21	0	21	28	0	0	16
Of-The-Effectiveness-Of-Online-Marketing-	2	0	6	6	5	4	0	12	4	45	5	3	1	10	2	1	3	2	0	10
18: Internals\\w400	1	2	0	0	3	19	0	5	0	12	0	14	2	5	5	0	3	0	2	1

Fig 5: Word Frequency

Word Frequency Table above shows that certain words have been used how many number of times in studies analyzed in literature review like bank, behavior, business, card, consumer, ethical, information, issues, marketing, payment, relationship marketing, research, service, student, studies, system, transactions etc.

7. Major Research Implications

As the world is moving from cash to a cashless one through the use of electronic- based transactions, it is imperative for India too to move in the same direction. The benefits of the same include increased economic growth, greater financial inclusion, and faster access to capital reduce risk of cash related crimes. As per the output obtained through various models in this study it is inferred that E-commerce has a major link in the development of electronic/digital payment methods. Further customers are apprehensive because of the risk in online payments. Thefts of payments data, personal data and fraudulent rejection are concerns due to which customers are more wary of trusting E – commerce. It is important to spread awareness about digital payment option and their usage through relationship marketing initiatives by marketers as the variable was found linked maximum number of times with E- commerce. As a whole, the study has critically reviewed previous digital payment studies across the world. The paper has also highlighted and analyzed past researches by giving much emphasis on

elements mostly appearing in each study. These include card payments, customer retention, digital ethics etc. Finally, the limitation of this study is its limited capacity of analysis. Therefore, future researchers can increase the scope to cover other aspects of earlier studies. This might give path to analyze and integrate the variables used with a view to find existing gaps for further empirical studies digital payment system.

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