A STUDY ON IMPACT OF ELECTRONIC PAYMENT SYSTEMS IN RETAIL SECTOR AT TIRUCHIRAPPALLI DISTRICT

Dr.S.P. Dhandayuthapani

Department of Management Studies, Anna University B.I.T Campus, Tiruchirappalli

Aravind rai Karthikeyan

Department of Logistics Management, Alagappa University, Karaikudi

Shalini S

Department of Management Studies, Anna University, BIT Campus, Tiruchirappalli

ABSTRACT

Modern technology is turning into an essential element in the financial trade. We focus the emphasis of this review on the E-wallet and Online payment, which is an element of an electric payment system, to get the pattern of using this service. "What are the major security issues regarding using electronic payments"? What security properties need to comply for secure electronic payments? With the systematic literature review approach, the results show that interest in E-wallets and online payment has grown significantly during this period, and it was found that for the increasing uses of electronic payments, researchers are more focused on security issues. The results show that to conquer the key gaps, electronic payment must have some protection properties, namely, availability, authorization, integrity, non-repudiation, authentication, and confidentiality. Nowadays, security problems in electronic payment are usually more demanding than the present security problems on the web. These findings can enable electric transaction providers to strengthen their security methods by boosting their security gaps, as required for relevant services.

KEYWORDS: Online UPI transactions, online payment,E-wallets.

INTRODUCTION

The electronic payment system has continued to grow more and more over the last years because of the increasing spread of internet-based banking and shopping. Electronic transfers are money transactions that take place electronically between consumers and retailers. Millions of users around the world regularly make various payments via the Internet. These exchange materials are a kind of electronic monetary instrument. Electronic payment systems have gained tremendous interest over the last two decades because of the vital role they play in contemporary electronic commerce. According to the Statista Fintech report, in 2019, the total amount of transactions in the digital payment segments an electronic payment system is
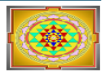
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individuals may pay for products and services online. There are quite a few e-payment systems that have been established in the payment sector around the world, and in References, the authors classified electronic payment systems into various categories, namely e-cash, e-wallet, online payment, card-based, etc. In this study, we dedicate the focus of the research to the e-wallet and online payment system that is part of an electronic payment method in order to understand the trend of using this system. An E-wallet is a tool that has actually additionally been acknowledged as a digital wallet. An E-wallet is a program for computer banking that can collect your identity and digital credentials an e-wallet is considered one of the most famous transaction approaches at present because a digital purchase utilizing an e-wallet has the advantages of simplicity and adaptability, as well asprotection. On the other hand, the online transaction system is an internet-based technique of processing monetary transactions that are accepted day by day. Online payment is an electronic way of exchanging payment that enables a customer to pay an online dealer or service provider. Security issues in electronic payments are more challenging today than the other current security issues on the Internet. In electronic payments, customers must deliver credit card and payment account details and personal information and this Internet transfer is a tool that can be used to steal money. In recent years, several studies have contributed to the multiple protection issues in the area of electronic payments where, because of electronic payment, customers need to feel protected regarding their personal privacy concerns. The aim of this analysis is to research the literature on e-wallets and online payment systems. We investigate different studies providing different backgrounds for study and their relationships. The following research questions are specified. "What are the major issues regarding using electronic payments. "What security properties need to comply for secure electronic payments? This paper provides a selection of fascinating queries regarding the interlocking between different threats of online and e-wallet transactions, looking at potential security measures. This paper is structured as follows. The section outlines the study methodology, the Section presents the reviewed papers based on research results, and the Section presents a discussion of the findings and the conclusions.
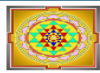
REVIEW OF LITERATURE

1. **N. Ashokan a Philip Janson (2000)** online through open networks such as the Internet, crucial security issues are being raised. Consumers had many workstations posing challenges of dimensions on electronic payment new ways of payment such as orders, cheques, and later plastic money were invented also allows with actual money.

2. **Ahuja & Joshi (2018)** have studied customer perception concerning mobile wallets. In this study, they examined the factors exploration techniques is used to classify the factors which influence customer opinion towards mobile wallets. This study has been conducted about the different types of mobile wallets in India. The data is collected from primary data.

3. **Singh & Gupta (2016)** they have conducted a study to identify various factors that influence the adoption of mobile wallet payments among customers. They considered the various variables for the study are convenience and trust.

4. **Dustin Odom Odomet (2014)** In his comparative study of smartphone users' perception and preference towards mobile payment methods in the us and Korea, as the smartphone adoption rate increases, smartphone users pay more attention to mobile payment.

5. **Palaka et al. (2010)** Presented a model for peer-to-peer e-commerce transactions with a decentralized approach focusing on the reliability issues of centralized payment systems offered by Internet e-commerce websites such as eBay and Amazon.

6. **Cobb (2004)** According to him the value of electronic payment was way beyond the immediate convenience and safety of cards, contributing to a great extent to the overall economic development.

7. **Anusha Prem Chand (2015)** Look at electronic payments what they entail and basic payments and infrastructure. We also look at the future of electronic payments as well as the challenges and recommendations for electronic payment systems.

8. **Marwah Naeem hassooni, Methaq Hameed Mustafa Sabah Taha (2020)**

To cover the vendors' payment-processing system work on this template. This method assists the transference of money electronically through performing an online payment system.

9. **Shroff (2007)** In this modern banking and technology have taken the role and impact of technology of electronic payment system. It also includes an in depth study of various payment systems provided by the bank.

10. **Lukman O. Oyelami, S. Adekunle (2020)** The electronic payment system adoption and consumer spending growth and increased rate of dynamics electronic payment systems in recent times have studies to investigate the relationship between electronic payment and consumer spending in various regions.

OBJECTIVE OF THE STUDY

To assess the behavioural pattern of electronic payment systems in retail segments in the Tiruchirappalli district.

To identify the user's perception of the electronic payment system used.

To review the instruments and institutions of payment systems.

To analyse the factors affecting the usage of the electronic payment system.

RESEARCH DESIGN

The research design is the arrangement of conditions for gathering and investigating information in a way that intends to consolidate pertinence to the exploration reason with the economy in technique. The examination configuration is the reasonable structure inside which inquiry is conducted; it establishes the plan for the gathering, estimation, and investigation of information.

SAMPLE DESIGN

A sampling design is obtaining a sample from a given population. A sampling technique is a convenient sampling method. Questionnaire structures are decided before the information is gathered. There are many examples of structures from which can analysts can pick. A few plans are moderately more exact and simpler to apply than others.

Sample size

The sample size taken for the main study is 96. The sample size arrives at 96 since it is convenience sampling.

Sampling techniques

The sampling method used to collect data regarding electronic payment systems is convenient sampling technique. It is non-probability techniques.

Questionnaire design

The structured questionnaire was used to collect the data from the respondents who used retail sectors in the electronic payment system. The questionnaire consists of a variety of questions presented to the respondents for the response. Close-ended questions, multiple choice, Likert scale, and interval scale were used in constructing the questionnaire.

Data collection method

The data was collected from primary data.

CHI- SQUARE TEST

Checking the relationship between gender and usage of electronic payment system
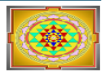
Hypothesis: 1

H0: There is a relationship between gender and usage of electronic payment apps

H1: There is no relationship between gender and usage of electronic payment apps

Table no: 4.2.1

Table name: Gender VS usage of electronic payment apps

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)

Pearson Chi-Square	108.140[a]	10	<.001
Likelihood Ratio	23.691	10	.008
N of Valid Cases	96		
a. 13 cells (72.2%) have expected count less than 5. The minimum expected count is .01.			

Chi-square result

Calculated value   : 108.140[a]

Degrees of freedom   : 10

Tabulated Value   : 18.307

Significant Level   : 5% Level

Comparison   : $108.140^a > 18.307$

Interpretation

Calculated chi-square test is greater than tabulated value. Therefore H1 Alternate hypothesis is accepted. There is a significant relationship between gender and usage of electronic payment apps.

Checking relationshipbetween age and how long have been using electronic payment apps

Hypothesis: 2

H0: There is a relationship between age and how long have been using electronic payment apps

H1: There is no relationship between age and how long have been using electronic payment apps.

Table no: 4.2.2

Table name: Age VS How long have been using e-payment apps

Chi-Square Tests

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	113.006[a]	16	<.001
Likelihood Ratio	26.587	16	.046
N of Valid Cases	96		

a. 16 cells (64.0%) have expected count less than 5. The minimum expected count is .01.

Chi-Square result

Calculated Value   : 113.006[a]

Degrees of freedom   : 16

Tabulated value   : 26.296

Significant Level   : 5% Level

Comparison   : 113.006>26.296

Interpretation

Calculated chi-square test is greater than tabulated value. Therefore, H1 Alternate hypothesis is accepted. There is a significant relationship between age and long have been using e-payment apps.

CORRELATION ANALYSIS

Correlation: 1

H0: There is no significant relation between problem facing of e-payment and factors influence of e-payment
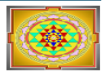
H1: There is significant relation between problem facing of e-payment and factors influence of e-payment

Table no: 4.3.1

Table name: problem facing of e-payment VS factors influence of e-payment

		Which type of problem are you facing retailers while using electronic payment service?	Which the following factors influence you the most to use electronic payment system?
Which type of problem are you facing retailers while using electronic payment service?	Pearson Correlation	1	.138
	Sig. (2-tailed)		.178
	N	96	96
Which the following factors influence you the most to use electronic payment system?	Pearson Correlation	.138	1
	Sig. (2-tailed)	.178	
	N	96	96

Interpretation

It is inferred that Pearson's value means that there is a positive correlation between problem facing of e-payment and factors influence of e-payment. Sig. (2-tailed) value is less than the critical value of 0.05. Hence, H$_0$ is accepted and H$_1$ is rejected which means there is statistically significant correlation between the variables.

Inference

Therefore, there is a positive relation between problem facing of e-payment and factors influence of e-payment.
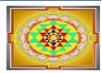
Correlation: 2

H0: There is no significant relation between which type electronic payment do you use and frequently failed transactions in e-payment system

H1: There is significant relation between which type electronic payment do you use and frequently failed transactions in e-payment system.

Table no: 4.3.1

Table name: which type electronic payment do you use VS frequently failed transaction in e-payment system.

		Which type of electronic payment service do you use ?	How frequently do you faced failed transaction while use 1 app?
Which type of electronic payment service do you use ?	Pearson Correlation	1	.282**
	Sig. (2-tailed)		.005
	N	96	96

How frequently do you faced failed transaction while use 1 app?	Pearson Correlation	.282**	1
	Sig. (2-tailed)	.005	
	N	96	96

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

Interpretation

It is inferred that Pearson's value means that there is a positive correlation between Which type of electronic payment do you use and frequently failed transaction in e-payment system. Sig. (2-tailed) value is less than the critical value of 0.05. Hence, H_0 is accepted and H_1 is rejected which means there is a statistically significant correlation between the variables.

Inference

Therefore, there is a positive relation between which type of electronic payment do you use and frequently failed transaction in e-payment system.

SUGGESTIONS

1.Retailers should offer a variety of payment options to customers, including credit/debit cards, mobile wallets, and online payment platforms. This will cater to different customer preferences and increase the likelihood of completing a sale.

2. Further research could explore factors such as technological proficiency, attitudes towards mobile payments, or financial habits that may contribute to the observed relationship and it may be helpful to compare these results to similar studies in other regions or countries to determine if the relationship is specific to your sample or if it holds true across different populations.

3. It may be useful to conduct additional analyses, such as regression analysis, to determine the specific nature of this relationship.

4. suggest that further investigation could explore factors such as system design, use error, or security concerns that might contribute to frequent transaction failures.
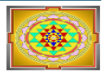
5. Additionally, it may be useful to consider how these factors differ across demographic groups or regions, and how they might affect the overall adoption and success of electronic payment systems.

CONCULSION

In conclusion, the impact of electronic payment systems in the retail segment has been significant and trans formative. Electronic payment systems have revolutionized the way people make payments by providing a convenient and secure way of transferring funds. With the advent of mobile wallets and digital payment platforms, electronic payment systems have become more accessible and widely used by consumers, leading to increased efficiency and reduced transaction costs. Retailers have also benefited from electronic payment systems, as they can now process transactions more quickly and accurately, and have access to valuable data insights that can help them improve their business operations.

BIBLOGRAPHY

Book

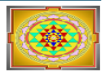Research methodology book by CR Kothari

Reference

Herzberg, A. (2003) *"Payments and banking with mobile personal devices"*,

Communications of the ACM, Vol. 46, No. 5, pp 53-58.

Juang, W.S. (2006) „D-cash: A flexible pre-paid e-cash scheme for date

attachment‟, Accepted for Electronic Commerce Research and Applications.

Kalakota, Ravi and Whinston, B. Andrew (1996), *Frontiers of Electronic Commerce*,

Singapore: Pearson Education, p. 295.

Laudon, C. Kenneth and Traver, Carol (2002), *E-Commerce*, New Delhi: Pearson Education.

Lawerence, Stacy (2000), *"Study Peeks into Worldwide Wallets",* The Industry Standard, April. pp 34-54.

Lee, A.S. (1989) "*A Scientific Methodology for MIS Case Studies*", MIS Quarterly, 13, pp 33-50.

Murthy, C.S.V. (2002), *E-Commerce: Concepts, Models and Strategies*, New Delhi: Himalaya Publishing House, p. 626.

1. Abrazhevich, D. (2002) „*Diary on Internet Payment Systems',* Proceedings of the British Conference on Human Computer Interaction, London, England.

2. Anderson, M.M. (1998), *"Electronic Cheque Architecture, Version 1.0.2",* Financial Services Technology Consortium, September

3. Baddeley, M. (2004) *"Using E-Cash in the New Economy: An Electronic Analysis of Micropayment Systems",* Journal of Electronic Commerce Research, Vol. 5, No. 4, pp 239-253.

4. Bhatia, Varinder (2000), *E-Commerce (Includes E-Business),* New Delhi: Khanna Book Publishing Co.

5. Boly, J. P. et al., (1994), *" The ESPRIT Project CAFÉ-High Security Digital Payment System",* ESORICS 94, Third European Symposium on Research in Computer Security, Brighton, LNCS 875, Spring- Verlage, Berlin, pp 217-230. accessed on http://www.zurich.ibm.ch/technology/Security/Sirene/Publ/ BBCM1_94cafeEsorics.ps.gz.

6. Cavarretta, F. and de Silva, J. (1995), "*Market Overview of the Payments Mechanisms*
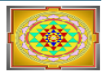
for the Internet Commerce",

accessed on

http://www.mba96.hbs.edu/fcavarretta/money.html.

7. Chakrabarti, Rajesh and Kardile, Vikas (2002), *E-Commerce: The Asian Manager's Handbook*, New Delhi: Tata McGraw Hill.

8. Charkrabarthi, Rajesh et al (2002), *The Asian Manager's Handbook of E-Commerce,* New Delhi: Tata McGraw Hill.)

9. Chaum, D. (1992), *"Achieving Electronic Privacy",* Scientific American, August,pp 96-101 accessed on http://www.digicash.support.nl/publish/sciam.html.

10. Danial, Amor (2002), *E-Business (R) evolution,* New York: Prentice Hall.

11. Dennis, Abrazhevich (2001), "*Classifications and Characteristics of Electronic Payment Systems",* Lecture Notes in Computer Science, Vol. 21, No. 5, pp. 81-90.

12. Diwan, Parag and Sharma, Sunil (2001), *E-Commerce: A Managerial's Guide to E Business,* New Delhi: Excel Books.

13. Diwan, Parag and Singh, Dharmvir (2000), *Computer Networks Driven E-Commerce Technologies*, New Delhi: Amexcel Publisher Pvt. Ltd.