_____

Consumer Attitude and Intention to Adopt Mobile Wallets in Chennai and Malappuram Districts of India

Dr. D. Paul Dhinakaran
Assistant Professor
Department of Commerce
Jayagovind Harigopal Agarwal Agarsen College
(Affiliated to University of Madras)
Madhavaram, Chennai, Tamilnadu-600060
Email id: pauldhinakaranboss@gmail.com

Dr. Umesh U
Assistant Professor and Research Supervisor
Department of Commerce and Management Studies
Amal College of Advanced Studies
(Aided by Govt.of Kerala & affiliated to Uty.of Calicut)
College under section 2 (f) & 12 (B) of the UGC Act 1956,
Accredited with NAAC 'A' Grade, Myladi, Nilambur, Kerala-679329
Email id: dr_umesh@amalcollege.ac.in, umesh.tripunithura@gmail.com
*orcid id: https://orcid.org/ 0000-0002-5380-4833

Mrs. Kamalam Edathil
Associate Professor and Head of the Department
PG Department of Commerce
EMEA College of Arts and Science
(Aided by Government of Kerala and affiliated to University of Calicut)
Kumminiparamaba PO
Kondotty, Malappuram
Kerala, India
Email id: gauthampangat@gmail.com

M. Rajalakshmi
M.Phil. Research Scholar (Full Time)
Department of Commerce
Jayagovind Harigopal Agarwal Agarsen College
(Affiliated to University of Madras)
Madhavaram, Chennai, Tamilnadu-600060

Abstract

In today – world, smart phone has become an essential part of one's daily life. Mobile users can nowadays use their Smartphones to make money transactions or payments by using applications installed in the phone. When smartphones can function as leather wallets, it is called "Digital Wallet" or widely known as "Mobile Wallet". The main aim of this empirical study is to examine the mobile wallets usage Consumer attitude and intention to adopt mobile wallet in Chennai district of Tamilnadu State and Malappuram district of Kerala State, India. The respondents were categorized on the basis of gender, age and occupation. The study is based on the primary data collected from 481 respondents by using a structured questionnaire. Five point likert scales was

used in questionnaire for obtaining responses. The statistical tools applied in this study are ANOVA, Chi Square, Friedman Test, and frequency analysis. SPSS 20 was used to perform statistical analysis.

Keywords: Mobile wallet, Digital Wallet, Mobile Payment, cashless payment, online payment, smartphone users

INTRODUCTION

The technological advancement has made the smart phones as devices where the mobile users can make money transactions or payments by using an application installed in the phone. The rapidly growing mobile payment adoption has already started to reshape the payment practices.(Xu, Y., et al,2018) Mobile wallets have provided newer digital payment avenues to consumers while offering companies and marketers greater opportunities to market their products and services online. However, not much is reported about the adoption of mobile wallets in India.(Chawla, D.,and Joshi, H. ,2019)

The Indian Government's initiatives such as 'Digital India' and increased use of mobile and internet are the main reasons for the exponential growth in use of digital payment. Even though the thought of digitalization arose long years ago, it has taken a growth pace recently. This is because of lack of awareness and knowledge among people, fear of making online payment, security issues etc.(Mathiraj, D. S et al,2019)

REVIEW OF LITERATURE

Vandezande, N. (2013) in recent years, the number of mobile payments has risen rapidly. During that same timeframe, the methodology of mobile payments has shifted from being mere monetary transactions executed by means of an interconnected network environment – such as the Internet – toward highly diverse mobile wallet ecosystems that include different types of services aimed at improving the overall user experience and at fostering customer loyalty toward a specific ecosystem. Rathore, H. S. (2018) In today-world, smartphones have become an essential part of daily life. Due to technology, mobile users can nowadays use their smartphones to make money transactions or payment by using applications installed in the phone. When smartphones can function as leather wallets, it is called "Digital Wallet" or widely known as "Mobile Wallet". The present study tries to study the various factors that can affect a consumer's decision to adopt digital wallet as a mode of online payment. Apart from this, the study also attempts to find out the various risks and challenges faced by users of digital wallets.

Agarwal, S et al (2018) Using mobile wallet and card transaction data from a leading Singapore bank, this paper studies the effect of a mobile wallet payment technology introduction in 2017 on business growth. We find the mobile wallet usage doubled after the new technology introduction, and the improved payment convenience generated a significant spillover effect. Small merchants experienced a monthly increase in debit and credit card sales amount (count) of 3.5 percent (3.4 percent) compared to large merchants. The payment technology promoted sales growth primarily for new businesses by facilitating customer acquisition.Singh, P., and Rajput, R.(2019) A Recent study by industry body ASSOCHAM suggests that the e-Commerce market in India might attain $38 billion in 2016. In February 2016; a report by Counterpoint Research stated that India had achieved the second largest smartphone market in the world with 220 million smartphone users. Nowadays, digital wallet and mobile banking apps which allow fast transactions anywhere at any time play a significant role in digital transactions. This brings into focus the security issues related

to these apps. Keeping these facts in view in the present study we investigate the security constraints of some digital wallet and mobile payment apps in India.

Das, A., et al (2019) Post demonetization in India, the popularity of digital wallets gains exponentially. There are many digital wallets which are currently active in India like Paytm, Freecharge, Jio Money, Airtel Money etc. The aim of this paper is to explore, in detail, about different digital wallets which are very much in use in India and what are their policies and what all measures they take regarding the security of the user data.Shree P.N, S et al (2020) The empirical research design was adopted by employing a survey method to collect responses from the target population through a convenience sampling method. The primary data collected were subjected to analysis using SPSS Version 23.0 and the statistical tools such as, percentage analysis, Correlation analysis, Factor analysis and multiple regression analysis.User friendliness and Users Awareness of Mobile Banking at large has to be thrusted at every branch banking units to digitally promote awareness of Government Schemes such as, Jan DhanYojana, Digital India, Licensing Small Finance Banks/Payment Banks, Aadhaar Enrollment and etc.Tripathi, S (2020) The research has also found that factors such as saving time, cashback and discounts, convenience, detailed records, reduced theft risk, track your spendings, and creating a cashless economy influence consumer's attitudes towards mobile payment applications. The research also indicates some factors as barriers to the consumers towards mobile payment applications such as transaction charges, don't know how to use, Digital Payments are not accepted everywhere, transparency, habit, and trust. It is expected that this study will help in India to plan successful strategies for increasing the use of mobile payment applications and they can build better relations with consumers.F, S.(2020) In today – world, smartphones have become an essential part of one's daily life. Mobile users can nowadays use their Smartphones to make money transactions or payments by using applications installed in the phone. There are several mobile wallets which provide these services. Mobile wallets are digital versions of traditional wallets that someone would carry in their pocket. They offer payment services through which the individuals/business can receive /send money via mobile devices. The present paper throws light upon the customer satisfaction level towards the ewallet services provided by paytm. It focuses on the services provided by Paytm wallet and its satisfaction level.

Padiya, J., &Bantwa, A. (2021) This paper also throws light on ancillary issues like impact of demonetization decision on preference for online payments, impact of various demographic factors on usage of E-wallets, problems faced by people while using E-wallets etc. The study is based on 318 valid responses received through a structured questionnaire. Data collected was analyzed by using percentages, cross tabulation and statistical tools like ANOVA. Through this study we found that E-wallet users give a very high level of importance to attributes like security, privacy concerns and pricing (Fees). The major problems frequently encountered by the respondents while using E-wallet are long transaction time taken by E-wallet for processing the transaction, security breach and delayed payment. The Demonetization drive of the government of India has contributed immensely towards awareness, usage and acceptance of online payment.

RESEARCH METHODOLOGY

The study is based on the primary data collected from total 481 respondents; 254 respondents from Chennai district of Tamilnadu State and 227 respondents from Malappuram district of Kerala State, India by using a structured questionnaire. Five point likert scales was used in questionnaire for obtaining responses. The statistical tools applied in this study are ANOVA, Chi Square, Friedman Test, and frequency analysis. SPSS 20 was used to perform statistical analysis.

Objectives of the study

1. To find out the impact of demographic factors on consumer preference towards mobile wallet

2. To study the factors that influence consumers in adoption of mobile wallet

3. To study the risk and challenges faced by consumers in use of mobile wallet

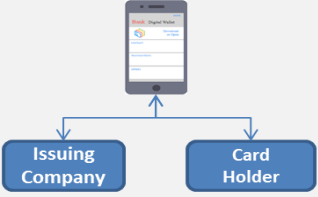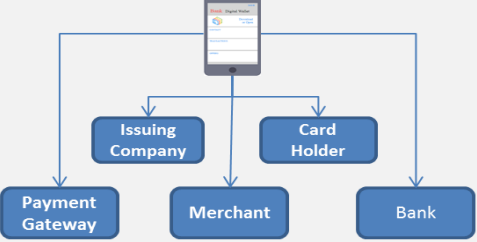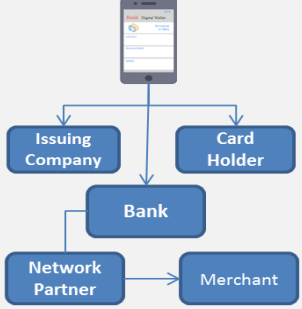4. To analyze the growth of mobile wallets in Chennai and Malappuram districts of India

Hypothesis of the study

❖ There is no relationship between gender of the respondents and using mobile wallets of the respondents.

❖ There is no relationship between education of the respondents and using mobile wallets of the respondents.
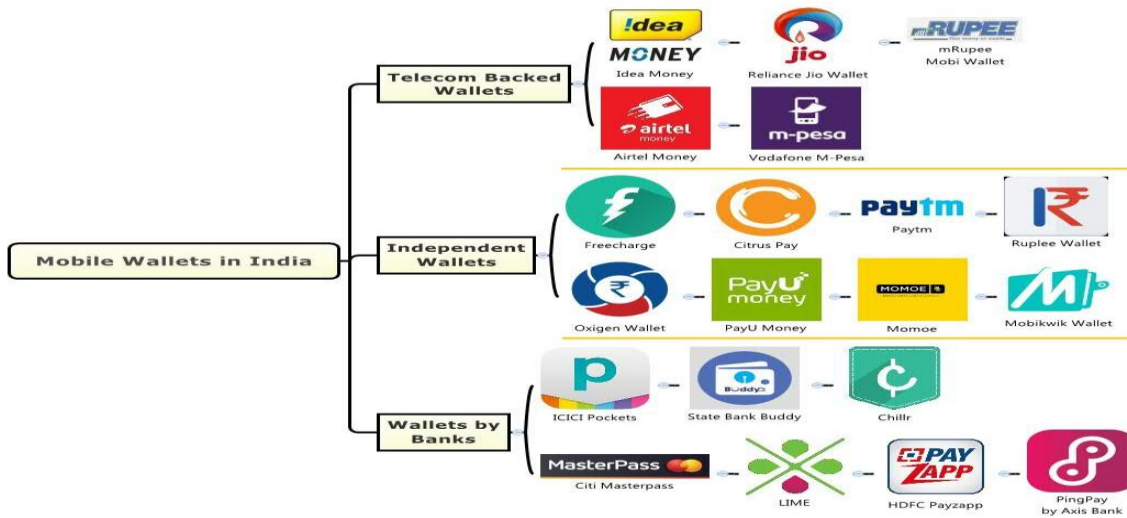
MOBILE WALLET

Unlike its counterpart like a physical wallet, a mobile wallet is a digital wallet in which one can add money through credit/debit cards and make payments from. It's basically an electronic prepaid account which can be used to pay anything. From groceries to bill payments to movie tickets, you can make all the transactions through mobile wallets. All you need to do is, download the app from play-store or app-store, and make an account with the mobile wallet provider. Such wallets are more convenient and provide more security than a traditional business.(https://indialends.com/ifsc/mobile-wallet)

Figure 1: Types of Mobile wallets (PPI) in Chennai and Malappuram districts

Closed	Semi Closed	Open
It is only for that company . Issued by the same company to buy their own products.	Can be used to buy goods and services from merchants that have a contract with the issuer to accept the payment.	Allow user to buy good and services, withdraw cash at ATM and transfer funds.
Money go to the issuing company account.	To escrow account	To bank account
Banks, NBFC (Non Banking Financial Companies) can operate .	Banks, NBFC can operate.	Banks only can operate
KYC is not required	KYC is not mandated	KYC is mandated
Maximum Rs 10,000 can be stored	Maximum Rs 50,000 can be stored by providing KYC	Maximum Rs 100,000 can be stored
Life style gift card, Metro card, flipkart wallet, make my trip wallet , etc...	Oxigen, Paytm, Mobikwik, etc.	Paytm payments bank. Vodafone M-pesa

(Source: https://blog.usejournal.com/product-adoption-life-cycle-for-mobile-wallets-in-india)

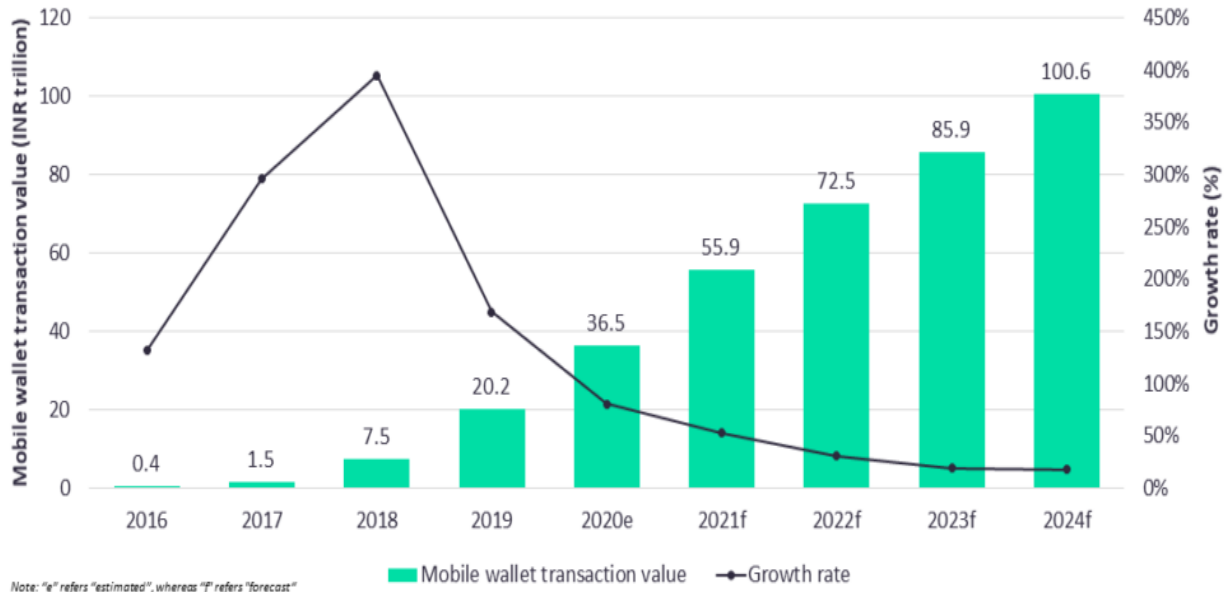**Figure 2: Mobile wallets in Chennai and Malappuram districts**

(Source: https://www.techinasia.com/talk/mobile-wallet-wars-india)

Digital wallet V/s Mobile wallet

Mobile wallets	Digital wallets
Mobile wallets are payment apps housed on mobile devices, like smartphones and wearables.	Consumers using digital wallets may or may not interact with them on their smartphones.
Consumers mostly use a mobile wallet for in-person transactions.	Consumers mostly use a digital wallet for online shopping or purchases.
Some of the most popular mobile wallets are Apple pay, Samsung pay etc.	Some of the most popular digital wallets are Paytm, Paypaletc

(Source: https://indialends.com/ifsc/mobile-wallet)

> ➤ **India: Mobile wallet Transaction value (INR Trillion) 2016-2024**

Mobile wallet adoption is hotting up and gradually displacing traditional payments forms such as cash and cards in India. This has become even more prevalent during the current COVID-19 crisis and as a result mobile wallet transactions are expected to surpass INR100 trillion ($1.36 trillion) by 2024, according to Global Data. An analysis reveals that mobile wallet transactions in India were valued at INR384 billion ($5.4 billion) in 2016. With consumers increasingly switching from cash to electronic payments, the value is expected to reach INR100.6 trillion ($1.41 trillion) in 2024.In terms of transaction volume, an estimated 23.5 billion mobile wallet transactions will be carried out in 2020, which is expected to more than double to 54.7 billion in 2024. *(https://www.paymentscardsandmobile.com/mobile-wallet-transactions-in-india-to-exceed-1-36-trillion-by-2024/)*

Figure 3: India: Mobile wallet Transaction value (INR Trillion) - (2016-2024)

Note: "e" refers "estimated", whereas "f" refers "forecast"

Source: Global Banking and Payments Intelligence Center

DATA ANALYSIS AND INTERPRETATION

Table 1: Socio-Economic Profile of Respondents

Variables	Category	No. of Respondents	Percentage
Gender	Male	321	66.7
	Female	160	33.3
	Total	**481**	**100.0**
Education	Up to H.Sc	7	1.5
	Diploma/ITI	3	.6
	Degree	37	7.7
	P.G and above	434	90.2
	Total	**481**	**100.0**
Age wise classification of the Respondents	21-30	176	36.6
	31-40	183	38.0
	Above 40	106	22.0

_____

	Upto 20	16	3.3
	Total	**481**	**100.0**
Monthly income (Rs.) wise classification of the Respondents	15001-25000	89	18.5
	25001-35000	73	15.2
	Above 35000	215	44.7
	Up to 15000	104	21.6
	Total	**481**	**100.0**
aware regarding the functionality of mobile wallets	Yes	428	89.0
	No	30	6.2
	Maybe	23	4.8
	Total	**481**	**100.0**
Information about mobile wallets	Social media	232	48.2
	Friends	191	39.7
	Television	33	6.9
	Newspaper	25	10.6
	Total	**481**	**100.0**

(Source: *collected and computed through Questionnaire)*

Inference
- ❖ The respondents of 66.7 percent of respondents are male and 33.3 percent of respondents are female. It is found that the majority of respondents are male.
- ❖ The table shows, out of 481 respondents, 7.7% respondents are from degree, 90.2% of respondents from PG and above and the rest seventeen 1.5% respondents are uptoH.Sc. Thus majority of respondents' are from PG and above.
- ❖ The respondents of 36.6 percent of respondents are 21-30 years, 38.0 percent of respondents are 31-40 years, 22.0 percent of respondents are Above 40 years and 3.3 percent of respondents are Up to 20 years. It is found that the majority of respondents are 31-40 years age group.
- ❖ The respondents of 18.5 % are getting monthly income of 15001-25000, 15.2 % of the respondents getting 25001-35000, 44.7% of the respondents getting Above 35000, and 21.6% of the respondents getting Up to 15000. It is found that majority of the respondents getting monthly income Above 35000 of the respondents.

❖ The respondents of 89.0% say yes, 6.2% of the respondents says no, 4.8% of the respondents says maybe. It is found that the majority of the respondents are says yes.

❖ The table 1 shows, out of 481 respondents got Information regarding wallet through, 39.7% respondents from friends and family; 10.6 % respondents from Newspaper,48.2% respondents from social media.And the rest Television 6.91% respondents Thus, majority of the respondents' are known information through Social media.

ONE WAY ANOVA

Table 2: One Way ANOVA – Using mobile wallets and Gender

Using mobile wallets and Gender		Sum of Squares	df	Mean Square	F	Sig.
aware regarding the functionality of mobile wallets	Between Groups	.261	1	.261	1.140	.286
	Within Groups	109.731	479	.229		
	Total	109.992	480			
Using mobile wallet services is interesting.	Between Groups	1.665	1	1.665	1.706	.192
	Within Groups	467.333	479	.976		
	Total	468.998	480			
Using mobile wallet services makes the handling of payments easier	Between Groups	11.726	1	11.726	13.409	.000
	Within Groups	418.889	479	.875		
	Total	430.615	480			
Approximately how frequently do you use Mobile Payment Apps	Between Groups	4.874	1	4.874	5.193	.023
	Within Groups	449.567	479	.939		
	Total	454.441	480			
How much money do you load in M-wallet on a monthly & basis	Between Groups	15.565	1	15.565	8.054	.005
	Within Groups	925.724	479	1.933		
	Total	941.289	480			
Mobile wallet services allow for a faster usage of mobile applications. e.g., movie tickets, Train Tickets	Between Groups	4.088	1	4.088	7.917	.005
	Within Groups	247.318	479	.516		
	Total	251.405	480			

(**Source:** *collected and computed through Questionnaire*)

Inference

Table 2 Depicts results of ANOVA test conducted to examine association between Using mobile wallet and gender result shows that at 5% significance level there is significant association of Using mobile wallet and gender.

Table 3: One Way ANOVA – Using mobile wallets and Education

ANOVA

Using mobile wallets and Education		Sum of Squares	df	Mean Square	F	Sig.
Mobile wallet services allow for a faster usage of mobile applications. e.g., movie tickets, Train Tickets	Between Groups	26.894	3	8.965	19.046	.000
	Within Groups	224.512	477	.471		
	Total	251.405	480			
It is easy to become skilful at using mobile wallet services	Between Groups	33.859	3	11.286	11.533	.000
	Within Groups	466.819	477	.979		
	Total	500.678	480			
Rate the mobile wallet service that you have used?	Between Groups	45.606	3	15.202	24.181	.000
	Within Groups	299.878	477	.629		
	Total	345.484	480			
When using mobile wallet, I believe my information (bank / card details) is kept confidential	Between Groups	20.846	3	6.949	5.898	.001
	Within Groups	561.998	477	1.178		
	Total	582.844	480			
The internet access charges are high when using mobile wallet	Between Groups	7.409	3	2.470	2.277	.079
	Within Groups	517.265	477	1.084		
	Total	524.674	480			
any obstacles when you use mobile wallet	Between Groups	.270	3	.090	.142	.935
	Within Groups	302.533	477	.634		
	Total	302.802	480			

(*Source: collected and computed through Questionnaire*)

Inference

Table 3 Depicts results of ANOVA test conducted to examine association between Using mobile wallet and education Result shows that at 5% significance level there is significant association of Using mobile wallet and education.

FRIEDMAN TEST

Table 4: Consumer Attitude and Intention Towards to Mobile Wallets

Friedman	Mean Rank	Rank
Using mobile wallet services is interesting.	7.00	2
Using mobile wallet services makes the handling of payments easier	7.31	1
Mobile wallet services allow for a faster usage of mobile applications. e.g., movie tickets, Train Tickets	2.36	8
It is easy to become skillful at using mobile wallet services	6.59	3
When using mobile wallet, I believe my information (bank / card details) is kept confidential	6.32	4
The internet access charges are high when using mobile wallet	5.12	5
Using online payment / banking wallet services is cost burden to me	4.64	6
Are there any obstacles when you use mobile wallet	3.39	7
want to continue using mobile wallet	2.27	9

(**Source:** *collected and computed through Questionnaire*)

Inference

Above from the table 3 Friedman rank test, it is ascertained that majority of the Consumer attitude and intention towards to mobile wallets. Using mobile wallet services makes the handling of payments very easier, Using mobile wallet services is interesting and It is easy to become skillful at using mobile wallet services.

CONCLUSION

After demonetization mobile wallet usage has become more popular. Internet problem and payment for two digit amount are the commonly issues faced by the respondents and also people are not willing to pay extra money. Whether it is a payment or transaction, mobile wallet is considered as a most convenient method. Financial literacy should be there in a country to adopt these kinds of changes. (Praiseye and Florence John,2018)

The study reveals that the majority of the respondents are aware about mobile wallets and they are using the mobile wallets for making payments. As a result, out of 481 respondents got Information regarding wallet through 48.2% respondents from social media, aware regarding the mobile wallets it is found that the majority of the respondents are says yes.The findings also reveal how the influential factors affect the adoption of consumers. Security issues in transaction and privacy are the most concerned factors among users.

REFERENCES

1. Agarwal, S., Qian, W., Yeung, B. Y., &Zou, X. (2018, December 27). Mobile Wallet and Entrepreneurial Growth. Retrieved from

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3298266

2. Chawla, D., & Joshi, H. (2019, June 19). Consumer attitude and intention to adopt mobile wallet in India – An empirical study. Retrieved from https://www.emerald.com/insight/content/doi/10.1108/IJBM-09-2018-0256/full/html

3. Das, A., Satija, T., Zilpe, S., Kavya, J., &Kar, N. (2019, April 08). A Study of Threat Model on Mobile Wallet Based Payment System. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3361202

4. F, S. (2020, April 10). A Study on Customer Satisfaction of Mobile Wallet Services Provided by Paytm. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3555616

5. Mathiraj, D. S., Geeta, S. D., & Devi, D. (2019, December 25). Consumer Acuity On Select Digital Wallets. Retrieved from http://www.ijstr.org/paper-references.php?ref=IJSTR-0819-21748

6. Mobile Wallets.(n.d.). Retrieved from https://indialends.com/ifsc/mobile-wallet

7. Dr. D.Paul Dhinakaran, "Exports and Imports Stagnation in India During Covid-19- A Review" GIS Business (ISSN: 1430-3663 Vol-15-Issue-4-April-2020).

8. Mobile wallet transactions in India to exceed $1.36 trillion by 2024. (2020, October 22). Retrieved from https://www.paymentscardsandmobile.com/mobile-wallet-transactions-in-india-to-exceed-1-36-trillion-by-2024/

9. Praiseye and Florence John, 2018, A Study On Consumer Preference Towards Mobile Wallet, 8 IJRAR September 2018, Volume 5, Issue 3.

10. Padiya, J., &Bantwa, A. (2021, February 02). Adoption of E-wallets: A Post Demonetisation Study in Ahmedabad City. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3735394

11. Rathore, H. S. (2018, August 07). Adoption of Digital Wallet by Consumers. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3215675

12. Shree P.N, S., Gurusamy, D. S., &Balaji, P. (2020, February 25). Perception of Youth Towards Mobile Banking Usage Intention – An Empirical Study. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3526114

13. Singh, P., & Rajput, R. (2019, March 21). Cybersecurity Analysis in the Context of Digital Wallets. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3355789

14. TechSci Research, H. (n.d.). India Mobile Wallet Market By Application (Money Transfer, Recharge, Taxi Booking, Utility Payment, Movie Tickets, Train, Online Food Ordering and Others), Competition Forecast and Opportunities, 2013 - 2024. Retrieved from https://www.techsciresearch.com/report/india-mobile-wallet-market/3796.html#:~:text=India mobile wallet market is,internet penetration across the country.

15. Tripathi, S. (2020, July 22). A Study on Adoption of Digital Payment Through Mobile Payment Application With Reference to Gujarat State. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3638854

16. Vandezande, N. (2013, September 15). Mobile Wallets and Virtual Alternative Currencies Under the EU Legal Framework on Electronic Payments. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2325410

17. Xu, Y., Ghose, A., & Xiao, B. (2018, November 12). Mobile Payment Adoption: An Empirical Investigation on Alipay. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3270523