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A Study on Embracing of Digital Wallet by Consumers

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Abstract:
In today-world, smartphone has become essential part of daily life.Due to technology, mobile users can nowadays use their smartphones to make money transaction 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 attempt to find out the various risks and challenges faced by users of digital wallet.

Objectives:
1. To understand how consumers perceive new technological service namely Digital Wallet
2. To study the factors that influence consumers in adoption of digital wallet.
3. To study the risk and challenges faced by consumers in use of digital wallet.

Method:
A structured questionnaire was sent to 150 smart phone users who also use digital wallet for online payment. The respondents were categorised on the basis of gender, age and occupation. Out of 150 people only 132 responded to the questionnaire.The questions were based on consumer's preference for online mode of payment, the factors affecting their choice and the challenges faced by them while using digital wallet. This research used quantitative method ANOVA in order to get the statistic result from respondents.

Conclusion:
Digital wallets are quickly becoming mainstream mode of online payment. Shoppers are adopting digital wallets at an incredibly rapid pace, largely due to convenience and ease of use. Tech-savvy shoppers are increasingly demanding seamless, omni-channel retail experiences and looking for solutions that deliver this.

Keywords: Digital wallet, online payment, smartphone users.

1. Introduction

In today-world, smartphone has become essential part of daily life. As it has become more rational, the number of smartphone users has increased radically. "India will exceed 200 million smartphone users, topping the US as the world's second largest smartphone market by the end of 2016 due to increasing penetration of affordable smart mobile devices in the country," the US-based research firm said in a report.According to TechSci Research's latest report, India's mobile wallet market could reach

$6.6 billion by 2020.

Along with smartphone production, a number of services have been generated to utilize the possible functions of smartphones. Smartphones are used as communication devices, as socialized tool, entertainment tool, internet access tool, and even payment tool. Due to technology, mobile users can nowadays use their smartphones to make money transaction or payment by using applications installed in the phone. Besides payment, people can also store receipts, coupons, business cards, bills…in their smartphones. When smartphones can function as leather wallets, it is called "Digital Wallet" or widely known as "Mobile Wallet".

Consider the following scenario: "A person is at the supermarket checkout line. He fumbles through his wallet to find credit card X, rejecting many other cards in the process, to pay for the transaction. Later in the day, hefalls victim to a pickpocket who steals his wallet. He is now

in a state of panic; he has to remember which cards he had in his wallet and then manually cancel those cards."

The above scenario highlights problems with a physical wallet; namely that finding particular items is time consuming, and finding a lost wallet is extremely hard. In addition, managing multiple monetary and identification implements is not easy. Monetary implements include cash, debit and credit cards, and stored value cards while identification includes national and/or state identification cards and driver's licenses.

A solution would be to replace the physical wallet with a digital wallet integrated into an existing mobile device like a cell phone. This digital wallet would allow the owner to carry multiple monetary and identification implements. These implements could be quickly searched by name, type, or other keywords. In addition, with the right software, these implements could be managed far more effectively. Finally, security would be enhanced as all data on the digital wallet would be encrypted and back up options would make recovering from loss easier.

However, the idea of a digital wallet is not new. Indeed, Japan,America, Sweden and South Korea have already rolled out cell phone-based digital wallet solutions. Consumers in those countries can use their cell phones to pay for groceries, order drinks from a vending machine, and even identify themselves at airline ticketing counters.

Objectives:

1. To understand how consumers perceive new technological service i.e. Digital Wallet
2. To study the factors that influence consumers in adoption of digital wallet.
3. To study the risk and challenges faced by consumers in use of digital wallet.

Most commonly used Digital Wallets in India

On a global perspective, mobile wallets are enabling economies to transition to a cashless society. The major tech giants all have solutions of their own - there's Apple Pay, Google Wallet, and Samsung Pay, to name a few. The popular digital wallet in India includes:

1. **Paytm**

Paytm started out with mobile recharges, DTH plans, and bill payments, and then launched an e-commerce marketplace in February 2014. Its wallet Adoption of Digital Wallet by Consumers partners include Uber, Book-my-show, and Make- my-trip, along with others in categories such as shopping, travel, entertainment, and food.It has a license from RBI to set up a payments bank, enabling it to offer current and savings account deposits, issuing debit cards and offering Internet banking services.

2. **FreeCharge**

FreeCharge lets one recharge any prepaid mobile phone, postpaid mobile, electricity bill payments, DTH and data card in India. It recently added metro card recharging as a feature of its platform. The wallet can be topped up with debit cards, credit cards and net banking, and can be managed via an app or from the Web browser.

3. **MobiKwik**

MobiKwik can also be used to recharge mobiles and pay bills, but it's also accepted across merchants such as Book-My-Show, Make-My-Trip, Domino's Pizza, eBay, among others.MobiKwik has also tied up with Big Bazaar and SagarRatna franchises enabling mobile payments. It has a section with cash backs offers listed on its website with include both online and offline players. Top ups can be done using net banking, debit cards, and credit cards, the app can be used to send and request money between friends and family members as well, using a mobile number or email ID. There is no additional charge for such remittances.

4. **Vodafone M-pesa**

Vodafone M-pesa claims to be India's largest cash out network, with over 85,000 M-pesa agents spread across the country. The service lets you send money to anyone, to recharge prepaid numbers, DTH connections, postpaid Vodafone numbers, utility bills and online shopping. Money can be transferred to bank via its inbuilt IMPS service, or to a mobile number.DTH and prepaid recharges can be done through m-pesa for free.

Benefit of using Digital Wallet to various parties

Digital wallet appears to be beneficial in generating real revenue stream to all the stakeholders of

mobile ecosystem like- customers, banks, mobile-operators, financial institutions.

Adoption of Digital Wallet by Consumers

Benefits of customers

- Anywhere, anytime payment experience which is the essence of immediacy &ubiquity.
- No dial-up, no configuration or booting requirement to ensure instant connectivity through wireless route.
- Substituting voice communication through texts & images for deaf or mute users.
- State of the art security platform.

Benefits to Bank

- Additional income stream through innovative user- friendly services.
- Enhanced brand image through alternate sales channel in mobile payment space and thus leading to loyalty development.
- Extending value-added services through 24x7 branchless banking experience.

Benefits to Financial Institutions

- Ensuring enhanced customer's satisfaction &their retention together with direct marketing promos for tailored offerings to specific clients.
- Generating new business leads by one to one bank- client relationship.
- Enables FIs to keep constant connection with clients through 24x7 formats to serve their diverse needs everywhere, all the time.
- Increased reach to more customers, specially the unbanked segment due to increasing mobile usage rate and thereby reduced operating costs out of fewer direct teller interactions happened physical branches.

Beneficial gains to mobile operators

- Expanded service portfolio & increased brand promotion to create a differentiating factor to generate more new leads.
- Lucrative route to strengthen client loyalty base vis- à-vis lessen „churn" & „attrition" rates.
- FIs gain increased revenue by high mobile traffic build up.

It enable users to check bank account status & recharge prepaid mobile account instantly using mobile payment gateway (IMPS).

2. Research Methodology

The aim of this research paper is to find the various factors that affect customers in adopting digital wallet and to find the various risks and challenges faced by users.

In order to reach the aim a structured questionnaire was sent to 150 smart phone users who also use digital wallet for online payment. The respondents were categorised on the basis of gender, age and occupation. Out of 150 people only 132 responded to the questionnaire.

This research used quantitative method ANOVA in order to get the statistic result from respondents.

3. Literature Review

Tomi Dahlberg, NiinaMallat&AnssiÖörni studied in their paper"Trust enhanced technology acceptance model – Consumer acceptance of mobile payment solutions" (2003) thatWhether the Technology Acceptance Model (TAM) describing user acceptance of technology offers comprehensive explanation for consumer decisions related to adoption of mobile payments. Their analysis suggests that the Technology Acceptance Model (TAM) provides a good basis to explain use of mobile payment solutions, yet, data proposes that a new construct, trust, should be included into the model to augment the present descriptors in explaining consumer adoption decisions in the mobile payment context.

, , , , studied in their paper "The value of different customer satisfaction and loyalty metrics in predicting customer retention, recommendation, and share□of□wallet "(2007) examined different customer satisfaction and loyalty metrics and test their relationship to customer retention, recommendation and share of wallet using micro (customer) level data. The results indicate that recommend intention alone will not suffice as a single predictor of customers' future loyalty behaviour. Use of a multiple indicator instead of a single predictor model performs better in predicting customer recommendations and retention.

Rajesh Krishna Balan, Narayan Ramasubbu, Giri Kumar Tayistudied in their paper "Digital Wallet: Requirements and Challenges" (2006) thattherequirements and challenges

deployinganationwidedigital wallet solution in Singapore. Further they discussed why Singapore is ready foradigitalwalletandidentifythekey challenges in buildinganddeploying adigitalwallet. thendiscusse done of the key challenges, supportingpeer -to-peer cash transactions between individuals usingadigital wallet, in moredetail andendthepaper withtheir proposedsolution.

4. Data Analysis and Interpretation

Table 1: Shows the result of data analysis between mode of online payment and various age groups.

Table 1. ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Debit Card	Between Groups	1.308	4	.327	.423	.792
	Within Groups	98.207	127	.773		
	Total	99.515	131			
Credit Card	Between Groups	1.537	4	.384	.194	.941
	Within Groups	251.433	127	1.980		
	Total	252.970	131			
Online Banking	Between Groups	6.928	4	1.732	1.497	.207
	Within Groups	146.981	127	1.157		
	Total	153.909	131			
Digital Wallet	Between Groups	8.200	4	2.050	2.331	.059
	Within Groups	111.679	127	.879		
	Total	119.879	131			

With respect to variable- digital wallet, the significance level is 0.059 (p = .059), which is above 0.05. and, therefore, there is a no statistically significant difference in the mean between age group and mode of payment.

Table 2: shows the result of data analysis between mode of online payment and various occupation.

Table 2. ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Debit Card	Between Groups	.561	4	.140	.180	.948
	Within Groups	98.954	127	.779		
	Total	99.515	131			
Credit Card	Between Groups	.842	4	.211	.106	.980
	Within Groups	252.128	127	1.985		
	Total	252.970	131			
Online Banking	Between Groups	5.261	4	1.315	1.124	.348
	Within Groups	148.648	127	1.170		
	Total	153.909	131			
Digital Wallet	Between Groups	8.817	4	2.204	2.521	.044
	Within Groups	111.062	127	.875		
	Total	119.879	131			

Adoption of Digital Wallet by Consumers

With respect to variable- digital wallet, the significance level is 0.044 (p = .044), which is below 0.05 and, therefore, there is a statistically significant difference in the mean between occupation and mode of payment.

Table 3: shows analysis of various factors that affect the selection of digital wallet as a mode of payment with reference to different age groups.

Table 3. ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Pricing (transaction fees, service fees)	Between Groups	2.761	4	.690	1.635	.170
	Within Groups	53.625	127	.422		
	Total	56.386	131			
Convenience in buying products online	Between Groups	3.463	4	.866	3.135	.017
	Within Groups	35.082	127	.276		
	Total	38.545	131			
Ease of use	Between Groups	2.093	4	.523	2.001	.098
	Within Groups	33.203	127	.261		
	Total	35.295	131			
Brand Loyalty	Between Groups	3.850	4	.962	2.443	.050
	Within Groups	50.029	127	.394		
	Total	53.879	131			
Security	Between Groups	.631	4	.158	1.054	.382
	Within Groups	19.005	127	.150		
	Total	19.636	131			
Privacy	Between Groups	.400	4	.100	.660	.621
	Within Groups	19.237	127	.151		
	Total	19.636	131			
Utility of innovation	Between Groups	2.330	4	.582	1.550	.192
	Within Groups	47.731	127	.376		
	Total	50.061	131			
Usefulness of Digital wallet	Between Groups	2.922	4	.731	3.844	.006
	Within Groups	24.138	127	.190		
	Total	27.061	131			
Discount Offers	Between Groups	.085	4	.021	.055	.994
	Within Groups	49.430	127	.389		
	Total	49.515	131			

Given that p = .017 for Convenience in buying products online, that p = .050 for brand loyalty and p = .006 for usefulness of digital wallet, which is below 0.05, it can be concluded that there is a statistically significant difference in the mean between age group and mode of payment.

Table 4: shows analysis of various factors that affect the selection of digital wallet as a mode of payment with reference to different occupations.

		Sum of Squares	df	Mean Square	F	Sig.
Pricing (transaction fees, service fees)	Between Groups	.989	4	.247	.567	.687
	Within Groups	55.397	127	.436		
	Total	56.386	131			
Convenience in buying products online	Between Groups	1.791	4	.448	1.548	.192
	Within Groups	36.754	127	.289		
	Total	38.545	131			
Ease of use	Between Groups	1.870	4	.468	1.776	.138
	Within Groups	33.425	127	.263		
	Total	35.295	131			
Brand Loyalty	Between Groups	6.179	4	1.545	4.113	.004
	Within Groups	47.700	127	.376		
	Total	53.879	131			

Adoption of Digital Wallet by Consumers

Security	Between Groups	.440	4	.110	.728	.575
	Within Groups	19.196	127	.151		
	Total	19.636	131			
Privacy	Between Groups	.548	4	.137	.912	.459
	Within Groups	19.088	127	.150		
	Total	19.636	131			
Utility of innovation	Between Groups	3.349	4	.837	2.276	.065
	Within Groups	46.712	127	.368		
	Total	50.061	131			
Usefulness of Digital wallet	Between Groups	2.802	4	.700	3.667	.007
	Within Groups	24.259	127	.191		
	Total	27.061	131			
Discount Offers	Between Groups	2.158	4	.539	1.447	.222
	Within Groups	47.357	127	.373		
	Total	49.515	131			

Given that, that p = .004 for brand loyalty and p = .007 for usefulness of digital wallet, which is below 0.05, it can be concluded that there is a statistically significant difference in the mean between occupation and mode of payment.

Table 5: shows analysis of extent to which consumers are accepting Digital wallet as a mode of online payment.

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Digital Wallet can be an alternative choice of payment mode	Between Groups	14.056	4	3.514	3.621	.008
	Within Groups	123.240	127	.970		
	Total	137.295	131			
Digital wallet can substitute the cash based payment method	Between Groups	3.101	4	.775	.521	.720
	Within Groups	188.809	127	1.487		
	Total	191.909	131			
Digital wallet can support the existing payment method	Between Groups	.633	4	.158	.370	.830
	Within Groups	54.336	127	.428		
	Total	54.970	131			
Digital wallet is not necessary	Between Groups	.287	4	.072	.163	.957
	Within Groups	55.796	127	.439		
	Total	56.083	131			

Given that p = .008, which is below 0.05, for the variable that Digital Wallet can be an alternative choice of payment mode, it can be concluded that there is a statistically significant difference in the mean between dependent and independent variables.

Table 6: Shows analysis of level of satisfaction with respect to use of Digital Wallet services

	N	Mean	Std. Deviation	Std. Error
Student	37	4.68	.475	.078
Housewife	11	3.64	1.027	.310
Service	32	3.88	1.314	.232
Businessman	14	3.93	.997	.267
Professional	38	3.87	1.095	.178
Total	132	4.08	1.063	.093

ANOVA					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	18.659	4	4.665	4.577	.002
Within Groups	129.424	127	1.019		
Total	148.083	131			

5. Findings

Moving the wallet to a mobile device offers more than portability. In addition to basic functions like payments and identification, mobile wallet create interactive shopping experiences.

The study was conducted on various digital wallet users: male and female, from different age groups and occupations. It was found in the study that there is no significant difference between male and female users.

The other major findings of the research are as follow:

- The three major factors which play an important role in consumer adoption are convenience in buying products online, brand loyalty and usefulness of digital wallet.
- It was found that digital wallet can be an alternate choice for online payments.
- Users of digital wallet are satisfied with the services provided to them.
- Security and safety of the funds is the most challenging issue for the users.
- Dependency on internet connection to make payment is one of the major reasons for less adoption of digital wallet.
- The most adored feature of digital wallet is that it is a hassle free mode of making an online payment.

6. Recommendation

Here are a few ideas to consider for encouraging mobile wallet usage:

1. Marketing and promotion programmes should be conducted to create awareness among non- users.
2. Discount offers and reward points on making payment through digital wallet can increase its popularity and adoption as well.
3. To increase the use of digital wallet, it is required to educate consumers about the benefits of a digital wallet in simplifying and streamlining their purchasing experience.

7. Conclusion

Digital wallets are quickly becoming mainstream mode of online payment. Shoppers are adopting digital wallets at an incredibly rapid pace, largely due to convenience and ease of use. Tech-savvy shoppers are increasingly demanding seamless, omni-channel retail experiences and looking for solution that deliver this. There's no question 2016 will be a pivotal year as digital wallets gain more widespread acceptance.

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