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An Empirical Investigation in the Aftermath of Demonetization: Whether E-Wallets Are Really a Catalyst Towards Expedition of Cashless Economy

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Abstract

Demonetization in India of stripping Rs.500 and Rs.1000 notes as no longer as legal tender is highly affected the common people of the country but, it paves the way for the digital push towards cashless economy and digital banking. The digital banking revolution has made it possible to provide ease and flexibility in banking operations for the benefit of customers. Technological innovations such as mobile money, e-wallets, payment aggregators, etc., have also helped in bringing the people online. Digital or E-wallet refers to an electronic, internet based payment system which is a store house for financial value as well as personal identity. Such electronic payment systems empower a customer to pay online for the goods and services, including transferring funds to other, by using an incorporated hardware and software system. In this study, an attempt has been made to explore the underlying dominant dimensions of e-wallet usage purposes and its determinants. The result reveals that deliberation and design are dominant dimensions of e-wallet usage purposes. The perception of e-wallet users started using e-wallets in the pre and post demonetization period have significant differences with respect to different usage purposes. This research paper found that increased use of technological products in a payment industry gives new outlook to

banking industry as well as helps to work in efficient and better way. E-wallets saves more time and are found to be convenient by the customer through their mobile phones at any point of time as a form of digital platform. To conclude, e-wallets are really a catalyst towards expedition of cash to cashless economy especially, in the aftermath of demonetization.

Keywords: Cashless Economy, Deliberation, Demonetization, Design and E-Wallets

I.INTRODUCTION

There cent occurrence of demonetization is the act of stripping a currency unit of its status as legal tender. Through demonetization, the existing money in circulation is retired and replaced with new notes or coins. Sometimes, a country completely replaces the old currency with new currency. In India, Honorable Prime Minister Shri. Narendra Modi announced demonetization in the first week of November 2016 retrieving Rs.500 and Rs.1000 notes no longer as legal tender. Due to demonetization of high-value currency, common people of India were highly affected which debilitated their way today living to a great extent. This changed tremendously the way banking business is being conducted. Technology plays an important role in banking. In fact, technology has made a lot of innovative initiatives in the realm of banking. Digital banking is a new innovation which has taken the modern banking by storm.

The digital push with technological innovation is all set to transform the banking and financial services sector in India. Structural growth drivers such as, smart phone penetration, increasing awareness about digital payments, preference for hassle-free transactions and secured payment solutions are driving growth for digital payments. The payment banking sector in India is expected to witness multifold growth in the next few years, helped by the new entrants into the banking and payment space. Technological innovations such as, mobile money, e-wallets, payment aggregators, etc., have also helped in bringing people online. Digital or e-wallet refers to an electronic, internet based payment system which is a store house for financial value as well as personal identity. Such electronic payment systems empower a customer to pay online for the goods and services, including transferring funds to other, by using an incorporated hardware and software system. As per Reserve Bank of India, there are three kinds of e-wallets in India.

They are closed, semi-closed, and open e-wallet. In fact, EMW has come as an alternative to the use of credit cards which are used for making payments. In this study, an attempt has been made to explore the usage perception of e- wallets in the aftermath of demonetization and the determinants of e-wallet and the usage of e-wallets by customers in Chennai city.

Review of Literature

Akbari (2012) found that cultural obstacles and the financial obstacles are plays a vital role in adoption of electronic banking in.

Iran.Paul (2014) discussed that mobile wallets are changing the customer experience in payment industry.

Kulkarni (2013) opined that the customer satisfaction is one of the major factors to measure the performance of banks and the performance of private sector banks is better than that of public sector banks and the level of customer satisfaction is also high for private sector banks.

Chen (2008) found that there is a moderate awareness on digital wallets which store a virtual copy of the contents of a consumer's physical wallet to facilitate online or offline retail transactions pay pal users.

Philiplays (2012) found that the efficiency of a website and responsiveness to complaints have a positive influence on e-loyalty of mobile banking customers.

Peter Jones (2013) discussed the emergence of e-wallet and the convenience of using it in the upcoming trends and they are also lacking in customer trust and loyalty.

Sierra Leone (2011) explored that the increasing trend and various benefits of using internet banking and highlighted the issues of privacy, security and fraudulent practices with regard to the use of e- banking services.

Objectives of the Study

1. To study the personal profile of the e-wallet users in Chennai city.
2. To identify the underlying dominant dimensions of e-wallet usage purpose variables.
3. To explore the influence of personal profiles of the users on total e-wallet usage perception.
4. To identify the differences between user's perception in before and after demonetization with respect to e- wallet usage purpose aspects.

Research Methodology

The present study is analytical in nature and has adopted survey method for its findings. This Questionnaire Design

A questionnaire was finalised with two sections to collect information from the e-wallet users of Chennai city.

Section I: Deals with personal profiles such as gender, marital status, age, nature of family, occupational status, educational qualification, monthly income and period of started using e-wallets.

Section II: Deals with 35 variables on different E-Wallet usage purposes perception.

Limitations of The Study

1. This study collected data from respondents residing in Chennai. Hence it lacks generalizability to other cities, states and countries.
2. Owing to time and money constraints, the study restricted its sample size to only200.
3. This study adopted Convenience Sampling Method. So, Limitations associated with Non-Random Sampling is also applicable to this study.

Statistical Tools Used

The data collected were subjected to percentage analysis, factor analysis, t – test and multiple regression analysis using SPSS Version21.0.

Table: 1personal Profiles of the Respondents

Profile	Groups With Frequency						Total
GENDER	Male = 137 [68.5%]			Female = 63 [31.5%]			200 [100%]
MARITAL STATUS	Married = 47 [23.5%]			Unmarried = 153 [76.5%]			200 [100%]
AGE (Years)	[<18] = 2 [1%]	[18-25] = 139 [69.5%]	[26-35] = 41 [20.5%]	[36-45] = 15 [7.5%]	[>45] = 3 [1.5%]		200 [100%]
OCCUPATIONAL STATUS	Business = 21 [10.5%]	Government = 7 [3.5%]	Private = 72 [36.0%]	Professional = 24 [12.0%]	Student = 65 [32.5%]	Others = 11 [5.5%]	200 [100%]
EDUCATIONAL QUALIFICATION	SSLC = 5 [2.5%]	HSC = 18 [9.0%]	Graduates = 72 [36.0%]	Post Graduate = 80 [40.0%]	Professional = 23 [11.5%]	Others = 2 [1.0%]	200 [100%]
MONTHLY INCOME (Rupees)	[< 15000] = 73 [36.5%]	15001-30000 = 70[35.0%]	30001-45000 = 22 [11.0%]	45001-60000 = 23 [11.5%]	[> 60000] = 12 [6.0%]		200 [100%]
NATURE OF FAMILY	Joint Family = 56 [28.0%]			Nuclear Family = 144 [72.0%]			200 [100%]
STARTED USING E- WALLET	Before Demonetization = 87 [43.5%]			After Demonetization = 113 [56.5%]			200 [100%]

Source: primary data

Table 1 reveals that majority of the respondents are male (68.5%), unmarried (76.5%), hailing from nuclear families (72.0%) and aged between 18 and 25 years (69.5%). Sizable portion of the respondents are post graduates (40.0%), private employees (36.0%) and earning less Rs. 15, 000 (36.5%) as monthly income. Majority of the respondents are started using e-wallet after the demonetization of high valued currency in India.

Table: 2 Descriptive Statistics and Pre-Testing of E-Wallet Usage Perception Variables

Aspects	E-Wallet Usage Perception Variables	Mean	S.D	Cornbach's Alpha Reliability Co-efficient
Accessibility	Easy access to transaction history	4.44	0.631	**0.837**
	Quick response if there is a problem	3.74	0.947	
	Provide regular updates	4.12	0.860	
	Provides data recovery system in case of mobile theft or loss	3.85	1.013	
	Provide 24 hours monitoring and assistance	3.81	0.866	
Convenience	Can access services 24/7	4.29	0.824	**0.763**
	E-wallet saves time	4.40	0.736	
	E-wallet are easy to use	4.33	0.814	
	Ensures access of account when abroad	3.83	0.790	
	Convenient to use while on travel	3.90	0.919	
Privacy	Confidential information is delivered safely from banks to customers	3.95	0.906	**0.801**
	Customers' financial information are protected	3.72	1.113	
	E-wallets keep customers information private and confidential	3.84	0.918	
	E-wallets ensure protection against risk of fraud and financial loss	3.75	0.950	
	Privacy factor influences the adoption of E-wallet services	3.93	0.854	
Security	Satisfied with the security system	3.96	0.807	**0.799**
	E-wallets adhere to the cyber security laws of the land	3.86	0.910	
	E-wallet application users have freedom from danger, risk and doubt about security	3.86	0.823	
	E-wallet applications have advanced cyber security	3.84	0.847	
	Security factor is prime factor for adoption of e-wallet services	3.90	0.835	
Design	E-Wallets have attractive screen layout and design	3.98	0.763	**0.822**
	E-wallet service medium has flashy graphics and colour configuration	3.87	0.861	
	Graphical user interface is an important determinant for using e-wallet services	3.83	0.903	
	The design is keeping customers informed in language they can understand and listening to them	3.89	0.771	

	E-wallet app interface is very simple and easy to understand	4.13	0.862	
Content	Provides clear, simple and understandable guidance	4.07	0.773	**0.794**
	Information credibility affects the acceptance of E-wallet	3.83	0.811	
	Up-to-date contents influences the adoption of E-wallet usage	3.95	0.816	
	Appealing aesthetic content draws potential customers' attention	3.96	0.844	
	E-wallets provide user friendly medium to perform payment transactions easily	4.07	0.793	
Speed	Speed is a driving force for using E-wallet services	4.13	0.841	**0.841**
	Transition is efficient	4.12	0.799	
	Response speed is satisfactory	4.14	0.857	
	Faster than traditional payment channels	4.19	0.773	
	No waiting time/delay	3.98	0.859	

Source: primary data

The Table 2 indicates that with the lower standard deviation values, the mean values of E-Wallet Usage Perception (UP) variables are the robust measures of them.

Factorization of E-Wallet Usage Perception (Up)Aspects

Thirty-Five E-Wallet usage purposes variables have been reduced into 7 aspects and the factor analysis has been applied on those Seven (7) Usage Perception aspects to understand the dominant dimensions in them.

Table:3 Factorization of E-Wallet Usage Perception Aspects

Factor Names & % of Variance Explained	**E-Wallet Usage Perception Variables**	**Factor Loadings**	**Mean**	**Standard Deviation**	**Communalities**	**MSA**
Factor 1 Deliberation Factor (DF) [46.003%]	Privacy	0.855	19.185	3.604	0.749	**0.840**
	Security	0.807	19.405	3.320	0.695	0.849
	Convenience	0.764	20.740	3.014	0.612	0.893
	Speed	0.653	20.555	3.237	0.566	0.907
	Accessibility	0.652	19.945	3.127	0.661	0.867
	Content	0.613	19.870	2.841	**0.564**	**0.910**
Factor 2 Design Factor (DEF) [22.093%]	Design	0.944	19.870	2.841	**0.920**	0.877
KMO – MSA = 0.875 and Total % of Variance Explained = 68.096%						
Bartlett's Test of Sphericity Chi Square value of 620.216 with df 21 at P Value of <0.001						

The table 3 shows that with the lower standard deviation values, the mean values of e- wallet UP variables are the robust measure of them. The range of communalities of the seven e- wallet usage perception variables is from 0.564 to 0.920 with KMO measure of Sampling Adequacy Value of 0.875 and Chi-Square value of 620.216 at d.f of 21 with P-Value of <0.001 in Barlett's Test of Sphericity, the factor analysis is applicable for factorization of seven e-wallet usage perception variables. Two factors have been extracted and they explain 68.096% of the variance in the seven e-wallet usage perception variables. Thus all the seven variables have been reduced to two independent factors and the most dominant factor is Deliberation Factor (DF) followed by Design Factor (DEF) in their order ofdominance.

Influence of Personal Profiles on E- Wallet UsagePerception

The Multiple Regression analysis has been applied to study the significance of influence of personal profiles on usage perception on e- wallet and the results are shown in table 4 and 5.

Table: 4 Anova of Influence of Personal Profiles on E- Wallet Usage Perception

Predictors		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**P–Value**
		B	**Std. Error**	**Beta**		
1	(Constant)	142.009	1.577		90.045	<0.001
	Demonetization	-6.138	2.401	-0.180	-2.557	**0.011**

The Tables 4 reveal that, Ordinary Least Square (OLS) model has a goodness of fit for multiple regression analysis and the demonetization is significantly influencing the total usage perception on e- wallet in their order of influence. Whereas, personal profiles such as, gender, marital status, age, occupational status, educational qualification, monthly income and nature of family do not have significant influence on total e-wallet usage perception. E- Wallet users started using e-wallets before demonetization have higher usage perception compared to e-wallet users stared using e-wallets after demonetization.

Table: 5 Significance of Difference in E-Wallet Usage Perception of Users Started Using E-Wallets Before and After Demonetization

Description	Demonetization Period	N	Mean	Standard Deviation	t – value	Df	Mean Differ0ence	P- Value	Inference
Accessibility	BD	87	20.265	2.676	1.659	198	0.737	0.099	NS
	AD	113	19.528	3.605					
Convenience	BD	87	21.380	2.540	3.521	198	1.472	0.001	S
	AD	113	19.908	3.374					
Privacy	BD	87	19.840	3.045	2.989	198	1.507	0.003	S
	AD	113	18.333	4.085					
Security	BD	87	19.687	3.087	1.412	198	0.676	0.159	NS
	AD	113	19.011	3.617					
Design	BD	87	19.982	3.047	1.582	198	0.683	0.115	NS
	AD	113	19.298	3.004					
Content	BD	87	20.097	2.777	1.292	198	0.523	0.198	NS
	AD	113	19.574	2.912					
Speed	BD	87	20.734	3.170	0.893	198	0.413	0.373	NS
	AD	113	20.321	3.325					
Total E-Wallet UP	BD	87	142.008	15.535	2.557	198	6.138	0.011	S
	AD	113	135.870	18.104					

Note: BD = Before Demonetization, AD = After Demonetization / S = Significant, NS = Not Significant.

Table 5 indicates that, demonetization have significant difference in total e-wallet user's perception. Convenience and privacy aspect perceptions have significant difference with respect to before and after demonetization. E-wallet users before demonetization have higher perception compared to users after demonetization. Other aspects such as, accessibility, security, design, content and speed do not have significant difference with respect to started using e-wallets before and after demonetization.

Major Findings of the study

1. Majority of the respondents are male, unmarried, hailing from nuclear families and aged between 18 and25 years. Sizable portion of the respondents are post graduates, private employees and earning less Rs. 15,000 as monthly incomes.
2. Majority of the respondents are started using e-wallet after the demonetization of high valued currency in India.
3. Seven aspects have been reduced to two independent factors and the most dominant factor is Deliberation Factor (DF) followed by Design Factor (DEF) in their order of dominance.

4. E-Wallet users started using e-wallets before demonetization have higher usage perception compared to e- wallet users after demonetization.
5. E-Wallet usage perception among users started using e-wallets before and after demonetization period have significant difference with respect to total e-wallet user perception. Perceptions towards convenience aspect and privacy aspect have significant difference with respect to before and after demonetization users.

Suggestions

1. E-Wallet applications should possess enhanced privacy, security, convenience, speed, accessibility, content and appropriate design to enhance the usage customers.
2. E-wallet users before demonetization have higher perception compared to new users. So, the application developers should educate the importance and benefits of using e-wallets to new customers to enhance and enrich their usage to reduce physical form of cash transactions.
3. E-wallet users opine that usage has two different dimensions such as, deliberation and design. Deliberation aspects such as, privacy, speed, convenience, accessibility should be given more importance to enhance usage whereas, improved design which helps them to choose the application from available alternatives.

II.CONCLUSION

To conclude, increase in use of technological products in an industry gives a new outlook and helps the industry to work in a better and efficient way. Likewise, in the banking industry, the transactions of money including, DTH recharge, Mobile Recharge, Payment to shopkeepers, etc. have change from physical form of cash to digital payment in order to pave the way for cashless economy. As e-wallets work in a paperless environment, thus saves time and is found to be convenient to use by the customer through their mobile phones at any point of time as form of digital application-wallets are really a catalyst towards expedition of cash to cashless economy especially, in the aftermath of demonetization.

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