

DIGITAL PAYMENTS: A STUDY ON USAGE PATTERN AND SATISFACTION AMONG THE USERS IN TIRUNELVELI DISTRICT

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ABSTRACT

Innovation has driven human lives from stone tool technology to digital technology. Each and every innovation helped the humankind to do their work with ease and at the same time faster with quality. One of such technology is cashless payments. The enhancement of digital payments depends on the usage pattern of different modes of digital payments and their satisfaction towards digital payments. Hence this paper analyses the usage pattern of different modes of digital payments and the users satisfaction about digital payments. The study concentrated on the nine methods of digital payments that are sited in the website of <http://cashlessindia.gov.in>. This site gives a broader outlook on the nine methods of digital payments. The study is based on primary data. The primary data is collected with the help of questionnaire. Since the population is infinite, the researcher has adopted Cochran's formula to define the sample size as 507. The result indicates that the usage pattern of respondents to use different modes of digital payments is high for 'banking cards' and 'mobile banking' and low for 'micro ATMs' and 'Aadhar Enabled Payments Systems (AEPS)'. It is also observed that the percentage of variance is high for 'benefits of online transactions' and thus the variables in 'benefits of online transactions' are more influential with regard to satisfaction about digital payments. This study concludes that the digital payment is growing in the upward movement over a decade. Yet there is a need to grow into 100 per cent cashless society by increasing the usage of all the methods of payments in and around India.

Keywords: Innovative Methods of Digital Payments, Cashless nation, Usage Pattern, and benefits of online transaction

INTRODUCTION

Digital payments is a way of payment which is made through online modes. In digital payments, payer and payee both use digital modes to send and receive money. It is also called electronic payment. Digital payment methods include Banking cards, E-Wallets, Unified Payment Interface (UPI), Unstructured Supplementary Service Data (USSD), Aadhar Enabled Payment System (AEPS), Mobile banking, Micro ATM, Prepaid card and Internet Banking. Digital payments have greater impact on human life by reducing their time and save their energy for other productive purposes. After demonetization in November 2016, digital payments has started to offer interesting and advantageous new services and so there has been a growth in digital transactions from 2070 crores in volume in 2017-2018 to 5487.12 crores in 2020-2021. In India, 89 per cent of cash was used as total transaction in 2020, which was 100 per cent in 2010. Hence the digital payment is growing in the upward movement over a decade. Yet there is a need to grow into 100 per cent cashless society by making people to use different methods of digital payments and satisfy them in digital payments. If the satisfaction is concentrated, then there may be a rapid increase in digital payments and it is the need of the hour for the country to focus on this to achieve digital India in the upcoming years.

STATEMENT OF THE PROBLEM

“Digital India is a dream for the nation” said by Prime Minister Shri Narendra Modi. To achieve this aim, he approved ‘Pradhan Mantri Gramin Digital Saksharta Abhiyan’ (PMGDISHA) to make 6 crore rural households digitally literate. This scheme measures the extent to which the Indian citizens are digitally literate so that they can operate digital devices, browse internet and undertake digital payments. There are also increase in number of online services and payment applications, but still the common people are crawling due to lack of digital literacy about digital payments, so the researcher wants to know how much the citizens are skillful to use different modes of digital payments in their day-to-day life, particularly in Tirunelveli district of Tamil Nadu which is the study area of the researcher. Keeping this as a research problem, questions arises in the mind of researcher like, what is the level of usage pattern with regard to modes of digital payments system?, And what is their satisfaction on different methods of digital payments? Considering these aforesaid questions, the researcher makes an attempt to study about the usage pattern and satisfaction towards different methods of digital payments in Tirunelveli District.

REVIEW OF LITERATURE AND RESEARCH GAP

Age plays an important role in the usage of digital payments and usage of digital payments does not depend on income and on education of respondents (Suma vally and Hema Divya 2018). There was a positive correlation between awareness and usage of digital payments between private and public sector banks but with slight differences between them in the implementation of the digitization schemes (Rengarajan et al. 2018). Growth of users of smart phone and also the internet penetration in metropolitan areas of Delhi facilitated the adoption of digital payments (Shamsher Singh 2017). There was a significant relationship between perception, satisfaction and usage rate of mobile wallet technology (Nidhi Singh et al. 2016). The 85 per cent of retailers revealed that 45.3 per cent of the total payments were made through cashless means. Certainly, it is proposed that a positive outlook is seen among the small retailers towards cashless economy in the Metro city of Pune (Upendra Lele 2019). The young, banked, urban working populations are tech-savvy and present short-term potential for the growth of mobile banking in India. The benefits of mobile banking should reach to the common man at the remotest locations in the country (Vinod Kumar Gupta et al. 2013). The continuous march towards less cash economy will lead to cashless economy in the country (Sharad Malhotra).

Demonetization has hiked the thematic and empirical research studies on digital payments. The present study highlights nine methods of digital payments. Hence this study is purely pioneer one. Reviews concentrated on awareness, perception and the essentials for being cashless yet the study concentrated on the usage pattern on digital payments. Reviews on satisfaction concentrated only on level of satisfaction among the variables relating to digital payments but the study used factor analysis to classify and study the satisfaction variables of digital payments. To bridge the gap in the research and to bring out a practical applicability on digital payments and make India as cashless nation the researcher has chosen this topic as “Digital Payments: A Study on Usage Pattern and Satisfaction among the Users in Tirunelveli District”.

METHODOLOGY

The study is based on both primary and secondary data. The primary data is collected with the help of questionnaire. Since the population is infinite, the researcher has adopted Cochran’s formula to define the sample size. Minimum required sample size for the study is 384. Purposive sampling method under non-probability sampling is used to select the sample respondents. Digital payment users were selected as sample respondents. Since the researcher is not sure to get 100 per cent response rate, the total number of questionnaires can be increased by 50 per cent to ensure more accurate response (Salkind 1997), hence the sample size is increased from 384 to 576. The oversampling is done to avoid any possible losses that can occur due to the existence of non-

cooperative subjects and damages. (Salkind 1997) Since there were incomplete response of 69 questionnaire, the response rate is 88 per cent. Hence sample size is 507.

OBJECTIVES OF THE STUDY

The general objective of the study is to analyse the usage pattern of different modes of payments by its users and their satisfaction in tirunelveli district. The following are the specific objectives:

1. To study the socio-economic conditions of the sample respondents,
2. To analyse the usage pattern of digital modes of payments by the users of digital payments and
3. To examine the satisfaction on digital payments.

LIMITATIONS OF THE STUDY

The study is confined only to the users of digital payments in Tirunelveli district and therefore the usage pattern of the users of digital payments and satisfaction on of digital payments differs with the other district. Hence the results of the study cannot be generalized.

TOOLS OF ANALYSIS

In this study, various statistical techniques like Percentage, Mean, Standard Deviation and Factor Analysis are used to analyze and interpret the collected data.

SAMPLE SURVEY STATISTICS

Demographic profile

To understand the respondents in a lucid manner the researcher has analysed the demographic profile of the respondents. Demographic profile consists of age, gender, educational qualification, marital status and family income of the respondents. The table shows about the demographic profile of the respondents.

Table No. 1 : Demographic profile the respondents

| Variables | Particulars | No. of sample respondents | Percentage |
|---------------------------|-----------------------|---------------------------|------------|
| Age | 18 to 25years | 90 | 17.8 |
| | 26-35 | 219 | 43.2 |
| | 36-45 | 126 | 24.9 |
| | 46-55 | 60 | 11.8 |
| | Above 55 years | 12 | 2.4 |
| | Total | 507 | 100 |
| Gender | Male | 267 | 52.7 |
| | Female | 240 | 47.3 |
| | Total | 507 | 100 |
| Educational qualification | Primary | 18 | 3.6 |
| | Secondary | 18 | 3.6 |
| | Higher Secondary | 6 | 1.2 |
| | Under graduate Degree | 90 | 17.8 |
| | Post graduate Degree | 168 | 33.1 |
| | Professional | 201 | 39.6 |
| | Technical | 6 | 1.2 |
| | Total | 507 | 100 |

| | | | |
|----------------|----------------------|-----|------|
| Marital Status | Married | 360 | 71.0 |
| | Unmarried | 147 | 29.0 |
| | Total | 507 | 100 |
| Family Income | Below ₹ 20,000 | 162 | 32.0 |
| | ₹ 20,001- ₹ 40,000 | 159 | 31.4 |
| | ₹ 40,001- ₹ 60,000 | 66 | 13.0 |
| | ₹ 60,001- ₹ 80,000 | 30 | 5.9 |
| | ₹ 80,001- ₹ 1,00,000 | 27 | 5.3 |
| | Above ₹ 1,00,000 | 63 | 12.4 |
| | Total | 507 | 100 |

Source: Primary Data

Table 1 shows that 43.2 per cent (219) of the respondents are between '26-35 years' of age. 2.4 per cent (12) respondents belong to the age of 'above 55 years'. It is inferred that digital payments are used by the middle aged group belonging to 26-45 years of age. These respondents belong to the working category, they earn money and spend for themselves and for their family. In their busy schedule of a day, they want to do away with obstacles in making payment, so they use digital payment to get the things done quickly.

52.7 per cent (267) respondents are 'male' and 47.3 per cent (240) respondents are 'female'. It is inferred that now-a-days women perform all types of work which are done by men and so gender inequalities in the society has reduced. It is reflected in digital payments also. There is a less difference between both female and male in making digital payments. The findings of the study supports with the study of Shamshersingh (2017) it is perceived that, there is no significant differences among male and female respondents in most of the attributes of digital payments.

39.6 per cent respondents are 'professional' and 33.1 per cent completed 'post graduation'. 1.2 per cent (6) respondents are educated in 'technical' level and equal per cent respondents are educated upto 'higher secondary' level. It is inferred that southern Tamilnadu is well known for education. Among the southern districts, Tirunelveli is called as oxford of south India, since it has more number of educational institutions which gives greater exposure to the school goers for their higher education and hence there are good number of post graduates and professionals.

71.0 per cent (360) respondents are 'married'. 29.0 per cent respondents are 'unmarried'. It is analysed that the married respondents have more commitment and responsibilities with regard to household chore. Hence digital payments becomes an apt tool in the hand of married people who are tied-up with heavy work. The findings of the study is supported by Deepak gupta (2020) which shows that 50.5 per cent of the married people are aware about digital payment.

63.4 per cent (321) of the respondents come under the income group belonging to 'below ₹ 20,000 to ₹ 40,000' and 5.3 per cent (27) of the sample respondents get '₹ 80,001- ₹ 1,00,000' as their monthly income. It is inferred that the small income group respondents are very comfortable and confident to use the digital payments, compared to high income groups. It is also inferred that due to fear and mishandling of money by unaccessed users or hackers, the high income group are reluctant and resistant to use digital payments.

RESULTS AND ANALYSIS

USAGE PATTERN OF DIGITAL MODES

Experience is the best teacher in all walks of life. Through experience a person becomes a expert in particular activity. The usage pattern of different methods of digital payments determines their regularity in using the digital payments. Following table shows the usage pattern of respondents in case of accessing digital modes.

Table No. 2 Usage Pattern of Digital Modes

| S. No. | Modes of Digital Payments | Mean | Std. Deviation |
|--------|-----------------------------------------|------|----------------|
| 1 | Unified Payments Interface | 3.24 | 1.348 |
| 2 | Mobile Banking | 3.85 | 1.173 |
| 3 | Unstructured Supplementary Service Data | 2.88 | 1.288 |
| 4 | Banking Cards | 3.91 | 1.217 |
| 5 | E-Wallets | 3.35 | 1.441 |
| 6 | Internet Banking | 3.83 | 1.211 |
| 7 | AEPS | 2.72 | 1.307 |
| 8 | Micro ATMs | 2.79 | 1.219 |
| 9 | Banks pre-paid cards | 2.91 | 1.421 |

Source: Primary data

In table 2, out of nine variables, the usage pattern of respondents to use different modes of digital payments is high for 'banking cards' (3.91), and 'mobile banking' (3.85) and least score for 'micro ATMs' (2.79) and 'Aadhar Enabled Payments Systems (AEPS)' (2.72). It is analysed that the respondents are confident to use the digital methods like banking card and mobile banking due to its accessibility and adaptability. This agrees with the study by Ravi Kumar et al., (2020) which shows that card transactions have achieved 122.2 per cent growth in terms of volume and 103.7 per cent growth in value during the period of 2013-14 to 2018-19.

FACTOR ANALYSIS ON SATISFACTION ABOUT DIGITAL PAYMENTS

Satisfaction of the people on digital payments will lead to recurring use, which in turn will shoot up the volume of digital payment transactions. Hence the satisfaction regarding digital payments is analyzed using Exploratory Factor Analysis.

KMO and Bartlett's Test

| | | |
|-------------------------------------------------|--------------------|-----------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | 0.937 | |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 12445.552 |
| | Degrees of freedom | 231 |
| | Sig. | 0.000 |

Kaiser - Meyer - Olkin Measure is an index which define a sampling adequacy. The KMO test value is 0.937 which is greater than 0.5, can be considered acceptable and valid to conduct data reduction technique.

The Bartlett's test of Sphericity helps the researcher to decide, whether the result of Factor analysis are worth considering and whether the researcher should continue analyzing the research work. Bartlett's Test of Sphericity, the level of significance is <0.001 which shows that there is a high level of correlation between variables of all factors, which make it adequate to apply factor analysis

Table No. 3 :Factors Loading, Eigen Value and Percentage of Variance using Principle Component Method Based on Satisfaction in Digital Payments

| Factor | Variables | Factors loading | Extracti on | Eige n value s | Percent age of Varianc e | Cum- Percentage of variance |
|--------|-----------------------------------------------------------------|-----------------|-------------|----------------|--------------------------|-----------------------------|
| I | Discounts | 0.82 | 0.716 | 14.223 | 64.650 | 64.650 |
| | Reduced risk of theft | 0.786 | 0.672 | | | |
| | Provides more service options | 0.779 | 0.786 | | | |
| | Better transparency and accountability | 0.776 | 0.675 | | | |
| | Due installment inquiry | 0.752 | 0.645 | | | |
| | Money transfer speed | 0.71 | 0.846 | | | |
| | Payments of bills | 0.705 | 0.751 | | | |
| | Tracking spends | 0.677 | 0.629 | | | |
| | Different account in different bank can be operated immediately | 0.675 | 0.669 | | | |
| | Numerous transactions can be done immediately | 0.67 | 0.777 | | | |
| | Statement request(by email, fax) | 0.669 | 0.656 | | | |
| | Language given by the server. | 0.623 | 0.698 | | | |
| II | Time saving | 0.833 | 0.773 | 1.296 | 5.892 | 70.541 |
| | Portability | 0.822 | 0.706 | | | |
| | User-friendly | 0.774 | 0.793 | | | |
| | Receiving SMS alerts. | 0.685 | 0.647 | | | |
| | Easy login | 0.647 | 0.814 | | | |
| | 24×7 service | 0.645 | 0.766 | | | |
| | Knowing of transactions status | 0.642 | 0.752 | | | |
| | Account information and balance enquiry | 0.64 | 0.781 | | | |
| | Statement viewed online | 0.632 | 0.53 | | | |
| | Transaction costs | 0.622 | 0.436 | | | |

In table 3, two factors such as 'benefits of online transactions' and 'convenience in online transactions' are extracted out of 22 variables. These two factors extracted together account for about 70.541 per cent of the total variance. Eigen value for the first factor 'benefits in online transactions' is 14.223 and 'convenience in online transactions' is 5.892. The percentage of variance is high for 'benefits of online transactions' which is 64.6 and it is low for 'convenience in online transactions' that is 6.245. Thus the variables in 'benefits of online transactions' are more influential than the variables of 'convenience in online transactions'.

The variables are grouped into two using dimension reduction method in the case of the respondents' satisfaction regarding different methods of digital payments.

In the first category, the variables are categorized under the factor of benefits and they are 'discounts', 'reduced risk of theft', 'provides more service option', 'better transparency and accountability', 'due installment enquiry', 'money transfer speed', 'payments of bills', 'tracking spends', 'different accounts in different banks can be operated immediately', 'numerous transactions can be done immediately', 'statement request (by email, fax)' and 'language given by the server'.

In the second category, the variables are grouped under the factor of convenience and they are 'time saving', 'portability', 'user-friendly', 'receiving SMS alerts', 'easy login', '24x7 service', 'knowing of transaction status', 'account information and balance enquiry', 'statement viewed online' and 'transaction costs'. Factors are,

1. Benefits of online transactions
2. Convenience in online transactions

Table 3.1 Benefits in online transactions

| Variables | Mean | Standard Deviation |
|------------------------------------------------------------------|------|--------------------|
| Discounts | 3.37 | 1.114 |
| Reduced risk of theft | 3.64 | 1.108 |
| Provides more service options | 3.65 | 0.981 |
| Better transparency and accountability | 3.80 | 1.031 |
| Due installment inquiry | 3.70 | 1.001 |
| Money transfer speed | 4.01 | 1.067 |
| Payments of bills | 3.84 | 0.976 |
| Tracking spends | 3.71 | 1.086 |
| Different account in different banks can be operated immediately | 3.88 | 1.055 |
| Numerous transactions can be done immediately | 3.98 | 0.968 |
| Statement request(by email, fax) | 3.64 | 1.096 |
| Language given by the server. | 3.80 | 0.970 |

Source: Primary Data

Table 3.1, reveals that out of 12 variables, satisfaction of respondents is high in case of 'money transfer speed' (4.01) and 'numerous transactions can be done immediately'(3.98) and least score is given to 'reduced risk of theft' (3.64) 'statement request(by email, fax)' (3.64) and 'discounts' (3.37). It is analyzed that, respondents are not satisfied with 'reduced risk of theft'. This shows that digital payments has not reduced theft, it exists in the form of

cybercrime. Respondents are satisfied with the transaction speed, it is because, when they want to transfer money in traditional method, it will cost more, waste of energy and consumption of time, but when they switch over to digital payments they can overcome the drawbacks of traditional method of payments. The finding of the study is disagreed by Nidhi Singh (2016) which shows that the variable of 'hedonism' (pleasure in making online payments) influences the consumer satisfaction about digital payments.

Table 3.2 Convenience in online transactions

| | Mean | Standard Deviation |
|-----------------------------------------|------|--------------------|
| Time Saving | 4.10 | 1.176 |
| Portability | 3.81 | 1.168 |
| User-friendly | 3.99 | 1.013 |
| Receiving SMS alerts | 3.93 | 0.969 |
| Login is very easy | 3.99 | 1.044 |
| 24*7 service | 4.12 | 1.043 |
| Knowing of transactions status | 3.92 | 0.998 |
| Account information and balance enquiry | 3.94 | 0.972 |
| Statement viewed online | 3.80 | 1.128 |
| Transaction costs | 3.54 | 1.183 |

Source: Primary Data

Table 3.2 depicts that among the ten variables of 'convenience in online transaction', the highest mean score is given to '24*7 service' (4.12), 'time saving' (4.10) and the least mean score is given to 'statement viewed online' (3.80) and transaction costs (3.54). It is analyzed that, the respondents are dissatisfied with the transaction cost charged, which they avoid while making direct payments. The finding of the study is supported by Angel Saral Rose and Ponmalar (2020) which show that transaction cost secured the last rank with a mean score of 85.75 with regard to mobile and internet banking.

The respondents are satisfied with the variable 'time saving'. The finding of the study is supported by KamatchiEswaran (2019) which shows that the respondents give more importance to the variable 'time saving' with the mean score of 45.49.

FINDINGS

- 43.2 per cent (219) of the respondents are between '26-35 years' of age. 2.4 per cent (12) respondents belong to the age of 'above 55 years'. It is inferred that digital payments are used by the middle aged group belonging to 26-45 years of age.
- 52.7 per cent (267) respondents are 'male' and 47.3 per cent (240) respondents are 'female'. It is inferred that now-a- days women perform all types of work which are done by men and so gender inequalities in the society has reduced. It has reflected in digital payments also, there is a less difference between both female and male in making digital payments.
- 39.6 per cent respondents are 'professional' and 33.1 per cent completed 'post graduation'. 1.2 per cent (6) respondents are educated in 'technical' level and equal per cent respondents are educated upto 'higher secondary' level. It is inferred that southern Tamilnadu is well known for education. Among the southern districts, Tirunelveli is called as oxford of south India, since it has more number of educational institutions which gives greater exposure to the school goers for their higher education and hence there are good number of post graduates and professionals.
- 71.0 per cent (360) respondents are 'married'. 29.0 per cent (147) respondents are 'unmarried'. It is analysed that the married respondents have more commitment and responsibilities with regard to household responsibilities.

- 63.4 per cent (321) of the respondents come under the income group of 'below ₹ 20,000 to ₹ 40,000 and 5.3 per cent (27) of the sample respondents get ₹ 80,001 - ₹ 1,00,000 as their monthly income. It is inferred that the small income group respondents are very comfortable and confident to use the digital payments, compared to high income groups.
- The usage pattern of respondents to use different modes of digital payments is high for 'banking cards' (3.91), and 'mobile banking' (3.85) and least score for 'micro ATMs' (2.79) and 'Aadhar Enabled Payments Systems (AEPS)' (2.72). It is analysed that the respondents are confident to use the digital methods like banking card and mobile banking due to its accessibility and adaptability.
- Two factors such as 'benefits of online transactions' and 'convenience in online transactions' are extracted out of 22 variables of satisfaction about digital payments. Eigen value for the first factor 'benefits of online transactions' is 14.223 and 'convenience in online transactions' is 5.892. These two factors extracted together account for about 70.541 per cent of the total variance. The percentage of variance is high for 'Benefits of online transactions' is 64.6 and it is low for 'convenience in online transactions' is 6.245. Thus the variables in 'benefits of online transactions' are more influential than the variables in 'convenience in online transactions'.

SUGGESTIONS

- ❖ Ministry of Human Resource Development (MHRD) can make arrangement with non-government organisation in local areas, so that the trained members of NGO's meet the people of above 55 years in person and help them in installation of mobile apps, enabling USSD in tamil version, creating username, password and MPIN, which facilitates the elders to make digital payments.
- ❖ The Ministry of Education can educate the students about digital payments at higher secondary level itself with demo in local languages. Since non-tech savvy is the problem on digital payments and there is no obsolete necessity of higher educational qualification for digital payments.
- ❖ The Service providers of digital payments can update their technology in bio-metric device, so that it scans quickly. This in turn increases the transaction speed in Aadhar Enabled Payment System (AEPS) and Micro ATM method of payments and enhances its usage.
- ❖ Policy makers can bear the installation and rental charges of micro ATM device so as to motivate the vendors to offer digital payments to their customers, which in turn will increase the usage pattern of Aadhar Enabled Payment System (AEPS) and micro ATM.
- ❖ Bio-metric finger print scanners and Point of Sale (PoS) machines can be made available to vendors at a subsidy rate so as to introduce digital payments in almost all outlets successfully.
- ❖ The new initiatives of RBI be introduced by all the banks like implementing USSD method of payment, which does not require internet connection and android mobile. Hence proper promotion should be made to the people about its availability and its benefits through advertisement or word of mouth promotion or customer query desk.
- ❖ Policy makers can undertake frequent research on methods of digital payments, this will help to encounter the problems faced in different methods of digital payments such as difficult for tech-unsavvy and so the problems can be rectified for smooth flow of payment.
- ❖ Digital payments service providers can provide immediate response by rectifying the mistake of network error such as payment in delay, so as to create confidence among the users of digital payments.

CONCLUSION

"Yes to digital payment, No to cash" is the new motto of cashless economy by Prime Minister Shri NarendraModi. Digital payments foster economic growth of the country by eradicating black money and creating transparency in all transactions. To achieve this, there is a need of cashless society. The present study reflects that, there is a moderate usage pattern in different methods of digital payments which necessitates the awareness and usage pattern of all the methods of digital

payments and requirement of infrastructure to achieve the components of Digital India under the mission "Power to Empower". Even though cash dominates the Indian economy, it is going to be demolished as soon as people are satisfied with digital payments and non-tech savvy becomes literate on digital payment technology.

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