DETERMINANTS OF USAGE OF DIGITAL BANKING CHANNELS BY RETAIL STORES IN CHENNAI

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Abstract

Digital Banking is a new word in today's transformation of business. Digital banking is viewed differently by the stakeholders. For customers, it has enhanced the conveniences in payment to purchases. For the decision-makers it is one of the ways to improve the customer satisfaction by providing Information and Communication Technology (ICT) infrastructure. A digital banking technology such as credit/debit cards, Unified Payment Interfaces (UPIs), electronic banking has evolved over a period of time. Literature review indicated that despite of different efforts taken by government of India to promote digital payments rates of adoption is less in India this paper aims to conduct the study on the adoption of digital banking systems by unorganised retail stores in Chennai. The data is collected from 158 retail stores categorised as convenience stores (30 Nos), speciality stores (58 Nos), departmental stores (30 Nos) and supermarkets (40 Nos). The findings showed that perceived use, perceived ease of use, ICT and awareness are positively and significantly related to level of usage of digital banking channels and security risk is negatively and significantly related to level of usage of digital banking channels.

Keywords: ICT, Digital Banking, Retail Stores.

1. Introduction

The current innovations in the banking sector around the world is focused around digitalisation of the services of the banks. (Joshi, Goel & Garg, 2019). No other area has experienced the transformation as payments and settlements in banking services. The digitalisation of payments has developed many options to the customers of banks. Digital banking refers to all types of financial transactions which takes place with the aid of technology.

Transactions began to be digitalized in the 1990s, and by 2010, digital payment systems had become common in a number of nations. First online payment was executed in 1994 in sting's Ten Summoner's Tales CD followed by mobile payments by Coca-Cola in 1997 and then Paypal in 1999. In China Alipay in 2003 and in Africa, Kenya based M-PESA was started in 2007 (Nufed,2020). The technology continues to unfold the digital banking is creating ripple effects around the world. Digitalisation has increased the number of services and products of the banks and became one of the key factors in improving the financial inclusion in the developing countries. India also adopted electronic banking but only a few percent of the population were using digital banking products. Demonetization was decided upon in India by Prime Minister Shri. Narendra Modi and Finance Minister Mr. Arun Jaitley to encourage the digitization of transactions. But different sectors were negatively impacted by demonetisation. Different platforms and products were devised by private organisations and banks to boost the adoption and usage of digital banking. Cash transactions are discouraged by charging 2% tax deducted at source on cash withdrawals that exceed one crore in a year.

Cash to GDP ratio is 14.7% in 20-21 whereas in 16-17 it is 8, 2%, 17-18 it is 10.7%, 18-19 it is 11.3% and in 19-20 it is 12% (Shetty, 2021). This shows that India has once again turned to cash economy. Cashless transactions continue to have a variety of issues in many areas, despite government measures including digitising government payments and fostering the environment. Retail sector comprises all retailers that provide goods and services to the final customer for domestic and personal use, from convenience stores and small grocers to large supermarket networks. Because it deals directly with consumers, the retail sector is likely the most significant one for the economy. (Hameli, 2018). Most consumers are likely to start their purchasing journey digitally. Consumers have a range of options to choose payment method to complete a transaction (RBI, 2020). There are many possible benefits for the retail stores on usage of digital banking like reducing commuting costs (depositing money), reducing friction on transaction (lack of change), reduce checkout time and increasing security (loss on account theft).Counting currency or writing cheque or adds friction to the buying process. The more friction created less the purchase. Reduction of friction makes easier for the consumer to buy (Krishnan, 2014).

Covid -19 Pandemic has affected the economy of India, digital banking which provides facilities of digital payments to the consumers played a critical role in reducing the fall in economic transactions. Merchants have also started using digital banking products to enable social distancing. Given the benefits of the digital banking question arises on the level of usage of digital banking products and factors impacting the usage. Though the behaviour of consumers and firms are important, this study focuses only on the retail stores. These findings will guide the participants being banks, retailers, technology companies to develop new strategies to address the consumer needs keeping in view the importance of digital banking.

2. Literature Review

In order to understand digital banking two sections which are related to the topic are included. Firstly, an overview of digital banking in India and followed by the factors that drive the usage of digital banking.

2.1. Digital Banking in India

Initially banks in India used standalone computers and enabled with core banking solutions (CBS) as adoption of technology. With the economy being opened in 1991, to meet the competition with new entrants which used new technology has made the existing bank to upgrade their technology. In 2011 with 4G internet services and penetration of smart phones led to the development of digital banking (Jain et.al, 2020).

Digital Banking covers usage of internet, computer and mobile for conducting banking transactions. Delivering banking goods and services to clients electronically is another definition of digital banking. There is no actual exchange of money involved. In digital banking the account is updated immediately after every transaction automatically. One of the main benefits of the digital banking is that the accounts can be accessed any time without visiting the branch. (Nirala & Pandey, 2015).

Digital banking was initialized with internet banking and mobile banking. The first step into the digital era was the development of electronic clearing services and electronic fund transfer services. With the launch of RTGS, India is taking the leap from a cumbersome paper-based system to the world of instant transfers. The launch of Unified Payments Interface (UPI) in 2016 by National Payment Corporation of India (NPCI) is another milestone in the era of digital banking.

A research conducted by Shukla et.al (2018) found that 42% of the merchants in Jaipur used any form of digital banking channels. Among the users most widely used is mobile wallet followed by cards and then by internet banking. Lele. U (2019), indicated that the adoption of digital banking by the retail sector has increased in Latur. The issues stated in his study for non-adoption of cashless transactions were network issues, high rent of POS machine, and lack of knowledge and lack of trust.

2.2 Factors that drive Digital Banking

Literature indicated that Technology Acceptance Model (TAM) is one of the main theories in technology adoption research (Varajao et.al, 2022). TAM proposes two beliefs namely perceived usefulness and perceived ease of use are the factors which explains users' attitude and intention to use new technology. The limitation of this theory is exclusion of influence of institutional factors.

2.2.1. Perceived Use (PU)

The degree to which a person believes that employing a system would help to improve performance is known as perceived usefulness. (Davis, 1986). Generally, cash is considered as free. But use of cost includes explicit costs like ATM fees, taxes on cash withdrawals and implicit costs like moving, storing cash and risk(theft) (RBI,2020).Use of digital banking will reduce the cost of transactions. On using the digital banking channels, the transaction time will reduce because of avoiding counting cash, friction because of lack of change. Merchants who have digital banking actually gets a higher average sale as the consumer can buy one or two with cash but can buy three or four with digital payments (Krishnan,2014).

Digital banking channels enhances customers' access, and reduces the consumer attrition (Rajan& Saranya, 2018). It was indicated that smooth completion of the transactions will improve the satisfaction of customers. Improved customer satisfaction leads to increase in sales. In a study conducted on intention to use digital payments by consumers in Malaysia, it was found that perceived use is positively related to intention to use (Tan et al., 2010).

2.2.2. Perceived Ease of Use (PEU)

The degree to which a person thinks a system would be effortless to use is known as perceived ease of use. Complexity of the system will reduce the usage (Davis, 1986).The minimum effort on use of digital banking will enhance the usage of digital banking. In a study conducted on intention to use digital payments by consumers in Malaysia, it was found that perceived ease of use is positively related to intention to use (Tan et al., 2010).

2.2.4. Security Risk (SR)

Security risk is defined as Users' impression of protection against risks while information is transferred. (Davis, 1986). Security is found to be one of the important obstacles on the adoption of online banking in Australia. In India people are skeptical on security related aspects of digital banking (Malusare, 2021). In a study conducted on impact of internet banking on the performance of micro and small enterprises in Costa Rica showed that security risk is one of the reasons for not using internet banking (Monge-González (2011)). Security risk is one of the reasons for non-adoption of digital payments by the merchants (Patil & Bhujpal, 2018). In a study conducted among the merchants in Belthangady Taluk in Karnataka, showed that there is significant difference between the respondents on the perception on the security of the digital banking (Chandravathi, 2018). In a study conducted on intention to use digital payments by consumers in Malaysia, it was found that security risk is not significantly related to intention to use (Tan et al, 2010).

2.2.5. Perceived Financial Cost (PFC)

Perceived financial cost is a barrier to usage of digital banking. Adoption of new technology might be costly new equipment need to be purchased (Hall & Khan, 2003). Digital banking requires investment by banks and service providers which will be financed by merchant discount rate (MDR) (Table 1)(Mittal & Grover,2020). In a study conducted on retail merchants in Latur showed that digital payments are not preferred because of high costs (Patil & Bhujpal, 2018). In a study conducted on intention to use digital payments by consumers in Malaysia, it was found that perceived financial cost in not significantly related to intention to use (Tan et al, 2010).

Table 1: Average Merchant Discount Rate

S. No	Digital Banking Channel	Existing MDR
1	UPI	0
2	RuPay	0
3	Credit Card	1.7-3%
4	Debit Card	0.3-0.9%

Source: (Mittal & Grover, 2020)

2.2.6. ICT

According to Servon and Kaestner (2008) ICT is an umbrella term that includes any communication device or application. These include computers and internet access and usage. Monge-González (2011) conducted a study on the impact of internet banking on the performance of micro and small enterprises in Costa Rica. In this study he found that the penetration of internet banking is low among micro and small enterprises in Costa Rica and identified the reason as lack of computers and knowledge on the usage of internet in employees. In this study it is also shown that benefits in the form of increase in sales, customer satisfaction and reduction on costs were obtained by the small group of firms which used internet banking.

2.2.7. Awareness

Shukla et.al., (2018) opined that creating awareness about technology leads to business growth and greater financial stability. In a study conducted by them on merchants in Jaipur showed that 42% of the sample indicated that not having awareness is one of the reasons for not adopt digital banking channels. Abhirami, (2017) showed that awareness of digital banking products is positively associated with adoption of them.

3. Research Gap

Literature shows that perceived use, ease of use, financial costs and security risk has impact on the adoption of the digital banking by the consumers, but the research on the institutional factors like ICT and awareness on the digital banking products was scant. At the same time dependent variable in the literature was intention to use or adoption and not much research was conducted on the level of usage of digital banking products. Sustained usage of digital banking products is key to digital transformation (Shukla.et.al, 2018). Thus, this paper aims at analysing factors related to the level of usage of digital banking.
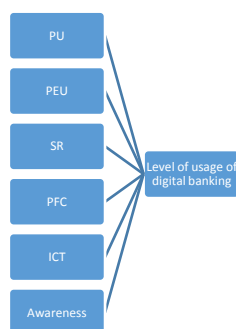
4. Conceptual Framework

Fig1: Conceptual Framework

Hypothesis

Ha1: Perceived usefulness (PU) is positively related to level of usage of digital banking

Ha2: Perceived ease of use (PEU) is positively related to level of usage of digital banking

Ha3: Perceived security risk (SR) has negatively related to level of usage of digital banking

Ha4: Financial cost (PFC) is negatively related to level of usage of digital banking

Ha5: ICT is positively related to level of usage of digital banking

Ha6: Awareness is positively related to level of usage of digital banking

5. Methodology

The main purpose of this study is to investigate the factors of level of usage of digital banking in the retail stores in Chennai. The questions in the questionnaire used by USAID in conducting

research on digital payments in India are used in the questionnaire used for this research. A self-administered questionnaire was developed. Pilot study was conducted among 30 stores. Construct reliability was initially evaluated using Cronbach's alpha reliability test. The values of all our variables exceed 0.70, which was significantly above the 0.7 level suggested for exploratory research, justifying the reliability of our measurements for model testing. Cronbach alpha for the perceived use (PU) is 0.775 and PEU, FC and Security is 0.75.

5.1. Variable Measurement:

5.1.1. Dependent Variable (Level of usage of Digital Banking)

Online includes internet banking and mobile Banking, Cards includes debit card and credit cards, UPI payments are the three different banking channels. Bharat bill pay is ignored because of low level of usage. The respondents indicated 100% of usage of the digital banking channel as only, between 80%‑ 20% as majorly and less than 20% as rarely and 0% as never. 100% usage is coded as 3, 80%‑ 20% usage as 2, 20% usage as 1 and 0% usage as 0. The sum of the codes of the usage to suppliers' payments, employees' payments, utilities payments and receipts from customers in each channel is used to measure the level of usage of the digital banking channels.

5.1.2. Independent Variable

Subjective Variables of perceived usefulness, perceived ease of use, security risk and financial cost are measures on the scale of 1 to 6(6=Completely Agree, 5= Mostly Agree, 4= Slightly Agree 3= Slightly Disagree, 2= Mostly Disagree and 1= Completely Disagree

Table 2: Measurement of Variables

S. No	Construct	Number of items
1	Perceived usefulness	9
2	Perceived ease of use	4
3	Security risk	1
4	Financial Cost	1
5	ICT	11 (1=Yes, 0=No)
6	Awareness of digital channel	4 (1=Yes, 0=No)

6. Data Analysis

6.1. Profile of the sample

The Profile of the survey is presented in table 3, which includes category of the store, frequency, average monthly income, having a bank account on the store name and details of bank account.

Table3: Profile of the Respondents

S. No	Category of the Store	Number (%)	Average Monthly Income(Rupees)	Percent of the Stores having Bank Account on the Store Name	Bank account (Store account/personal account) enabled with internet banking
1.	Convenience Store	30 (19%)	1,15,800.00	37%	26%
2.	Supermarket	40 (25%)	17,18,750.00	100%	93%
3.	Specialty Store	58 (37%)	9,13,189.66	83%	71%
4.	Departmental Store	30 (19%)	4,18,666.67	80%	57%

Table 3 shows that out of total sample of 158, 19 percent are convenience stores and departmental stores, 25 percent of the sample are supermarkets and 37 percent of the sample are specialty Stores. Average monthly revenue of the convenience store is Rs.1, 15,800.00, supermarket is Rs.17, 18,750.00, specialty store is Rs.9, 13,189.66 and that of departmental store is Rs.4,18,666.67.

Majority of the specialty stores and departmental stores have bank account on the store name but few of the convenience stores have bank account in the name of the store. The stores which do not have the bank account on the stores name uses their personal bank account.

6.2. ICT usage

Fig 2 shows the percentage of sample using accounting software; computer; printer; internet; email; SMS; SMS package, using social network; instore application and Radio Frequency Identification (RFID).
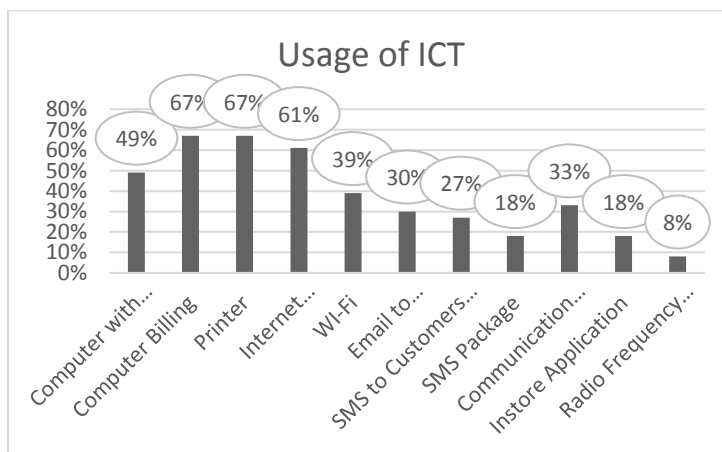

Fig 2: Usage of ICT

The results show that only 50% of the sample uses the accounting package, around 60% uses computer billing, printer and internet connectivity, Wi-FI, email and SMS is used by around 30% and SMS package, social network and RFID is used by 18%

6.3. Awareness of Digital Banking Channels

Fig 3 shows the awareness on digital banking, credit cards, debit cards, mobile banking, UPI, Bharat Billpay.
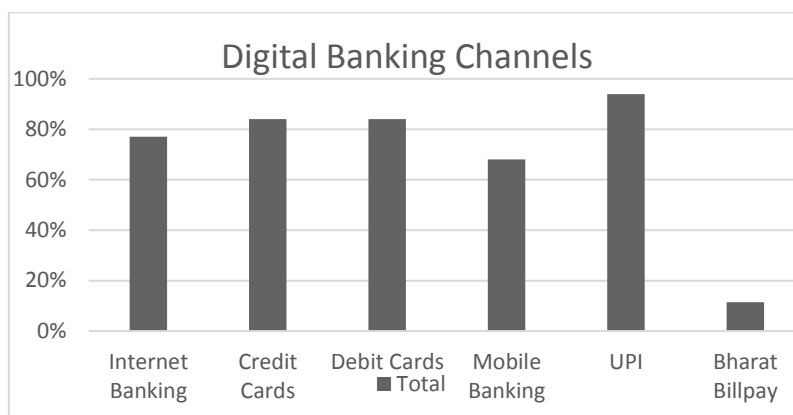
Fig 3: Awareness of digital banking channels

The results show that majority of them are aware of internet banking, credit cards, debit cards and UPI. More than average of them is aware of mobile banking and very few are aware of Bharat Billpay.

6.4. Starting point of usage of Digital Banking Channels

Table 4 shows the reason for starting the usage of digital banking channels. Around 50% of the sample used the Internet banking, debit/credit card without any external reasons like demonetization of Covid -19.

Table 4: Reason for starting the usage of Digital Banking Channels

S. No	Digital Banking Channel	After March 2020 (%)	Before January 2017	Between January 2017 – February 2020	Not Started
1	Internet Banking	8 (5%)	65 (41%)	40 (25%)	45(29%)
2	Credit Cards	8 (5%)	77 (49%)	41 (26%)	32 (20%)
3	Debit Cards	6 (4%)	82 (52%)	43 (27%)	27 (17%)
4	Mobile Banking	20(13%)	48 (30%)	32 (20%)	58(37%)
5	UPI	94 (60%)	14 (9%)	37 (23%)	13 (8%)
6	Bharat Billpay	8(5%)		9(6%)	141(89%)

Demonetization was the reason for 25% of the sample to use all the digital banking channels. Covid has increased the usage of UPI alone by 60% and others marginally.

6.5. Usage of different Digital Banking Channels

Table 5 presents the information on the percentage of sample using digital banking channels with payment to suppliers, employees, utility bills and collections from customers.

Table 5: Usage of Digital Banking Channels for Different Transaction

S. No	Transactions with	Suppliers	Employees	Utilities	Consumers
1	Percentage of Sample	67%	62%	54%	93%

It is found that almost all of them use digital banking channels for sales followed by suppliers and then to employees and utility payments.

6.6. Level of usage of different digital banking channels

Table 6 shows the mean scores of the level of usage of different digital banking channels.

Table 6: Level of usage of Digital Banking Channels

S. No	Particulars	Online	Cards	UPI	Total
1	Mean	3.15	1.8	2.27	7.22
2	S.D	2.74	1.53	2.13	4.8

The results shows that mean value of online banking is highest followed by UPI and then Cards. The average score of total usage is 7.22.

6.7. Descriptive statistics of independent variables.

Table 7: Descriptive Statistics of Independent Variables

S. No	Variable	Mean	S.D
1	PU	38.14	11.935
2	PEU	14.26	5.88
3	SR	3.3	1.6
4	FC	3.39	1.65
5	ICT	4.83	3.75
6	Awareness	4.07	1.47

Table 7 presents the descriptive statistics of the independent variables.

6.8. Regression Analysis

Multiple Regression is used to identify the linear relationship between the independent and dependent variables

Table 8: Results of Multiple Regression

S. No	Particulars	Online (Dependent Variable)	Collinearity Statistics	
			Tolerance	VIF
	Constant	-4.5 (0.003)**		
1	PU	0.12(0.000)**	0.596	1.677
2	PEU	0.142(0.033)*	0.530	1.887
3	SR	-0.478(0.031)*	0.626	1.598
4	FC	0.430 (0.056)	0.587	1.705
5	ICT	0.336 (0.000)**	0.690	1.449
6	Awareness	0.892 (0.000)**	0.695	1.440
	R Square	0.49	Adjusted R Square	0.469
	Sig (ANOVA)	F=24.151(0.00)**		

** Level of Significance 1% ; * Level of significance 5%

Table8 shows that PU, PEU, ICT and awareness are positively and significantly linearly related to usage of digital banking channels, whereas SR is negatively and significantly linearly related to usage of digital banking channels. But, FC is not significantly related. Tolerance and VIF values indicated that the independent variables are non-collinear.

7. Discussion

The primary objective of the research is to study the retailers' usage of digital banking channels. The hypothesis related to relationship between variables were tested. The findings of the research are in line with the literature review. Perceived use and perceived ease of use are

positively and significantly linearly related to usage of digital banking channels. Tan et.al in their study also found that these variables are positively and significantly associated with intention to use. Thus, it can be inferred that the technology usage is influenced by perceived use and ease of use. Security risk is found to be one of the determinants for non-usage of digital payments. This finding is also supported by the opinion of Malusare, 2021. Not having sureness on the security of the transaction is one of the factors for non-adoption of digital payments (Monge-González 2011, Patil & Bhujpal, 2018, Chandravathi, 2018). Financial costs are positively related but not significantly related. This result indicates that the usage of digital banking channels increases the costs of the transactions. The respondents indicated that with given the margin of the store the cost of digital transactions is high. It was also indicated by the respondents that currently the cost for usage of UPI is nil, but card payments have merchant cost. If UPI transactions are charged then there might have impact on the usage of the UPI. ICT measures the preparedness of the store for the usage of the digital banking channels. The results shows that the higher the usage of ICT the higher the usage of digital banking. Awareness is the first step for adoption and usage. This study showed that higher the adoption higher is the usage. This result is in line with the results of the study conducted by Shukla et.al, 2018.

8. Conclusion

This research aims at identifying the determinants of usage of digital banking channels by the retail stores in Chennai. It was found that perceived use, perceived ease of use, ICT and awareness are positively and significantly related to level usage of digital banking channels and security risk is negatively and significantly related to usage of digital banking channels. This research also found that financial costs are positively and not significant to the level of usage of digital banking products. It was also found that usage UPI mode of digital payments widely increased after Covid -19.

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