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FinTech Revolution: A step towards digitisation of Payments - Review of Existing Literature

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ABSTRACT

A research study titled “Fintech Revolution: a step towards digitization of payments” was conducted with the focus on learning about digitization of payments in India and its importance in the current economic scenario. The study focused on three major FinTech companies in the country. There is a large pool of secondary data available which is analysed with the help of a software tool called “MAXQDA”. Using the qualitative analysis the variables that lead to digital cash are identified. In support to the qualitative analysis a pre-tested questionnaire was administered to assess the use of digital wallet among the users which is further analysed using “Statistical Product and Service Solutions package” (IBM SPSS), a data analysis tool.

As part of the above research study, the existing literature has been reviewed. The concepts of FinTech companies and digitisation of payments being the novel phenomenon in the economy reviewing the existing literature helped in identifying the research areas for assessing the performance and contribution of these concepts to the growth of the economy. The literature thus reviewed constitutes the content of the current paper.

Key words: FinTech, MAXQDA, SPSS, Digitisation of Payments, Review.

1. BACKGROUND FOR THE PAPER

A research study titled “Fintech Revolution: a step towards digitization of payments” was conducted with the focus on learning about digitization of payments in India and its importance in the current economic scenario. The study focused on three major FinTech companies in the country. There is a large pool of secondary data available which is analysed with the help of a software tool called “MAXQDA”. Using the qualitative analysis the variables that lead to digital cash are identified. In support to the qualitative analysis a pre-tested questionnaire was administered to assess the use of digital wallet among the users which is further analysed using “Statistical Product and Service Solutions package” (IBM PSS), a data analysis tool.



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1.1 INTRODUCTION

“Digital” is an intricate word in the global as well as Indian milieu. Oxford English dictionary states the meaning of “digital” as “Relating to, using, or storing data or information in the form of digital signals; Involving or relating to the use of computer technology”. In this 21st century a country is well-thought-out as “developed” only if it capitalizes digitization. Digitalization is using digital technology as a part of everyday life. Digitalization is different from digitization which means “the action or process of digitizing; the conversion of analogue data into digital form.” Digitalization includes digitization and digitization is the first and foremost step to digitalization. Digitization of payments helps a person to transfer money from his bank account to the payees for his day to day transactions. Digital payments are a number of instruments under one umbrella which can be used as and when required. The word “digital cash” has been introduced long back but it didn’t gain much attention as E-Commerce has received. The payment system has gained significance once the countries which are into digitization proved to be more effective in financial inclusion measures. India is stepping in to the leadership role in case of internet stage, as it is dominating many other countries like US in case of internet usage and anticipating a growth in such a way people have more access to mobile than that of electricity connections at home. Indian policies are changing to adapt to the new digital world. India is open to innovation and is expecting a large investment in Indian E-commerce industry. Even though internet comes with many disadvantages India is trying to use its maximum benefits in order to create transparency in the system and that is one of the reason why Government shifted towards E-governance.



“Digital” is considered as the key to address the needs of the online consumers. Asia’s population will turn towards digital payments and by 2020 half of the population will be online customers against the one-third today. Businesses will need to remodel their structure so as to capture more customers as well as boost their revenue. Digital disruption is a reality and no industry can be resistant towards it. The entrants like Alipay of China, Paytm of India along with many others redefining the financial industry (Bahl , 2015). Digital payment system is evolving around the world as well as in India. India is trying to become a cashless society but being a large country it has a lot challenge to face. Becoming digital is the need of the era. There is a FinTech moment that is going on in India and if India can capitalize it, there is a huge opportunity for the country as FinTechs can play a major role in digitization (Giriprakash, 2016).

1.2 International and National scenario

The first section of this paper deals with reviewing literature relating to evolution of FinTechs at global level and the digital payment system followed in some of the countries such as Sweden, South Korea, Mexico and Kenya, representing international scenario. Further the section discusses reviews at national level covering evolution of FinTech Companies and their growth in India, evolution of digital cash, to understand the FinTech landscape in India. It also covers the recent developments that have taken place in India in the context of digitisation.

The review of literature done at international and national levels helped in identifying the gap in the literature which constituted the basis for selection of the current topic for the study.

1.2.1 Evolution of FinTech around the world:

FinTech in India is just a beginner in this industry. In 2016 alone more than 40 companies in different business model has sprung up. There still a long way ahead to reach the position of big giants such as Lending Club or Prosper(Jain, 2016).FinTech Companies have already established a good ground in the financial sectors of US and Europe. UK has been dominating the global financial industry over 200 years. UK is well positioned to become financial hub for FinTech business. UK sees itself as a future world leader in FinTech. There was 135000 work conducted UK wide in financial services technology. Analysing data of FDI projects done globally in last 5 years, 25% were in Europe and half of which were in London (UK Government Chief Executive Advisor, 2015). The world’s first market place lending IPO Lending Club is in London. It has set standard for peer to peer lending. Crowd bank one of the FinTech claims that when banks take nearly 6 weeks to grant a loan, they will give it quicker at lower cost to investors and borrowers. Nickle has an app which digitizes savings groups. Government policies are really favourable for the company. High net worth and tech savvy consumers are advantages of Nickle. These FinTech companies feel that they are accepted as an alternative finance and their vision is to establish themselves as a service industry. (Vasava, 2015). Sydney is with highly skilled financial service people. During August 2015 a financial hub has been opened in Sydney. Stone & Chalk is a FinTech company and a pool of FinTech companies is linked to it(Eyers, 2015). Even giants like Apple and Google are also into mobile payments with the introduction of Apple Pay and Google Pay (Chuen & Teo, n.d.).Thus FinTechs are modifying traditional business models as well as financial model around the world.

1.2.2 Evolution of digital payment system in international scenario:

Even though Cash is considered as king there are countries which moved ahead to adapt digital cash. There are countries like Belgium, Canada, etc. where 90% of the consumers make their payments using cashless means while US, Australia etc. 80% transactions are made through digital mode.(worldatlas, 2016)

a) Sweden

Sweden is expected to grow into first cashless society in the world. The development in Sweden started in 1960's when the companies started paying wages and salaries to the employees through bank accounts. This had helped the companies to lower cost as well as the banks to get new customers. In 1990's Sweden started using card system and employees and companies benefited from the same. In mid-2000's Sweden tried using less cash as a result of many robberies and theft that used to happen in buses, banks etc. In the year 2012 the country adopted a new payment model i.e. mobile payment service called swish. With the growth of e-commerce payment becoming increasingly electronic and number of card transactions and value of card transaction increased on a daily basis. In one of the recent studies it was concluded that debit cards are more cost efficient for Sweden's and switch towards cashless economy is advantageous only if people use more debit cards than credit cards(Wood , 2016). The consumers have put strong faith in the payment system which led to the acceptance of electronic payment system. The development of this system in the country lies with financial institutions, card operators, service providers and many other players. The country is focusing to become "cashless society" by the end of 2030(Arvidsson , 2016).

b) South Korea

South Korea is one of the cash independent nations in the world. There is a reduction of 2% in Value Added Tax for merchants who use card transactions. Tax rebates are also available to the individuals. There will be a mandatory audit for those merchants who avoid installation of infrastructure to accept card payments (Denecker et al., 2013). Recently bankers in South Korea revealed that there will be efforts put to reduce coin circulation in the country. The country's cash transaction amounts to only 20%. Koreans can accept "T-money" in exchange of their coins which can be used for purchasing from nearly 30000 stores as well as it can be used for transit. According to an Economic researcher Kim Seong-hoon, South Korea could save a lot of cost as they shifted towards digital payment mode. He said, "If we abandon cash, we could see 1.2 percent extra economic growth a year. A cashless society can help us tackle low growth, low inflation and the low-interest environment" (James, 2016).

c) Mexico

The Mexican government had saved nearly \$1.27 billion by shifting towards electronic payment system. The government realised that dispersing payments like wages, social welfare funds through an electronic system had reduced the cost of transactions by 3.3%.The Mexican government found inconvenience in money transactions as they generated holdups and muddles. The first step towards digitization was to digitalize all government transactions, changed the legal framework accordingly and efforts were made from the side of Ministry of Finance to adopt towards centralised electronic payment system. All government-business payments were made through digital mode and later government to person payments. After 2010 the electronic transfers accelerated in the country. The country believes that digitizing cash transfers can lead to financial inclusion (Better Than Cash Alliance, 2015).

d) Kenya

Majority of the people in Kenya didn't have bank accounts. Due to this many couldn't send money home. Even then 8 out of 10 owned a mobile phone. One of the largest cell phone services Safaricom founded M-Pesa in 2007 which allow transfer of money through mobiles. Within 5 years 83% of the Kenyan started using this service. It works in basic cell phone sets and money can be transferred through SMS (Kohli & Patel, 2016).

1.2.3 National Scenario - Evolution of FinTech Companies and their growth in India:

In the national scenario, India is positioned as third chief start-up hub. There are nearly 10000 start-ups in the country out of which 4300 are technology based start-ups. All the sections of market are attacked by these start-ups. "The local grocer along with the plumber and food delivery boy has now become tech savvy".(Gupta et al., 2016)The investment in FinTech has increased from USD 247 million to USD 1.5 billion from 2014 to 2015. Even though India has a very few angel investors, an increase in the interest level can be seen in investors comparing to 2014(KPMG , 2015).

Mobile is already having a big impact on our lives, jobs and our economy. FinTech companies with the help of mobile are digitizing money and soon will make physical wallets vanish (Hayashi, 2015). In the case of this payment mechanism users will not be able to understand what is happening when they make such payments. They are unaware of the mechanism that works behind. So FinTech companies need to create awareness, make them feel safe and secure while using their services. In India FinTech is not a new concept. In 2006 FinTech 100 which is an annual ranking of hardware and software service provider had ranked Wipro as one among top 25(Economic Times, 2006).

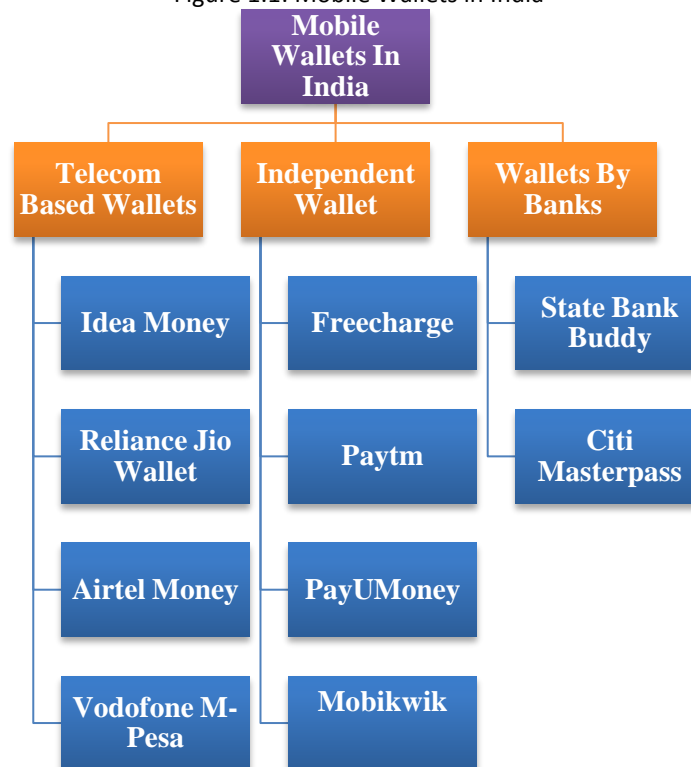
There are 750 FinTech companies in India and about 174 were started last year.2015 many of them raised billions and Paytm had the major share among them. According to KPMG India their global FinTech investment tripled in 2015.In the year 2015 even companies tried to transform digital transactions and introduced a lot new product. As per Paytm, one of those 11 that got license from RBI, "people started using mobile phones to do business payments and transactions". Awareness among the people about such companies has increased and people are even using personal financing such as insurance, investment and money

management. 2015 was a year which even saw banks partnering with these companies in the global context; these companies are seen as threat to formal banking system. In order to grow these companies need a supportive system. India can expect a lot from these companies.(Vishwanathan, 2015)

FinTech companies can help India to move towards “Digital India” by using e-wallet, Vodafone e pesa etc. The burden of cash can be reduced as RBI nearly bears a cost of \$3.5 billion annually for operations. Only 6% of merchant accepts digital payment while 10% of Indian consumers use debit card. With Pradhan Mantri Jan-DhanYojana 200 million bank accounts have been opened last year. More than a million phone connections have been taken still the use of digital payments were less.

The people who are using the digital money in India are feeling safe and are very happy. But awareness about the digital money is very less among the Indian consumers. Many people in the rural areas are not even aware that they are a debit card holder. The people who are receiving daily wages receive it in the form of money and need to use for day to day use. Such people do not have opportunity to save it in their bank accounts. Merchants also prefer to have cash transaction while they accept high value transactions through cards or banks. When consumers are getting some monetary benefit they are willing to make digital transactions.

Figure 1.1: Mobile Wallets in India

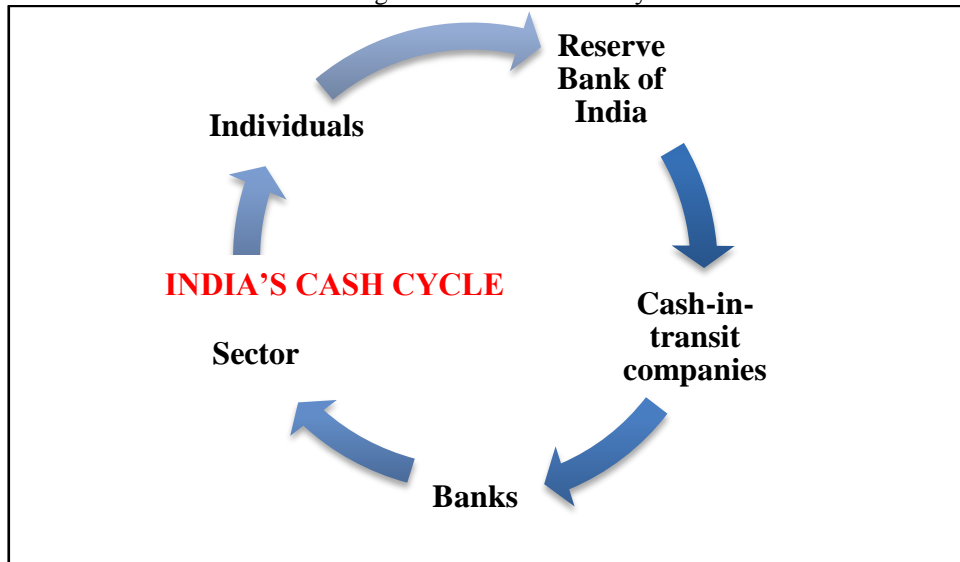


This indicates the growth of FinTech companies in the country. The wallet service providers are increasing with increase in the mobile wallet users but a very few merchants accepts payments through such wallets.(Kohli & Patel, 2016)Comparing to other countries like Kenya,Brazil, Nigeria etc. Indians use less of digital payment system. Indians feel comfortable keeping cash in hand and a minimum of Rs.2000 will be with them even when they make card payments. These institutions need to start accepting the digital payment system. RBI is incurring very high cost in printing currencies. The use of cash needs to be reduced at each stage of the cycle (D. Mazzott et al., 2014).

There is a need to create awareness among people about the safety, security and fastness of digital transactions.(Maras, 2016)With the start of Paytm in the country, people started using mobile wallets. When the company completed 2 years of service it created 25 million wallet users. By 2014 it reached 40 million wallet users. Pay U Money started in2011 as an online payment solution. Pay U Money also provides wallet services and customers can store money. (DV et al., 2015) These FinTechs provide digital wallet services to the customers. There are many such digital wallets in the Indian market.

The Stakeholders in India’s Cash Cycle are identified as:

Figure 1.2: India's Cash Cycle



With the increase in the FinTech players in the economy, there is a need to recognise “FinTechs” as a key player in the India’s Cash Cycle. Recently RBI has given license to 11 payment banks. This will further increase the number of FinTech companies in the country as the economy is friendly for these companies’ survival and growth. The government is trying to reduce the entry barrier for these companies and to empower them to create a payment revolution in the country. (Kashyap, 2016)

1.2.4 Evolution of digital cash in India:

Digitization has been viewed as one of the major tool for financial inclusion by many of the countries. One such country is Nigeria which has minimal rates of financial inclusion. All the G2P payments are made through bank accounts and government accepts fees and fines electronically. The report on digitizing government payments in Nigeria states “Digitization of social benefit programs would reduce leakage from corruption and fraud and ensure government payments reach beneficiaries on time and in full, due to reduced delivery costs. It is estimated that leakage in the administration of social benefit programs could be as high as US\$60-80 million.” (Bill & Melinda Gates Foundation, 2014) Digitization is seen as vital in order to achieve G20 goals too. In 2010 G20 authorized “Principles for Innovative Financial Inclusion” which stated that the extensive adoption of digital payments for international and domestic remittances can be influential in reaching the goals of the G20 i.e. financial inclusion. The report says that there are many benefits for the government such as transparency in the system, control corruption to some extent and lower cost as to transferring social benefits, printing currency etc. As per the G20 report “ broader adoption of digital payments—with regard to both remittances and other payments—can significantly advance the global financial inclusion agenda and support the priority areas of the Global Partnership for Financial Inclusion (GPFI).” (World Bank Development Research Group, the Better Than Cash Alliance, and the Bill & Melinda Gates Foundation, 2014)

India is also focusing on the digitization of payment system with a view to become Digital India in all aspects of functioning. The main aim of the country is to reduce the value of currency in circulation which is greater than of any emerging markets. “Government subsidies alone comprise for estimated cash transactions worth Rs. 2.93 trillion.” India should build infrastructure to support the digital transactions as well as spread digital literacy in order to digitize its payment system. (Singh, 2015) The government initiatives were started with the last budget to make digital cash usage within the economy. Cash has its own risk attached with it such as chance of getting misused and thoroughly promotes black money still it has acceptability across the world. In cash heavy society like India in order to promote digital money government needs to bring about equivalence between the two. (Surya, 2016)

The access to digital money can be made only through building infrastructure. The mobile internet penetration in India can be used as a tool in order to digitalize the payments. The study conducted by YourStory.com, in collaboration with Nasscom and Akamai projected a future internet report stating by 2020 there will be nearly

- 730 million Internet users;
- 75% of new Internet user growth from rural areas ;
- 70% of E-Commerce transactions via mobile phones;

According to the study in the coming years mobile will be the tool for reaching out to every part of the nation. (NASSCOM — AKAMAI TECHNOLOGIES, 2016) The World Bank estimates that the rise in broadband connections by 10% leading to an increase in economic growth of 1.38 percentage in the middle and lower income countries. The access to internet should be considered as basic necessity as it will enable access to employment, education and other social and economic growth. (The Internet and Mobile Association of India, 2014-15) The studies show that the economic benefit of digital finance is more that it will have an impact of standard of living as well as quality of human capital. In one of the studies it found that absenteeism is more in case of states which do not follow a digital payment system for disbursement of salary while it is only 90% in those states which have a digital system. (McKinsey Global Institute, 2016) Technology always made human life easier. Electronic payment

system is also to enable smooth and hassle free payment system which is efficient, reliable and affordable. Payment system is backbone of any country and India need to make such decisions carefully and intelligently to make digitization its strength to grow stable.(Kaur & Kaur, 2015)

1.2.5 Recent Developments in the area of Digital India movement: Demonetization

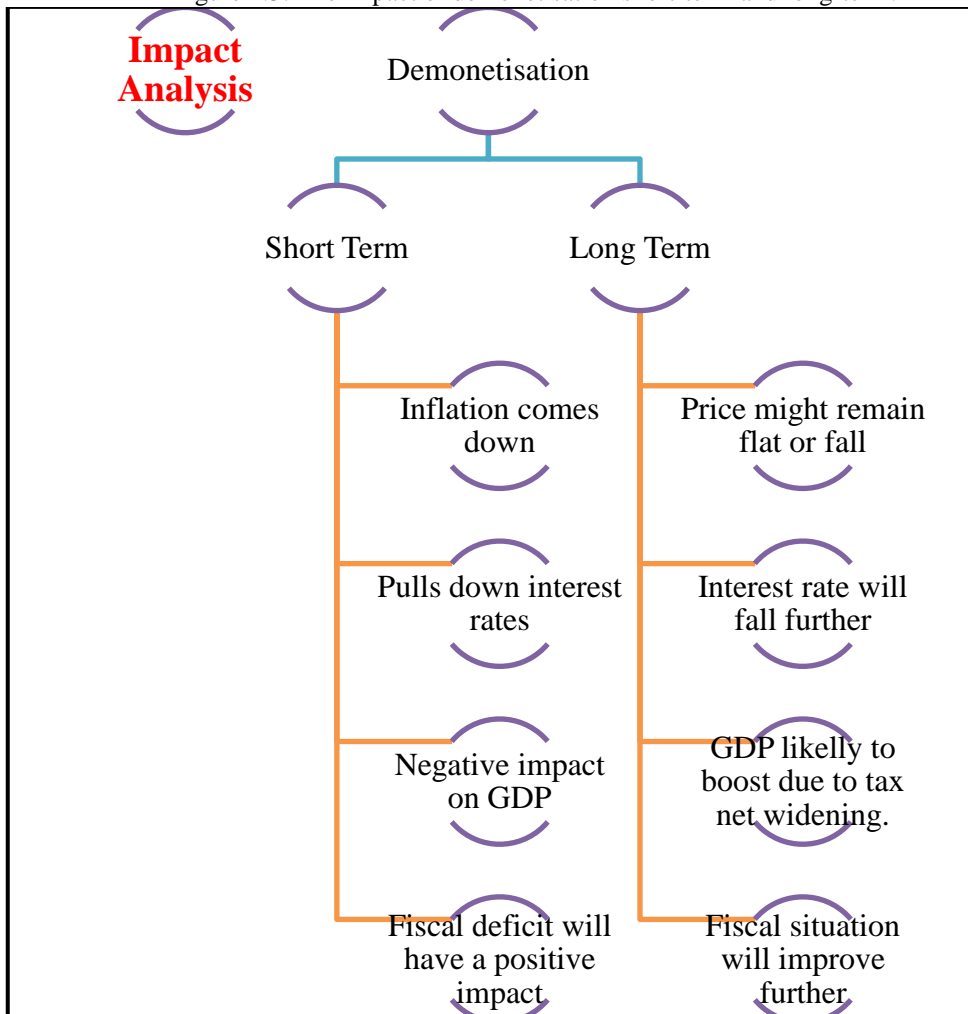
“After demonetisation India’s attractiveness has fallen” said by Amit Bhartis, portfolio manager, EMS equity team GMO. The intensity of the impact will depend on how fast the economy recovers.(Mirchandani, 2016)Even when the intention of the policy is good there is a large informal sector which relies on cash. Tirupur Exports Association used to disburse salary to their 250000 workers in cash. “The company helping workers to open bank account and planning to deposit two weeks’ pay in their account”. There are some industries that are dominated by cash and this policy is affecting them worst. The industries like fisheries, construction where unorganised workers are more. (Mathew & Mondal, 2016) The concern is for those who do not have a bank account. In rural India, people need to have minimum cash in hand to meet their daily requirements. This move has affected 70% of the transactions in the economy as the government has removed 86% of the money in circulation.(Moily, 2016)

On the other hand there are people like CEO of JP Morgan India who believe “Demonetisation is a step towards inculcating a habit of using the formal financial system”. The policy created over Rs.6 lakh crores cash flow into bank accounts.(Adhikari, 2016). A special investigation team under Supreme Court suggested “there should be a ban on cash transactions above INR 3 lakhs and Act should be framed to declare such transactions as illegal and punishable under law.”(Malhotra & Das, 2016)

According to Anil.S.Bokil, chief architect of Arthakranti Proposal, demonetisation created a shock in the economy. He believes government had to take such a sudden step due to security reasons. He said “Demonetisation was one of our proposals. Conditions and technology are also favouring Arthakranti as India is fast moving into digital economy”. He says that there is a deeper penetration of digital money and digital transaction in the economy.(Mathew, 2016)

There are many users of digital system who have moved towards it for the first time. Cooperative banks in the state of Kerala, created an app COO Paisa after the demonetization. The bank found the 90% of the people in the district using cash for payments. The app is helping them to make digital transactions. Thus the Calicut Town Service Cooperative Bank has taken the digital initiative to overcome the cash crunch. Another initiative was by Travancore Devaswam as the Sabarimala Temple decided to use swipe machines to accept offerings.

Figure 1.3: The impact of demonetisation short-term and long-term.



(Mirchandani, 2016)

Mobile payment giant Paytm is ahead of its target. It has seen a rise in transaction to nearly Rs. 120 crores a day. The company is giving discount of 1% on transaction fee for Its KYC enabled consumers. (Express News Service, 2016) Payworld which had around 1 lakh retail tie-ups and over 100 million users had witnessed an increase in the number of users by 25% after demonetisation. Most of the new users are from rural and semi-urban areas. ItsCash, Paytm, Freecharge are all focusing now on the rural India as there is a large market which is untapped. ItsCash claims that there was a hike in transactions by 40% after November 2016.(Singh, 2016)

PayPal received PM's policy with open hand and it claims that demonetisation didn't have any unpleasant impact among the foreign tourists the policy has led to a behavioural shift among the merchants who have been providing services to foreign tourists. There is an increased acceptance of PayPal among the merchants. "We now are receiving lot of requests from merchants, who earlier were not open to accepting digital payments, and who now believe that accepting digital payments is the need of the hour," Megha Tyagi, Director - Large Merchants, PayPal Payments. (Srivats, 2016)

The government statistics from November 8th to December 8th the e- wallet transactions has been increased from 17 lakhs to 63 lakhs. Transaction using RuPay cards also has increased during this period. Government as well as FinTech companies expect that this trend would stay till the cash crunch persists. (Dovall, 2016)

1.2.6 Role of FinTechs in promoting digital cash – Overall scenario:

Access to financial services is considered as the right of every citizen of the country. The urban rich have easy access to the same while the rural people are deprived of the same. Financial technology companies like FINO, Eko Financial solutions can help the government to include the financially excluded in to the main stream. With use of technology and innovative business model these companies can provide alternative banking services and other financial services to the excluded.(A.N. Wright et al., 2013)

Bill Gates founder of Microsoft supports India's move towards digitization. Digitization is an inclusive platform where basic need is a mobile phone to access all financial products and services. "Increasing digital financial inclusion brings dramatic benefits of better interest rates, smart savings and transparency, but it won't completely replace cash," says Gates. (Hindustan Times, 2016)

Digital India program aims to build a digitally empowered economy. PMJDY and other cashless initiatives is the base of the pyramid on which digitally inclusive India is built. Demonetization will provide a required push to this move by encouraging rather forcing economy to shift towards digital payments. (Gupta, 2016) Demonetization policy initially paralyzed the society is currently became a catalyst for digital payments. The Indian economy is emotionally attached to money and this policy made them come out of it as they are signing in to e- wallets and net banking.(Iyyer, 2016)

There are proposals like award scheme for people using digital payment system through lucky draw system. It is necessary to confirm that the mode is acknowledged by all sections of the society. NITI Aayog with NPCI is working on the initiative.(Nair, 2016)The government has introduced many subsidies for digital payments. The government also waived tax on low value transactions. The payment of insurance policies, railway tickets through online attracts 10% off. (Finextra, 2016)

With the government announcement of benefits on online transactions the use of cash in the economy will further reduce.

Figure 1.4: Recent benefits announced by Government on digital payments

0.75% DISCOUNT	<ul style="list-style-type: none"> • Digital purchase of petrol and diesel. • Purchase should be from state owned outlets. • Reduce cash of Rs. 2 Trillion
0.5% DISCOUNT	<ul style="list-style-type: none"> • Digital purchase of railway tickets - Monthly and seasonal. • Reduce cash requirement from Rs.2000 crore to Rs.1000 crore
NO SERVICE CHARGE	<ul style="list-style-type: none"> • Transactions upto Rs. 2000

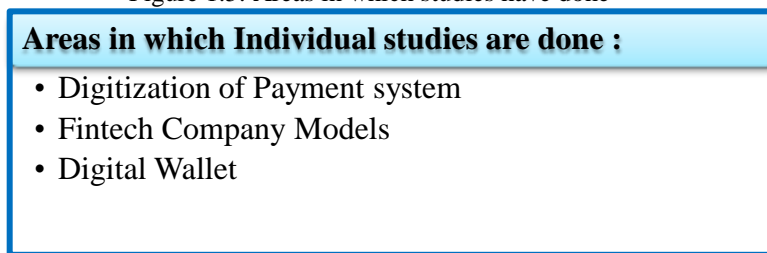
Paying digitally will reduce the cost to the government. (Nair & Roy, 2016)

Government of India initiated a committee under NITI Aayog to identify consumer affable digital payment system under various sectors of the economy. The problems involved in accessing each payment system will be identified. The infrastructural requirements will also be analyzed by this committee. It will collaborate and work with Central Ministers, State bodies, Regulatory bodies etc. to promote digital payment system. The aim of the authority is to eliminate major share of cash transaction from the economy.(National Institution for Transforming India, 2016)

1.3 Identification of Research Gap

Digitization of payment system is a novel area of functioning in the financial system. It is also a new area for conducting any kind of research. The review of literature above gives an understanding about the importance of digitization in the country. Identification of the enablers of such payment system is essential to appreciate the factors which are promoting digital payment system. This knowledge can help to highlight further different stages in the evolution of digital payments. Further FinTech companies being new entrants in to the financial system studying the business models of these companies can create understanding as to whether these are supportive or supplementary to the existing financial system.

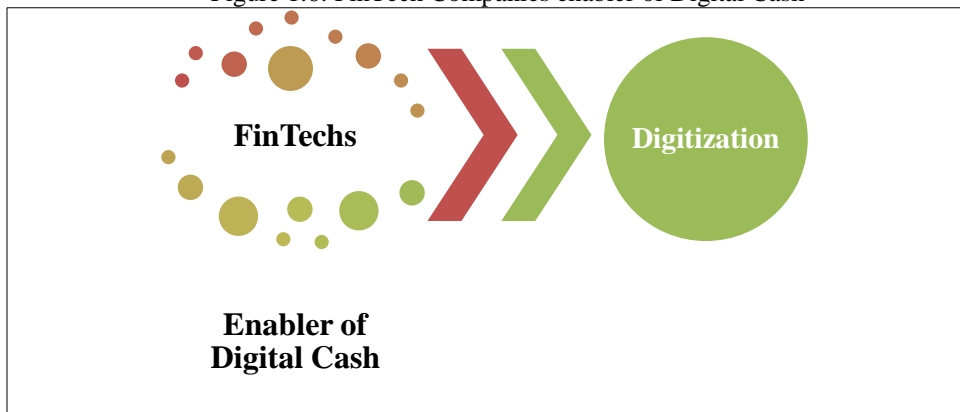
Figure 1.5: Areas in which studies have done



Some studies have been done in the above areas. But the studies were focusing either on digitization of payments or on study any of the FinTech companies. There were many studies how consumers perceive digital wallet and how useful they are in the present economic scenario. But no single study was found where the role of FinTechs was analysed in promoting digital payment system. Hence the current study is chosen.

Digitization of payments is the main step towards “Digital India”. The FinTech companies are using technology to provide financial services. First how far they are acting as an enabler is identified.

Figure 1.6: FinTech Companies enabler of Digital Cash



Among these companies three companies are studied to know how their business model is encouraging digitization.

Figure 1.7: Filtering the main service to be studied

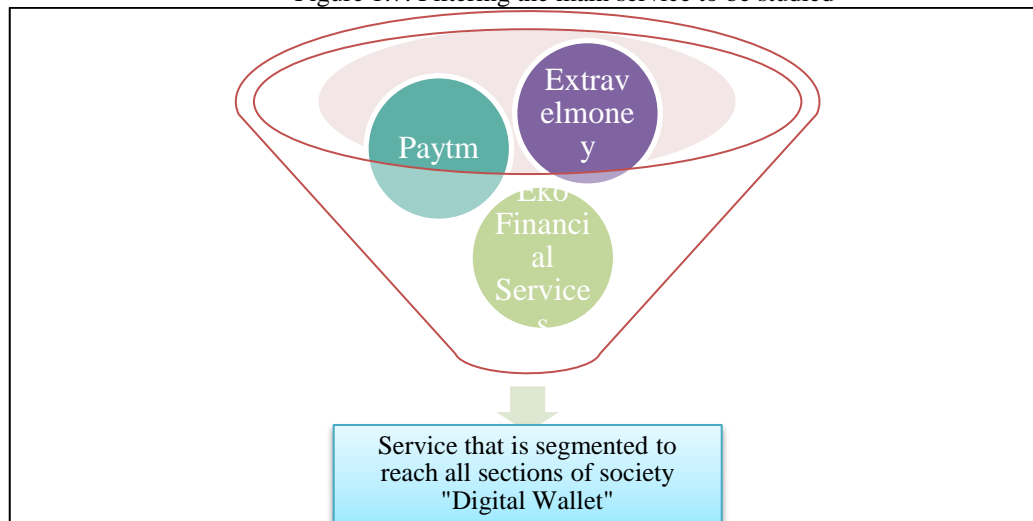
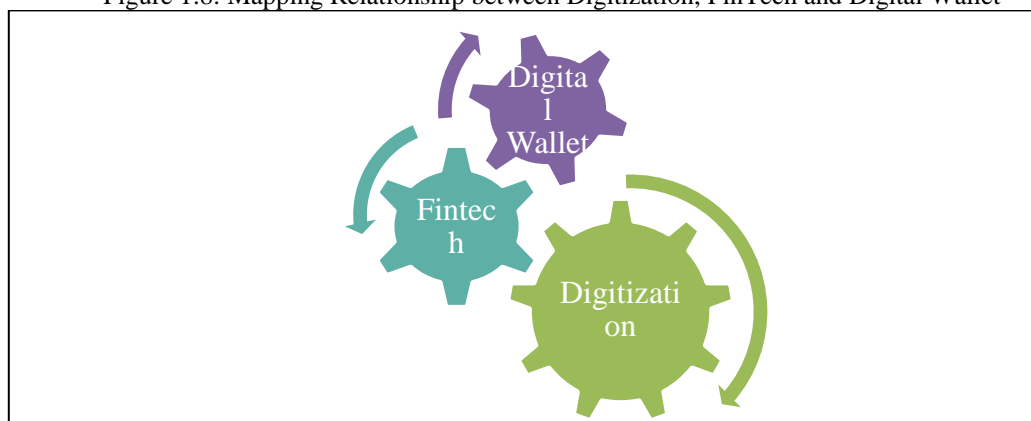


Figure 1.8: Mapping Relationship between Digitization, FinTech and Digital Wallet



Thus this study establishes the relationship between digital wallet, which is one of the services of FinTech companies, and digitization of payment system in the Indian economy.

1.4 CONCLUSION

The researches done in the area have been studied in depth and a review of the same has been done covering international and national perspective. This enabled identification of the research gap which finally facilitated in arriving at the current topic for the study i.e. "Fintech Revolution: A step towards digitization of payments".