The New Era of Digital Payments

Volume – I

Chief Editor

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PROFILE OF THE CHIEF EDITOR

Dr.S.C.B. Samuel Anbu Selvan, is working as an Associate Professor in the Department of Commerce, The American College, Madurai, Tamilnadu. His qualificaton is M.Com., M.Phil., UGC NET, MBA., M.Phil., PGDCA, Ph.D. He has got 23 years of experience in Teaching, out of which 10 years are Post Doctoral Experience. He has so far guided 11 PhD scholars, 18 M.Phil scholars and more than 60 PG scholars. He is presntly guiding 06 Ph.D Scholars in the emerging areas of Commerce. He has also conducted various national and International level Seminars, Conferences and Workshops.

He presently holds additional responsibilities such as Convener for Service Learning Program, Placement Director and Coordinator for B.Com – Professional Accounting Program. He has also acted as the Convener for NSS Program, University Level Advisory Committee Member, Vice President of Commerce Association, Member of Criterion V Committee- Student Support and Progression, Member of Extension of Autonomous Status Committee, Coordinator for BBA Program etc.

During his tenure as a Convener of NSS program , he had received 14 Prestigious Awards and the most renowned among them are Tamil Nadu State NSS Award for Best NSS Program Officer for the academic year 2012-2013 and Dr.B.R.Ambedkar National Award -2017 in the Social Work category at Pragati Maidan, New Delhi from Dr.B.R.Ambedkar sports foundation on 24th august, 2017.

He is also a National Awardee for National Service Scheme (NSS) Awards for the year 2016-2017 and received the award from Honorable Shri. Dr. Ramnath Govind, President of India, Rastrapathi Bhavan at New Delhi on 21st December, 2017. Cash Prize of Rs.1.70 Lakh received from Ministry of Youth Affairs, Government of India.

He has published around 80 research articles in various International and National Level Journals and Conferences. He has also served in various Committees as Chair person. He is a Life Member of Indian Commerce Association and Indian Accounting Association Research Foundation. He is also acting as an Editor/ Assistant Editor for various International Journals. He has edited and published 07 Books.

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About the Book

: Since the digital age has arrived decades back and it's penetrating in to various industrial sectors with innovation and breath taking changes. Financial sector is also a playground for this digital medium. This book proposes several opportunities, demerits, improvements, innovations, legal obligations, governmental support etc. with regard to digital transformation of payment system in Banks and financial companies. The outcome of the chapters would be beneficial for scholars, academicians and industrialists for keeping check points on the digital payment system.

Scope of the Book

Banking/ Digital payment/ Google Pay and other payments Apps/ Safety aspects of Digital payments/ Future opportunities/ Governmental support and initiatives/ Payment system in other countries/ Economics of Digital Payment/ Threats of Digital payment system/ International Banking with digital payment system/ Export and import with digital payment system/ Commercial side of digital payment system/ New business opportunities with digital payment system/ Future of Indian IT sector and digital payment Apps

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Chapter - 1

THE NEW ERA OF DIGITAL PAYMENTS ONLINE PORTALS AND DIGITAL GREEN WASHING

Ms K. DEEPTHI NIVASINI

Abstract

With the emergence of digital marketing via different digital portals data transparency is fuelled and it enables tracking issues through Environmental, Social, and Governance (ESG) analysis. Corporates establish digital portals to market products online and to allure potential customers to their websites. The information provided digitally influences the consumers to make their purchase decision. In the digitally developed market, potential buyers are to be captivated via a plethora of online marketing modes. Different companies make use of different marketing gimmicks to capture the market. Every company has its own strategy to get buyers to buy their products; some of them make great changes in their production processes whereas the others are satisfied with creating an illusion of the new and improved product. Customers are made aware of the environmental impact they could create by purchasing a company's products by the information exhibited online. This information is capable of swaying the customer's decision to buy a product over another competitive product in the market.

Keywords: Green washing, online portals, ESG analysis, Environment, Sustainable.

Digital technology has introduced a plethora of new products and infiltrated the existing products, cars and other existing analogue devices are comprised of microprocessors. Semiconductors forming the energy-intensive basis of manufacturing microchips are also used in eco - tech products like LEDs and solar panels. The International Energy Association in its report has stated that the electricity consumption of mobile phones, personal computers, flat screened televisions and other electronic devices will double by 2022 and triple by 2030. The use of digital technology in electronic gadgets though is marketed to be green, proves to be environmentally destructive. There is a conflict between consumption pattern

and the environmental impact created by the product. The term ‘green washing’ was coined by the environmentalist Jay Westerveld in 1986. It includes non-practical claims, deceptive labels, flocculent language, images of plants and leaves on products, use of jargons on products that only experts could understand and green packaging. Green washing dates back to 1960’s when an American electrical company Westinghouse, proclaimed cleanliness and safety of nuclear power plants. With the increase in demand from users for more green and eco-friendly products, companies have begun green washing their products. Green washing is carried out with the motive of increasing the sales and goodwill of companies. It has become more prevalent over the last few years. There is a plethora of companies in the market labelling their products as pure, organic, herbal, chemical-free, natural and dermatologist tested but, the users are unaware of these green washing tactics used by the industry to successfully promote their products.

Green washing has been categorised as follows: It is information on the product misleading the customer with words highlighting its environmental features; it is the usage of graphics and visuals portraying the benefits to the environment; it lays emphasis on a green claim without provable facts; it is an overstating or using superfluous facts on how green the product is; Significant information is masked or omitted on the product (Chen and Chang, 2012). Although the concept of green washing has been around for several years, it is being increasingly practiced by corporates in recent years. This is because of a steady growth of demand from customers for green products. The price of products labelled as natural or organic also tend to be high. When a major number of companies do not follow sustainable business practices, their efforts to green market their products are perceived as green washing by customers. Green washing places the burden on the customer to distinguish between authentic green cosmetic products and green washed products.

Digital Green washing

Vague terminologies used by companies to market products online tend to deceive customers about the green design of the products sold. The products are advertised with information about its green components and energy saving capabilities. The customer does not delve deep inside every other ingredient or composition of the product sold and relies on the superficial information displayed online and tends to rely on reviews posted about the product without analysing if it is genuine in nature. The credentials offered by the company

to prove its products are true become handy to the customer while making an online purchase decision (Kasulaitis, Barbara V., et al. 2015).

Examples of Digital Green washing

i. The use of chat bots to interact with customers online and convince them to make a green purchase is a perfect example of digital green washing. Some other examples include

ii. The Televisions with flat screens have replaced the tube televisions with lead. The new televisions are marketed as 'lead free' as lead is toxic to the environment. Instead the televisions use mercury which is another chemical toxic in nature. Therefore, the electronic products are not green by design but are green washed and advertised to be safer to both the customer and the environment.

iii. Personal computers are marketed as energy efficient and environment - friendly, but in reality the energy consumption during the production/manufacturing of these devices exceeds the energy consumption during the operation of the product. The same applies to other electronic gadgets like refrigerators and durable goods like cars. With the advancement of technology, the embodied energy in a handful of micro - chips exceeds that of, the energy consumed while manufacturing a car. (Kris de Decker, 2012).

Conventional manufacturing techniques when compared with the techniques used in manufacturing semiconductor production and nanomaterial - a technology used in producing electronic products, batteries, solar panels, and LEDs reveal that the energy required to produce microchips is not proportional to its size. The energy savings acquired with the help of digital technology is absorbed its own growing footprint. The modern day personal computers have more microprocessors, multi-core processors and multi - CPU systems capable of managing its own tasks independently. This enables the use of digital technology optimally to run a virus scan, to search and view files and to burn DVDs simultaneously. Every extra chip brings more embodied energy. The "Graphics Processing Unit" or GPU is a specialised processor that offloads 3D graphics rendering from the microprocessor. The Graphics Processing Unit (GPU) offers 3D graphics and proves to be indispensable while playing videogames. They are capable of raising the energy consumption of the personal computer as they are capable of consuming more energy than CPU's and consume more embodied energy. Recycling is often encouraged to lower the embodied energy of products

but it does not work for nano-materials. Recycling is not a solution when more energy is used in the manufacturing process itself. (Gutowski, T.G. 2017).

The Climate Group a group of 50 companies in their report indicated the use of electricity for electronic equipment but also estimated the benefits of energy efficient consumption. The emissions from Information Communication Technology and the energy use of data centres are estimated to raise making advancements in energy efficiency (Task Force on Climate-related Financial Disclosures (TCFD) report, 2020).

Ecological footprint of Digital Technology

Several studies carried out on energy consumption and energy efficiency have disregarded the toxicity of the production processes and the exploitation of resources, which are in higher magnitude for both Nano materials and semiconductors. The lifecycle of electronic products is also to be considered while estimating the efficient use of energy. Most digital devices do not last for even a decade. Customers tend to replace perfectly workable electronic devices within a few years, in order to keep up with the ever evolving digital technology. The need to address technological obsolescence is the most significant approach that could be used to lower the ecological footprint of digital technology (Kris de Decker, 2012).

Digital Data Transparency and Green washing

Data transparency has become an indispensible aspect of companies selling products online. With more number of goods marketed on the web, the need to keep the customers informed about the components/ingredients used to produce the product has become a necessary element. Transparency of records published electronically and made accessible to all stakeholders digitally, forces companies to maintain an environment – friendly record. Traditionally, it was not possible to access data related to what impact a particular company had on the environment, but with the development of digital technology across several digital platforms, accessing any amount of data at any time has become possible. The data provided has to be authentic in order to avoid confusion and safeguard the goodwill of the company. Data is a powerful tool for customers to unite as a voice for or against an environmental cause.

ESG Investigating Digital Green washing

AI enabled platforms like Climate-Bert is used to watch other robots deliver accurate climate related financial disclosure. There is interplay between digital data transparency and the ever shifting social norms which cannot be ignored. Companies are encouraged to cut carbon emissions and strategize accordingly (Gillian Tett, 2021).

I. MISLEADING INFORMATION There are several methods to communicate the strong results of scientific research	**II. ENVIRONMENTAL COMMUNICATION** Communication made to keep the business going – every company wants this
III. NOISE IN GREEN WASHING Unwanted information that is not useful to the business itself	**IV. UNSUBSTANTIATED CLAIMS** The claims made by the company are not reliable and is capable of placing the brand at risk

Figure 1 CATEGORIES OF GREEN WASHING

The digital information available online to customers includes misleading information where companies that have incorporated green practices are unable to communicate it in a proper manner to the customers. The companies may try to sway customers' purchase decision with the information provided by trying to feel "environment friendly" to the customer. These companies have the potential to move into the Environmental Communication quadrant by delivering their messages in the right manner to the potential customers. Unsubstantiated claims by the companies may seem to be valid at the beginning, but the resources employed to communicate that the company is taking green initiatives is more than the initiatives actually taken. False information and claims carried out digitally will soon be identified by the customers. Once the customers become aware of this gimmicks and are educated well about the green washing techniques employed these companies move to the Noise in green washing quadrant. The noise in green washing is where the company does not have enough information to back up the previous claims made by it digitally. Developing an ideal strategy to communicate the value added by the company to the environment and ascertaining its impact on the environment can enable these companies to move to the Environmental Communication quadrant. The companies falling under the Environmental Communication quadrant has effective means of communicating their efforts for the social and environmental well – being. The other companies look up to them for guidance, as they work both internally and externally to align with their environmental claims.

REASONS FOR THE RISE IN DIGITAL GREEN WASHING

Companies aim to act on the rising demand for green products with irrelevant and false claims online to promote sales by all means. They lack the initiative to produce products with a green design; instead they decide to green wash the products through misleading claims about the favourable impact the company and its product create on the environment.

- Customer's attitude to be responsible towards the environment.
- Sale of organic, green and environment friendly products have considerably increased over the years.
- Despite the changes in the economy the demand for green products is steady.
- Lack of government regulation and action on green washing.
- Lack of common standards to communicate environmental messages.
- Advertisement expenses spent by companies to portray the product as green and energy efficient continues

MITIGATING THE RISK OF DIGITAL GREEN WASHING

Every company aims to incorporate green criteria in their products. There may be an urge to claim that all products of the company are green, but it is advisable to convey an honest message to the customers about the products sold. There must be more clarity in the environmental benefits offered by the product; it becomes important to let the customer know that the product is just a sample of a larger initiative to go green. Contacting the stakeholders of the company and having a two-way communication with them about the green initiatives taken and yet to be taken will prove to be effective in the long run. Digital information can be shared widely in no time, it is important to earn the trust of customers while advertising products on websites and other online modes. The motives of the company must include sustainability; this encourages the trust of its stakeholders in the efforts of the company to impact the environment in a positive manner. Green washing denies trust from customers not only to the particular company but to those that are in the same business. It is advisable to work along with the other companies in the industry to attain long term environmental goals and to safeguard the existing reputation of the company (Business for Social Responsibility and Forum for the Future 2008).

FORMS OF DIGITAL GREEN WASHING

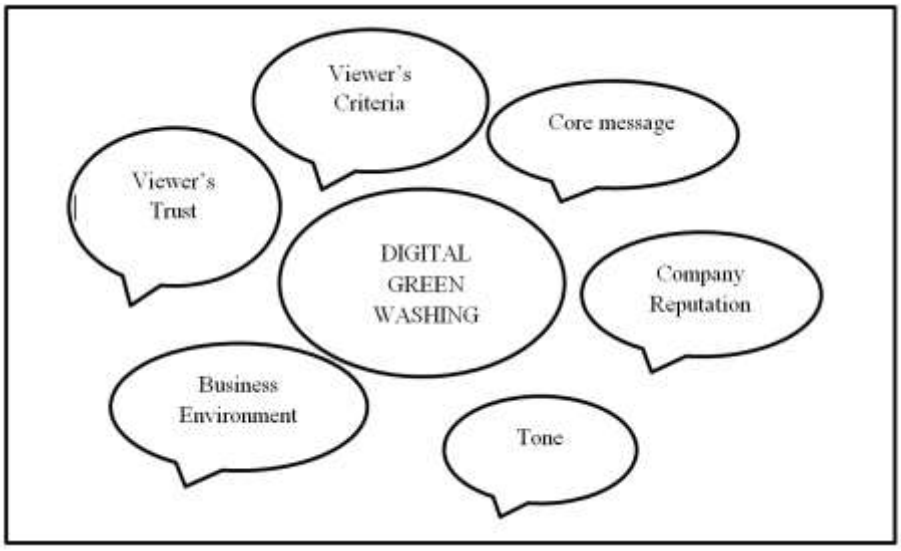
- Feature films
- Launch events

- Email press release
- Viral videos
- Hospitality events organised
- Case Studies
- Voluntary National Reviews (VNRs)
- Editorial Coverage
- Advertisements
- Interviews
- Webcasting
- Sponsorships
- Direct Marketing
- Internet Wellness Events
- Online Campaigns and Workshops

DIGITAL INFLUENCE ON STAKEHOLDER'S OPINION

Every individual's idea of green washing differs; a customer may trust the company's products for what it is whereas another customer may be sceptical about the products advertised digitally. It is significant to consider the stakeholder's opinion on digital green washing. The stakeholders whose opinion matters include customers, enforcing authorities, regulatory bodies, NGOs, Media, Bloggers, Journalists and other content creators.

Figure 2 OPINION ON STAKEHOLDER'S ON GREEN WASHING



The core message in the above figure represents the action taken by the company in reality; it refers to the efforts put in by the company as a contribution to improve the environment. The viewer's criterion refers to the factors considered by the viewer's or customers of the product while deciding if the product is green washed or not? The view point may vary from customer to customer; there must be a clear idea of what the company has done to impact the environment, whether it is about tackling sustainability issues, producing with zero waste or effecting climatic change strategies (Karimov, et al.,2011). Viewer's level of trust in the organisation plays an important role as it determines if the

customer trusts the green and energy efficient claims made by the company. Company reputation refers to the history of the company having records of initiatives carried out previously towards environmental welfare. The Business Environment also plays a vital role in determining if the product is green washed, the news regarding any negative corporate incident may affect the stakeholder's opinion. Tone is the claim made by the company; it is factual and has to be supported by quantitative data. The viewer's or customers are sceptical about the company boasting about its environmental impact and welfare initiatives.

CUSTOMER PERSPECTIVE ON DIGITAL GREEN WASHING

Studied have identified that 64 percent of potential customers viewed sustainability to be a marketing tool and did not trust the green claims of brands in their websites. It is also revealed that the population demanding safer, natural and organic products are willing to pay 10 percent more for more sustainable products, despite the state of the economy. In short, the customers who demand these products are the ones who do not trust the claims that aim to promote them (Havas Media 2008).

A poll conducted by the Natural Marketing Institute, states that 34 percent of the population complain that they are constantly bombarded with talk about the environment. When every company in the market claims to be green, then it is not going to be a differentiating factor anymore. There is confusion among customers on which company has made which claim due to innumerable claims of being green, organic and pure. Customer generated online sources such as green washing index are used by bloggers and other online content creators to point out digital green washing to a larger audience. They often portray the term green washing as an event that occurs as a result of improper business and advertising ethics. Nearly 25 percent of blogs and articles about digital green washing have addressed the contradiction of claims and actions of corporates and only 17 percent of those articles discussed about a general suspicion over the products claimed to be green via digital modes (Nielsen, 2007). Digital Green washing is not identified directly in companies' websites, it comes in many forms. Companies are required to communicate only the measurable benefits of the green products sold online, in order to prevent confusion and promote goodwill. Trust is a major determinant for detecting green washing. When viewers or customers of a product do not recognise the statements presented digitally about the product to be trustworthy, then, they assume it to be a claim made by the company to intentionally showcase the product as sustainable (Peattie, et al., 2009).

SINS OF DIGITAL GREEN WASHING

The seven sins of green washing is widely acknowledged by researchers as follows:

i. **Hidden trade-off:** Claims justifying a product to be green set up on a slender set of attributes without much detail to major issues.
ii. **No proof:** It is a widely identified green washing sin as it cannot be substantiated with the necessary information to support the claims made.
iii. **Vagueness:** The sin of vagueness indicates that the real meaning of the claims made is likely to be misunderstood by the viewers or customers; this could lead to confusion about its usage, based on the information on the package of the product.
iv. **Irrelevance:** Immaterial and useless claims, that prove to be of no help to the customer.
v. **Lesser of two evils:** This sin of green washing aims to distract the customer from greater sins and environmental damage done by the company or organisation.
vi. **Fibbing:** False claims that are displayed by companies on their respective web portals and webpages to promote products as environment friendly and socially agreeable is referred to as the sin of fibbing.
vii. **False Labels:** Untrue information on labels and fabricated endorsements made by the organisations in order to deceive the viewer or customer of green products marketed online.

Web based surveys are conducted to enable customers to identify digital green washing. These online surveys make the customers aware of the concept of green washing which is widely in existence, in turn collecting the viewer's demographic data. A series of Corporate Social Responsibility (CSR) themes of the company or organisation is displayed to the viewer filling the survey, supported by cases of green washing online. The customers and viewers are encouraged to identify digital green washing based on the information displayed online, this enables companies to analyse the trust factors influencing customers while detecting digital green washing of products. Such web based surveys shed light on the major factors that distract customers from efficiently detecting digital green washing. Studies reveal that investigations have been carried out by experts on what consumers pay attention to and what they should rather pay attention to with regard to Digital Green washing (Djamasbi, et al., 2012).

Factors Determining Trust and Green wash Detection								
	Category	**Hidden Trade-off**	**No Proof**	**Vagueness**	**Irrelevance**	**Lesser of two evils**	**Fibbing**	**False Labels**
Green washing	**Channel**	**Text**			**Visuals**			
	Horizontal placement	**Left**		**Center**		**Right**		**Prominent**
	Vertical placement	**Top**		**Center**		**Bottom**		**Prominent**
Assurance	**External**	**Company Policy**		**Accuracy/Correctness**			**Ranking**	
	Internal	**Company Policy**			**Accuracy/Correctness**			
Visual Design	**Orientation**	**Banner**		**Pop - up**		**Skyscraper**		
	Environmental Imagery	**Leaves**		**Ocean**	**Mountains**	**Forests and other images**		
	Image of the Product	**Partial**				**Full**		
	Total aesthetics	**Poor**		**Medium**		**Excellent**		
Social Media	**Buttons**		**Comments/Tweets**			**Consumer Ratings**		
Category	**Health, Wellness and Beauty Products**	**Cleaning Products**		**House Appliances**	**Building & Construction**	**Baby Care Products and other categories of products**		

Figure 3 Detecting Green Washing based on Factors influencing the trust of customers

Let us consider an example of Digital green washing in the case of paints

100% Lead free Paint!

The above advertisement made on the company's website lets the customer know that the paint is lead – free. Based on the above figure very meagre amount of benefit is experienced

by the customer and the green washing category is “irrelevance” by the channel “text” with “prominent” placement.

Eye-tracking studies have shown that while viewing a website, customers tend to use an F-shaped viewing pattern, looking more into the left portion of the web page. This could cause users to miss out on significant information not located in the left portion of the web page. The area where green washing occurs in a major manner on online portals was analysed in previous studies with the sole motive of detecting the area of occurrence of digital green washing.

Assurance on a product’s characteristics is the company’s declaration with the intention to deliver confidence to its customers. External and Internal assurance is provided by organisations while advertising products online. External Assurance is given by third parties, such as laboratories or research agencies and auditors of companies. This influences the opinion of stakeholders and the goodwill of the organisation. External Assurance enables customers to deal with unknown vendors and producers under the protection of third parties. Internal Assurance includes the Company’s Policy, Correctness and External Assurance includes Customer Rankings. The work put in to create the website of a company allows ease to use and accessibility to new customers; it showcases the company’s commitment to its customers or viewers. Digital Advertisements published online are the viewer’s first contact with the product. It creates the first impression about the product and its impact on the environment. Therefore Visual Design is also one of the factors influencing the trust of customers. The Colour Composition of the product also plays a vital role in attracting viewers towards the product. Environmental Imagery present on the packaging of the product allures customers and makes them consider purchasing it. Orientation is the way the advertisement is displayed and includes Banners, Pop – ups and Skyscrapers.

In the midst of personal interactions, subconsciously customers are on the lookout for signs on, to what extent the other persons could be relied upon. Online shopping environments lack the human touch and means of communication, thereby limiting the potential for further communicating. Social presence has been identified as a prime factor that could influence the trust of customers. The company must strive to achieve higher levels of social presence by involving chat bots and a well-developed chat support system to interact with its customers and help them make an ideal purchase decision (Evans & Krueger, 2011).

Previous research has confirmed that the inclusion of environmental imagery on the company's web portal can result in creating a higher degree of digital trust among the viewers. Children on the other hand are often featured on images illustrating the Corporate Social Responsibility initiatives of the organisation. Avatars and assistance systems like humans or animals and other objects play a key role in the adaptation of Information Technology artifacts. It is still unclear on how the avatars are designed and how often are to appear without being intrusive and whether the use of avatars is considered dubious by stakeholders. Human-like features comprising expressions, emojis, animals, objects and avatars both male and female are being used increasingly by companies to promote their products. Social Media is being used to increasingly engage customers online and online shopping has become a common aspect today. Reviews and testimonials from buyers increases the prospective customers' trust on the website, these reviews earn a reward for the existing customers also (Qiu and Benbasat, 2009). Customer loyalty is easily tracked online by these websites and reward points are provided accordingly. Social Media buttons, Comments/Tweets, Consumer Ratings serve as factors influencing online trust among users. Product Category is also considered as a trust-creating component, they can also be called as trust-mediating factors as some products are identified to be more suspicious in regard to green washing than some other products (Walter et al., 2013).

Eco-labelling serves beneficial to companies to avoid digital green washing but it doesn't strive to eliminate it as a whole. The use of fake labelling and false certification of green products is widely prominent in the digital era. There is an easy accessibility to different online portals which deliver tons of information, the genuineness of which cannot be questioned. Obtaining false labelling has become easier and to portray them digitally has become effortless. The view rate and response generated is also enormous.

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Chapter – 2

CHALLENGES AND PROSPECTS OF DIGITAL PAYMENTS IN INDIA

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Chapter – 2

CHALLENGES AND PROSPECTS OF DIGITAL PAYMENTS IN INDIA

C.JOSELYN NITHYA

INTRODUCTION:

The payment landscape in India has witnesses some structural dramatic changes throughout the last few years that is taken into account a watershed amount within the payment business. Within the early Nineties, the banking company of India spearheaded the event of technological infrastructure that expedited the creation of a Department of payment and Settlement System (DPSS). Government of India passed the payment and settlement Act in 2007. Since the beginning, the department continued its target migrating to a cashless economy through a method of neutral consultation for developing a restrictive framework that's conscious of rising development and innovations.

The Information Technology (IT) has revolutionized the different parts of our lives; especially it has given a simple approach for digital payments. During the Demonetization period, the Government of India constrained the public directly or indirectly to do all commercial transactions via Digital mode. The common man began to move from traditional payment system towards Digital Payments systems. This Chapter analyzed the issues and challenges of digital payment systems and offers some solutions to improve the digital payment quality.

DEMONETIZATION AND DIGITAL PAYMENTS:

Demonetization has helped digitization to grow. Factors like mobile connectivity, infrastructure, electronic delivery, technology, information technology have helped digitization to grow in India. Advantages are ease of use, faster transactions, reduced pollution of environment, more satisfied customers, and social upheaval. Lack of education, adaptation of technology, less support from government, costs of implementation, safety issues, infrastructure problems and lack of training are challenges for digitization. Better systems, security, and collaboration from all concerned can hasten the process of digitization.

Demonetarization has triggered the widespread use of digital transactions; however, UPI has gained more traction in the long run by popularizing the digital payment methods. It has been observed that UPI overtook all the digital financial transaction instruments by increasing the volume of transaction by 450% at the end of the financial year 2018- 2019. According to the industry experts the affordability of smart phones and internet data too has accelerated the widespread acceptability among the customers from different strata of the society.

Proceeding the demonetization period, usage of digital payments was an alternative. Nonetheless, in the rural market segment where cash was the king, the choice of digital payments was practiced by very few retail outlets and also the consumers were wary of using such trends. However, with the wild entrance of ICT such trends has been changing, still the quantum of digital payments has gone up vitally post the demonetization period.

Phenomenal developments has taken place in the process of digital payments and many mobile wallet companies, Point of Sales Service providers, ecommerce players, and government initiatives has been focusing on improving the digital payment solutions. Payer and payee both utilize digital modes to send and get money. It also named as electronic payment. No hard money (currency notes) is involved in the digital payments. All the transactions in digital payments are made through online. It is a moment and easy way to make payments.

The digitalization of the payment mechanism is a milestone in the time of Faceless, Paperless, and Cashless economy of Digital India. Digital India, ideal administrative climate, new instalment administration, and further developed client experience are considered as the significant drivers for the development of Indian digitalized payment frameworks.

CHALLENGES OF DIGITAL PAYMENT IN INDIA:

The banking sector is going through exciting times and technology, digitization, social media and mobility are changing rapidly altering the way in which we live, work and interact with each other. As the government presses ahead with cash to less cash to cashless economy, the success of the transition will depend on various challenges such as:

Slow Internet Speeds:

India is tormented with extremely low internet speeds, which keep on crawling up however are lower than worldwide benchmarks. For setting exchange carefully web association is requires however the network are not accessible in the provincial area. The normal mobile download speed in India in January was 12.41 Mbps as against the 12.91

Mbps in December. The transfer speed dropped over 4.2 percent 4.76Mbps in January 2021, while it was around 4.97 Mbps in December last year. The web speeds in India saw a vertical pattern taking the country to 70th situation as far as broadband speed, up by 3 positions and 122nd as far as portable speed, up from versatile download speeds in June 2021.

Security:

The digital media industry has not had the option to completely adapt the substance because of uncontrolled piracy in India. Weak IP regulations and ineffective enforcement has debilitated players to deliver unique substance and IP. Security is the fundamental worry of any new innovation. Since the current century is the hundred years of data and information, each innovation which is working with, they are in openness of information burglary, taking, and misrepresentation. It is more perilous when the data is about the money and the financial information. The change to digital economy, forces firms not only to develop customer intimacy but also to ensure that security requirements are part of the customer relationship strategy. The lack of interpersonal trust creates a circumstance for a security threat. By and large, security is a bunch of techniques, instruments and computer projects to confirm the wellspring of data and assurance the trustworthiness and protection of the data (information) to avoid the present situation to prompt a difficulty (monetary) of information or organization assets.

Risk of Cyber Fraud:

As the digital channel in financial services keeps on developing, cyber security has become a business hazard, rather than simply a technical risk. Security breaches can harm reputations and destroy trust, thereby jeopardizing the investments made in digital solutions. Worldwide, various occasions of hacking happen, of email accounts, information bases, and bank subtleties sleuth. The expanding computerized exchanges act digital protection like the primary test for public, organizations and government. Mobile Banking Malwares complex infection tainting banks portable applications client to take secret word subtleties and even upsets the two factor verification, by giving casualties a phony adaptation of the login screen when they access their genuine financial application. No Secure Network Connections Factors such as out-dated operating system versions, use of no secure or public WIFI network in mobile devices permit cyber criminals to misuse an existing online banking session to steal funds and credentials.

Unbanked Population

The public authority alongside Reserve Bank of India (RBI) executed and started various plans like PradhanMantri Jan DhanYojana, computerized India installments restricted and so on, to advance monetary consideration, particularly in provincial India. Notwithstanding every one of the endeavours, around 19% of the Indian populace actually doesn't approach banks, as indicated by an investigation together directed by ASSOCHAM and the consultancy firm, Ernest and Young. Late information from the public authority and different sources discredit a case that pronounced close to 100% of families to be in control of financial balances yet the realities are expressed previously. Every one of the well-known strategies for instalment like E-wallets United Payment Interface and BHIM and so forth, are reliant upon financial balances, if not additionally cell phones and internet access.

Cash dependent Economy:

92% of the Indian economy is comprised of casual labourers, who contribute around half of the GDP; 80-90% of these specialists are paid in real money which are frequently undeclared resources. These sorts illuminate the significance of money in the Indian economy Mediums like cell phones and web availability are as yet excessively expensive to a sizeable populace in this manner denying them admittance to computerized types of exchange. The majority of the requirements of country individuals rely upon cash exchanges, and to present the idea of computerized instalments is an exceptionally overwhelming undertaking. Money serves better compared to computerized exchange in light of the fact that country economy is for the most part casual or sloppy.

Digital and Financial illiteracy:

Large portions of the People are less mindful of computerized world and PC/cell phone. They even come up short on the fundamental information on working a cell phone or a PC. Being a piece of the formal monetary framework is an exorbitant undertaking for the base necessity; it requests monetary proficiency which is undeniably more burdening than education. Given that most people will in general catch while topping off check and bank structures, even with educated, and the exchange is an expense in provincial regions. There is just 6% individuals in India are PC educated and close about 90% Indian individuals don't comprehend the PC and web that is the reason they can't utilize the digital payment.

Inadequate Infrastructure:

Smartphone penetrations, internet connectivity, electricity, banking services are inadequate. Indeed, even the greatest nationalized banks of India are thinking that it’s hard to

give the fundamental financial administrations to the rural population. Although the Jan DhanYojana boosted financial inclusion, but most of the accounts made under the scheme are dormant and less or no transactions are done in them.

Poor Economy:

The rural population of India is as yet poor, and the per capita pay is impressively not exactly the national one. This makes even the essential necessities excessively expensive for the rural population.

Limited number of Transactions:

Higher number of exchanges with a similar trader might push a person to divert toward ease of payment. However, in rural areas, there are set number of exchanges, and that too toward the month's end, individuals may be less able to attempt exchanges through the digital mode.

Merchant Sale:

Adoption of the merchant sales via Point of Sales is very slow despite the service provider's effort by providing various schemes and discounts. According to the reports of RBI there are 1.44 Million POS terminals installed by banks across locations at the end of July 2016 and it increased by 24% in 2018. There should be involving every trader.

Vulnerable System and mistrust:

The misnomer is that if cash has been stopped in a bank, they can be cheated or abstained from pulling out cash, making them considerably more careful to a computerized exchange. Further, the fakes that happen aggravate the things.

Selective to non -acceptance of digital payments:

As there are limited entities to commit transaction in rural areas, non- acceptance by any of such limited entities may soon result in non-digital payment mode, despite the willingness to pay or so.

High Cost of Transaction and Time Consuming:

Digital Payment mode are exceptionally costly on the grounds that it incorporates set up cost, machine cost, the board cost and this method of installment will take additional time than the actual method of instalment. The expense of exchanges that are demanded over the customers is additionally a significant concern. For instance, over each check card exchange, a few retailers are charging the exchange cost from shoppers and it is extra weight. To guarantee that charge and Visas are utilized pervasively, such exchange charges must be sidestepped. Portable wallet organizations has absolutely made the exchange interaction a lot easier to the clients, however the costs charged over changing the cash from wallet to

financial balances are again a key concern. As the portable wallet organizations are charging anyplace around 1% to 4% for exchanges to ledgers, shoppers are careful about utilizing mobile wallets for deals.

Money Laundering:

Money laundering is characterized as the demonstration of camouflaging the beginning or responsibility for acquired assets to cause them to seem real. The enormous amount of cash is acquired through criminal operations and has been connected to essentially a wide range of wrongdoing for benefit including coordinated and middle class violations. This cash should be washed to try not to seize by the law requirements and gave to the public authority. There was a developing worry on illegal tax avoidance as it is normal related with drug dealing, bank reserve funds manhandles, land extortion, and tax avoidance. The high number of exchange and the progression of wire move through completely robotized frameworks have made it difficult for it to be identified by law requirements and befuddle review attributes.

Technological Issues:

As Per the World Bank's report, more than 290 million people in India lack the access to electricity, which is a necessary ingredient for technological advancement. As per TRAI, India had more than 1 billion dynamic portable memberships in 2016, however every one of the memberships are not one of a kind clients and are just a sign of the measure of sim cards sold by the telecom tasks, and around 25% of them stay torpid. Likewise, around 50% of these memberships don't have a functioning web association and are disconnected. Recent schemes from the telecom operators in India are showing an ascent in mobile use in provincial India, yet larger part of them are utilized for just calls and need essential internet availability.

High use of ATM Cards:

There are many digital payment systems but Indian People still using ATM cards for withdrawal and give money to other. They didn't use M. wallet and digital payment for money transfer.

Training:

There is a communication gap between bank and their customer. It requires giving training about use of online and payment system but banks do not provides any training program to increase the digitalization.

Public Sector Banks:

There are 80% portion of money area is involved by public sector banks and they began the digitalization from 1996. That is the reason it is in reformist pattern. Private Banks are ahead in digitalization to public sector banks.

Lack of Usability:

Electronic payment system requires enormous measure of data from end customers or make exchanges more troublesome by utilizing complex explained sites interfaces. For example credit card payments through a website are most effortless way to pay as this system requires large amount of personal data and contact details in web form.

Issues with e-cash:

The fundamental issue of e-cash is that it is not generally accepted because it is necessary that the commercial establishment accept it as payment method. Another issue is that when we makes payment by utilizing e-cash, the customer and the sales rep have accounts in a similar bank which issue e-cash. The installment isn't substantial in different banks.

Lack of Trust:

Electronic payments have a long history of misrepresentation, abuse and low unwavering quality just as it is new framework without set up sure standing. Potential clients frequently notice this danger as the key motivation behind why they don't believe a payment services and accordingly don't make web buys.

User's Perception regarding Acceptance of digital Payments:

User's perception is a vital factor deciding the achievement or disappointment of any data framework project. Client's acknowledgment is "the verifiable readiness inside a client gathering to utilize data innovation for the undertakings it is intended to help". Electronic instalment frameworks are not a special case of it. It implies these are not fruitful without acknowledgment of clients. Electronic payment is a creative way for online transactions. Issues are not tolerating effectively a result of absence of safety in evolving business-climate. Online payment system requires improvement of data innovation. The disappointment of electronic instalment framework is relying upon the factor that it disregards the necessities of clients and the market.

Lack of Awareness:

Making online payment is definitely not a simple assignment. Indeed, even educated individuals likewise deal with issues in making on the online payments. Consequently, they generally lean toward customary method of shopping rather than online shopping. At times

there is a specialized issue in worker customer attempted to do online payments yet they neglects to do. Accordingly they keep away from it.

PROSPECTS OF DIGITAL PAYMENTS IN INDIA:

The payments industry witnessed a quick adoption of contactless payment options in India. With the help of Near Field Communication (NFC), credit/debit cards, and digital wallets on our Smartphone or Smart watch, we can easily make buy with a simple tap on the screen. NFC empowers a user to gesture their phone near an enabled gadget and offer information without establishing a manual connection. Wearable gadgets also have ascended as a key driver of adoption of contactless payments. These take out the need to check a user's identity with a signature or PIN during the process of transaction.

Personalization has further led to the increase of voice-enabled banking. Voice interactions offer important experience to customer needs, behaviours and preferences. Using this data, banks and fintech companies can provide customized services. In addition, crypto currency has created immensely fertile opportunities for fintech start-ups. This new sort of currency has led to the event of wallets which may store digital assets and swapped coin pairs to open new channels for patrons to achieve the value from their digital coins within the world.

The Covid-19 pandemic acted as a catalyst for the expansion of digital payments in India. Now, mobile wallet landscape within India is expanding with the increase of various payment channels. Despite the underlying security concerns, instruments like UPI, debit/credit cards etc. are getting increasingly popular in India. Millennial are the first growth drivers during this case.

Moreover, fintech start-ups disrupting the prevailing digital payment landscape with advanced payment technologies using low-cost models are rising. These hold the potential to level the playing field and convey about financial inclusion.

Some of the Prospects of Digital Payments are as follows:

1. The India banking sector is one of the best sector in India and it changes as per the requirement of the India country
2. There are large scope of digital payment system in India because of it is increasing trend. The growth in volume and value of transactions using payment issued banks entities has been significant.

3. There are several banks and near about all banks are in adaption of Digital banking and NPCI also promoted Adhar enabled payment system to involve all Indian in digital transaction.
4. UPI System, the simplest system to form digital transaction and its expected to offer a progress in digital payment transactions.
5. Debit and credit card are shows as usual to make transaction but it is increasing trend from Demonetization of money.
6. With increasing mobile banking services, growth in e-commerce and use of mobile payment applications, the use of cash will decrease.
7. RTGS and NEFT volumes increase almost threefold between 2013 and 2020 reflecting greater adoption of the system.
8. The government of India is focus on digital infrastructure and it can encourage digital transactions culture in India there are almost every persons have Jan dhanyojana account and Aaadhar card.
9. There are 320 above mobile users in India in 2018 and it is a good environment to encourage the Digital payment system.

SCOPE FOR DIGITAL PAYMENTS IN INDIA

Digital payments in India are at nascent stage, and there's a push from varied quarters towards adapting the platform of digital payment solutions. Some of the reverent steps that are incorporated within the recent past towards improving the scope of digital payments are:

Limiting the scope for cash payments

Reserve Bank of India has regulated the cash payments during a phased manner. Imposing higher transaction charges for banking dealings like cash deposited. Introduction of More Digital Payment Solutions Though India is cash based economy; slowly the transition has started towards digital economy.

Reserve Bank of India issuing payment bank licenses to many fin- tech companies like Paytm and many competitive mobile wallet solutions emerging from existing banking companies lead to foray of digital payment options available for stakeholders like merchants and consumers Strategic launch of UPI solutions like BHIM by government of India, to enable hassle free digital transactions on a government platform leads to more secured platform for consumers. Aadhar based payment solutions that are emerging strongly in to the Indian market signifies potential scope of completing digital payments even with feature phones. In a recent report published together by CII and Deloitte, the study emphasize that

there's significant raise within the demand from consumers for digital payment modes. Many merchant creations are keen on using the digital payments because the solution for retaining the customer base.

Incentivizing Consumers

Numerous private digital wallet companies are offering value added services to the purchasers. Consumers are offered value proposition in terms of simple usage, cash back offers, discounts for using their mobile wallet platforms etc. Government of India tries to announce various incentive schemes and reward programs for the consumers to attract them towards digital payments. RBI reducing or terminating the cross transaction cost for the bankers and UPI solutions to encourage them reduce the value of transaction to the top users. More Point of Sale solutions being procured and made available to the merchants are vital step towards improving the system. Launching awareness programs, and inspiring as many feasible ways (like feature phone based digital transfers facilitated using Aadhar card etc.) has led to way where more number of outlets and establishments considering the digital payment solutions in rural sector. Incentives allotted by Govt. as discounts for fuel purchase using the digital payments like debit/credit cards within the outlets signify the strategic approach towards encouraging digital transactions.

Market Drivers

It is imperative from the recent reports that there's significant development within the case of digital payments that are happening . Some of the key and influencing factors that are supporting the digital transaction processes are: Compared to the sooner trends, within the current scenario the method of mobile banking, IMPS solutions and other such related developments was an easy and got simplified. Increasing number of ecommerce companies offering their services within the rural segments are also the opposite key element that's driving the digital transaction solutions. Direct and indirect initiatives from government towards improving the banking ease, compliance standards and other such factors play a key role within the process. Few of the many initiatives like issuance of “RuPay cards” linked with Jan Dhan accounts (Zero balance accounts) opened in massive scale, Kisan Credit cards issued to the farmers, drive in terms of enabling PoS Solutions to rural merchants etc. has created fundamental platform that's essential for gaining momentum of digital payments within the rural segment.

WAYS TO OVERCOME DIGITAL PAYMENT SYSTEMS:

Encryption:

Online shopping is exceptionally delicate to idea that internet business is unreliable, especially with regards to online payments. Most online payment systems use an encryption system to feature security to the transmission of private and payment details. There are various encryption schemes in use to stop from frauds of online payments.

Digital Signatures:

In order to ensure authentication for transactions involved, the customers involved in online payments should asked to use digital signatures.

Check Whether the Country is a "High Risk" Country:

Continuously require nearer assessment for orders that being sent to a worldwide location. Focus harder if the card or the transportation address is in a space inclined to MasterCard extortion. As per a Clear Commerce® overview, the best 12 global hotspots for online extortion are Ukraine, Indonesia, Yugoslavia, Lithuania, Egypt, Romania, Bulgaria, Turkey, Russia, Pakistan, Malaysia, and Israel. A similar review additionally showed that the 12 nations with the most minimal extortion rates are Austria, New Zealand, Taiwan, Norway, Spain, Japan, Switzerland, South Africa, Hong Kong, the UK, France, and Australia. IP Geo location administration can recognize the nation of beginning for organizations who need more data. It is useful in keeping up with the confirmation in online payments.

Firewalls:

A firewall is an integrated collection of security measures designed to stop unauthorized electronic access to a networked computing system to guard private network and individuals machines from the risks of the greater internet, a firewall are often employ to filter incoming or outgoing traffic supported a predefined set of rules called firewalls policies. There are 3 policy actions of firewalls:

Accepted: Permitted through the firewall.

Dropped: Not allowed through without indication of failure.

Rejected: Not allowed through amid an effort to tell the sources that the packet was reject.

There are two fundamental approaches to create firewall policies to effect minimize vulnerability to the outside world while maintaining the desire functionality for the machines in the trusted or individuals computer. These are:

(a) Blacklist Approach

(b) White list Approach

Compare the Credit Card Issuing Bank's Country with the Billing Address Country

Another significant highlight is to check the issuing country and the billing address. Ensure that the issuing country and billing address country are the same. This is particularly significant, in light of the fact that minor banks might not have thorough distinguishing proof strategies.

Call the credit card issuing bank to verify the validity of credit card

If online merchants have any suspicions about an order and wish to verify the small print of the order, they will call the issuing bank and ask to verify the overall account details. This is to form sure that the cardboard isn't stolen. The issuing bank telephone number is predicated on the primary 6 digits of MasterCard number referred to as the Bank number (BIN).

Request more Identification in case of doubts:

While consumers value their privacy and need quick internet site ordering facilities, it's important to collect sufficient customer identity details during the ordering process. The customers' name, MasterCard number and expiry date isn't enough. Merchants should call them for verification through phone or request a photograph ID to be faxed if they need any doubts.

SUGGESTIONS FOR MAKE INDIA AS CASHLESS ECONOMY:

Digital payments is a tremendous step taken by Govt. towards Digital transaction but it must reform to get rid of these obstacles and lot of efforts got to put for integrating customers who face these obstacles in using this technique . within the light of the study to reinforce the utilization of digital payments some measures could also be suggested as follows:

- Merchants should be instructed by Government to simply accept digital payment
- In all sort of transports digital payments should be accepted
- In all sort of utility payments digital payments should be accepted
- Options for digital payments should be provided at the payment desk in order that the buyer can do payments accordingly.
- Capacity building and digital literacy programs should be arranged at freed from cost
- Internet connectivity should be improvised
- Some motivational push for using digital payments should tend in order that people attempt to start using digital payments.

CONCLUSION:

Digital Payment system is easy to use to the customer as well as bank officers and there are several option are available in the financial system in India, but there are large amount of people in India don't know how to use the system. The Digital literacy of Indian people is low level, Therefore digital payment system is not pure developed and spread all over the India. The social and infrastructure barriers are there influences to use of digital payment system. But Now a day's mobile banking are becoming famous in the India because it is easy to use and anytime can use. It is also required to improve the digital literacy among the people. There are also issues relating to the risk and security. Electronic payment refers to the mode of payment which doesn't include physical cash or cheques. It includes open-end credit, MasterCard, open-end credit, e-wallet etc. E-commerce has its main link in its development on –line in the use of payment methods, some of which we have analysed in this work .The risk to the online payments are theft of payments data, personal data and fraudulent rejection on the part of customers. Therefore, and until the utilization of electronic signatures is wide spread, we must use the technology available for the instant to ensure an inexpensive minimum level of security on the network. With reference to the payments methods they need been analysed during this work, it's impossible to mention that anybody of them is ideal, although all of them has advantages as opposed to others. If the client wants to take care of privacy, then they choose those payment methods which guarantee a better level of privacy like E-cash or Net Bill Checks. Both consumers and repair providers can enjoy e-payment systems resulting in increased national competitiveness within the end of the day. The successful implementations of electronic payment systems depends on how the safety and privacy dimensions perceived by consumers also as sellers are popularly managed, successively would improve the market confidence in the system.

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Chapter – 3

OVERVIEW OF e-RUPI IN INDIA

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Chapter – 3

OVERVIEW OF e-RUPI IN INDIA

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Abstract

The "QR code or SMS string-based e-voucher"; that will be accessed via the beneficiaries' mobile phones; It works in the same way that prepaid vouchers do, in that it may be redeemed and paid to service providers. When utilizing a card, internet banking, or digital payment apps, this allows the user to bypass the unnecessary processes.

Keywords: e-Rupi, National Payment Corporation, Futures and Benefits.

Introduction

India's honourable Prime Minister, Mr. Narendra Modi, has launched a number of digital initiatives. In the last few years, India has experienced a digital revolution. Citizens have gained a better understanding of digital payment techniques, which has improved their living conditions. In this essay, we'll talk about the e-RUPI digital payment platform. This platform allows users to send and receive digital payments. You will discover everything you need to know about this payment system by reading this post, including its objective, benefits, how it works, and how to download it. You must read this if you want to learn everything there is to know about the e-RUPI digital payment network this article all the way through.

What is e-RUPI

Mr. Narendra Modi, India's Prime Minister, will debut the e-RUPI Digital Platform, a digital payment platform, on August 2, 2021. This platform will be used to perform cashless and contactless digital payments. The e-voucher is a QR code or SMS string-based e-voucher sent to the users' mobile phones. This voucher does not require the use of a digital payment app, internet banking, or a card to be redeemed. This digital payment platform was created

using India's national payments organization's UPI technology. The collaborators are the Department of Financial Services, the Ministry of Health and Family Welfare, and the National Health Authority. This initiative will bring together the service sponsors with the beneficiaries and service providers. The connection will hold in a digital manner without any kind of physical interface.

Uses of e-RUPI Digital Payment Platform

The payment of the service provider will be made only after the transaction is completed through the e-RUPI platform. This payment platform will be prepaid, thus there will be no need for an intermediary to make the service provider's payment. Aside from that, this platform can be used to deliver services under schemes that provide drugs and nutritional assistance, such as the mother and child welfare scheme, the TB eradication programme, drug and diagnostic under the Ayushmann Bharat Pradhan Mantri Jan Arogya Yojana, fertiliser subsidies, and so on. These digital tokens can also be used by the private sector for employee welfare and corporate social responsibility programs. Leak-proof revolutionary delivery of welfare services will be ensured through this initiative.

Voucher Issuing Procedure

On the UPI platform, the National Payment Corporation of India developed the e-RUPI digital payment system. Banks that would be the issuing authority of the voucher have been boarded by India's national payment organisation. The company or government agency must approach a partner bank (including private and public sector lenders) with information about the specific person and purpose for which the payment is needed. Beneficiaries will be identified using the bank-issued mobile phone voucher. This platform will be a ground-breaking digital effort, aimed at raising the standard of living and simplifying the payment process.

About National Payment Corporation of India

The National Payment Corporation of India (NPCI) is in charge of running India's retail payment and settlement systems. The Reserve Bank of India and the Indian Banks' Association founded this institution. In order to build a strong payment and settlement infrastructure in India, this institution works under the provisions of the Payment and Settlement Systems Act of 2017. The National Payment Corporation of India (NPCI) is a non-profit corporation that operates under Section 8 of the Companies Act of 2013. NPCI is

also in charge of maintaining the banking system's infrastructure in India, including physical and electronic payment and settlement systems.

This organization focuses on bringing innovation to the payment system by introducing of technology. The promoter banks of NPCI are State bank of India, Punjab national bank, Bank of Baroda, Canara Bank, Union Bank of India, Bank of India, ICICI bank, HDFC bank, Citibank, and HSBC.

Launching Of e-RUPI Digital Payment Platform

The e-RUPI digital platform was introduced via video conferencing on August 2, 2021. Prime Minister Mr. Narendra Modi has introduced e-RUPI through video conferencing. On the occasion of the opening of this payment platform, the Prime Minister was joined by the chief executive chairman of the National Health Authority. On the occasion of the platform's debut, the first implementation of E-RUPI digital payment was shown in a private Mumbai vaccination centre.

Key Highlights of e-RUPI Digital Payment

Name Of The Article	e-RUPI Digital Payment
Launched By	Government Of India
Beneficiary	Citizens Of India
Objective	To Provide Cashless And Contactless Instrument For Making Digital Payments
Official Website	https://www.npci.org.in/
Year	2021

Objective of e-RUPI Digital Payment

The e-RUPI digital payment platform's major goal is to establish a cashless and contactless payment system that allows citizens to make digital payments with ease. Users can make secure payments with the assistance of this payment platform. This payment mechanism employs a QR code or SMS string-based e-voucher that is transmitted to the beneficiary's mobile phone. The e-RUPI digital payment platform ensures that services are paid on time without the need for an intermediary. Users will not need to carry any cards or digital payment apps, nor will they need online banking access to make payments, making the process simple and secure.

List of Banks That Are Live With e-RUPI

Name of Banks	Issuer	Acquirer	Acquiring App
Union Bank of India	Yes	No	NA
State bank of India	Yes	Yes	YONO SBI Merchant
Punjab national bank	Yes	Yes	PNB Merchant Pay
Kotak bank	Yes	No	NA
Indian bank	Yes	No	NA
Indusind bank	Yes	No	NA
ICICI bank	Yes	Yes	Bharat Pe and PineLabs
HDFC bank	Yes	Yes	HDFC Business App
Canara bank	Yes	No	NA
Bank of Baroda	Yes	Yes	BHIM Baroda Merchant Pay
Axis bank	Yes	Yes	Bharat Pe

Features of e-RUPI Digital Payment

- On August 2, 2021, the Honorable Prime Minister of India, Mr. Narendra Modi, will introduce the e-RUPI digital payment platform, which will be a paperless and contactless instrument.
- This platform will be cashless and contactless instrument
- Users can make digital payments using this system by using a QR code or SMS string based e-voucher
- This voucher will be delivered to the users' mobile phone
- Users can redeem this voucher without the use of a payment app, internet banking, or a card
- The National Payment Corporation of India has developed the e Rupi Digital Payment service on its UPI platform.
- The Department of Financial Services, the Ministry of Health and Family Welfare, and the National Health Authority are among the collaborators.
- The sponsor of services will be linked to the recipients and service providers through this programme. This connection will be made entirely digitally, with no physical interface.
- Payment to the service provider will be made after the transaction is completed on this platform.

- ❖ This payment platform is prepaid.
- ❖ e-RUPI does not need payment from any type of service provider.
- ❖ This platform can also be utilised to provide services under government-sponsored drug and nutritional assistance programmes.

Benefits of e-RUPI

Benefits for Consumers	The payment process is completely contactless. Consumers are not obliged to divulge their personal information and only need to follow a two-step redemption process. They do not need to have any kind of digital payment app or bank account. In order to protect your privacy.
Benefits for Hospitals	Because the voucher is pre-paid, the transaction is fully secure. In a few simple steps, you can redeem your voucher. Because hospitals are not obligated to handle currency, payments can be made in a hassle-free and contactless manner. A verification code authorizes the voucher, making the payment procedure simple and secure.
Benefits for Corporates	Employee well-being can be aided through the distribution of corporate vouchers. Because the transactions are digital and do not involve any physical issuance, the issuer can follow the voucher redemption in a speedy, safe, and frictionless manner, resulting in cost savings.

Other Services Provided By NPCI

The National Payment Corporation of India is in charge of running India's retail payment and settlement systems. The national payment company provides the citizens of India with the following services:

Unified payment interface (UPI)

A person's many bank accounts can be merged into a single mobile application using this capability.

Rupee and Payment (RuPay)

It is an Indian domestic card payment network that accepts payments at ATMs, point-of-sale terminals, and e-commerce websites across the country. It is a secure network that protects users from phishing attacks.

Bharat Interface for Money (BHIM)

BHIM is an app through which you can make simple, easy, and quick payments and transactions by using your unified payment interface. Instant bank to bank payments can make through BHIM and the user can also collect money using just a mobile number or virtual payment address.

National Automated Clearing House (NACH)

Interbank high-volume electronic transactions that are repeated and periodic are facilitated using NACH. Banks, financial institutions, corporations, and the government all use this platform.

Immediate Payment Service (IMPS)

Interbank electronic fund transfers (IMPS) are available 24 hours a day, seven days a week, through a variety of channels including mobile, internet, ATM, SMS, and others. It is a reliable and real-time financial transfer technology that transmits funds between banks across the country in real time. IMPS is completely secure and cost-effective.

National Electronic Toll Collection (NETC)

The Countrywide Payment Corporation of India has built a national electronic toll collection system to fulfil the Indian market's electronic tolling needs. This platform provides a statewide toll payment system, as well as a clearing house service for settlement and dispute resolution.

BHIM Aadhaar

Merchants are unable to accept digital payments from clients using BHIM Aadhaar. Aadhaar authentication is used on this platform. Merchants can accept payment from bank clients by validating their biometrics using this technology.

Adhaar Enabled Payment System(AePS)

AePS is an online interoperable financial inclusion transaction that takes place at the point of sale via a bank's business correspondent and uses Aadhaar authentication. This platform allows you to conduct six different sorts of transactions. To make a payment, customers simply need to enter their bank name, Aadhaar number, and the fingerprint collected during enrolment.

National Financial Switch (NFS)

It is a 37-member network that connects 50,000 ATMs. This platform creates in-house operational models that are powerful and long-lasting. National financial switch's operational functions and services are comparable to those of other global ATM networks.

Cheque Truncation System (CTS)

It is a method of clearing checks electronically rather than physically processing them. This is done by presenting a bank on the way to the paying bank branch. This platform is managed by the National Payment Corporation of India. This technique will also save a significant amount of time.

Highlights Provided By the Chief Executive Chairman Of National Health Authority

- The National Health Authority's chief executive chairman has praised the e-RUPI initiative, which was established as part of the Digital India goal. He has emphasized the importance of this payment platform, which is comparable to BHIM UPI. This platform, which is built on the UPI architecture, is a person- and purpose-specific instrument. He has also emphasized the instrument's purpose-specific character. Currently, the government and other institutions are not obligated to provide funds for various forms of benefits. They can provide this voucher instead of money, and the beneficiary can only use it for the reason for which it was issued.
- This platform is real-time and paperless. Health, nutrition, education, etc departments will be able to take advantage of this platform. Along with that, it can be used for the national Digital Swasthya mission. This voucher is recognized by the Reserve Bank of India.
- Through this platform, direct fund transfers can be made to the service provider. This voucher can use only one time.

Highlights Provided By Honourable Prime Minister Narendra Modi

- • On the occasion of the e-RUPI platform's debut, India's honorable Prime Minister emphasized the platform's numerous advantages.
- He has emphasized the importance of this Endeavour in terms of digital governance.
- Digital transactions can be made effortlessly with the support of this platform, and it will play a key part in making digital payments effective.
- This voucher will assist in making targeted, transparent, and leakage-free transactions.
- The Prime Minister also emphasized the fact that India is progressing thanks to digital technologies.
- Citizens' living standards are rising, and technology is playing an increasingly important part in their lives.
- He has also expressed his thanks that this project is being launched on Amrit Mahotsav, the nation's 75th anniversary of independence.

- This voucher can be utilised not just by the government, but also by non-governmental organizations (NGOs) to aid people with education, health, and other issues.
- With this programme, money given to beneficiaries will be used for the same purpose.
- In the beginning, this system will solely cover health-related benefits.
- This voucher is person and purpose specific, as stated by the Prime Minister, and can be used in immunization drives, old age homes, and hospitals, among other places.
- This voucher is person and purpose specific.
- Only the person for whom this voucher has issued can use it.
- He has also highlighted the importance of technology.
- The banks and payment gateways have played a major role in launching this platform.
- Many private hospitals, corporates, businesses, NGOs and other institutions have shown their interest in e-RUPI platform.

View List of Live Hospitals on e-RUPI

- First of all go to the **official website** of national payment Corporation of India
- The home page will open before you
- On the homepage click on **what we do** Option
- Now you have to click on UPI
- After that you have to click on **e-RUPI live partners**
- After that you have to click on Live Hospitals on e-RUPI
- A PDF file will appear before you
- In this PDF file you can view list of live hospitals on e-RUPI.

Download e-RUPI Digital Payment Mobile App

- First of all open **Google play store** or Apple App Store in your mobile phone
- Now in the search box you have to enter e-RUPI Digital payment
- After that you have to click on search
- A list of apps will display before you
- You have to click on the first option
- After that you have to click on install
- e-RUPI digital payment mobile app will download in your device

Procedure to Redeem e-RUPI Voucher

- The beneficiary have to show the **e-RUPI QR code or SMS** at the service provider outlet
- The salesperson require to scan this QR code or SMS
- Now an OTP will receive through the beneficiary
- The beneficiary have to to share this OTP with the service provider
- Service provider have to enter this OTP into the OTP box
- Now service provider have to click on proceed
- Payment will make to the service provider

Contact the Department

- Visit the **official website** of national payments Corporation of India
- The homepage will open before you
- On the homepage click on **get in touch** Option
- Now a new page will appear before you
- On this new page you have to enter the following details:-
    - Name
    - Email ID
    - Contact
    - Subject
    - Description
    - Captcha code
- After that click on submit button
- By following this procedure you can contact the department

View Contact Details of Offices Of NPCI

- Go to the **official website** of national payments Corporation of India
- The homepage will open before you
- Now you have to click on **get in touch** option.
- A new page will open before you
- You have to scroll down
- At the bottom of the page you can view the details of offices of NPCI

Helpline Number

We have given you with all of the necessary information on e-RUPI digital payment in this post. If you continue to have issues, you can contact the department at its hotline number for assistance. The phone number for the hotline is 18001201740.

Conclusion:

On August 2, 2021, Prime Minister Narendra Modi introduced the India Digital Payment Solution e-Rupee platform as India's best-ever payment solution, as we all know. You can also look over the e-Rupee prepaid voucher's details. e-RUPI will be introduced by the Prime Minister through video conference, and he will go over the different benefits of e-RUPI.

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Chapter – 4

DIGITAL PAYMENTS, E – COMMERCE AND ENTREPRENEURSHIP

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Chapter – 4

DIGITAL PAYMENTS, E – COMMERCE AND ENTREPRENEURSHIP

Ms SUSAN ANITA ANDREW

Abstract

Digital modes of payment are being welcomed by businesses ranging from colossal corporations to MSME's, irrespective of the nature of the business, as it provides a simple and straight forward payment experience. In recent days, mobile payments and digital wallets have become popular as a result of the Covid – 19 pandemic. Furthermore, the Indian government has been making coordinated efforts with the RBI in order to promote financial inclusion, and it is the Digital India initiative, implemented in the year 2015 that has pushed the economy ahead by leaps and bounds in this aspect. Entrepreneurship in many cases is the sole source of income, in situations where formal employment opportunities are not available. Digital payment platforms for entrepreneurs, especially in markets of a developing nature, are simple and secure, and also advantageous as they help speed up the development of the business through greater transparency, resulting in quicker obtaining of a business license, increased involvement in e-commerce, better management of the supply chain which reduces costs and saves time.

Keywords: *Digital Payments, E-Commerce, Entrepreneurship, Women Entrepreneurs*

The Indian economy has traditionally been reliant on cash, but with the accelerated adoption of technology and the internet, the country's digital payment ecosystem is also beginning to see rapid evolution. In recent days, mobile payments and digital wallets have become popular as a result of the Covid – 19 pandemic. Cashless payments to procure products and avail services can be easily and instantly made from almost anywhere. Furthermore, the Indian government has been making coordinated efforts with the RBI in

order to promote financial inclusion, and it is the Digital India initiative, implemented in the year 2015 that has pushed the economy ahead by leaps and bounds in this aspect.

As the government takes steps to push the country into becoming a cashless economy: It is critical to remember that the supporting function of entrepreneurs: make them the backbone of the economy. E – Commerce has also played an important role in changing the landscape of the commercial world through its swift penetration into almost every sector and its subsequent contribution towards economic development. Moreover, e-commerce and digital modes of payment allow businesses to have a competitive edge by providing them with equal access to consumers all around the world, and also to help upgrade traditional industries. Technology has become an integral aspect of daily life; therefore, businesses must quicken the pace of adoption of such new technology to keep up with the trend. In this regard, digital payment systems play a large part, by offering an easy and inexpensive way for entrepreneurs to establish and maintain relationships with banks, customers, employees, merchants, and potentially new markets. E-Commerce, Digital Payments and Entrepreneurship go hand-in-hand, in permeating every aspect of life. Beyond its profound impact on business activities, its impact can be felt in production, employment, education and even society. It breaks the boundary of time and space, alters the trade pattern, improves the circulation of merchandize, capital and information, and makes enterprises have an edge over others as well by reducing the cost of production effectively (Qin, et al., 2009)

Application of Digital Payments in E-Commerce

The digital payments landscape took firm root in India and progressed into the next stage of consumer participation, following the demonetization of all ₹500 and ₹1,000 notes in 2016. It has taken the framework of transactions that are done through, RTGS (Real Time Gross Settlement), NEFT (National Electronic Fund Transfer), USSD (Unstructured Supplementary Services Data), AEPS (Aadhar Enabled Payment System), Digital Wallets, UPI (Unified Payments Interface), Internet and Mobile Banking.

A major portion of digital payments in India comes under the umbrella of the National Payments Corporation of India (NPCI). The range of services covered by the NPCI apart from the above mentioned modes of digital payments also include, the Bharat Bill Payment System (BBPS), BharatQR, Immediate Payment Service (IMPS), RuPay, National Electronic Toll Collection also known as FASTag and most recently e-RUPI. Digital Payments being the need of the hour is evidenced by the fact that it has been estimated that the Indian E-

Commerce market is estimated to hit $200 billion by the year 2026, as per a report published by Morgan Stanley (Gupta, 2017). Moreover, the digitization of the predominantly cash based economy coupled with the reformation of the tax system, indicate that India has the growth potential to become one of the world's fastest growing economies in the world over the next decade (Morgan Stanley, 2017).

Digital modes of payment are being welcomed by businesses ranging from colossal corporations to MSME's, irrespective of the nature of the business, as this is being incentivized by the government and as restrictions are being placed on cash transactions. Likewise, it also provides a simple and straight forward payment experience. The development of fintech in recent years; the push towards digitization of the economy and the unprecedented circumstances resulting from the covid – 19 pandemic, have made digital payment methods preferable throughout the world. From a business standpoint, digital receipt and payment methods eliminate data entry errors and simplify purchases and sales and from a customer's point of view, platforms based on apps, are user friendly and ensure data security. In spite of the benefits to both the merchant and the consumer, there are still a great number of people who are either unaware or wary of digital or contactless payments.

Digital Payments and Entrepreneurship

Entrepreneurship in many cases is the sole source of income, especially in situations where formal employment opportunities are not available. It results in creation of new wage earning opportunities, thereby boosting income. It is in this respect that devices with connection to a network allow entrepreneurs to substitute the usage of cash with electronic or digital payments. Digital payment platforms for entrepreneurs, especially in markets of a developing nature, are simple and secure, and also advantageous as they help speed up the development of the business through greater transparency, resulting in quicker obtaining of a business license, increased involvement in e-commerce, better management of the supply chain which reduces costs and saves time. Additionally, it gives entrepreneurs financial credibility which enables them to increase the amount of working capital and scale upwards towards becoming large scale entrepreneurs.

In India, the acceptance of women as business executives has decreased from 31% in 2006 to 26% in 2015 (Aidis, Weeks, & Anacker, 2015). The benefit of better financial credibility because of digital modes of payment, is favorable for women entrepreneurs who in many parts of India are still considered a high credit risk. For women who run small

businesses, the ability to send and receive money swiftly, can be either a positive or negative turning point in the life of the business. Moreover, in order to achieve the goals of sustained development and growth of the economy, women entrepreneurs must be treated equally and empowered economically, and financially. With 8.05 million viz., i.e., 13.76% establishments in India (Ministry of Statistics and Programme Implementation, 2016) being run by women it is clear that women hold the key to economic growth. India being a member of the 'Better Than Cash Alliance' evidences the seriousness of the nation in developing the next generation of entrepreneurs, particularly women, in the rapidly evolving digital economy, thereby also helping to promote the United Nations Sustainable Development Goals (Better Than Cash Alliance, 2017). In this sense, the financial ecosystem in the digital age is altering the game for Indian women entrepreneurs. Low – cost financial transfers from one mobile device to another have made digital payment modes accessible to every socio – economic segment.

Digital Financial Inclusion Framework of Entrepreneurs

While unbanked adults make about 31% of the global population (World Bank, 2017), it is known that the foundation to the development of any economy is financial inclusion. While the Digital India initiative, launched in 2015, has been instrumental in bringing the unbanked and financially excluded population, it was the launch of the unique biometric identification system, known as Aadhar, which saw the official beginning of the digital revolution in India. The Pradhan Mantri Jan Dhan Yojana which was launched later on in the year 2014, served to bring almost 285 million unbanked Indians into the official financial system, it was estimated that prior to this almost 35% of households in India did not have a bank account (Morgan Stanley, 2017). A point to be noted is that while all efforts are made for financial inclusion, it must also serve to educate not only on the opportunities but also on the inherent risks and of financial services digitization.

The Covid – 19 pandemic has accelerated the push towards Digital Financial Inclusion. It has been estimated that by 2026 almost 915 million Indians will have access to the internet (Morgan Stanley, 2017). Some of the interventions that played a role in this push towards financial inclusion through the usage of digital payments are the adoption of cash refusal policy by retailers, implementation of non - cash toll booths, increase in the number of online stores and decrease in traditional brick and mortar stores to name a few. Apart from government interventions, another positive factor driving the increased usage of digital

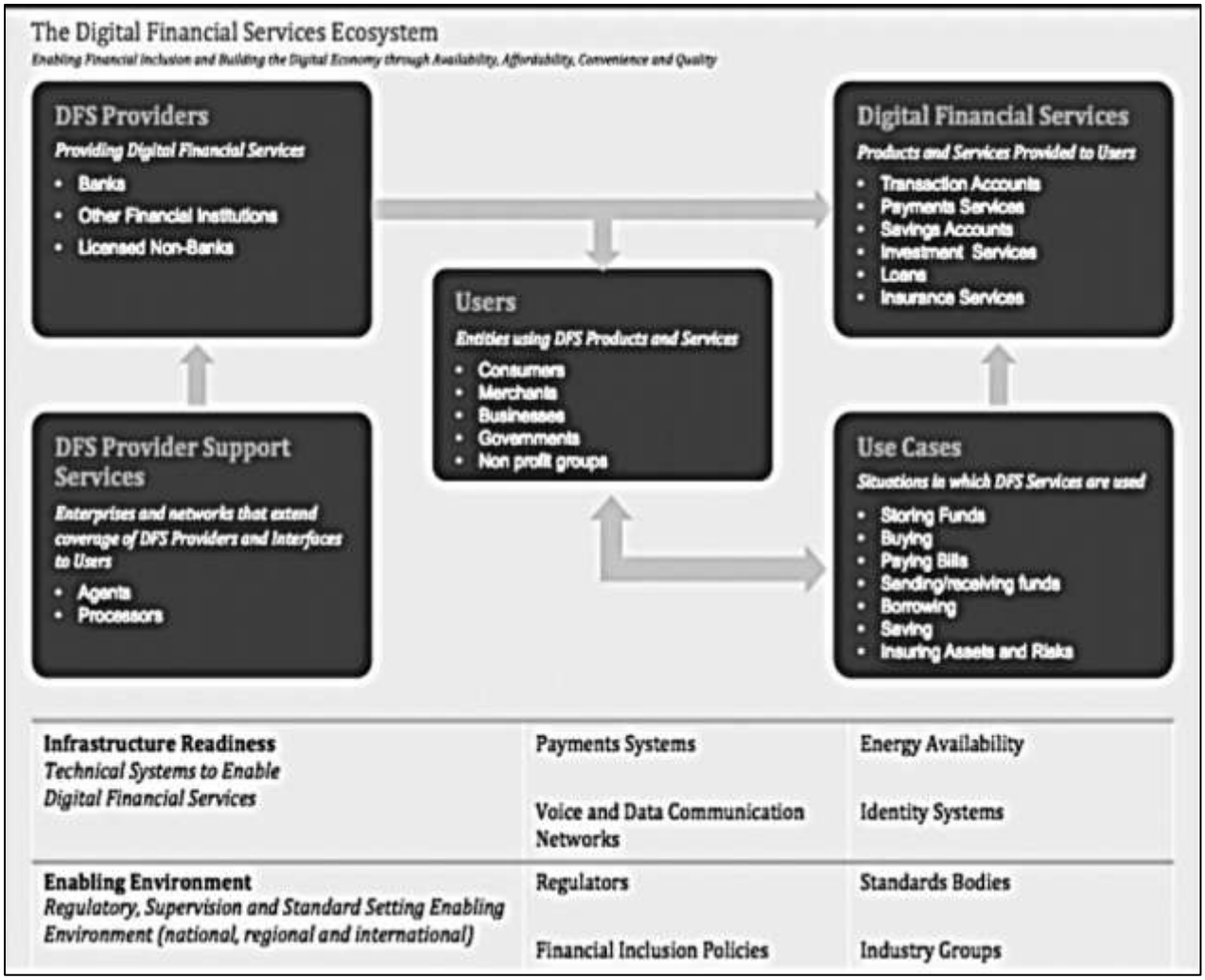
payment systems are demographics. India is ranked as one of the youngest countries in the world with more than 62% of the population in the working age group of 15 to 59 years of age and more than 54% of the population below the age of 25 (mygov.in, 2017). This young generation is driving forward change in the economy, as they are flexible in changing from the traditional brick and mortar system of banking, to accessing digital banking through mobile phones and smartphones.

For the purpose of obtaining a better understanding of the Digital Financial Inclusion Ecosystem, a grasp of the key components is essential.

I. **Digital Financial Transactions Platform:** Customers can use devices connected to a network to send and receive data to and from a bank or non-banking entity that is allowed to hold value electronically to make or receive payments and store value.
II. **Devices with a Network Connection:** This refers to electronic devices used by customers that communicate data by connecting to the digital device of the merchant of a similar nature.
III. **Merchandisers:** They must have a network – connected device that sends and receives transaction data enabling customers to have 'digital liquidity'.
IV. **Additional Financial Services:** These are services offered by banking and non-banking entities through the Digital Financial Transactions Platform such as insurance, deposits, credit, and investment facilities to name a few.

The ultimate purpose behind Digital Financial Inclusion is to achieve "digital liquidity" which is defined as *'a state wherein consumers and businesses are content to leave their funds in digital form, therefore reducing the burden of the "cash-in", "cash out" process.'* (International Telecommunication Union, 2016). The Digital Financial Services Ecosystem is mapped out in the figure below.

Figure 1 *The Digital Financial Services Ecosystem*



The digital financial services ecosystem allows several benefits to entrepreneurs such as:

- Keeping a track record of payments, especially those made in the past, which will enable the entrepreneur to increase the profit margin, by predicting future sales.
- It will help to boost the visibility of the business as today's consumers prefer e-commerce platforms in terms of both buying and selling.
- It ensures timely and accurate transfer of wages to the employee, guaranteeing that both the employer and employee are satisfied.
- It enables the government to monitor tax evasion, through incentivizing the use of digital payments.

For rural women with untapped entrepreneurial talent, financial inclusion has the capability of bringing, financially excluded women into the official banking system, thereby directing their idle savings into productive ventures. The financial inclusion promotional strategies can be said to have succeeded, from the significant leap in census data that shows

the number of women owning a bank account to have jumped from 26% in 2011 to 77% in 2017 (Statista Research Department, 2021). The World Bank has rightly said that 'Empowering Women Is Smart Economics' (Revenga & Shetty, 2012). Having said this it is also important to understand that this does not exclude women from societal and familial pressures, which means that often times it is not possible for a woman to travel long distances to meet suppliers or bank outlets. In such situations digital payments more specifically, mobile based banking platforms, are useful and help boost women entrepreneurship by giving them the security and confidence that they need.

The immense advancements in technology have resulted in the creation of a new business model viz., social commerce entrepreneurship. It offers solutions for the issues faced by women entrepreneurs in starting and expanding the business. Reduction in the difficulties in obtaining credit and entering the formal financial services net, can be overcome through social commerce entrepreneurship. Financial inclusion and the advancement of women entrepreneurship are now being revolutionized as a result of social commerce. An analysis of this business model reveals that there are four key segments viz. WhatsApp Entrepreneurs, Social Media Entrepreneurs, E-Commerce Entrepreneurs, and Digital Payment Entrepreneurs (Women's World Banking, 2019). Through this segmentation of social commerce entrepreneurship, it can be understood that women use separate digital platforms for various aspects of the management of the business such as customer relationship management, marketing, delivery and payments. If the integration of these areas is updated it will allow women entrepreneurs to have access to an array of financial services, provide protection to both the buyer and seller as well as save time.

Women entrepreneurs need to have a better understanding of the emerging opportunities that social commerce provides. This is possible with continual promotion of, the full-fledged utilization of digital platforms for business, and education as to how to effectively utilize the same. The end result of these endeavors is the increased financial capability of women entrepreneurs.

Matching India's fast changing digital ecosystem, with the wants and needs of women is possible with a better grasp of the role of e-commerce, social media, digital payments and delivery and the services of financial companies in entrepreneurship.

E-RUPI : A Digital Payment Solution

The e-RUPI is a one-time digital voucher issued by the National Payments Corporation of India (NPCI) in association with Department of Financial Services (DFS), National Health Authority (NHA), Ministry of Health and Family Welfare (MoHFW) on 2nd August 2021. It is a facility that allows beneficiaries to use e-RUPI to get a digital voucher that can then be redeemed for any government service. It is seen as a way of discovering and fixing potential flaws in the current social payment system. It is a system based on digital tokens which provides leak-proof delivery of social benefits and reduces corruption by cutting out the middleman.

Simply put it is an e-voucher of a value equivalent to the amount of the direct benefit transfer that will be delivered to the recipient's mobile phone in the form of a QR code or SMS string. (Livemint, 2021). In order to redeem the voucher, the recipient must show the SMS string or QR code at a specific center, followed by a verification code that will be sent to the same mobile device. It ensures that the voucher can be redeemed only for the specified purpose of its issue. It is a seamless platform that enables redemption without the need for a card, digital payment app, or access to internet banking. Furthermore, in the wake of the covid – 19 pandemic, it makes contactless direct benefit transfers quicker, simpler and faster. It offers benefits to corporates, hospitals, and consumers (National Payments Corporation of India, 2021)

Opportunities and Challenges of Digital Payments to Entrepreneurs

The share of currency to the Gross Domestic Product for the year 202, was 12% (Statista Research Department, 2021). During times of economic growth, the ratio of Currency in Circulation (CIC) to GDP tends to increase. Although, for the financial 2021, despite the pandemic induced recession, not only is a rise in Currency in Circulation expected but also in Digital Payments as well. This is evidenced by the fact that the share of digital transactions in the total volume of non – cash retail payments increased from 95.4% in 2018 – 19 to 97% in 2019 – 20 (Reserve Bank of India, 2020). The result of demonetization coupled with the use of the UPI (United Payment Interface) platform is that even the rural Indian population has access to the digital payment national and international financial platforms such as Whatsapp, Google, Phone Pe, Amazon Pay and, Paytm to name a few.

The digital age enables entrepreneurs to utilize social media platforms to introduce new products and services to consumers and take advantage of technology's potential. In terms of technology pervading every aspect of a business, there are two types of

entrepreneurs, those who are completely dependent on technology and others who use digitalization in select aspects of their business.

Though the number of digital transactions in the country seems to be promising, it is not without its share of problems. India still has a long way to go before the digital financial framework firmly takes root. The first challenge faced is in bringing the unbanked population into the formal financial system, once that is achieved, the next challenge is in educating the self – employed people into recognizing that digital modes of payment are not only beneficial to them as entrepreneurs but also to the society as well. The basic necessity for usage of digital payments is a mobile device connected to a network. Although the number of people owning such devices is on the rise there are still many people in rural parts of the country who do not have access to such devices. Out of the 58.50 million establishments in India, 59.48% of them are located in rural areas (Ministry of Statistics and Programme Implementation, 2016). After financial inclusion, the challenge of accessibility and education on how to use an electronic device is a major issue.

The issue of financial inclusion lies at the very core of encouraging entrepreneurs to begin using digital payment systems. One of the reasons for this is that in order to open a bank account, the basic necessity is to own government-issued identification papers or cards. As a result, entrepreneurs' access to formal registration, labor contracts, and financial services may be hampered (IZA World of Labor, 2017). This can be remedied, through financial literacy education. This financial education must include information on financial safety and the seriousness of keeping PIN numbers confidential. The capacity of entrepreneurs must not be over – estimated when a new method pf payment is introduced. This must specially be kept in mind as 59.48% of establishments are rural based. (Ministry of Statistics and Programme Implementation, 2016). In the case of digital payment methods, both the supply and demand sides need to be developed at the same time to ensure its successful implementation.

If this implementation is not carried out simultaneously, digital payment platform hosts are the ones who will be adversely affected as the lack of acceptance among the entrepreneurial community will subsequently result in a lack of interest on the part of consumers and vice versa, without acceptance by customers, entrepreneurs will also not be willing to take the perceived risk of acceptance, especially since they must pay to use the services of such digital payment providers. Financial literacy cannot be sufficiently stressed

in this regard, as it is evident that the level of financial literacy is low among entrepreneurs in stark contrast to the number of entrepreneurs.

Assuming that the challenge of difficulties in financial inclusion among entrepreneurs especially in rural areas and education on how to use digital payment, methods has been resolved, there is still the challenge of financial service providers not technologically updated, and found to be using legacy platforms i.e. relating to, or being a previous or outdated computer system (Merriam - Webster, n.d.), or application program which results in payment failures, and make already wary entrepreneurs feel even more insecure in using digital payment methods. The solution to this problem is to transition to cloud-based technologies in order to obtain greater resiliency and reduced latency while dealing with demand spikes (Chatterjee, 2021). With the recent spike in the use of digital payments as a result of pandemic induced contactless payments, a new challenge of shortage of Point of Sale (POS) devices, among merchants who do not have the necessary infrastructure to support such payments.

Conclusion

Constant and profound changes in technology, and the business world are constant in today's fast paced world, entrepreneurs have the capacity and innovation to capitalize on technological potential. The risk involved in making heavy investment into the development of digital payment infrastructures for an entrepreneur is also linked to the fact that technology is ever evolving. Unless an entrepreneur, in the e-commerce landscape is capable of adapting to the changing ecosystem there is a high risk of failure.

Women entrepreneurs in this aspect face additional challenges, as apart from gender biased societal perspectives even in the digital work area women are forced to face the constant biased opinions on a woman's professional qualification and technical know – how. Ultimately, the success or fall in implementation of the digital payments system, largely depends on the level of trust between, customers, merchants, entrepreneurs, and the government have on this system. The high prevalence of corruption has negative impacts on the trust levels.

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Chapter – 5

EVOLUTION OF MONEY: FROM BARTER SYSTEM TO DIGITAL MONEY

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Chapter – 5

EVOLUTION OF MONEY: FROM BARTER SYSTEM TO DIGITAL MONEY

DR. D. ANBUGEETHA & B. NANDHINI

Abstract

Money is important in order for everyone to earn a living. It is very important that most people end up living their lives, earning only a living. However, the value of money has a long history behind it. Money, as we use it today, is the result of a long process of transformation. Its physical features are nothing more than the number of humans that put it. We use it as an exchange, which allows us to trade goods and services. Ordinary money has not always been available. In the early years, people used a variety of methods to exchange items. Initially, people used the exchange system as a means of exchange. An exchange program is the exchange of goods or services in exchange for another asset or service. Goods were exchanged for equipment, herbs, food, and tea. Salt was considered a common exchange and was demanded by Roman soldiers so that their salaries could be paid. Europeans travel around the world exchanging handicrafts and chicken wool for silk and perfume. Livestock was also sought after in trade. If anyone has cattle and sheep, it means they were rich. With the changing needs of the business world, spending has also changed. The advent of technology, money and payments has changed dramatically. Credit card transactions and digital currencies are now very common in the community. It enables people to buy their necessities almost immediately, and with that in seconds. This chapter discusses the emergence of money and various categories that have gone as far as the current computerized currency.

Keywords: Evolution of Money, Barter System, Digital Currency

Introduction to the Concept

In today's world, money is considered a luxury. People are not only using the money and dollar bills issued by the government as money, but the use of credit cards have also considerably increased. Banks are able to transfer millions of dollars with the touch of a single mouse. Money has always been important to people and the economy. Many economists, such as Keynes (Skidelsky, 2000, pp. 110,112), have addressed the question of money. Forms of money that have lasted for centuries have been closely linked to technological advances in the economy.

Money can be a shell, a coin, or a piece of paper with a historical image on it. Money derives its value by being a means of exchange, a unit of measure and a treasury. Money allows people to sell goods and services indirectly, understand the price of goods (prices written in dollars and cents corresponding to the price in your wallet) and give us a way to save more purchases in the future.

As simple economies evolve into more complex economies, money has been adapted to different economic conditions. With regard to the latest developments in the computer industry a new currency has emerged: e-money. This chapter examines current trends in payment technology by examining how modern currencies have evolved over time.

Barter System

Barter system is the very oldest exchange system. This system has been around for hundreds of years and before money was introduced. People start exchanging services and goods for other services and goods in return. For example, someone who swaps a bag of wheat instead of a packet of wheat or someone else can build a house by exchanging a bag of beans. The exchange system has been in use for centuries and dates back to the year 6000 BC. This method of trading is non-monetary and relies solely on the exchange of goods and services for other services and goods in return.

This barter system was common among Mesopotamian nations and later adopted by the Phoenicians. The number of items sold can be negotiated with another group. Today, commerce has become even more sophisticated, using sophisticated methods to assist in trading, for example, on the Internet. In ancient times, this involved sectarian people in one place; today, however, global trade. The number of items sold can be negotiated with another group. Trading under barter system is usually done directly between two parties; however, it

can be done in a number of sectors through trade exchanges. Developed countries generally do not participate in companies unless they are made in accordance with your country's general financial plan, and yet, it is only done in exceptional circumstances.

In times of financial crisis, an exchange program is often established as a way to keep trade of goods and services and to keep the country afloat. This can happen if tangible cash is not available or if the country is experiencing inflation or a deflationary spiral.

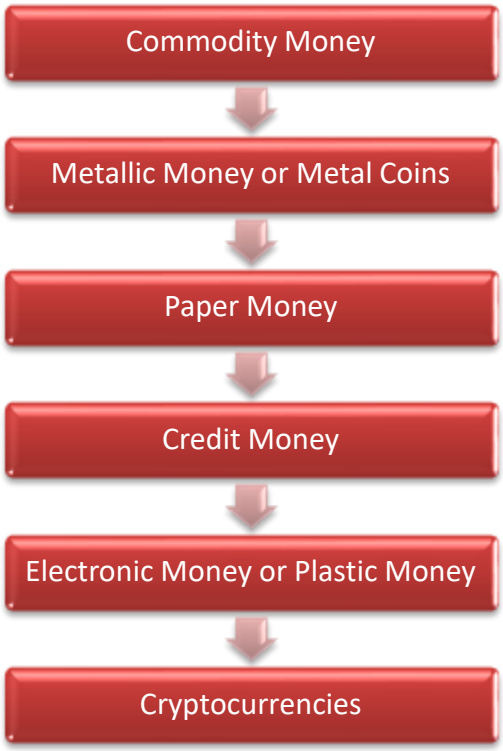
However, apart from its few advantages, it also had many problems as well. Difficulty with the exchange system for its inefficiency. The first possible problem is that the person who needs the timber may not be able to find a timber supplier who needs something the timber can offer. The second potential problem comes with trying to ensure proper exchanges. The financial economy helps to make the exchange of goods and services more manageable.

Evolution of Money

The word "money" can mean many things. It is used in a variety of contexts in our daily speech. On the other hand, when people say that a person has a lot of money, that person is usually rich. For economists, on the other hand, money has a certain meaning. Money shall be defined as "anything that is generally accepted in terms of goods and services or in the payment of debts." (Mishkin, 1992, p.G-7) It should be noted at this time that money, e.g. euro (€), one currency. However, defining money as money can be very little for economists. Money has now taken a variety of forms now that people have but do not need to carry with them on a regular basis. Financial management has now become much simpler.

Stages of Money: From the Barter System Era to the Current Digitised World

Figure 4.1: Showing the Stages of Evolution of Money



Source: Author's own Contribution

Commodity Money

Like trade, commodity money worked under the same policy, with the only difference being that societies set different prices for certain items. Suppose we have two farmers, X and Y. X plants olives and Y plants potatoes. Farmer X needs potatoes and gives farmer Y olives in exchange, but Y does not need olives at all. As a result, Y rejected the offer and the exchange failed. This was a major exchange challenge. It was very difficult to agree on two things that would be exchanged.

Therefore, common materials such as shells, salt and stone (small stones) were considered interchangeable. This made farmer X sell his olives for the purpose of making shells (like money), and with those shells, he could simply buy potatoes from farmer Y. Inflation led to the birth of money in ancient times and the economy began to grow as a result.

Metallic Money or Metal Coins

As people used to spend money on goods more often, they pointed to new problems. This trading site had three major common features - corruption, fragmentation, and heterogeneity. They could not be kept for long, so people could not repay the loan or save it for other needs in the future. Besides, goods were not the same in all markets, and trading with other regions was very difficult.

King Alyattes of Lydia was the first to make official coins in 600 BC. The coins represented coins, made of silver and gold. Coins were stamped with pictures to avoid counterfeiting. Each coin had a different value, making it easier for people to estimate the cost of items. As a result, the money raised helped Lydia's internal and external trade, making it one of the richest states in Asia Minor. When you hear the saying "Rich as Croesus", it refers back to the last Lydian King who issued the first gold coin. Shortly thereafter, countries began making their own coins at different rates.

Paper Money

Coins were first introduced into the Tang dynasty in China in the 7th century, but the real paper money came into being only during the Ngoma dynasty, in the 11th century. Marco Polo introduced the concept of paper money in Europe, in the 13th century. At that time, paper money was used to buy goods and was used in many ways as money these days. The big difference is that the money was disbursed by banks and private institutions. Now, the government has an obligation to spend money in almost every country.

Representatives (paper money) are made and are currently made of non-profit items. The real value was backed up by the bank's promise to exchange the paper for various goods, such as gold or silver.

Credit Money

When money became the standard and societies began to realize that living a healthy life was defined by paper, life was no longer safe. Paper money was not protected from theft and wealthy people were treated as victims by thieves. In response, a banking system was developed. This model has enabled people to save money they earn in a secure savings account and distribute it to people who need loans. At the outset, however, the real issue was

that moneylenders were exploiting poor people. As a result, banks are taking on the responsibility of providing conditional loans.

Electronic Money or Plastic Money

Electronic money is what we know as credit or bank cards. It is a computerized savings account and one can withdraw money using an ATM. In the 1920's, individual US companies began issuing credit cards to customers. Purchases were available only within the company's premises. These days, this model is used by businesses like Starbucks. Customers get a loyalty card from which they can add cash and pay with it at any Starbucks location. They earn points for every purchase. It is up to the owner of the economy to decide which vendors are part of it and members can be easily rewarded based on purchasing behavior.

In 1950, Diner’s Club introduced the first credit card, which could be used in various locations. In 1958, American Express reversed the use of credit cards. It was the first credit card to be accepted worldwide. In its early stages, these cards are made of paper, with the account number and customer name typed. One year later, in 1959, American Express began issuing plastic cards, the industry first. Nowadays, credit cards can be stored on mobile devices. Services such as Apple Pay and Samsung Pay enable customers to pay by simply tapping their phones at the store. It replaces the need to carry a visual card in your wallet.

Crypto currencies

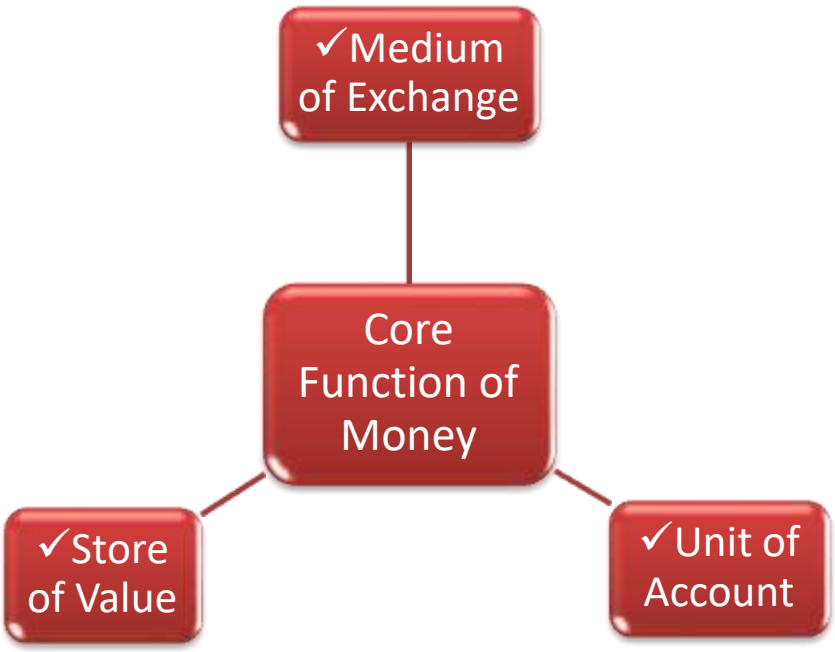
In 2008, Bitcoin was the first cryptocurrency to emerge. Satoshi Nakamoto, whose real name is still a mystery, is the one who missed the first block of the Bitcoin network, exploring blockchain technology. The most important difference of crypto payments is that transactions are downgraded, excluding the governing body. Transactions are kept in individual blocks and are not subject to change. Crypto currencies are untapped, and have no physical value. Businesses are beginning to realize that using crypto payments results in lower transaction costs. Without mediators involved in the process, traditional credit card funds are not a cost. To give you an idea of the emergence of crypto, as we speak, there are 5000 crypto currencies out there.

Core Functions of Money

No matter whether money is gold or paper or beads or knives, in any economy it has three functions. It is a medium of exchange, a unit of account and a store of value. (Mankiw, 1999, pp.155-156) These three different functions can be distinguished in the following ways:

- ✓ Medium of Exchange
- ✓ Unit of Account
- ✓ Store of Value

Figure 4.1: Showing the Stages of Evolution of Money



Source: Author's own Contribution

Medium of Exchange

Cash or checks are a form of exchange, because in our economy people use it to buy goods and services. Without the exchange system, we would be living in an exchange economy where goods and services were exchanged directly for other goods and services. When relying on trade, people should satisfy 5 "double standards". (Mankiw, 1999, p. 156) In order to trade, people need to find someone who has the luxury or service they want and who wants the best or the service they offer. In a society with millions of people and millions of different goods and services, an interdependent economic system becomes more difficult to achieve. Money as a means of exchange facilitates transactions that take place in the economy. The time spent trying to exchange goods or services is reduced and as a result the

transaction costs are reduced. The simplicity and speed with which money is converted into other goods - goods or services - is called “monetization”. As Keynes points out, money is a very liquid commodity. (Hicks, 1989, page 42)

Unit of Account

The second function of money is its function as a unit of account. The account unit means that the money provides for the terms in which the prices are quoted and when the bills are recorded. It is also called the level at which the economic transaction is measured. In monetary terms, all prices, i.e., prices of goods and services can be expressed in the same way, depending on the currency units. In the USA, for example, the unit of account is the US Dollar.

Store of Value

Finally, money also serves as a value store. This means that purchasing power is transferred from now to the future. A person may decide to keep some of his earnings in exchange for his work for later use. Thereafter the savings act as a value store. John Maynard Keynes put great emphasis on money as a value store. This was noted by Lord Skidelsky: "Keynes' emphasis on money as a store of value, as an escape from commitment to work, was one of his first economic contributions." (Skidelsky, 2000, page 112) Keynes described money as “a storehouse of absolute value, and that is the only asset that a person can fully own.” (Hicks, 1989, page 42)

In times of inflation, when a general increase in inflation can be seen, money is not as efficient as a stock market. So Keynes' argument was especially true during periods when inflation was not or at times when inflation was very low. There are other goods that work better as a value store, e.g., stocks, bonds, land, houses, art, or jewellery, because many of these are more profitable than money as a store of value. Among those facts that they pay the owner higher interest rates than money, or that they get a price tag.

Conclusion

Financial history has made an attempt to explain how the funds were used for trading. The development and emergence of various currencies has facilitated transactions. With the advent of PCs, a variety of applications improve the development of electronic exchanges that people will not be willing to pay for. They will be anticipating what has just been thought

of, reducing the cost of using electronic money as a paid and square partner. Aside from the disadvantages of using electronic exchanges, paper money remains the norm for people.

Money has taken many forms over time. Today's currency has changed over the centuries. Thanks to many innovations and technological advances in the computer industry, money has become what it is today: high-tech technology. It serves as a trademark of the commercial structure in which we operate. By examining the history of money, it is clear that the high number of economically prosperous societies has led money to adapt to technological advances in the economy. Where society is more complex the use of traditional currency has declined. All the steps to transition from the exchange economy to the modern world of technology have been followed by 19 evolutionary measures. From commodity money to fiat currency, it has evolved into computerized currency. Digital money makes it easy to make money transactions online. "By doing so, it will be the foundation for a new generation of computer-generated business." (Besson, 1999, p. 79) It can be safely assumed that e-money will reduce government spending. Thus, the emergence of money signifies technological and economic progress. From cattle and poultry exchanges to digital currencies, humanity will never fail to adapt to new ways.

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Chapter - 6

INDIA'S DIGITAL PAYMENTS AND THE IMPACT OF PANDEMIC

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Chapter - 6

INDIA'S DIGITAL PAYMENTS AND THE IMPACT OF PANDEMIC

Dr S.MAHIMA

Abstract

In the current environment, digital payments play an important role and offer numerous benefits over cash, including ease of transaction, security, and transparency. In this pandemic condition, the banking sector plays a critical role in digital payment by providing digital instruments such as debit cards, mobile banking, mobile wallets, and so on. The pandemic may hasten the world's transition to digital payments. Circumstances are driving the adoption of digital payments. Payment systems have shown to be efficient and long-lasting, and the general public continues to have a high level of trust in them. The lock-down and company closures, however, resulted in reduced average transaction volumes. It is critical that the digital platform aids the recovery and contributes to the emergence of this new norm. The importance of digital payments during pandemics, the many types of digital payment systems, and the expansion of digital payment in pandemics are all discussed in this study. In addition, The Future of Digital Payments:

Key words: Pandemic, Digital payment, Mobile Banking, e-Banking, Cashless

Introduction

In this pandemic, digital payments play a critical role. In light of the current circumstance, when people are required to maintain a physical distance, digital payment methods are being used. Following the arrival of the coronavirus, many businesses were entirely destroyed. Furthermore, small business owners closed their doors. Many people have lost their sources of income all throughout the world. All of these factors have contributed to the current economic scenario being extremely unfavourable. In this urgent situation, however, digital payment modes are extremely advantageous. Since the Pandemic, India's digital payments have increased. By using digital payment from the power bill to cab fares, the Coronavirus epidemic would eventually achieve what India's shock demonetization tried to do four years

ago. "People who have never paid bills online are paying for people who have never bought groceries online to buy groceries online." According to Nithyananda Sharma, CEO of Get Simple Technology Pvt, Ltd., which allows individuals to order food and groceries online and make payments online, "In the previous three months, we've accomplished what would have taken five years." People struggled to access bank notes at first, so digital payments grew, but they went back to cash when the number of notes in circulation increased. Now that the pandemic has made individuals fearful of close human connections, internet payments are on the rise again.

The Indian government's major outcome is the Digital India programme, which aims to transform India into a digital society and an information economy. "Faceless, paperless, cashless" is one of the values of Digital payment. As part of encouraging cashless transactions and transforming India into a cashless economy, various digital payment methods are available. Demonetization will very certainly be seen as a game changer for the Indian economy. Demonetization, on the other hand, results in a surge in cashless transactions. In this futuristic world, all payments will be made with contactless cards, cell phone apps, and other electronic means, with notes and coins being phased out.

Currently, the government is actively encouraging individuals to accept digital payments if it was previously for convenience, but it has now become mandatory due to social distancing and the COVID-19 crisis because Novel Corona Virus (Covid-19) is rare and there are hundreds of different Corona Viruses, the majority of which are found in animals such as pigs, camels, bats, and cats. hey will, however, occasionally transmit from animals to humans. When this happens, it leads to chronic cold diseases affecting the upper respiratory system. It is extremely rare for the animal Corona virus to infect humans and then spread between people. is extremely unusual for the animal Corona virus to infect people and then spread between them. However, in the last two decades, three of the seven Corona Viruses thought to affect humans, including SAR-COV-2, have originated in animals and have caused serious, widespread disease and death (01-01-2021) Global cases reported: 83,963,759; Global deaths (1,827,539) are 2.18 percent of the total, while global recovery (47,289,065) is 56.32 percent. The first big wave after demonetization was widespread acceptance of digital payments. During the pandemic and lockdown, the second major wave of digital payments arrived. The central government has long attempted to encourage digital payments in India, where three out of every four customer purchases are made in cash. In November 2016, the

Central Government abruptly and unexpectedly invalidated a large portion of the country's high-value currency notes—a move aimed at reducing inflation, , which he later acknowledged aided in promoting a shift toward digital transactions. In the current social distancing climate, we have launched India pay safe through our ongoing 'UPI chalega' initiative to raise awareness of paying securely with digital payments. We hope to inspire a large number of people who have been used to managing cash to switch to digital payments and make a permanent change. The initiative pushes a broader public message in terms of using UPI as a fast, stable, and instant digital payment process. We've even attempted to use celebrities to promote the cause for which UPIchalege.com was created. Microsite where you can learn everything you need to know about using UPI safely. Clearly, technology has made our lives easier. Electronic payments are one of the most recent technological advances in banking, finance, and trade. Electronic payments (e-payments) are a technological advancement that allows us to conduct financial transactions electronically, eliminating long lines and other issues. Electronic payments enable people to pay their taxes, permits, penalties, fines, and transactions in unusual locations and at any time of day, 365 days a year. Savings on expenses Digital payments will save governments and businesses a significant amount of money. Convenience and accessibility It is very simple to use digital payment methods. Online payments can be made in a matter of seconds. In order to complete a contactless transaction, you must hold your card over the payment equipment. It is accessible via any mobile device.

Reduced Risk the important transaction details will be securely transmitted via an online payment gateway. There is no set time for conducting an online transaction; you can conduct it whenever you want. Everything Can Be Traced The best part about using digital payment methods is that you can track your transactions.

Virtual Payment's Future the online payment industry is thriving since the introduction of COVID-19. Various digital payment companies are working hard to encourage the use of digital payment methods. There is no doubt that the post-pandemic era will be characterised by the use of digital payment methods. As technology advances, several businesses have implemented advanced payment terminals. This payment terminal would make it easier for retailers to accept credit card payments. Customers would now be able to make deposits in a more convenient manner. As a result, the digital payment mode will be a blessing in disguise for small merchants. Various Digital Payment Methods Formed in 2008 under the patronage

of the Reserve Bank of India and the Indian Bank Association, NPCI has embarked on a machine to reach out to every Indian through its diverse range of digital payment items such as UPI (Unified Payment Interface), BHIM (RuPay, NETC, AePS (Aadhaar enabled Payment System), BHIM Aadhaar, Bharat Billpay, NFS (National Financial Switch), NACH (National Automated Clearing House), CTS, IMPS (Immediate Payment Service), and to enable secure digital payments.

These services are beneficial in the following areas:

• Money transfer from one person to another

• Person-to-person transactions, such as kirana stores, gas stations, recharges, and e-commerce.

• Business-to-business transactions, such as a retailer to a supplier or distributor

• Business-to-person transactions, such as salaries, reimbursement, and claims

Objectives

- To Know the Importance of Digital Payment in Pandemic.
- To study modes of online payment.
- To compare and analyse current year digital payment data with previous year data.

Outcome of the study

In India, however, digital payments are on the rise. Digital purchases in the country of nearly1.5 billion people have reached a record high this year, as they have in most other parts of te world. According to the local outlet, all channels from the unified payment interface (UPI) to the Aadhar Enabled Payment System (AEPS) experienced significant growth. In contrast to the gloom caused by the Covid-19 pandemic and the economic lockdown, digital payments and fintech saw record highs in 2020 when a large number of people chose to stay at home and maintain social distances. With concerns about getting new coronavirus infections from visiting bank offices and using currency notes, many individuals began to use their cell phones to make purchases and even take loans for seamless banking services, not just in metros but also in rural towns. As a result of the COVID-19 shutdown and the resulting limitations, Uttar Pradesh recorded a massive 126 percent increase in digital

transactions in 2020 compared to the previous year. In September, the Card spends 60-70 percent of the January average at retail point-of-sale terminals. This means that individuals make use of digital payments in physical settings such as shopping. Last month, the amount of transactions on sssthe Unified Payment Interface, a site created by India's Largest Banks in 2016, reached an all-time high as consumers fretted about how they would manage bank notes in the midst of the epidemic. Transfers of electric cash from banks have also returned after falling in April as economic growth dropped by nearly half. Digital payments achieved a new high in 2020, with all systems performing admirably, from the Unified Payments App to the Aadhar-enabled Payment System (AePS).

Payment Transactions in the Previous 12 Months

	No. of Transaction (in Crore)	**Growth in % (month on month)**
Jan 2020	436.43	
Feb 2020	847.44	94.17
March 2020	1,262.84	49.02
April 2020	1,566.22	24.02
May 2020	1890.23	20.69
June 2020	2,298.85	21.62
July 2020	2,699.06	17.41
August 2020	3,132.43	16.06
Sept 2020	3,620.51	15.58
Oct 2020	4,108.29	13.47
Nov 2020	4,623.25	12.53

(Sources: digipay.gov.in)

After surpassing the 200-crore barrier in October, UPI transactions in November reached a new high of 221 crore transactions totaling 3.9 lakh crore. The Centre has set a goal of 4,630 crore for digital payments for 2020-21, which players believe will be exceeded. Despite the fact that demonetization resulted in the first introduction of digital payments in India in 2016:

the government's actions have remained complicated over time. According to Manish Patel, Founder and CEO of Mswipe, the worldwide epidemic fuelled the rapid and broad adoption of digital payments and digital trade in India. Contactless payments increased from 13% of total transactions in January 2020 to 30% of total transactions in December 2020 at Mswi People in the state have conducted such large-scale digital transactions as a result of Chief Minister Yogi Adityanath's on-going and intense focus on the incorporation of technology into the economy. The state of Uttar Pradesh, which has a population of roughly 24 crore people, has witnessed an online sale.pe. According to a government spokesman, the state has recorded the most digital payment this year in comparison to all other states in the country.

Digital payments reached a new high in 2020, with all platforms experiencing stellar growth, from the Unified Payment Interface [UPI] to the Aadhar enable Payment System (AePS).

Since October 2020, when it surpassed the 200 crore milestone (about 27,1563 million). In November 2020, UPI transactions reached a new high of 221 crore (30 million+) valued at Rs.3.9 lakh crore (about $53 billion). Between 2020 and 2021, around $63 billion in digital payments are estimated to be accepted (or accepted).

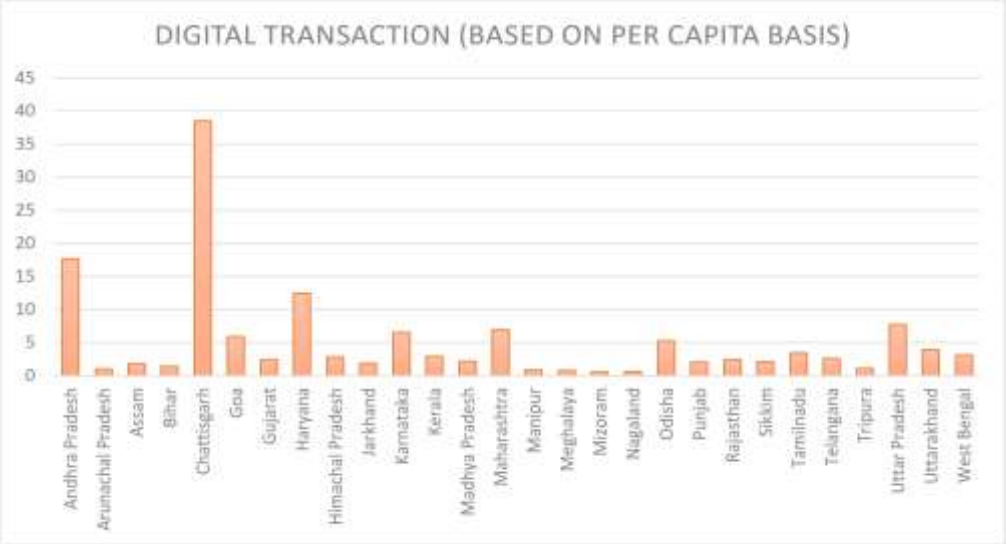
State wise Distribution of Digital Payment Transaction

Payment Mode of BHIM *99#, Rupay Card on POS only

SL. NO.	**STATE**	**DIGITAL TRANSACTION (BASED ON PER CAPITA BASIS)**
1	Andhra Pradesh	17.683
2	Arunachal Pradesh	1.041
3	Assam	1.764
4	Bihar	1.361
5	Chattisgarh	38.481
6	Goa	5.886
7	Gujarat	2.389
8	Haryana	12.42

9	Himachal Pradesh	2.834
10	Jarkhand	1.81
11	Karnataka	6.538
12	Kerala	2.909
13	Madhya Pradesh	2.184
14	Maharashtra	6.948
15	Manipur	0.8
16	Meghalaya	0.765
17	Mizoram	0.548
18	Nagaland	0.584
19	Odisha	5.275
20	Punjab	2.041
21	Rajasthan	2.377
22	Sikkim	2.139
23	Tamilnadu	3.437
24	Telangana	2.571
25	Tripura	1.114
26	Uttar Pradesh	7.731
27	Uttarakhand	3.911
28	West Bengal	3.162

(Sources: digipay.gov.in)



SL.NO.	UNION TERRITORIES	DIGITAL TRANSACTION (BASED ON PER CAPITA)
1	Andaman and Nicobar	2.35
2	Chandigarh	0.419
3	Dadra & Nagar Haveli & Daman & Diu	8.311
4	Delhi	9.313
5	Jammu & Kashmir	0.796
6	Ladakh	-
7	Lakshadweep	1.272
8	Puducherry	4.991

(Sources : digipay.gov.in)

BHIM – UPI Transactions, Monthly Growth (LAKHS)

2018-2019		2019-2020		2020-2021	
April-18	1,899	April-19	7,817	April-20	9,995
May -18	1,893	May -19	7,334	May -20	12,344
June-18	2,462	June-19	7,544	June-20	13,368
July-18	2,355	July-19	8,222	July-20	14,973
August-18	3,119	August-19	9,183	August-20	16,187
September-18	4,057	September-19	9,549	September-20	18,001
October-18	4,822	October-19	11,483	October-20	20,715
November-18	5,248	November-19	12,187	November-20	22,101
December-18	6,200	December-19	13,083	December-20	22,341
January-19	6,726	January-20	13,049	January-21	
February-19	6,741	February-20	13,256	February-21	
March-19	7,994	March-20	12,468	March-21	

(Sources: digipay.gov.in)

(Sources: digipay.gov.in)

The government's push toward a cashless economy showed fruit, as digital payments in India increased at a compound annual growth rate (CAGR) of 55.1 percent during the fiscal year (FY) 2015-16 and 2019-20. The information was revealed by the RBI. During this period, its value has increased from INR920.38 lakh Cr to INR 1623.05 lakh Cr. Clipping at a compounded yearly rate of 15.2 percent.

Between 2015-16 and 2019-20, digital payments increased at a compounded annual growth rate of 55.1 percent, rising from 593.61 billion in the fiscal year ending March 2016 to 3,434.56 billion in the fiscal year ending March 2020. The fiscal year (2020) showed a significant increase in volume to 3,434.56 Cr over the previous year, while the value fell to INR 1,623.05 lakh Cr.

Digital payments increased to INR 969.12 Cr in 2016-17, up from INR 593.61 Cr the previous year, compared to INR 1,120.99 Cr the previous year. In 2017-18, the volume grew to 1459,01 Cr, while the value is increased to INR 1,369,86 lakh Cr. While the numbers increased at a higher rate in 2018-19, the volume increased to 2,343.40 Cr.

Conclusion

With social distance and the COVID-19 problems, the government is actively pushing individuals to accept digital payments now, if it wasn't already obligatory. The offline-to-online payment shift has been occurring for a long time, but the recent lock-down scenario linked to COVID-19 has seen an increase in client behaviour. NPCI supported and advised consumers and other key service providers to migrate to digital payment methods in order to remain safe.

We're starting to see answers emerge, and Merchants are moving farther into the 'phygital world.' They don't even have to go completely online. People will be able to utilise any messaging method in our usage to place orders or communicate by trading photos, telling them what they want to buy, and finally digital payment will take place. Everyone goes out to pick up or deliver the things. After the shutdown, we'll have to be extra cautious and take additional steps to be safe until the world has fully recovered from this scenario. This time is

all about developing solutions and innovating to satisfy the requirements of the general public, retailers, and companies.

In light of the recent shutdown, we are urging citizens, in collaboration with the RBI and the government, to migrate to digital payment methods in order to remain safe. The NPCI and other state governments are working to ensure that additional suppliers of critical services are available on the digital platform. The government has used social media to encourage the use of internet payments while discouraging the usage of cash. The RBI and the government continually emphasise numerous digital payment alternatives accessible to consumers in their day-to-day transactions like as NEFT, IMPS, and BBPS, which are available 24 hours a day, seven days a week.

The digitalization of the financial industry, through the usage of smartphones, is bound to meet the population's rising expectations. It did, in fact, minimise human error and increase comfort. Most businesses no longer have to worry about the timing of financial transactions thanks to digital banking. Transactions will now be processed at all hours of the day and night

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Chapter - 7

APPLICATIONS OF DIGITAL PAYMENTS IN ONLINE SHOPPING

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Chapter - 7

APPLICATIONS OF DIGITAL PAYMENTS IN ONLINE SHOPPING

Ms C. JAMESLYN VITHYA

INTRODUCTION

Digital payment can be a payment strategy framed through a digital model. In digital payment, both the payer and the payee utilize digital strategies to send and get cash. It additionally called electronic payment. Hard money (cash receipts) won't be influenced by digital payments. All exchanges in digital payments are completed on the web. This is a speedy and helpful payment strategy. The disarray of information technology (IT) has influenced each part of our lives; specifically, it gives a straightforward digital payment strategy. During the non-adaptation time frame, the Government of India straightforwardly or verifiably limits people from endeavouring to direct all business interchanges through digital models. Ordinary residents started to move from a standard payment system to a digital payment structure to guarantee assurance, security, and accommodation. With the tremendous advances in PDA development and basic organization access, the Indian market has perceived digital payments. The extent of digital payments through various techniques has extended further at a basic speed.

EVOLUTION OF DIGITAL METHOD OF PAYMENTS IN INDIA

India's payment structure, particularly the digital payment system, has grown energetically lately, determined by development and progress in data and correspondence, and in accordance with the way imagined by the RBI. The web based financial technique started during the 1990s, with the openness of the Internet. Web based banking has changed the entire money management circumstance.

The development of digital payments in India is directed by the Federal Reserve Bank of India (RBI) and happens inside the Indian payments framework appropriated in 1998. The 2007 "Payment and Settlement Algorithm" portrays digital payment as any "movement of

electronic resources", as any exchange of resources started by an individual coordinating, endorsing or mentioning a bank to gather or credit an amount of cash of put away records. Bank and retail combine moving, ATM changes, direct capacity or withdrawal of resources, moves started by telephone or on the web, and card payment. The essential achievements made in this generally development pattern of the payment structure are a blend of MICR (Magnetic Ink Character Confirmation Code) clearing during the 1980s, electronic clearing administrations and electronic assets moves, and the issuance of credit and charge cards during the 1990s. Banks during the 1990s, public monetary trades that perceived the public interconnection of ATMs in 2003, LBTR and NEFT in 2004, Check Truncation System (CTS) in 2008, and second factor confirmation for "missing card" trades in 2009 and 2013 New LBTR with features refreshed in the year.

The National Payments Corporation of India (NPCI) was set up in 2008. It has been advancing the development of retail payment structures. Also, non-bank materials were gone into the pre-issuance payment device (PPI), including multifunctional and digital wallets. These activities have gotten an incredible lift from NPCI, including the commencement of organization data exercises by CTS, NACH (National Automatic Clearing House), IMPS, NFS, RuPay, APBS and AEPS, the National Unified Platform of USSD (NUUP), UPI and BHIM Applications. These advances have set off occasions in the design of digital payments in China. Accordingly, the Indian government overwhelmingly advanced the establishment of the Digital Payments Committee in August 2016, led by Ratan P. Watal, NITI Aayog's main expert.

After adaptation was dropped in November 2016, India's decision of digital payment innovation has limitlessly improved. Demonetization has driven Indians to change to credit-just procedures, methodologies that are joined by a great deal of covered up costs, however when the weight is decreased, Indians return to utilizing cash. In India's change to a credit-just economy, the expressions "demonetization" and "Covid" and their effect have assumed a key part. One set up a digital payment structure and the other turned into the primary wellspring of development of the digital payment environment.

As per the new gauge made by Accenture and followed through on November 24, 2020, by 2023, India should complete around 66.6 billion exchanges, esteemed at 270.7 billion US dollars, from cash to card and digital payment, which will increment further in 2030 Increment to US $ 856.6 billion. As per the report, the market for payment entryway

aggregators in India is assessed at Rs 9.5 trillion up until now. The Covid resembles another business driver like non-adaptation. Digital payment suppliers are exceptionally dynamic in reacting to the present circumstance, offering better help in food, shroud, sanitizer, COVID19 assurance and other fundamentals, and giving gifts to PM CARES saves and other fundamental items and management departments.

APPLICATIONS OF DIGITAL PAYMENTS IN ONLINE SHOPPING

India is one of the nations with the fifth biggest online client base on the planet, a huge piece of which is simply utilizing multi-practical organizations, which is without a doubt the principle main thrust to conquer the misfortune of digital media payment. Extravagant advancements, for example, e-wallets, UPI, clicks and payments have likewise made individuals look past the typical payment strategies. The mechanical changes seen by the nation enjoy two benefits and burdens, which are significant for a higher future. On account of Covid 19, with the nonstop development of shopping configuration, even India's multifunctional digital wallets have additionally advanced. With UPI reliably making payments, multi-utilitarian wallets and digital payment applications are outperforming the utilization of MasterCard and progressively starting to supplant normal payment advancements.

A compact wallet or digital wallet, fundamentally, can be a multi-useful virtual wallet that can store money to make versatile, on the web or disconnected payments. There are various sorts of multifunctional wallets in India, like open, semi-open, semi-shut and shut, contingent upon the kind of utilization and the payment to be made. Wallets are growing quickly on the grounds that they help accelerate trades, particularly for Internet business associations. All organization based business shopping centers have likewise been incorporated with this compact wallet. With UPI programming, it becomes simpler in light of the fact that

Here are probably the most 10 digital wallet and subsequently the top online payments applications in India and what they give to their customers. Our top pick is Google Pay, which is also the No.1 digital wallet and UPI payment application at this moment

#1 Google Pay

As a component of the Google environment, they need to quickly develop their client base, regardless of whether they are late participants. It is right now the main digital wallet

and one of the greatest online payment applications in India. With Google Pay, you can send money to associates, check solicitations and make buys on the web, turn on your telephone during UPI, and get it directly from your record. Since Google Pay is utilized with your present monetary equilibrium, this implies that your money is secured alongside the bank. There is no convincing motivation to stress over re-energizing the wallet and there is no compelling reason to play out extra KYC, which is essential for a wide determination of different applications. You will likewise buy scratch cards and various prizes, and the discount will go straightforwardly to your record. Today, you will likewise reactivate your multi-capacity or month to month service bill. Since the presentation of UPI, wallets have gotten out-dated, and clients like to enrol accounts through UPI.

#2 PhonePe

The following in the gathering of India's top online payment applications is phonepe. Phonepe was established in 2015. In only 4 years, it had the alternative of getting through the 100 million download mark. From UPI payment to reactivation, cash move to online bill payment, you can do it via telephone. It is a by and large fantastic UI and one of the quickest and most secure online payment encounters in India.

#3 Dhani

The Dhani application is vital to the Indian steers crowd and has a few features. In addition to the fact that it is a standard e-wallet application, however it can likewise be associated with the Dhani Supersaver card. Dhani likewise has a Dhani client commitment and prizes program, where clients can mess around and win cash to buy compact re-stimulation, EMI payments, protection, and extra acquisition of new Dhani things. This will be utilized with Dhani Super Saver Rupay (physical and virtual cards), which ensures a 5% profit from all products bought through cardboard, and the primary month is exceptionally free.

#4 BHIM Axis Pay

BHIM Axis Pay can be a UPI banking application that permits you to exchange the flicker of an eye with any individual who just uses your telephone. Reactivate your convenient and paid ahead of time DTH set-top boxes online straightforwardly from the gadget.

#5 PayTM

PayTM is quite possibly the most significant multi-useful business stages and one of the greatest online payment applications in India, giving clients digital wallets to store money and make speedy payments. Dispatched in 2010, this e-wallet application utilizes a semi-shut model with a convenient commercial centre where clients can store money and make payments to senders who have a utilitarian association with the association. Before UPI's dispatch, it was at first India's main digital wallet. Notwithstanding online business correspondence, the e-wallet application can likewise be utilized to make bill payments, move cash, and manage seller benefits in the games, entertainment, and retail enterprises. They presently likewise have UPI approved payments.

#6.Mobikwik

MobiKwik is an independent versatile payment network that interfaces 25 million clients to 50,000 retailers supposedly, and this is only a glimpse of something larger. The e-wallet application permits its clients to give charges to utilization of money, Visa, internet banking and surprisingly on location cash evaluating management, so it very well may be utilized for reactivation, payment of administration bills and visits to focuses of business. Because of the developing demand for facilitating, MobiKwik has likewise as of late confined enormous and humble staples, cafés and other detached merchants.

Another extraordinary thing they need is their expense tracker, which permits you to spending plan for the expense of all payment instruments and utilize your SMS data to investigate and control expenses This isn't unexpected for the accumulation of top online payment applications in India.

#7 Yono by SBI

This multifunctional wallet application was sent by a store monetary foundation in India, permitting clients to move money to various clients and records, take care of bills, re-energize power, book films, post, and in any event, Shopping. This semi-shut prepaid wallet gives management in 13 tongues and is likewise accessible to non-SBI clients. This application additionally permits your clients to change gifts, income refreshes, and consider limited scope statements of trade.

#8 ICICI Pockets

Pockets are a digital bank that gives adaptable wallets to its clients. It permits you to advantageously utilize any monetary equilibrium in India to help your convenient wallet and buy exchanges. With Pockets, you can move cash, restore, book tickets, send gifts, and offer costs with your friends. The wallet utilizes a virtual VISA card, permits its clients to run on any multifunctional site or application in India, and gives prohibitive arrangements or related brand bundles.

#9 HDFC PayZapp

PayZapp can be a full payment agreement that permits you to pay with a single tick. PayZapp permits you to reactivate your versatile card, DTH and Knowledge, pay for administrations, trust and hold air tickets, transportation and convenience, shopping, purchase film tickets, music and food, appreciate phenomenal guidance on SmartBuy and send money to any of your Telephone index.

#10 Amazon Pay

Amazon Pay is an online payment readiness management claimed by Amazon. It is likewise the main online payment application in India and surprisingly the world market. Amazon Pay dispatched worldwide in 2007 and in India in 2017. With Amazon's client base, clients can decide to pay with their Amazon accounts on outsider affiliate sites, including applications like Big Bazaar, and afterward can utilize Amazon Pay on Amazon. Amazon Pay additionally limits fintech associations, like Zest Money, to empower free EMI payment options on top of it. This permits clients to effectively buy products on Amazon and buy merchandise at a sensible month to month expense.

MODES OF DIGITAL PAYMENTS IN INDIA

Several impulses to improve Indian digital clearance frameworks are as follows:

Aadhaar Enabled Payment System (AEPS)

AEPS is a POS (Point of Sale/Micro ATM) online through all bank executives (BC)/Bank Mitra Using Aadhaar's affirmation, it tends to be a financial drive model that permits functional monetary trade.

Banking Cards

The bank card offers more prominent security, convenience and organization than other payment methodologies. Wide scopes of open cards, including credit, stacking and paid ahead of time, are likewise furnished with tremendous versatility. These cards give an approval of two variables to support secure case pins and OTP payments. Rupay, Visa, Mastercard are important for the card payment outline. Payment cards make it conceivable to purchase people for stores on the web through the postal mail and phone record. Save two clients and exchanging time and money, accordingly zeroing in on the effortlessness of replacement.

Banks Pre-paid Cards

Stout on the preload card prior to continuing on cash, and in case it is "utilized" it is "utilized" to the bank's true program, the Bank Confirmation Card is stacked. It proposes that your bank can make an expense to deal with the buy and expulsion of ATM with what has surpassed what you have surpassed in your enlistment.

Internet Banking

Net Banking, Ninga No internet banking, Ebanking, or virtual banking, Ebanding, or virtual band, clients Full customers Change changes Change money change through the Site of the Financial Foundation. Public vehicle of gadgets reserves (Neft), Real-time outline (RTGS), straightforward electronic framework and # 40; ECS and # 41; and cash administrations.

Micro ATMs

Micro ATM can be a contraption utilized by a lot of business correspondence (BC) to communicate fundamental monetary management. The situation actuates the business reaction (Kirana retailer and can be designed as a little ATM) to go through a moment trade. Convenient portfolio

Portable Wallets

Wallet convenient is a way to deal with track down a versatile digital plan. At the point when you meddle your visa information or Mastercard on your telephone, you can move cash online in a compact wallet on a Pollet call to a flexible wallet. Rather than purchasing utilizing your real plastic card, you pay with your telephone, tablet or sagacious. It is important to record individual records to stacked in digital portfolios. Most banks have

their Yureet and some individual property organizations. For instance, PayTM, Mobikwik, Oxigen, Mrupee, Airtel Money, Jio Money, SBI Buddy, Itz Cash, Cash, Borderfon Mpesa, Axis Bank Lime, Pocket ICICI, PLAYPAY

Mobile Bankin

Mobile or Portable Banking or Banking General of Purpocation or Another given client By the monetary base permits the customer to demonstrate a few sorts of monetary trade that clients use telephones or tablets to the far off. Normally, utilize the programming called applications given by banks or monetary establishments by the base. Each bank gives its own convenient financial application for Android, Windows and flexible stages.

Point of Sale

POS is exchange. At full scale level, POS can be a retail plaza, market or city. At a little level, retailers accept that the customer has got done with supplanting, for instance, payment. Else, it is known as the space to be confirmed.

Unified Payments Interface (UPI)

UPI Manages a few monetary moving on different corporate benefits for a few organizations (designated banks), management of steady resources and provider payments to a hood. It is a system to join. Likewise, we will gather the "dispersed" assortment demand that can coordinate with the arrangement and convenience. Each bank gives its own UPI application to Android convenient stages, Windows and iOS.

Unstructured Supplementary Service Data (USSD)

UDSD channel envisioned a payment * 99 # chips. This permits the trading of convenient funds utilizing phones of essential segments. Huge web data to utilize compact Banking dependent on USSD there is no influential justification claiming the Office. He has presented a standard monetary organization that gives the monetary development and monetary catch of the Bank.

ESSENTIAL FEATURES OF DIGITAL PAYMENTS FOR ONLINE SHOPPING

Bill Payments

It is on the grounds that the staggering youngsters' need to mind on the web, purchase, food, eatery, film ticket book, Booking flight tickets, renting, instructive costs, utilities. , the advancement, the digital successful moment that acquired a digital moment in real money, beyond question, the wallet is a piece for average men, doesn't change to the fundamental management.

Instant Payments

The movement of money between the payer handbag and the pay portfolio will be hung on an electronic wallet account in the quantity of moments of a moment rather than a couple of hours or work days. This part can be paid, as it is feasible to pay whenever when supplanting the completely starter replacement, so it could be feasible to make an individual and business hold management, so it is pay. Management of development created.

Managing Virtual and Physical Card Operations

Inventive development, actually assisted saves with crediting credits or charge card data. This can be utilized to show up in the store trade whenever all throughout the planet. The development of Ewallet works on customer's assets, which helps gather every one of the cards during a solitary center region. The adaptable utilization of the wallet or the payment application is protected to reveal to you every one of the cards, and you will truly call the customer to send the visa. The item utilizes high grade security to help the gadget the cardboard board data without the card number.

Easy and Fast Self – Registration

The primary objective of e-wallet information is to save time, exertion and simple trade. The straightforward self-recorded measures end up being useful to clients, inciting them to peruse the gadget without reexamining their utilization. Generally, the enrollment estimates will be joined by a prepayment

1. Wallet Cash Advantage
2. Registration Confirmation
3. Download the gadget and run it on the telephone
4. Finally utilize the wallet
5. Link with charging or Mastercard or record as required
6. Set the key and sign in

7. Sign and give significant data

Nonetheless, the enrolment cycle can be one time communication, setting up a significant first association that keeps going forever.

Coupons, Rewards, Discounts

Use payment applications and e-wallets to give your clients coupons, limits, rewards, resolute techniques, and then some. Digital wallet exchanges will be related with many organizations that give offers, limitations, and coupons for the utilization of payment applications. The e-wallet develops an ideal environment for dealing while at the same time attempting to discover different advantages for clients and help versatile wallet applications stay alert.

Vendor Payments utilizing Contactless Technologies

The serious level of development has made many providers all throughout the planet comprehend the need to utilize various components to distinguish digital wallets. Most retail clients have masterminded to utilize a multifunctional wallet for in-store payments through a contactless methodology, regardless of whether it is utilizing a QR code or is going to handle a letter, and so on NFC or Near Field Communication can be a significant distance contactless development that can work inside brief distances (for instance, 10 cm) and give individuals secure payments between client confronting intuitive gadgets and their individual cell phones. Speedy reaction code or QR code is one of the notable payment innovations, which is fundamentally comparable to a bound together mark. Clients should initially utilize a cell phone or camera to translate normalized IDs and associated applications or to channel QR codes through open destinations where payments are regularly made. Most payment applications give NFC and QR payment workplaces, as the demand for contactless trades and the accommodation they give to clients is developing flawlessly.

Payments to and from Respective Bank Accounts

The payment application will consider the moment when money is moved to any bank that recalls the individual record of a similar bank, regardless of whether it is moved to someone else's record in various banks. Payment application proprietors will have different alternatives, regardless of where you are, at whatever point you need, you can send and get business or individual money with only a couple clicks. Individuals should initially download

online payment applications on their cell phones. Most paid application downloads can be gotten to on Android and IOS based telephones.

Security

The adaptable money management office has acquired the picture that individuals will in general acknowledge the main qualities. It is fundamental that there is no risk in trading cash starting with one end then onto the next. Portable paid applications for the most part have many incredible advancements like passwords, once passwords by means of SMS, encryption of features, security questions, biometrics, out-of-band confirmation, and so forth Despite the fact that it just so happens, digital wallets are contrasted with MasterCard, purchaser worries about security have consistently been the primary deterrent to getting payment applications.

ADVANTAGES OF DIGITAL PAYMENT APPLICATIONS AND E-WALLETS FOR ONLINE SHOPPING

Coming up next is a rundown of benefits of digital payment applications and electronic wallets for online buys:

A quicker method to make Payments

What each client needs to do is contact, pay and go. As the quantity of individuals utilizing cell phones keeps on expanding, the electronic payment structure has acquired momentum all throughout the planet. All they all need to do is shaking or tap the telephone before the practical NFC terminal. Through this single action, the client has effectively upheld the trade. This might bring about contactless changes, despite the fact that they got card number has not been found, likewise, the cycle is quicker than being incorporated into the gadget or utilizing Charge or Visa by swiping the card.

Client Convenience

The greatest benefit of utilizing payment applications is client accommodation, since they truly need to utilize their cell phones to make payments, regardless of whether they utilize contactless payments or channel QR codes quickly. Indian payment applications are typically made utilizing Samsung Pay or Android Pay or Apple Pay. Individuals can leave money and Visa receipts easily, and utilizes their cell phones to make general payments.

Paying with a convenient wallet is normally simpler and quicker than swiping or embeddings a card.

Further develops Cash Flow

The rise of electronic wallets has additionally fostered the income of the business area. To start with, contrasted with conventional money payment methodologies, most clients need to utilize credit/Mastercard cards to check their bills. Most portable payment processors will move resources for corporate records inside three days.

Incorporates Loyalty Programs

The utilization of convenient payments makes it possible to incorporate offers and rewards, as client information will be put away in the application. For instance: you can decide to send coupons to clients when they are close to your store. This can assist clients with getting prize concentration or coupons for each trade they make.

Secure approach to make Payments

Payments made through the telephone application permit clients to utilize their cell phones to make buys in the store. These applications utilize a creative innovation called Near Field Communication (NFC); essentially contact or move your telephone to make payments on a client confronting intelligent terminal (POS). As a rule, these applications use encryption or security codes to restrict the damage to individual client data. Your extraordinary card number won't be saved money on the gadget or at the retailer, and under any remaining conditions being equivalent, the structure will conceal the cardboard number by relegating sporadic numbers or tokens to each buy. On the off chance that developers attempt to hack into the store or your gadget's data, they will just get futile information. Electronic wallets give uncommon security to clients' financial data. Clients can add a solitary unique finger impression or PIN or secret word as an extra layer of safety on the telephone to refresh perception content.

DISADVANTAGES ASSOCIATED WITH DIGITAL METHOD OF PAYMENT APPLICATIONS IN ONLINE SHOPPING

Coming up next is a rundown of inconveniences identified with uses of digital payment strategies in online buys:

Reception of client stays moderate

A large portion of clients need to remain in their standard family range, that is, they like to utilize cash or charges or MasterCard for payment. Nonetheless, there are numerous payment strategies appended to Visa or Visas or monetary equilibriums, and clients need to swipe or add a card at the terminal as opposed to moving the telephone in the terminal.

Hard to Read Terms and Conditions

For general payment application clients, understanding the agreement is an unquestionable and mandatory requirement. Likewise with other business agreements, business visionaries should first painstakingly peruse and comprehend the agreements accessible in the payment application. On the off chance that the client disregards the primary insights concerning the preparing charges, they will be amazed when they open the receipt toward the month's end.

Costly Technology

In any case, it just so happens, the utilization of multifunction payment is less expensive than the conventional POS structure and really requires new equipment, including terminals or phones that help close to handle correspondences. It's hard to make a payment, regardless of whether you have an old Visa or Mastercard terminal, you might not have a telephone. Indeed, even the requirement for a solid organization association and a state-of-the-art system is an undeniable requirement influencing multi-work payments.

Security

Security has consistently been perhaps the most stressing issues for property holders and clients. Individuals track down that the multifunctional payment part isn't solid and safe.

RECOMMENDATIONS FOR THE BETTER USE OF DIGITAL MODE OF PAYMENTS IN ONLINE SHOPPING

1. Customers ought to reserve the option to pick an agreement to concede to a digital payment methodology and instantly advise the underwriter regarding the disaster/robbery of the payment instrument Electronic (EPI) to monitor the equilibrium, particularly after every exchange.

2. The government can guarantee the public that the exercises of digital payment trades are liberated from trade costs, consequently helping clients of different trades to make buys through the online mode.
3. The government can give reliable media consideration through news/TV projects, radio or far off casual correspondences or papers/magazines to comprehend the advantages of digital payments to general society and people.
4. The government can permit retailers, vendors and various providers to sell and manage things through digital mode, so this will provoke all transporters to become dealers
5. The government can facilitate preparing projects to arrange everybody to utilize digital payments.

Later on, digital payment will turn into an obvious requirement, so the propensity of individuals to perceive digital payment should likewise be changed. Trading credit alone isn't just safer than trading cash; it is additionally drawn-out. It additionally assists with recording every finished trade. In the twentieth century, India had more than 1 billion unique wearable affiliations and in excess of 220 million PDA clients. This number will increment considerably more with quicker web speeds. Cross-utilitarian associations, the Internet and the compass of force are additionally creating digital payments in far off regions. For this situation, there is no question that the future trade structure is the credit trade.

GROWTH OF DIGITAL PAYMENT SYSTEM IN INDIA

The digital payment structure isn't hard to use for clients, even bank authorities, and there are a few alternatives inside the Indian cash system, however India has an enormous populace without the vaguest thought of how to utilize the system.

- According to the review, there were in excess of 320 PC clients in India in 2018, which is a genuine environment that advances a digital payment system.
- Compared with different districts in India, the financial area in India is surprising and will change as indicated by the necessities of the Indian country.
- Debit cards and visas give off an impression of being the ordinary method to frame trades, however they have extended since the cash demonetization in 2016.

- Due to its development model, India has a wide scope of digital payment systems. It is vital for utilize the volume of exchanges and the value occasions of the material paid to the bank.
- Several banks have shut and practically all banks are adjusting to digital banking NPCI has additionally progressed the payment system approved by Aadhar to remember all Indians for digital trades.
- The exchanging volume of RTGS and NEFT nearly significantly increased somewhere in the range of 2013 and 2016, mirroring the structure.
- The Indian government centers around the digital structure, which can uphold India's digital correspondence culture. Nearly everybody has a Jan dhan yojana record and Aadhar card.
- The UPI structure is the most straightforward system to shape a digital trade, it needs to give advancements in the trading of digital payments.
- With the extension of multifunctional monetary management, network-based business development and utilization of versatile payment applications, the utilization of money will diminish

Indians have a low degree of digitization, so the digital payment system was not made exclusively and spread to all pieces of India. Social and essential limitations are the effect on the utilization of digital payment structures. Regardless, Now Daily's multifunctional banking business is documented in India since it isn't hard to use, as long as it tends to be utilized. It is likewise important to decide the digital capacities between individuals. Likewise, there is additionally the issue of distinguishing dangers and security.

BACKGROUND OF THE STUDY

The Union Cabinet drove by Prime Minister Narendra Modi upheld Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA) to frame 60 million rustic families with digital training. The Digital Payments Committee comprised of the Ministry of Finance and the Department of Economic Affairs recommended the establishment of a medium-term framework to speed up the development of digital payments. Along these lines, many digital payment advances are not enlisted with conventional residents and individuals are not able to utilize them in their day by day exchanges. Individuals try to ignore different digital payment advances. There is additionally a legend that once we utilize digital payment focuses and

banks to deduct the high trade expenses of digital payment exercises, overspending is possible. Consequently, authority of digital payments has become a requirement.

DISCUSSIONS AND CONCLUSION

India is in an interesting stage and digitization possesses a focal situation in advancing essential information. In the previous ten years, as the organization business industry grabs hold, the momentum of digital engagement has totally digressed, making the digital payment system a key auxiliary. Regardless, India's digital scene is as yet in its earliest stages and is taking a gander at a large group of changes driven by essential designs and development gateways. The digital payment structure is the benchmark for monetary administrations that are changing their elements. Digital payment models are quickly arising, with goliaths entering the disaster area offering cash back, prizes, and limits to tempt clients to utilize their bases. Extended telephone entries and less expensive organizations have helped digital wallet associations acquire immense help and have begun to involve a spot in clients' ways of life.

Not exclusively does the association look to describe its clients, however clients have even started to comprehend the significance of acquiring digital payment options when making buys. The field of digital trade might be of clear and undeniable quality, and it is creating at a disturbing rate, which is additionally a decent sign for the economy, on the grounds that an ever increasing number of individuals are accepting this standard procedure and technique. The conduct change transforms into a sort of steadiness, so when adaptation is reported, the whole digital payment model has more wheels. Because of the limited availability of money, the whole environment needs to depend on the digital payment system to make every one of the distinctions in monetary exercises. The new pandemic has additionally supported the demand for digital wallets, as contactless payments are viewed as an average new practice. With its benefits and weaknesses,

Development can settle the troubles and make significant improvements in the current design to make it more open and solid. Regardless, the credit-just economy may now be an unreachable dream, yet we are certainly on the way of advancement first, so the money use rate will be fundamentally diminished.

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Chapter - 8

ROLE OF GOVERNMENT IN PROMOTING DIGITAL PAYMENTS IN INDIA THROUGH DIGITAL INDIA PROGRAM – CASE ANALYSIS

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Chapter - 8

ROLE OF GOVERNMENT IN PROMOTING DIGITAL PAYMENTS IN INDIA THROUGH DIGITAL INDIA PROGRAM – CASE ANALYSIS

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ABSTRACT

A digital payment, sometimes called an electronic payment, is the transfer of value from one payment account to another using a digital device such as a mobile phone, POS (Point of Sales) or computer, a digital channel communications such as mobile wireless data or SWIFT (Society for the Worldwide Interbank Financial Telecommunication). Many factors such as Demonetization of currency notes, outbreak of corona virus and the like has led to the promotion of digital payments in India. Beside the above said reasons government of India is playing a vital role in promoting Digital Payments through various schemes such as Digital India Programme Digi Varadan, Cashless India and the like. This chapter deals specifically in detail about the Digital India Program. Case studies in support of the effectiveness of the Digital India Programme have also been discussed in this chapter.

Keywords: Digital Payments, Digital India, Digital Channels, Financial Telecommunication

INTRODUCTION

The Digital India programme is a flagship programme of Government of India with a vision to transform India into a digitally empowered society and a digital economy. Under this programme, Government targets to promote digital payments and support development of low cost and easy to use digital payment solutions for all sections of the society.

As part of 'Paperless, Cashless and Faceless' services across the country especially in rural and remote areas, various modes of digital payments are being provided like Banking Cards, Mobile Wallets, Internet Banking, Mobile Banking, Bank Pre-paid Cards, Micro ATMs, Point of Sale machines (PoS), Aadhar Enabled Payment System (AEPS) and Unstructured Supplementary Service Data (USSD).

The focus areas with regard to promoting digital payments are as follows:

1. Seeding of Bank Accounts with Aadhar and mobile numbers.
2. Enabling Public Financial Management System (PFMS) facility in the Panchayats of the Districts.
3. Adopting digital payment facilities at ration shops and fertilizer shops to enable digital payments.
4. Enabling digital payment facilities at Revenue (Tehsil) offices.
5. Increasing revenue collection from electricity bill payment through digital modes.
6. Ensuring transparency/accountability in promoting digital payments and implementing digital infrastructure.
7. Developing digital payment ecosystem comprehensively.

Best Practices for Replication

Primarily, objective of promoting digital payments is to create awareness about digital payments among people and make them aware about the advantages of digital payments to convert India into less-cash society.

- Administration is coordinating with banks, NGOs, government officials and public representatives to spread awareness about digital payments by organising different programs, camps, rallies, gram sabhas, Digi Melas, Garib Kalyan Melas, Nukkad Natak, bike rallies, digital marathon etc.
- Door-to-Door campaigns and surveys are being conducted by the help of NGOs, Business Correspondents (BCs), Self-Help Groups (SHGs) to literate and aware people about digital payments, especially in villages and rural areas.
- As information can be disseminated faster and more efficiently through audio video means of training, DigiRath and digital LED vans are being used through designated route maps, such that they cover every village in the district.

- Print media (pamphlets, brochures, slogans, leaflets, booklets, banners and posters), electronic media (TV, radio jingles) and social media (Facebook, Twitter, WhatsApp) are actively being used to create awareness among all societies of people.

- Digital literacy centres are opening and Digi Dhan Melas are being organized at State and District level to educate people about digital payments.

- Digital payments training program for capacity building are being conducted for government functionaries like revenue officials, block level officials, district level officials, teachers, FPS agents, fertiliser agents, etc. so that seamless digital services would be provided to citizens.

- Different trainings are being organised on digital payments based on Training of Trainers (ToT) model where master trainers are being created for further training of people.

- Administration, schools, colleges and universities are imparting knowledge about digital payments to students and using them as master trainers and brand ambassadors to spread knowledge about digital payment amongst people.

- School students are being taught about digital payments in morning assemblies and homework also includes something about digital payments.

- For effective implementation, monthly coordination and monitoring meetings are being conducted at district and block levels where data on digital transactions from government agencies and banks are collected and analysed by the administrator. Based on the feedback, clear cut objectives and plan of actions for every level of administration are being prepared.

- Incentive schemes like install BHIM and get `50 are used to promote digital payments. Fair price shops and fertiliser shops are offering discounts to customers on digital payments. Local festivals are used to promote digital payments by setting up demo stalls where knowledge about digital payment modes are provided.

- To promote digital payments in market areas, awards are given to shopkeepers who are doing well in digital payments. Industries are making payments to their employees digitally. This provides better satisfaction to both employer and employees.

- Administration is providing free Wi-Fi services at prime locations, tourist spots and market areas to promote digital payments. Internet is provided at panchayats through Baratnet so that promoting digital payments in rural areas will not be a challenge.

CASH STUDIES

CASH STUDY 1: BISHNUPUR, MANIPUR

Implementing Digital Payments Promotion Strategies

- With an aim to create awareness about Digital Payments Mission, local people were involved along with different civil societies. Door-to-Door campaigns were organised for financial literacy and to educate people about the digital payments.

- Campaigns were undertaken in market areas to promote digital payments among merchants and consumers. Workshops were conducted and competitions were held in schools and colleges.

- The 'I Pledge' campaign was launched to contribute to the Government's vision of creating a cashless, and corruption-free India by spreading the information about digital financial transactions.

- Incentive scheme were provided to promote BHIM (i.e. 'Install BHIM and get `50). Free PoS machines were provided the merchants who opened current account, and fertiliser dealers.

Implementing specific Digital Payments Promotion Strategies (only for Karang Island)

Karang Island was a remote and backward region, which was relatively cut-off from the District due to insurgency for a long time. In this regard, incentives were provided for training towards digital payments and five PoS machines were provided on the island. Self Help Groups (SHGs) and youth clubs were involved for community mobilisation and parallel activities were conducted on the island for Aadhaar enrolment and bank account opening. Additionally, shop-toshop awareness was also provided, coupled with set up of PoS machines for fertiliser dealers.

Using Technology

Digital Bishnupur-An online channel was launched to make people literate about digital payments. In addition, social media interventions were made for promoting digital payments.

Impact

Karang Island of the District became the first cashless island of the country. Cash outflow per capita from SBI Bishnupur branch reduced by 33% and the district got the second position in painting and slogan writing at state Digi-Dhan Mela 2017. There was enhanced transparency and accountability in Government payments with increase of digital transactions. All 24 Gram Panchayats, six Municipal Councils are enabled with Public Financial Management System (PFMS) facility. About 92% of bank accounts were seeded with mobile and 70% of bank accounts were seeded with Aadhaar. Further, percentage of electricity bills paid through digital payment mode increased from 78% to 97% in last 20 months.

CASE STUDY 2 : DAMAN AND DIU

Implementing Digital Payments Promotion Strategies:

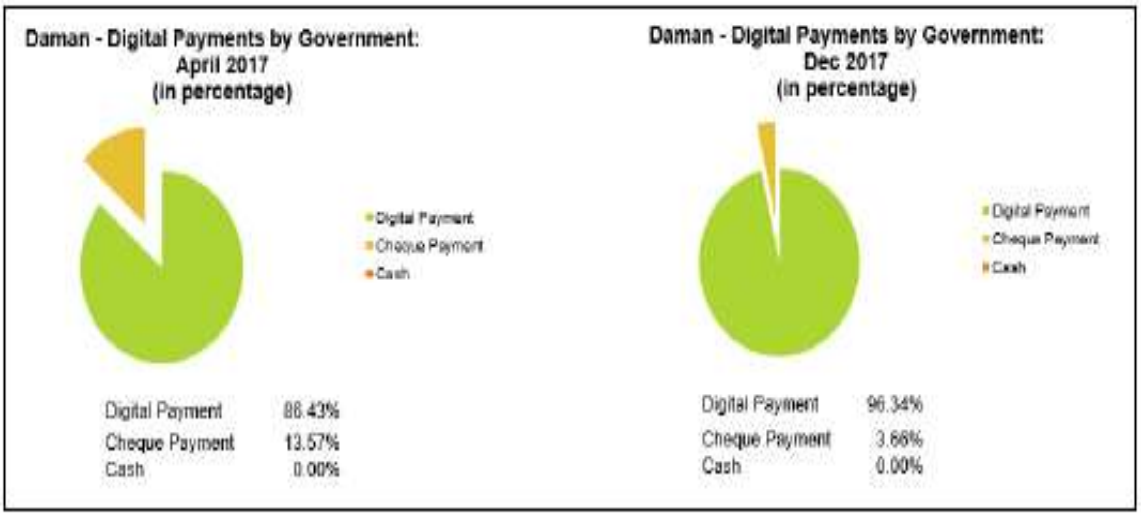
- Digital payment awareness was created by following 'Train the Trainers' model in the District. Around 1,000 people from various sectors and groups were provided extensive training.
- Promotions were done for the programme by leveraging banners, hoardings, mass SMS and social media platforms.
- A special meeting was organised for more than 700 industrialists, where they were imparted training on various modes of cashless payments and urged to ensure that their employees and workers also switch to cashless modes of payments.
- 140 teams were formed to undertake door-to-door campaigns, to ensure that at least one person from each household does a digital transaction and intensive training was done for a team of 10 people including one nodal officer, one teacher, six-eight students and one IT person.

- A mega ‘Cashless Daman’ campaign was launched, where the District Administration officials addressed 3,000 people on digital payments. It was made mandatory for industries to make payment only through bank accounts.

- Daman and Diu Electricity Department (DDED) collected electricity bill payment through various cashless modes i.e. Internet Banking, Credit/Debit Cards, PoS Machine at all its collection counters and e-payment facility was also made available to the public.

- In addition, ration distribution at every Fair Price Shops (FPS) in Daman District was made through Aadhar enabled PoS machines. Digital payment modes and PoS machines were provided at the Fertilizer Shops and Fair Price Shops as well.

Figure Showing the Growth in Digital Payments



Source: vikaspedia.in

Using Technology

Technology was used in the implementation of the programme by way of social media interventions for promoting digital payment via Facebook and Twitter pages and SMS campaign to create awareness about digital payments. Also, digital payment videos involving students, teachers, small vendors were made and circulated over Whatsapp, Facebook and Twitter. There was real-time data sharing over Whatsapp group.

Impact

In all, 11 Panchayat funds were disbursed through Public Financial Management System (PFMS) only and cashless fund collection facilities were available at Citizen Services Centres. PoS machines and other digital payment facilities were provided in all 38 Fair Price Shops. All fishermen purchased diesel through cashless methods only. Tehsil Office in Revenue Department has seen 100% cashless transactions in last two months. All industries moved to 100% cashless payment of salaries to workers. In addition, the departments and Offices of Union Territory administration started to accept digital payment transactions. All distilleries, petrol pumps, restaurants and hotels have digital payment facilities. Further, Cashless Citizen Services (i.e. G2C, B2C services) were provided at 37 Common Service Centres (CSCs). Government to Government payments were 100% digital and Government payments to beneficiaries was 100% via Direct Benefit Transfer (DBT) only. All Government receipts above `1,000 were accepted through digital payment only. About 92% of bank accounts were seeded with mobile and 83% of bank accounts were seeded with Aadhaar. The percentage of electricity bills paid through digital payment mode increased from 21% to 46% in last 20 months.

CASE STUDY 3: SONIPAT, HARYANA

Implementing Digital Payments Promotion Strategies

- Identification of stakeholders and establishments to identify areas with maximum footfalls. Initial survey was conducted to identify the usage statistics of digital payments.

- Digi Dhan Mela was conducted where 170 stalls were set up and footfall was around 1,50,000 and 112 awards were given.

- Further, 10,00,000 bulk SMS, video messages were broadcasted on cable TV and social media to generate awareness about the programme. 1,100 medium size banners were put up and 1,00,000 handbills were circulated. Additionally, banners were pasted on autorickshaws in all towns.

- All Government schools educated children about cashless payment during morning prayers. Further, private schools were instructed to give homework about digital payment methods which had to be completed by students with the help of their parents.

- More than 1,90,000 digital transactions were facilitated by Saksham Yuva groups.

Training and Capacity Building

Total 1,558 key employees were trained initially, who in turn, trained 8,000 employees of various departments. Training camps for traders, petrol pump owners, general public were held at Tehsil and Subdivision level. In addition, training was provided to rickshaw drivers and vegetable vendors.

Using Technology

Social media platforms such as Facebook and Twitter were leveraged for promoting digital payments. Bulk SMS campaign was undertaken to generate awareness about digital payments. Video messages were broadcasted on cable TV channels and social media platforms.

Impact

Sonipat has implemented 100% cashless enabled Subji Mandi. It also has the state's first 100% cashless e-disha Kendra. Out of a total of 366 Fair Price Ration Shops (FPS), 350 are cashless enabled. Additionally, all 4 sub divisions, 6 Tehsils, 5 Municipal Offices are cashless enabled. Number of POS machine increased from 273 in November 2016 to 658 in November 2017.

Further, 81% of bank accounts were seeded with mobile and 82% of bank accounts were seeded with Aadhaar. Percentage of Electricity Bill payment through digital mode has increased from 4% to 88% in last 20 months.

CASE STUDY 4: BOKARA, JHARKHAND

Implementing Digital Payments Promotion Strategies

- The District Administration created a roadmap with the objective of increasing the digital literacy and digital payments in Bokaro.
- Informational advertisements were published in newspapers, and a large scale District-wide awareness camps and training programmes were conducted for all

District level officers and staff. 'BHIM Sena' was created with a group of volunteers, Master Trainers to promote digital payments.

- The District officials conceptualised and implemented a Chai-Samosa training model and universal training programme of all Government school teachers.

- A two day workshop was conducted in the District to promote digital payments. Special camps were organised at every village and Block office. Door-to-door visits were undertaken by banking correspondents and team of volunteers. The 'Cashless Walk' was introduced in the District.

- Public awareness was targeted through social media including WhatsApp group for every block.

- As information can be disseminated faster and more efficiently through audio-video means, the Digi Rath or Digital LED vans were launched on designated route maps to enable adequate coverage across the District. The vans publicised details of digital payments, its benefits, ease of use, etc. Finally, financial literacy camps were also organised in all Panchayats.

Using Technology

Public awareness was targeted through social media viz Twitter, Facebook and WhatsApp. Additionally, a WhatsApp control group was created for every Block in the District.

Monitoring Mechanism

Weekly review meetings were conducted at District and Block level to monitor progress and identify and negate the gaps in implementation. Moreover, a control team was deployed at District and Block level to monitor awareness programmes conducted as part of the scheme.

Impact

Payment to Pensioners was 100% done through digital medium and 100% labours payment under MNREGA was made digitally. Further, 100% Revenue Offices and 42 Fertiliser Shops have digital payment facility. Two cashless Panchayats at Dugda West and

Dugda South and two Digi Gaon at Kura Village and Chandankiyari East were set up in the District, which were the first in Jharkhand. By the end of July 2017, all Government services in the District were provided to citizens where digital transactions were enabled.

Additionally, 69% of bank accounts were seeded with mobile phones and 81% of bank accounts were seeded with Aadhaar. The percentage of electricity bills paid through digital payment mode increased from 1% to 10% in last 20 months.

CASE STUDY 5: BHAVNAGAR, GUJARAT

Implementing Digital Payments Promotion Strategies:

A detailed action plan was developed by the District Administration for financial and digital inclusion for all departments. Training of all Police Personnel, District officers and Government school teachers was done. About 10 camps were organised for trainers and 65 camps at villages and 18 camps at schools and colleges. Additionally, a plan was prepared for Training of Trainers (T.O.T.s) as part of digital literacy training programme. 10 permanent training centres were set up in each municipality and all talukas to create awareness and 11 digital literacy centres were set up, where 100 ToTs and 52,000 were trained in the initial phase.

Further, two permanent digital and financial literacy centres were opened by banks where 36,602 people were trained. Digital literacy training for promoting digital payments was provided to all employees in the Government departments.

Information, Education and Communication (IEC) activities were conducted using print, electronic media and social media, rallies, banners where in 14 lakh pamphlets were distributed. Three IEC vans were sent for awareness and converted digital literacy material in Gujarati. Special IEC van on wheels for scattered and industrial areas was deployed to educate illiterate people and labourers. Learning through sharing of experiences was promoted to increase transparency in the implementation of the programme.

Using Technology

Suitable models and applications were developed for promoting digital payments. Hands-on training, use of audio-visuals and focus on learning by doing approach was established as part of this programme.

Monitoring Mechanism

Daily reporting was done using Google Drive and WhatsApp for documentation, monitoring and planning by the District. Monthly review meetings were conducted and online data/work/progress reports were uploaded on the drive. A review meeting was held with bankers. In addition, coordination meetings were held and continuous monitoring and feedback exercises were done.

Impact

A total of 3,618 PoS machines, BHIM and QR codes were installed. All 702 Fair Price Shops, 363 fertiliser centres, 10 Tehsil/Revenue offices, six Municipalities were digitally enabled. About 1,591 Integrated Child Development Services (ICDS) centres purchased fruits and other eatables with online payment only. All outsourced agencies/contractors received their payments digitally and all petrol pumps, gas agencies accepted digital payment. In the District, 88 villages were enabled with digital payment facilities. Total 4,11,848 RuPay cards and 3,76,008 Kisan Credit Cards were issued in the District.

As a case, Vallabhipur was a digitally payment enabled taluka where all 18638 families had bank accounts seeded with mobile and Aadhaar. All Gram Panchayats were connected with the internet. All Fair price Shops (FPS) and 27 milk co-operatives were digitally enabled and payment was made through banking channel. Further, 77% of bank accounts were seeded with mobile and 79% of bank accounts were seeded with Aadhaar. Percentage of electricity bill through digital payment mode increased from 4% to 6% in last 20 months.

Suggestions for Effective Implementation

Awareness about using digital solutions like smart phone based transactions and use of credit/debit cards at PoS solutions is still a persistent issue in rural areas.

The government, along with Reserve Bank of India (RBI) has implemented and initiated numerous schemes like Pradhan Mantri Jan Dhan Yojana to promote financial inclusion, especially in rural India. Despite all the efforts, some population still doesn‘t have access to banks.

To overcome these challenges, more awareness campaign and training camps should be arranged in rural areas to literate people about the benefits of having bank accounts and doing digital payments.

Make all banks responsible to form a training team at branch level with bank staff and skilled volunteers to train the local merchants and inform citizens about digital payments and benefits of seeding bank accounts with mobile number and Aadhar.

All government departments and officials should involve at district, block and tehsil levels to create awareness and promote digital payments.

More incentivising schemes should be introduced for both merchants and customers to promote digital payments.

Monthly service charges on PoS machines and transaction charges levied by banks on digital payments should be minimised or borne by the district/state/ central government bodies.

Network issues, poor mobile coverage and internet reach is a major challenge in rural areas, thus denying access to digital forms of transactions.

Augmentation of digital infrastructure is required, especially in rural areas to provide better internet connectivity with sufficient band width to promote digital payments.

People are bit apprehensive about security concerns related to digital payments such as fraudulent misuse of payment networks and data theft.

Hence, to gain confidence of citizens, cyber security protocols need to be strengthened for securing digital payments.

Aadhar enabled Payment System (AePS) is majorly used in rural areas and biometric readers are integral part of the Aadhar based payment system.

It is better to ensure that quality biometric readers are available in the market. Tapping of industries where unorganized labor is working and payments to them are happening in cash.

Conclusion

The landmark move of demonetization, made on the eve of 8th November, 2016 by the government of India was aimed at catalyzing the nation's digital payments, along with curbing corruption and black money in the country. More than two months since demonetization, India is witnessing an emerging era of digital economy. The cash crunch in the market has led to a boost in digital payments. Post demonetization, RuPay card transactions have noticed a phenomenal rise from 6.22 million to 18.16 million in volume and the value of these transactions has spiked from 11.97 million to 30.06 million in November. That's not it, in December the usage of RuPay transactions touched 47.27 million in volume and 70.05 million in value. Digital payments have increased by many folds, and thus there arises the need for educating people about the best practices of digital payments. It is the important duty of government to educate its people about the benefits of digital payments and hence it has got a vital role in promoting the digital payments in the country

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Chapter - 9

GOVERNMENT INNITIATIVES IN PROMOTING DIGITAL PAYMENTS IN INDIA

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Chapter - 9

GOVERNMENT INNITIATIVES IN PROMOTING DIGITAL PAYMENTS IN INDIA

I .GRACE JULIA

Introduction

The vision of the Government of India is to transform India into a digitally empowered nation promoting cashless, faceless and paperless transactions in all fields in all possible ways. One of the major fields is digital payments. A digital payment also known as the electronic payment, is the transfer of money from one account to another account. The transfer of money can be done with the help of a digital device using electronic gadgets such as a mobile phone, computer with internet facility, and Point of Sale (POS) machine. In this regard the Indian Government is taking all initiatives to enable seamless real time financial transactions benefitting millions of people. In India now one can find a huge wave of digital transformation ensuring 'good governance', 'timely services' and building in knowledge society under the Digital India Program.

Digital India Program

This is a significant programme initiated by the Government of India with an aim to achieve citizen-centric orientation, interoperability of various e-governance applications by maximal utilisation of latest technology along with unique ID to facilitate authentication and delivery of benefits at the central and the state level. Due importance will be given to ensure the socio-economic needs of every state. In a nut shell all the prevailing e-governance projects are to be revamped so as to meet the vision of Digital India. The road map of the Digital India includes nine major mile stones such as Broadband Highway, Mobile connectivity, Public Internet facility, empowering government with technology, e-services, access to organised information, production of electronic devices, IT enabled Jobs and Early Harvest Programmes.

Framework of Digital India

Infrastructure has a pivotal role in channelizing the needs and demands of Digital India Scheme; In this regard the following are some of the programmes that would enhance the digital infrastructure.

- AADHAR – Unique identification for every Indian.
- BSNL – Functions as the steward of National Optical Fiber Network.
- CoE-IT – Aims at developing innovative applications.
- CERT-IN – Maintains the security of Indian Cyber Space
- Common Services Centres - Various E-services with regard to public welfare schemes, with special reference to health, social, financial, and education can be assessed.
- Cyber Swachhta Kendra – Detects botnet infections and does the notification and cleaning to secure the system of the end users.
- Deen Dayal Upadhyanja Gram Jyothi Yojana – Enhance the rural India with continuous power supply.
- DigiLocker – Empowers citizens digitally through digital wallet.

Today, Digital India has become a mass movement touching the lives of millions of Indians. The Government has taken many steps to spur the movement of digital payments and some of the important initiatives in this direction are as follows:

Aadhaar Enabled Payment System (AEPS),

India Post Payment Banks,

Internet Banking,

Banking Cards,

Unstructured supplementary Service Data,

Unified Payments Interface (UPI),

Mobile Wallets and

e- RUPI

Aadhaar Enabled Payment System (AEPS)

The Indian Government has righty recognised that the digitalisation is a key economic driver of the 21st century which is backed by information and technology. Hence it has taken its first step of sucesss by bringing all its citizens in a banking frame work which is enabled by the AEPS. It allows online interoperable financial transaction at PoS (Point of Sale / Micro ATM) through the Business Correspondent (BC)/Bank Mitra of any bank using the Aadhaar authentication. There is every chance of forging an individual's signature hence biometric authentication such as finger print scan or iris scan are being included in AEPS to empower every citizen to avail easy and safe access to all financial and nonfinancial banking services throught the nation. Furthermore, it is not necessary to carry the passbook or the debit cards instead all they need is Aadhar number and finger print authentication to carry out the transactions without any difficulties.

AEPS Mechanism

Step 1: The customer will have to give his/her aadhar number details, fingerprint data and financial transaction via a micro ATMs

Step 2: The encrypted digital data will be processed through UIDAI through a 'Bank Switch'

Step 3: The response will be Yes/No, based on the authentication by the UIDAI

Step 4: If the response is "YES", then the bank will initiate the required authorization.

Unified Payments Interface (UPI)

Unified Payments Interface (UPI) is a mechanism of merging multiple bank accounts into one mobile application (of any participating bank). It also caters to the "Peer to Peer" collect request which may be scheduled and paid as per requirement and convenience. Each Bank provides its own UPI App for Android, Windows and iOS mobile platform(s).

Protocol of UPI

• Open a Bank a/c

•Link the Mobile number with the bank a/c

• Smart Phone with internet facility is essential

• Procurement of Debit Card for re-setting MPIN.

Procedure for Service Activation

• Download the App for UPI

• Do registration online on the App with a/c details

• Create a virtual ID

• Set MPIN

Mobile Wallets

A mobile wallet is a means to carry cash digitally. All we need to is to link the information of the debit or the credit cards with the mobile wallet application. Usage of mobile wallets are much more simple, easy and safe to make purchases and transactions. That is rather than using our physical plastic card to for purchases, we will be making the payment through our smartphone, tablet, or smart watch. Most banks have their e-wallets and a few private companies as well provide the mobile wallet. Some of the common mobile wallets used in this pandemic situation are Paytm, Freecharge, Mobikwik, Oxigen, mRuppee, Airtel Money, Jio Money, SBI Buddy, itz Cash, Citrus Pay, Vodafone M-Pesa, Axis Bank Lime, ICICI Pockets, SpeedPay etc.

During this Covid situation, some of the factors such as reluctance to handle paper cash, the feeling of safety with contactless commerce and convenience has hiked up more than 50 percentage growth in usage of mobile wallets and it is also evident that many new customers are preferring to activate the mobile wallets.

How to get it:

• Option to open Zero KYC or Full KYC wallet

• Option of Consumer vs. Merchant wallet

• Mobile Number

• An App to be downloaded in smart phone

Service Activation:

• Load money (subject to regulatory limits) using internet banking or merchant locations

• Bank A/c

• All Cards

• Cash-In

What is required for Transaction:

• Smartphone or internet

• Use MPIN

• Self-service and/or Assisted mode

Transaction Cost:

• Customer pays for remittances to bank a/c @ 0.5%-2.5% of fixed fee.

• May buy data charges in self-service mode.

Disclaimer: The transaction costs are supported available information and should vary supported banks.

India Post Payment Banks (IPPB):

Indian government has initiated numerous innovative steps to incorporate information technology (IT) tools in public institutions to increase transparency, with the already established infrastructure. In this regard, India Post Payment Banks is a public sector company under the Department of Posts and the Ministry of communication with 100per cent equity of the Government of India, and governed by RBI. India Post Payment Banks reach and its operating model is built on the three key of India stack - enabling paperless, cashless and presence less banking in simple and secure manner at the customer's doorstep through the CBS integrated smartphone and biometric device. This enables every Indian to become financially secure and empowered.

In India around 67 percentage of the population live in the rural areas hence with the wide network of well-established post offices and postal employees makes available various activities such as opening a bank account, transfer of funds, deposit and withdrawal of cash,

recharge or pay bills, buy insurance and general insurance and accomplish much more services at the doorstep even to the remotest corners of the nation.

Significance of IPPB

- Account can be opened at the door step at free of cost.
- Services are provided through the GDS, as and when required
- On request, funds can be availed through the local postman at the door step.
- Bills can be settled at the door step with assured security.
- Even the illiterates in the remote India can be benefited with secure banking.
- It provides Multilingual customer support.
- No commitment of minimum balance.
- Nominal charges
- Day end balance above Rs. 2 lakh can be swept into linked POSA (Post Office Savings Account)
- Easy and quick access to growing merchant network.
- There is no limit for deposits and withdrawals.

Banking Cards (Debit / Credit / Cash / Travel / Others)

When compared with other payment methods, banking cards offer consumers more control, security, and convenience. The large range of cards available, including credit, debit, and prepaid cards, gives you a lot of options. For safe payments, these cards include two-factor authentication in the form of a secure PIN and a one-time password (OTP). Card payment systems include RuPay, Visa, and MasterCard, to name a few. People can use payment cards to make purchases in stores, on the Internet, through mail-order catalogues, and over the phone. They save both customers and businesses time and money, making transactions more convenient.

How to get it:

- Open a new account and provide KYC (Know Your Customer) information
- Apply for a card with the option of a debit or credit card
- Get a PIN

Service Activation:

- To activate your PIN, go to an ATM.
- May take about 3-7 days

What is required for Transaction:

- A point-of-sale (POS) terminal or an internet payment gateway
- Provide PIN
- Provide OTP (One Time Password) received on registered smartphone to complete online transaction for merchant website
- Present Card physically or card data for online transaction
- Modes of self-service and/or assistance

Transaction Cost:

- For merchant transactions, the customer receives nothing.
- Annual fee and ATM transaction limits set at the discretion of the institutions.
- Merchants pay 0.50 percent to 2.25 percent.
- In the case of credit cards, a cash-out fee of 1% to 3.5 percent of the transaction amount is levied to the consumer.

Services Offered:

- These cards can be used at point-of-sale (POS) machines, ATMs, micro ATMs, shops, wallets, online transactions, and e-commerce websites.
- International cards can be used in a variety of currencies all across the world.

Funds Transfer limit:

- A transaction limit based on card can be set by the user.
- Credit scores are used.

Service Available from no. of operators:

- 751 banks *(Source: NPCI)*
- Interoperable

National Electronic Fund Transfer (NEFT)

National Electronic Funds Transfer (NEFT) may be a nation-wide payment system facilitating one-to-one funds transfer. Under this Scheme, individuals, firms and corporates can electronically transfer funds from any bank branch to a person , firm or corporate having an account with the other bank branch within the country participating within the Scheme. Individuals, firms or corporates maintaining accounts with a bank branch can transfer funds using NEFT. Even such individuals who don't have a checking account (walk-in customers) also can deposit cash at the NEFT-enabled branches with instructions to transfer funds using

NEFT. However, such cash remittances are going to be restricted to a maximum of Rs.50,000/- per transaction. NEFT, thus, facilitates originators or remitters to initiate funds transfer transactions even without having a checking account . Presently, NEFT operates in hourly batches - there are twelve settlements from 8 am to 7 pm on week days (Monday through Friday) and 6 settlements from 8 am to 1 pm on Saturdays.

Real Time Gross Settlement (RTGS)

RTGS is defined because the continuous (real-time) settlement of funds transfers individually on an order by order basis (without netting). 'Real Time' means the processing of instructions at the time they're received instead of at some later time; 'Gross Settlement' means the settlement of funds transfer instructions occurs individually (on an instruction by instruction basis). Considering that the funds settlement takes place within the books of the Federal Reserve Bank of India, the payments are final and irrevocable. The RTGS system is primarily meant for giant value transactions. The minimum amount to be remitted through RTGS is 2 lakh. there's no upper ceiling for RTGS transactions. The RTGS service for customer's transactions is out there to banks from 9.00 hours to 16.30 hours on week days and from 9.00 hours to 14:00 hours on Saturdays for settlement at the RBI end. However, the timings that the banks follow may vary counting on the customer timings of the bank branches.

Electronic Clearing System (ECS)

ECS is an alternate method for effecting payment transactions in respect of the utility-bill-payments like telephone bills, electricity bills, insurance premia, card payments and loan repayments, etc., which might obviate the necessity for issuing and handling paper instruments and thereby facilitate improved customer service by banks / companies / corporations / government departments, etc., collecting / receiving the payments.

Immediate Payment Service (IMPS)

IMPS offers a need of the hour service, that is 24X7 interbank electronic fund transfer service through mobile phones. IMPS is an emphatic tool to transfer money instantly within banks across India through mobile, internet and ATM which isn't only safe but also economical both in financial and non-financial perspectives.

Objectives of IMPS:

To enable bank customers to use mobile instruments as a channel for accessing their banks accounts and remit funds

Making payment simpler just with the mobile number of the beneficiary

To sub-serve the goal of Federal Reserve Bank of India (RBI) in electronification of retail payments

To facilitate mobile payment systems already introduced in India with the Federal Reserve Bank of India Mobile Payment Guidelines 2008 to be inter-operable across banks and mobile operators during a safe and secured manner

To build the inspiration for a full range of mobile based Banking services.

Unstructured Supplementary Service Data (USSD)

The innovative payment service *99# works on Unstructured Supplementary Service Data (USSD) channel. This service allows mobile banking transactions using basic feature mobile. It's envisioned to supply financial deepening and inclusion of under banked society within the mainstream banking services.

*99# service has been launched to require the banking services to each commoner across the country. Banking customers can avail this service by dialling *99#, a "Common number across all Telecom Service Providers (TSPs)" on their mobile and transact through an interactive menu displayed on the mobile screen. Key services offered under *99# service include, interbank account to account fund transfer, balance enquiry, mini statement besides host of other services. *99# service is currently offered by 51 leading banks & all GSM service providers and may be accessed in 12 different languages including Hindi & English as on 30.11.2016 (Source: NPCI). *99# service may be a unique interoperable direct to consumer service that brings together the various ecosystem partners like Banks & TSPs (Telecom Service Providers).

How can we get it?:

• Provide KYC (Know Your Customer) information to open a replacement account

• Mobile no. should be linked with bank a/c

• Register for USSD/Mobile Banking

• Get MMID (Mobile Money Identifier)

• Get MPIN (Mobile PIN)

Point of Sale

A point of sale (PoS) is that the place where sales are made. On a macro level, a PoS could also be a mall, a market or a city. On a micro level, retailers consider a PoS to be the world where a customer completes a transaction, like a checkout. it's also referred to as some extent of purchase.

Physical PoS

Necessary conditions for service initiation:

• Handheld Device with card and /or bio-metric reader

• Merchant Bank a/c

• Internet connectivity GPRS/ Landline

Service Activation:

• Paper work with Bank for acquirer a/c

• Deposit specific amount

• Collect device

• Configuration and training to operator

What is required for Transaction?:

• Any Card

• Resident for bio-metric authentication (AEPS)

• Assisted Mode

Funds Transfer limit:

• No limit for regulator

• Merchant's Bank and payee Bank may set limit supported its own discretion

Virtual PoS

Necessary conditions for service initiation:

• Smartphone and /or browser

• Internet connectivity 2G/3G/4G, or Wi-Fi or landline

• E-payment gateway

• Virtual A/c for transactions

• May need QR code

Service Activation:

• Merchant Bank a/c with some merchant credentials

• In case of QR code for pull transactions

• May require ability to spot or authenticate user for service delivery

What is required for Transaction?:

• Any Card

• Wallet Account

• Scanner for reading QR Code and Universal Product Code

Funds Transfer limit:

• No limit for regulator

• Merchant's Bank and payee Bank may set limit supported its own discretion

Disclaimer: The transaction costs are supported available information and should vary supported banks.

INTERNET BANKING

Internet banking, also referred to as online banking, e-banking or virtual banking, is an electronic payment system that permits customers of a bank or other financial organization to conduct a variety of monetary transactions through the financial institution's website.

E-RUPI System:

Very recently, the government of India has taken yet another initiative to encourage digital payment system by launching e-RUPI platform to send the Governments monetary benefits directly to the beneficiary's mobile phones. It has been developed by the National Payments Corporation of India (NPCI), the department of financial services, the National Health Authority and the ministry of Health and Family Welfare. It is nothing but a digital voucher payment system since it comes in the form of one-time use e-vouchers to access Government services. To begin with, the Government has planned to use this platform for health services like COVID-19 Vaccination Drive. Gradually, it will be extended to other welfare schemes also.

The e-RUPI system can be assessed by anyone who has a smart mobile phone. One need not even have any bank account or any card or any internet access to redeem an e-voucher. The e-vouchers will be issued to the beneficiary's mobile device through QR codes or long string SMS. The beneficiary has to show it to the welfare service provider to authenticate the transaction. Since these vouchers have a life of one-time use only. The e-RUPI is powered by the NPCL's UPI platform. As it is, eleven banks have been authorised to issue digital vouchers. Beneficiaries will be identified by their mobile numbers. The greatest advantage is that it ensures correct welfare payment disbursement to the right person and also one can find out how much funds have been disbursed so far to the beneficiaries. No doubt, the E-RUPI platform will promote digital payment system among the citizens of India on a large scale in the years to come.

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Chapter - 10

Whatsapp Pay

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Chapter - 10

Whatsapp Pay

Mrs A Emimol Grace

Abstract

WhatsApp regularly rolls out new features and updates to provide a seamless user experience. WhatsApp Pay is an in-chat payment feature that allows users to make transactions via WhatsApp to their contact list. It is UPI-based payments service that allows you to both send and receive money. It was developed by the National Payments Corporation of India (NPCI). Users can send money directly through chat by tapping on the share file icon and selecting 'payment'. The 'payment' section is available on the shortcut menu. Users can check their transaction history and account details in that section.

Keywords: WhatsApp Pay, National Payments Corporation of India, shortcut menu

Introduction

WhatsApp is the name of a mobile messaging app for Android, iPhone, Windows Phone or for Mac or Windows PCs. WhatsApp lets users make free voice calls, face-to-face video calls or text message. By using your wired Internet connection or connecting your device to Wi-Fi, users avoid SMS and data usage mobile carrier fees that are typically associated with texting and voice or video messaging.

WhatsApp Pay which went live in India in November last year is being rolled out to more users. The Facebook-owned messaging app had informed that the new payments feature will be rolled out gradually to the users. Many users did not receive the feature immediately after it went live even after updating their app several times but now most users across Android and IOS seem to be getting it finally. WhatsApp Pay, as the name suggests, lets users send money from their bank accounts. People can safely send money to a family member or share the cost of goods from a distance without having to exchange cash in person or going to a local bank." The feature was designed in partnership with the National Payments Corporation of India (NPCI) using the Unified Payment Interface (UPI), an India-first, a real-time payment system that enables transactions with over 160 supported banks.

What is Whatsapp?

Whatsapp is a very popular and widely-used social media messenger. More than 2 billion people in over 180 countries use WhatsApp. In India, there are more than 400 million WhatsApp users. However, during the corona virus lockdown, Whatsapp became a common area for people to as it helped people remain in touch with each other.

Features of Whatsapp:

WhatsApp has been seen working on a handful of new features in recent days.

WhatsApp disappearing messages

WhatsApp rolled out disappearing messages feature in 2020. In an individual chat, user can either turn the disappearing messages on or off, but in a group chat, only group admins have the control to turn disappearing messages on or off

WhatsApp QR codes

WhatsApp QR Code is another interesting feature that makes easier for users to add new contacts. It helps users to share their contact details with other WhatsApp users through customised QR codes. Therefore, any user can add a contact on WhatsApp just by scanning the WhatsApp QR code.

Permanent mute option

In 2020 WhatsApp has also rolled out a permanent mute option for chats. This means that users can now permanently put a chat on mute. Earlier, users had the option of muting their groups for a year but the things would again get back to normal after the completion of a year. So now with the updated feature, users have a permanent solution for annoying groups. The permanent mute option is available for both Android and iPhone.

WhatsApp group calls

During the Covid-19 pandemic, WhatsApp witnessed a significant increase in engagement. Therefore, the company added group support for video calls and extended the participant limit to eight users -- instead of four previously. The group call feature is available for both Android and iOS users.

Dark mode

WhatsApp introduced the Dark Mode feature for its users earlier this year. The feature was launched for both Android and iPhone devices. But, later the dark mode feature was also rolled out for desktop WhatsApp.

Multi-device support

This is the highly-anticipated feature from WhatsApp. The multi-device support will allow users to login WhatsApp accounts to multiple devices simultaneously. The feature is currently in development and has been spotted in the beta version one too many times. Currently, WhatsApp only supports two devices at the same time, namely a phone and a desktop. The new multi-device support will reportedly allow users to add up to four devices on a single account. This means that once the feature gets rolled out, you will be able to log in from your iPad and iPhone at the same time, along with the desktop.

WhatsApp audio message speed and disappearing images

WhatsApp is also working on a new audio message feature. The feature is said to allow users to control the speed at which the audio message plays. In addition to the 1x speed, users will be able to play the audio files at 1.5x or 2x speeds, per a report by WABetaInfo.

As for the disappearing images feature, it's expected to be similar to WhatsApp's self-destructing messages in the sense that they will be automatically deleted from the chat after a while. The WhatsApp self-destructing photo feature is currently in work and is likely to roll out on both Android and iOS versions of WhatsApp via a future update.

Read later

'Read later' is said to be an improved version of the existing Archived Chats feature on WhatsApp. When a chat is moved to read later, WhatsApp won't send notifications for that chat. Additionally, the feature will include a 'vacation mode', which will ensure that the 'read later' chats work the same way as archived chats on the current stable version. Read later will also come with an edit button for users to customise settings. WhatsApp users will also be able to select multiple chats at once to quickly unarchive them.

WhatsApp payments:

After a long wait of two years, WhatsApp Payments has been launched in India. The Facebook-owned messaging app first proposed the idea of introducing the payment feature in India in 2018 but it took the company two years to receive approval from the National Payments Corporation of India (NPCI) to go live on Unified Payment Interface (UPI).

According to WhatsApp, the payments feature is now live with State Bank of India, HDFC Bank, ICICI Bank, and Axis Bank for Indian users. Now, users can send and receive money through WhatsApp Pay, but first, they need to add their bank account on WhatsApp.

What is Whatsapp Pay?

WhatsApp Pay is an in-chat payment feature that allows users to make transactions via WhatsApp to their contact list. It is UPI-based payments service that allows you to both send and receive money. It was developed by the National Payments Corporation of India (NPCI). To use WhatsApp Pay, a user must initiate a payment to a contact. Once the request is received, the user can set up their UPI account on WhatsApp.

Procedure to set up Payments on WhatsApp:

1. Go to the Settings menu on your app
2. Tap on Add New Payment option given at the bottom of the screen
3. You will then be redirected to a page with a list of banks
4. Choose your bank from the list
5. Verify your phone number via SMS
6. A message will be sent from your number automatically
7. You can then select a bank account linked to the phone number
8. Tap on the bank account you want to add
9. You can now send and receive payments to and from your WhatsApp account

Advantages WhatsApp Payments:

WhatsApp Payments is extremely new and limited in functionality in its current state. All you can do is send or receive money at the moment. In comparison, apps like PhonePe and PayTM also allow you to make payments for services and products. That said, there are obvious advantages of using WhatsApp.

- Almost everyone - from your grandfather to your local Kirana shop owner - is on Whatsapp. Therefore, the reach is massive and one can easily convince anyone to sign up for the Payments on an app they already trust.
- Its ease-of-use could also propel the adoption for Whatsapp Payments.

Disadvantages Whatsapp Payments:

The one obvious downfall of Whatsapp Payments is the fact that gullible users can fall prey to social engineering. What this means is that forward messages like - "Send money to XYZ account to receive blessings from Babaji. Share it with more friends for more blessings" -could start spamming your Whatsapp inbox.

Also, Whatsapp Payments is merely a payment option inside a messaging app, and apps like PayTM, PhonePe, Google Tez are all feature-rich wallets.

Features and Benefits of Whatsapp In-Chat Payment

- Make payment to anyone on Whatsapp contact list from anywhere and at anytime
- User-friendly 'pay' feature that makes transferring funds as simple as sending a photo or a message
- The payee/beneficiary will receive a payment notification on their chat window once the fund transfer has been made
- There is no need to ask the payee for account details such as account number or IFSC Code. All you need is a virtual address to make payment
- The Whatsapp In-Chat Payment application is a one-of-a-kind payment feature

Procedure to link a bank account to Whatsapp:

Users can add an active bank account that supports the Unified Payments Interface. The primary phone number associated with the bank account must match the phone number used to operate the Whatsapp account. The steps given below will solve all doubts related to how to link a bank account to Whatsapp.

- Open Whatsapp application
- Go to the More or the three-dots menu at the top right corner of the screen
- Select and open Settings
- Select and open Payments
- Tap on add new account
- Accept Whatsapp Payments Terms and Conditions
- Tap on verify via SMS and click on allow
- Select a bank from the list of banks that appears on the screen
- Tap the bank account which will be used for sending and receiving payments on Whatsapp
- Verify the last 6 digits of the debit card and the expiration date
- Click on Done

Whatsapp Payments feature:

Receive Money

- Once the Whatsapp Payments is set up on a device, receiving payments is as simple as receiving messages.
- If someone sends money through Whatsapp, it appears like a text message along with details of the transaction.

Send Money

- Open Whatsapp
- Open the chat with the receiver
- Click on the attachment icon at the bottom of the screen
- From the list of options available, click on Payment
- Once the Whatsapp Payments feature is set up, a user will need to enter the amount to be sent
- Click on Next
- Whatsapp will confirm the receiver and the bank account from which the money is to be sent
- Click on Send Payment
- Enter UPI Pin on the screen that appears to complete the transaction.

Conclusion

The features of Whatsapp pay flourishing in the digital payment markets in India and It pay ensuring smooth payment experience for customers. The Whatsapp In-Chat Payment feature will allow users to make payments to anyone from their Whatsapp contact list. The payment system will work on the Unified Payments Interface (UPI) method, where fund transfers can be initiated without having to provide bank account number and IFSC code. The UPI interface allows customers to make instant fund transfers through a virtual address, also known as, Virtual Payment Address (VPA). The fund transfer process is fast, easy and can be done on a 24/7 basis on all 365 days in a year.

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About the Contributor

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