Digital Wallets: Impact on the economy with reference to youth in Ernakulam city

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BONAFIDE CERTIFICATE

This is to certify that this dissertation entitled **"Digital Wallets: Impact on the economy with reference to youth in Ernakulam city"** is a record of original work done by Mr. JITHIN JOSE (REG NO: 200021077096), Ms. KEERTHANA KRISHNAKUMAR (REG NO: 200021077098), Ms. MILINA MARTIN (REG NO:200021077103), in partial fulfilment of the requirement for the Degree of Bachelor of Commerce – Finance and Taxation under the guidance of Asst. Prof. PADMAJA P MENON, Department of B.Com Finance and taxation, the work has not been submitted for the award of any other degree or title of recognition earlier.

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DECLARATION

We JITHIN JOSE, KEERTHANA KRISHNAKUMAR and MILINA MARTIN hereby declare that the project report titled “Digital Wallets: Impact upon the economy with reference to youth in Ernakulam city", is a Bonafide Record of work done by us under the guidance and supervision of Asst. Prof. PADAMAJA P MENON. Department of Finance and Taxation, BHARATA MATA COLLEGE, THRIKKAKARA. We also declare that this report embodies the findings based on our study and observation and has not been submitted earlier for the award of any Degree or Diploma to any institute or university.

Place: THRIKKAKARA

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CHAPTER I
INTRODUCTION

INTRODUCTION

Digital Revolution is all regarding developing for better hereafter. This change can have an influential impact in different ways on different societies, husbandry, and over all humanity. Not only that, but digitalization also modified the way information is scattered across different sectors of the globe. Giving grounds for businesses to move forward beyond the public requests to other requests, thereby leading transnational requests, and enhancing the connection of the world. One of the signs of these shifting overflows is the digital revolution in India that has been catching grip since smartphones and 4G streaming have grown cliché within civic areas including numerous pastoral areas too.

India has moved forward, in all sincerity, to growing an essential machine of the world frugality, we are on the edge of a transformative occasion for the country to gain global leadership. The country is passing a digital revolution that is driving transformative developments in areas like-payments, digital knowledge, fiscal addition, geographic mapping, pastoral development, and much further. So, let us bandy all the factors which have been streamlined from 2014 to 2022.

Bharat Interface for Money- Unified Payment Interface(BHIM UPI), with over 600 million deals in 2019 exclusively, is the backbone connecting all banks and consumers and is being frontal- ended by numerous public and multinational digital programs. Paytm, Google Pay, Amazon pay, etc all are setting their situations in the world of digitalization.

Digital payments and its purpose

Digital payments are deals that take place via digital or online modes, with no material exchange of money involved. This means that both parties, the payer and the payee, employ electronic mediums to exchange money. The Government of India has been bearing several measures to upgrade and encourage digital payments in the country. As part of the 'Digital India' drive, the government has a purpose to produce a 'digitally empowered' frugality that's 'Faceless, Paperless, Cashless'.

The main aims of digital transactions are to demote the costs and perils of handling cash, accelerate the ease of conducting online deals, and increase clarity among financial deals among people.

There are various methods of digital payments and some of them are as follows:

- Banking cards
- Unstructured supplementary service data (USSD)
- Aadhaar enabled payment system(AEPS)
- Unified payment interface(UPI)
- Mobile wallets

- Bank prepaid cards
- PoS terminals
- Internet banking
- Mobile banking
- Micro ATMs

A mobile payment is a money remittance made for a product or service through a movable electronic device similar as a notepad or cell phone. Numerous banks have lately espoused technology into their banking apps that allow clients to transfer money immediately to mates and family members directly from their bank accounts. Mobile payments are also made on point at stores by surveying a barcode on an app on your phone, accepting payments from convenience stores to large, multi-national retailers.

This study aims to provide the readers data relating to the benefits, problems and history of mobile payments in India. This study also reveals the usage and preference of different mobile payment apps used by youngsters in the Ernakulam city.

The study answers the following questions

i. What are mobile payments?
ii. Why was it implemented?
iii. What is the future of mobile payments?

OBJECTIVES

- To understand the extent of usage of e payments with reference to youngsters in ernakulam.
- To analyze awareness and knowledge of different digital wallet services.
- To analyze the digital wallet gateways preferred by youngsters.
- To analyze the level of satisfaction of youth from using the e payment facilities.

RESEARCH METHODOLOGY

This system of study uses both primary and secondary data. The primary data was collected through a questionnaire, designed to gather information relating to the preference of digital wallet gateways by youngsters as well as their usage. As for secondary data collection, information was gathered from various articles, publications and websites.

Sample size selected for the study is 50.

Number of questions asked is 18.

Hypothesis tested using the statistical tool of ANOVA.

LIMITATIONS

- The responses recorded may not be accurate.
- The respondents were not willing to spend time to complete the survey.
- The study was performed in a limited time.

CHAPTER II
LITERATURE REVIEW

1. ***Sujith T S, Dr. M Sumathy & Anisha T(2019):*** **"Customer perception towards mobile – wallets among youth with special reference to Thrissur city".** This study focuses on the preference of youthful guests towards mobile wallets in Thrissur City and effectively anatomized the impact of demographic variables on the operation of Mobile wallets. An aggregate of 60 replies was anatomized from Thrissur City and their answers were analysed. This study will support in developing suitable strategies for Mobile wallet companies to tap the implicit customers.

2. ***K. Maran, P. Priyadarshini, Leena Jenifa, C.R. Senthilnathan, P. Venkatesh(2021*)**: **"Data Analysis on Mobile Payment Technology with Reference to Users' Behaviour of Retail Goods in India".** This paper attempts to study the consumer's tendency towards mobile remittance for the purchase of retail goods, as a result of the advancement in the world of digitalisation and the growth of technology.

3. ***M. Humbani & M. Wiese(2018):*** **"A Cashless Society for All: Determining Consumers' Readiness to Adopt Mobile Payment Services".** The study applies technology readiness index to determine consumers' willingness to adopt digital payment services and the moderating effect of gender. The results of the analysis give perceptivity on how to increase acceptance and decrease the gender gap in mobile payment services.

4. ***Syed Far Abid Hossain, Zhao Xi, Mohammad Nurunnabi & Khalid Hussain(2020*)**: **"Ubiquitous Role of Social Networking in Driving M-Commerce: Evaluating the Use of Mobile Phones for Online Shopping and Payment in the Context of Trust".** The article examines the role that social networking plays in promoting m-commerce and offers insight into how the use of mobile apps affects consumers' perceptions of making online purchases and choosing a method of payment. Consumer education has an impact on whether they choose to use a digital payment method because educated consumers are more likely to be familiar with the internet. The article not only highlights the role of education in helping customers understand how to apply online payment methods through mobile phones, but it also points out that there are security concerns, even though these have been partially overcome by technical advancements.

5. ***Xiu-Ming Loh, Voon-Hsien Lee, Teck-SoonHew, Binshan Lin(2022):*** **"The cognitive-affective nexus on mobile payment continuance intention during the COVID-19 pandemic".** This study looks at the factors that influence people's decision to continue using mobile payments while a pandemic is ongoing. From a penta-dimensional approach, the dynamic links between the cognitive and emotional constructs were developed. Youths who were using mobile payment provided 307 responses to an online survey, which was then used to evaluate data using structural equation modelling (SEM) and artificial neural networks (ANN). Continuence intention is highly influenced by both positive and negative affective components, which can also act as mediators for the cognitive variables.

6. ***Dr. Anil Jain , Dr. Apurva Sarupria, Ankita Kothar(2020):*** **"The Impact of COVID-19 on E-wallet's Payments in Indian Economy".** This study focuses on the impacts of COVID 19 on the e payment systems in India and concludes as follows: The established deadlines for stopping COVID-19 outbreaks before they spiral out of control have an influence on digital, online, and offline transactions run by top companies. Although there is still a lot of client traffic on digital platforms, payment costs have decreased significantly. Businesses in the digital payments industry may suffer over the next two to three months if this pattern persists for a significant amount of time as consumers become more aware of the outages. Purchase habits may temporarily change due to the volatile times we live in, when the effects of the Coronavirus outbreak have been felt both economically and socially.

7. ***Mitesh Patel(2020):*** **"How COVID-19 Increases Digital Payment Adoption Globally".** Globally, the COVID-19 pandemic has had an impact on all markets, industries, and aspects of daily life. However, in this digital age, lockdowns or coronavirus outbreaks cannot halt the flow of money. This study points out that the adoption of COVID-19 has functioned as an impetus for the expansion of digital payment platforms.

8. ***Gurleen Kaur & Bijay Prasad Kushwaha(2021):*** **"Digital Payment Systems A Way to Protect One Another From Coronavirus".** This study examines diverse expert opinions and in-depth experiments on the corona virus transmission method. This essay will also demonstrate how electronic payments stop the corona virus from spreading. The paper is literature-based, and secondary sources were used to draw conclusions. Scientific, professional, and medical opinions

have been gathered from recent articles and websites. The results of the study demonstrate that maintaining social distance while making purchases is the greatest approach for us to safeguard one another from COVID-19.

9. ***Sumathi Paramasivam, Kishen Adnani & Yong Yu Xin(2022*)**: **"Behavioural Intention of Malaysians Towards E-Wallet Adoption: Moderated by Gender".** Using an expanded ETAM model, this study intends to investigate the variables that affect behavioural intention to adopt e-wallets as well as the moderating effect of gender between these antecedents and adoption satisfaction. This study found that both male and female users had been influenced by the Covid-19 epidemic, which had likely forced users to trust and use e-wallets. As a result, gender has no bearing on the decision to adopt e-wallets. The results aid e-wallet service providers in comprehending the significance and bearing of several antecedent variables on the intention to utilise this technology.

10. ***Manimay Ghosh(2022):*** **"Empirical study on consumers' reluctance to mobile payments in a developing economy".** This study focuses on the effects of the barriers to mobile payment service adoption in India. This empirical study added three less-studied barriers (surveillance, habitual cash use, and technology) to the classical innovation resistance theory framework and tested it, thereby enhancing the existing literature on consumer resistance to mobile payments. It also looked upon how gender affected the uptake of mobile payment services.

11. ***Vishal Mishra, Isabelle Walsh & Ankur Srivastava(2022*)**: **"Merchants' adoption of mobile payment in emerging economies: the case of unorganised retailers in India".** This report focuses on how unorganised enterprises in India are embracing new technology. This study shows that unorganised merchants are essential collaborators in economic growth and technology-driven inclusion by showing the crucial connection they foster between enterprises and consumers at the bottom of the pyramid as well as between the state and its marginalized citizens.

12. ***Abhipsa Pal, Tejaswini Herath, Rahul De' & H. Raghav Rao(2020):*** **"Contextual facilitators and barriers influencing the continued use of mobile payment services in a developing country: insights from adopters in India".** This study focuses on identifying the contextual drivers of mobile payment usage intention, including the facilitators (such as price advantage, network externalities, trust, and habit) and inhibitors (such as risk, the absence of facilitating

conditions, and operational constraints). Data from 298 Indian survey respondents who had accepted and were currently using mobile payment services is used to evaluate the concept.

13. ***Abhipsa Pal, Tejaswini Herath & Rahul De(2020*)**: **"The Role of Mobile Payment Technology in Sustainable and Human-Centric Development: Evidence from the Post-Demonetization Period in India".** This study focuses to evaluate mobile payments role in sustainable human-centric development. To analyze the framework, a comprehensive field research was carried out that included interviews with retailers and customers. The study uses publicly available secondary survey data to triangulate the results. Results show that, in addition to the benefits of low cost, simple installation, and operability, consumers also mentioned that, in contrast to cash transactions, mobile payment technology can support innovative applications. The analysis reveals implications for development on the requirement for greater inclusion of small-scale vendors.

14. ***V. Kumar, Nandini Nim & Amit Agarwal(2020*)**: **"Platform-based mobile payments adoption in emerging and developed countries: Role of country-level heterogeneity and network effects".** This study focuses on a conceptual framework for mobile payments adoption at an aggregate level for customers and retailers. The study tests the theory across 30 varied countries, and the results show that network effects exist as well as different effects of perceived value, inertia, and culture on the rate of adoption of innovators and imitators. This paper also discovers considerable levels of within and between country heterogeneity for the adoption of mobile payments, which adds to the case for emerging nations' leapfrogging in the area of widespread mobile payment acceptance.

15. ***P. Smitha Xaviera , Zakkariya K. A.(2021*)**: **"Factors Predicting Consumers' Continuance Intention to Use Mobile Wallets: Evidence from Kerala, India".** The purpose of this study is to examine the factors that predict a mobile wallet user's usage continuance intention. Based on a valence framework, the study examines how different valence dimensions, specifically positive valence (hedonic value, utilitarian value, monetary value, and social value), and negative valence (perceived risk), affect the intention of mobile wallet users in Kerala to continue using their devices. A self-administered online survey was used to gather information from 134 participants, and variance based PLS-SEM was used for analysis.

16. ***Abhijit Kundu(2022):*** **"Impact of Digital Payments on Indian Economy".** This study focuses on the effect of digital payments on the Indian economy. The most recent technological

advancements have changed conventional cash-based payment systems into a more effective cashless payment system. Since 2014, digital payments have exploded in India thanks to the government's "Digital India" plan, the growth of the Internet, the adoption of smartphones, and other technological advancements.

17. ***IBEF (Indian Brand Equity Foundation) (2022*)**: **"Digital Payments and Their Impact On the Indian Economy".** With around 25.5 billion real-me payment transactions, India ranked first in transaction volume in 2020. By utilizing electronic banking at its branches, Industrial Credit and Investment Corporation of India (ICICI) launched online banking services in India in 1996. Banks like HDFC, IndusInd, and Ci introduced online banking services later in 1999. As more banks introduced net banking services in India, the tendency kept expanding. This was the commencement of the era of digital transactions in India, as various new banks began providing services to customers.

18. ***Dr. Raja Kamal Ch , Prof. Souparnika V.T.(2021*)**: **"A Study On The Impact Of Digital Payment In Indian Economy With Special Reference To Covid-19".** This paper examines the potential impact of digital payment in the Indian economy, with special reference to Covid-19 on consumer payments. It analyses how digital payment is contributing to the economy and its transaction value, and how the nationwide lockdown has affected the country's GDP growth rate.

19. ***K.Suma vally, Dr. K.Hema Divya(2018):*** **"A study on Digital payments in India with perspective of consumers adoption".** The demonetization has led to exponential growth in digital payments, resulting in more transparency and empowering the country's economy. This research paper examines the adoption of digital payment systems by customers in Hyderabad.

20. ***Priyanka Appu Shetty(2020):*** **"A Study On Online Payment Applications In India With Reference To Amazon Pay".** This research paper examines the impact and importance of online payment applications in India, and the advantages and disadvantages of Amazon Pay. It also looks at the steps taken by RBI and the Government to encourage cashless transactions.

21. ***Ms. Sweta Mishra & Ms. Vidhi Rajora(2018):*** **"A Study on Digital Payment System- with special reference to Youth"**. The present era is seeing the emergence of digital payment systems, such as the mobile payment (m-payment) system, which enable users to pay for goods and services using their mobile devices. This research paper focuses on the impact and usage of these systems on youth and their problems. Data was collected using structured questionnaire and analyzed using simple statistical tools.

22. ***Rasna T.P.P, S.Susila(2021):*** **"A Comparative Study on the Usage Pattern of UPI Payments among Rural and Urban at Kannur District of Kerala".** This study aims to understand the preference of online payment known as UPI in Urban and Rural areas of India. It focuses on analysing the preferences of UPI payment apps and a comparative analysis of the male and female users of UPI in rural and urban areas with reference to Kannur district in Kerala. UPI is an advanced payment system which offers greater ease of use and high security and has shown greater adoption by the people. It is a forward stepping stone towards Digital India.

23. ***Haritha P.H.(2022):*** "**Mobile payment service adoption: understanding customers for an application of emerging financial technology**". This paper examines the mediation influence of perceived trust on adoption readiness and intention to use financial technology (FinTech) in India. It found that mediation of perceived trust had a significant but small impact on adoption readiness.

24. ***Dr. Shafeer P S(2019):*** **"Usage Of Digital Financial Services Among Youth From College Campuses In Kerala".** Digital Financial Services (DFS) are a range of financial services accessed and delivered through digital channels, including payments, credit, savings, remittances and insurance. Purposive sampling method was used to explore the usage of digital financial services among youth from college campuses in Kerala.

25. ***Annreeta Thomas & Dr. Aloysius Edward J.(2021):*****"Problems of Digital Payment on Labourers: a Study with Reference to Kannur District, Kerala"**. Digital banking has had a positive impact on labourers in Kannur district, Kerala, with most of them using it for more than a year. They are satisfied with the overall digital banking services and expect more improvements. The utility created on time, place and cost by digital banking services is accepted by everyone.

CHAPTER III
THEORETICAL FRAMEWORK

Mobile payments

A mobile payment is the execution and authentication of a financial transfer or remittance to a person, dealer, or business for bills, commodities, and services via a mobile device. The payment tool may be a mobile browser, SIM toolkit, virtual or electronic wallet, or mobile menu.

One of the many mobile financial/fiscal services (MFS) that are currently offered is mobile payment, which is considered as a doorway to other mobile fiscal services including mobile banking and insurance. More lately, users are embracing cryptocurrencies for savings, investing, trading, and payments. Person-to-person (P2P), consumer to consumer (C2C), consumer to business (C2B), and business to business (B2B) transactions are all possible with mobile payments. A P2P transaction may be referred to as a Mobile Money Transfer (MMT), although more specifically marketable C2B, B2C, and B2B transactions may be referred to as mobile payments.

Benefits

The following are some benefits provided by this facility:

1. *Convenience* - Mobile payments exclude a hedge to finishing a client's purchases. Clients can pay conveniently by tapping a phone or credit card at a point of trade, or they can make online deals using their payment apps.

2. *Speed* - Monetary institutions process mobile remunerations in the blink of an eye. This makes mobile checkout as hastily as a credit card transaction — if not faster.

3. *Popularity* – Larger customers are spending money through e payments. In 2021, worldwide consumers consumed spent over $1,786 billion through this method. Financial critics expect this figure to threefold in the coming five years.

4. *Security* - Mobile payments are among the most assured forms of commerce. That's because they 're accomplished on mobile devices that tend to bear some form of authentication, generally in the form of a point, facial recognition, or a passcode. The devices also cipher their transmissions, giving robbers a very minimum chance of interdicting client data.

5. *Digitized financial transactions* - Consumer remitments are a critical part of the house budgeting process. Digital wallets can incorporate fluently into software and mobile apps that assist people keep trace of what they 're spending, where, and how frequently. In addition, electronic bills

can be issued to help consumers keep better track of their spending, demote paper waste, and drop costs for businesses.

Disadvantages

The mode of e payment provides various of benefits and advantages. Similarly, there are various limitations in context to this facility. Some of them are as follows:

1. *Lost or Stolen Device* - The majority of people utilize their mobile phone as a lifeline for absolutely everything. They've substituted our wallets, business cards, GPS and furthermore lately credit card scanners and banking. All of these operations or hardware demand the user to enter some form of delicate data such as passwords, personal facts, location and banking details which are put up on the device.

2. *Weak Password* - Being manipulated due to delicate passwords, or overused passwords, is one of the over-the-hill forms of hacking. Indeed, the strongest form of word mincing encryption, used by commercial security enterprises, can fail when it comes to cyber offenders' decryption tools.

3. *Using Public Wi-Fi* - Some of the most popular ways hackers can jeopardize public Wi-Fi are by creating artificial connections and side jacking (thieving a user's access to a website through wireless public networks). Fake connections are created by setting up an access point(AP), which can be done utilizing any form of device with internet access, with the identical name as a legitimate connection. Hackers also block any data in conveyance, such as a bank transfer or online payment.

4. *Human Error* - Human error or neglectfulness has been quoted as the number one contributor to security violations in a number of scenarios. Hackers depend on human error when mapping some form of cyber-attack as they count on users to click on unsecured links, open emails containing security dangers and accidentally download malware.

5. *Technical Problems* - As it's an online service, it may go down due to technical issues and people who get 100% dependable on this service for their disbursements may face an issue.

Payment Gateways

Mobile payment gateways permit buyers to pay for purchases from the app and vendors to accept online payments. The gateway's main function is to admit, process, cipher, authenticate and transfer trade data from the client to the dealer. generally, the payment gateway app acts as a ground between the customers and the dealers to facilitate fiscal deals.

In other words, a payment gateway is a trader service furnished by an e-commerce operation service provider that authorizes credit card or direct payments processing for e-businesses, online retailers, bricks and clicks, or traditional brick and mortar. The payment gateway may be provided by a bank to its clients, but can be provided by a specialised fiscal service provider as a different service, such as a payment service provider.

The payment procedure typically proceeds as follows:

1. The user selects the item they wish to purchase and adds it to their shopping cart.
2. The customer chooses their preferred method of payment at the checkout, such as a credit card, bank app code, or another. additionally, they are directed to a gateway website, such Paypal (but there are plenitude of others). The gateway forwards the information adjoined by the user to the bank.
3. The issuing bank verifies the validity of the transaction and confirms that the buyer has sufficient funds in their account to cover the transaction.
4. If the verification is successful, the payment evidence is transferred back, nevertheless. through an app's payment channel.
5. The trader also learns that an order was submitted and paid for.
6. The trader eventually notices the funds in his account once the gateway launches a payment agreement.

The most commonly used gateways in India are as follows:

- Google pay
- PayTm
- PhonePe
- Bank provided online applications
- Amazon pay

Let us see the different gateways available under this facility.

1. **Paytm**

Paytm is an online retailer and financial technology firm based in India. Paytm was invented by Mr. Vijay Shekhar Sharma in August 2010. The business launched Paytm Wallet, a first-ever digital e-wallet, in 2014. Paytm provides online shopping, digital wallet payments, mobile remittances, Paytm Payments Bank, etc. The RBI granted Paytm a licence in 2015 so that it could open Paytm Payments Bank, which the then-finance minister Mr. Arun Jaitley officially opened in 2017.

The Paytm Wallet and Paytm Payments Bank are the two main ways that Paytm operates. Paytm is a well-known digital disbursement system that enables online banking as well as the ability to send money using debit or credit cards. Once you've signed up for Paytm, you can send money to pay your bills online or through your wallet by first adding funds to it.

Source: https://www.logo.wine/logo/Paytm

2. **Google Pay**

Google Pay also comprehended as G Pay or Pay with Google it's also one type of Digital Wallet and online remittance system developed by Google. The services of Android Pay and Google wallet amalgamated in January 2018 and the name was altered to Google Pay. On September 2017, Google commenced a UPI - based app known as TEZ in India which was latterly rebranded as Google Pay. Google Pay has more than 25 million operational users in a month of the digital wallets in India. Google Pay deals are safe and secure.

Google Pay enables you to-

i. Transfer and admit money.
ii. Store your credit/ debit card data safe.
iii. And use this information to pay for various particulars on variegated apps.

Google Pay is known for its security among other resembling digital payment apps. Google store your credit/ debit card facts in its secure servers using strong encryption. Cloud storage and data security of the clients is the foremost concern of Google.

Source: https://pay.google.com ; https://play.google.com

3. **PhonePe**

PhonePe, also known as PhonePe Private Limited, is a digital wallet and e-commerce payment provider based in India. PhonePe was the first payment app in India to be created using the Unified Payments Interface, or UPI, and it was developed in the year 2015 by its founders, Mr. Sameer Nigam and Rahul Chari (UPI). PhonePe is now offered in 11 different languages.

Phone Pe provides a number of services, including:-

i. The Phone Pe app allows users to send and receive money.
ii. Users have access to a variety of payment options, including mobile and DTH recharges as well as payments for online purchases made through various apps.
iii. Phone Pe even enables users to reserve tickets using a variety of apps, like Redbus, Goibibo, Ola, and others.

More than 100 million people use the Phone Pe app, which has processed more than 5 billion transactions.

The most recent update to the Phone Pe app allows users to withdraw money via the in-app UPI feature, sometimes referred to as the Phone Pe ATM, by sending the required amount to a nearby Phone Pe equipped retailer or seller.

Source: https://www.phonepe.com

4. **Mobikwik**

Another Indian company's app that serves as a mobile payment system and digital wallet is MobiKwik. Bipin Singh and Upasana Taku launched the app MobiKwik in 2009. MobiKwik began as merely a website with a closed wallet feature but subsequently expanded to include mobile apps. MobiKwik introduced the Mobikwik Lite app in 2016, which was designed for 2G and 3G mobile networks that had weak network connectivity. In 2012, MobiKwik unveiled its first-ever mobile wallet platform.

Additionally, Mobikwik introduced the capability of sending and receiving money using a mobile app.

Additionally, Mobikwik offers financial services like loans, various insurances like life, accident, and fire insurance, as well as mutual funds. The principal rival of MobiKwik in 2017 was Paytm.

MobiKwik was used by more than 15 million people in 2015 for its distinctive features, and the company claimed that number was growing by one million users per month, according to Forbes India Magazine.

Demonetization took place in India in 2016, and Mobikwik saw a 400% rise in financial transactions during this period.

Source: https://www.logo.wine/logo/MobiKwik

5. **YONO by SBI**

The State Bank of India launched this mobile wallet app. This wallet has 13 languages available for its services. The name YONO, which stands for "You Only Need One," refers to an app that gives users access to a variety of financial and other services. It functions as a digital banking platform that provides services like online shopping payments, ticket booking for trains, buses, taxis, and flights, as well as the ability for users to pay for medical bills.

The YONO app was introduced in 2017 by Mr. Arun Jaitley, India's finance minister at the time. Customers can also use this app to withdraw money from an ATM and to transfer money between different types of accounts, among other things.

Mr. Arun Jaitley, then-finance India's minister, unveiled the YONO app in 2017. Customers can use this app, among other things, to transfer money between different kinds of accounts and withdraw cash from an ATM.

Source: https://commons.wikimedia.org/wiki/File:SBI_YONO_Logo.svg

6. **CITI MasterPass**

Citi Bank India and Mastercard jointly introduced CITI MasterPass. The first global digital wallet is one from India.

The details of the customer's card and their shipping information are saved in their Mastercard by Citi MasterPass, which safeguards sensitive data. In order to avoid having to fill out all the information during checkout, customers can just choose the "Buy with MasterPass" payment option when completing their payment. Due to the necessity for safe, secure, easy, and rapid transactions when purchasing, this feature increases the risk of personal consumer information being exposed.

More than 24 nations around the world provide CITI MasterPass services. Due to Citi Bank's innovative, secure, and safe online offerings, 41% of its transactions are now made in this manner.

Source: https://1000logos.net/masterpass-logo

7. UPI BHIM App

Bharat Interface for Money is referred to as BHIM. The National Payments Corporation of India (NPCI) developed the BHIM App, which is based on the Unified Payment Interface (UPI) (UPI). This software was introduced by our prime minister, Shri Narendra Modiji. The BHIM App was released on December 30, 2016, and there are presently 20 languages accessible for it.

All Indian banks that use the UPI system and the IMPS, or immediate payment system, which enables users to transfer money to bank accounts of any two parties, are supported by the BHIM app.

A user can conduct transactions quickly, easily, and easily using the UPI system.

Users of the BHIM App can do the following services:-

i. The ability to send money.
ii. The user can request money, but to do so, the user's cellphone number must be connected to the bank account they are using.
iii. Users can Scan and Pay for speedy transactions.
iv. Another benefit of the BHIM App is that it enables users to view a history of their transactions.
v. Customers can use the report option in the BHIM App to submit any complaints they may have.
vi. The BHIM App's next option is the Bank Account option, which allows users to examine the bank accounts that are connected to their accounts via the BHIM App. By simply selecting "Change Account" in the BHIM App, a client can also change their bank account.
vii. Transferring money via the BHIM App is simple because the app enables customers to send money to several payment addresses.

Source: https://www.india.com

8. HDFC PAYZAPP

The HDFC Bank created the mobile payment software PAYZAPP. Customers can purchase movie, train, and aeroplane tickets, book a cab, recharge their phones and DTH, pay utility bills including energy, rent a car, and shop online using Payzapp. Additionally, customers can track their expenses and give money to their loved ones.

In order to use the most secure form of payment, a customer must connect their bank account to the HDFC PAYZAPP app. To complete any transaction on the Payzapp app, you simply need to scan a QR Code.

Aditya Puri, managing director of HDFC Bank, stated during the Payzapp app launch that "The wallet we introduced under Payzapp, unlike other wallets, is not a pre-paid wallet. It displays both your account information and the balance on your credit card. What's more, it only takes one click. The convenience is that."

Starting the Payzapp App: -

i. The Payzapp app must first be downloaded from the Play Store.
ii. Type in your registered mobile number, which is the one associated with your bank account.
iii. Finish the registration procedure by going through each KYC stage.
iv. The following step requires you to connect your bank account or credit card to the Payzapp app.
v. The Payzapp app is now available for usage.

Source: https://www.companyvakil.com

9. Amazon pay

Owned by Amazon, Amazon Pay is an online payment processing business that debuted in 2007. There are 18 countries worldwide where Amazon Pay is accessible. For Amazon Pay, there are no registration fees. To improve the speed, simplicity, and effectiveness of the

customer's payment procedure, Amazon Pay has undergone a number of adjustments during its evolution.

To prevent theft and fraud, Amazon Pay does not provide the retailers with card information.

The user of Amazon Pay has the ability to utilise their Amazon Pay account to make purchases on external or third-party websites. Both the Amazon app and other e-commerce websites and apps support third-party integration with Amazon Pay. Grocery shopping, the purchase of smart home gadgets, and other purchases may all be made via Amazon Pay.

Source: https://www.amazonpay.in

10. Braintree

Since PayPal bought Braintree in 2013, the two names are frequently used together. The unique selling point of Braintree is that they provide specialised merchant accounts, which is something that payment service providers don't typically provide. Businesses like Airbnb, Uber, and GitHub use Braintree payment processing services.

Features that set it apart include:

i. Considered a technologically advanced payment gateway.
ii. Strong security protocols.
iii. Aids in identifying and preventing fraudulent transactions.

Source: https://www.braintreepayments.com

11. Adyen

This Dutch corporation is a major player in the payment gateway industry. Adyen's transaction volume in the first half of 2019 topped € 130 billion, while its net revenue totaled € 220+ million, representing a 41% year-over-year increase. Microsoft, eBay, Uber, Spotify, Sephora, and Nike are a few of Adyen's clients.

Features that set them apart include:

i. Offering transparent fees with a clear list of prices for accepted payment methods on the website Supporting nearly all cards and digital wallets
ii. Presenting itself as the payment gateway for large and international operations
iii. Operating in many nations and continually growing its global presence.

Source: https://en.wikipedia.org/wiki/Adyen

12. CCBill

Since its founding in 1998, CCBill has served more than 30,000 international e-commerce merchants and conducts over a billion dollars' worth of transactions annually.

Unique features:

i. CCBill specialises in high-risk payment processing and payment gateway for dating, non-profit, subscription-based, and live entertainment business types in addition to handling international payments for e-commerce businesses.
ii. Accepts bank transfers, online checks, credit cards, debit cards, gift cards, and other forms of payment.
iii. Connected to a number of regional payment options and a large credit card network.

Source: https://ccbill.com

13. <u>Paya</u>

Formerly known as Sage Payment Solutions, Paya is a company that offers payment processing services. Since 1989, Sage Payment Solutions has operated in the United States as a division of the British corporate software giant The Sage Group. GTCR purchased Sage Payment Solutions in 2017. Paya, a now-independent business, provides several payment options, including Paya Connect, a well-liked payment gateway service in the United States and Canada.

Features that set them apart:

i. Provides strong connection with payment platforms
ii. Recurring billing is supported, and
iii. A user-friendly mobile payment mechanism is available.

Source: https://paya.com

14. Alipay

The most popular online payment service in China is Alipay. With more than 200 million daily transactions and 1.2 billion active users worldwide, Alipay is a must to tap into the burgeoning Chinese market, so it's no surprise that more than 80,000 retail locations have already embraced it. Features that set it apart include:

i. Easy setup and premium assistance.
ii. Advanced encryption technology.
iii. In-app purchases on mobile devices.

Source: https://www.rpnpay.com/alipay

15. Razorpay

With its product suite, Razorpay is the only payments solution in India that enables companies to receive, handle, and disperse payments. All payment methods, including credit card, debit card, net banking, UPI, and well-known wallets like JioMoney, Mobikwik, PayUmoney, Airtel Money, FreeCharge, Ola Money, and PayZapp are accessible through it. At a fair price, Razorpay offers the best level of technological integration.

Source: https://en.wikipedia.org/wiki/File:Razorpay_logo.svg

16. CCAvenue

One of the biggest payment gateways in India, CCAvenue, provides a variety of payment methods. It provides 200+ payment alternatives, including 6 credit cards including eZeClick, JCB, Mastercard, Visa, and Amex. Additionally, it supports 27 main currencies, allowing you to service clients in some important international markets other from India. Additionally, CCAvenue offers a Multilingual payment page in 18 important Indian and foreign languages.

Source: https://www.nopcommerce.com/en/ccavenue-payment-module

Following is a table showing some payment apps along with its pros and cons

APP	DESCRIPTION	PROS	CONS
PayPal	A well-known payment gateway service that can serve as both a processor and a gateway is PayPal. It is not only simple to use, but it is also loaded with many capabilities for making and taking payments. The merchant costs charged by PayPal vary based on your region, supported currencies, and payment methods. For instance, the transaction charge increases from 2.59% to 3.09% when you utilise PayPal Online Card Payment Services, plus a predetermined sum.	• **Simple setup:** Users can easily link PayPal to their online store. •**Supports international payments:** One of the greatest solutions for sending money abroad, it is accessible in more than 200 nations and regions. • Under the **Seller Protection Program,** PayPal will assist eligible merchants in resolving transactional concerns.	• **Delays in the checkout procedure**: Because PayPal uses redirection, clients must go to a different website to finish their purchase. The auto-return function is also restricted to business accounts only. • PayPal users are a **frequent target of phishing attacks**. You might occasionally get phoney PayPal emails with phishing links.

Stripe	Stripe is a trustworthy online payment gateway that accepts credit and debit card payments from all kinds of businesses. Stripe costs 2.9% + $0.30 from each successful card charge, however there are no startup fees at first.	• **Financial reporting**: Users of Stripe Sigma will get thorough reports with recommendations for enhancing business operations. • Accept payments in **more than 135 different currencies** to enable international transactions. Additionally, it enables a number of payment options, including credit card payments, mobile payments, and one-click checkout. • **Compatibility:** The major eCommerce platforms and third-party services, such as analytics, finance, and marketing tools, are easily integrated with this payment gateway.	• **Technical expertise required:** Its developer tools and APIs may be challenging for non-tech users to use. • **Delay in payout:** It usually takes 7 to 14 days for sellers to see money in their accounts.
Square	Square is another platform that makes settling payments easier for merchants. It offers an advanced and feature-rich	• **Free POS:** Square's point-of-sale system is free to use and has several great features. For instance, retailers	• **Weak customer support:** Square can often terminate a merchant account when problems arise

	solution for accepting mobile credit card payments. Square charges transaction fees of 2.6% + $0.10 for card-present transactions and 2.9% + $0.30 for card-not-present payments online	can create professional-looking invoices and track item inventory. • **All-in-one payment:** Various payment options are available, including recurring payments, invoicing, credit or debit card payments, and contactless payments. • **Virtual terminal:** Insert credit card details directly via web connected devices. • **Clean-looking dashboard:** Square also provides a payment dashboard that serves as a central hub for all your payment activities	with third-party payment processing without adequate explanations. • **Not cost-effective for large businesses:** The flat-rate pricing system may be costly for businesses with higher transaction volumes.
Apple Pay	For mobile payments, Apple Pay provides a quick and dependable payment gateway solution. As long as your store has a near-field communication (NFC) terminal, you are able to accept credit cards and other types of electronic payments.	• **Speedy checkout:** With only one click, customers may swiftly finish their purchases. No form needs to be made in order to get cardholder information. • **Built-in privacy and security features:** The	• **Difficult adoption:** In order to use the service, merchants must have an NFC terminal. • **Problems with compatibility:** Depending on where your audience is

		use of EMVCo and the anonymized digital token system make Apple Pay one of the safest payment methods.	located, it's possible that their gadget won't work with this payment gateway.
Amazon Pay	Online payment processing is made simple and safe with Amazon Pay. Amazon shoppers may simply make payments to merchants using its checkout option. The transaction fee for Amazon Pay includes taxes in addition to domestic processing and authorization fees.	• **Voice-based transactions:** Let customers use Alexa-enabled devices to shop. • **Extremely responsive:** To lower card abandonment, enhance the web and mobile checkout experience. • **Discounts for non-profits:** Qualified non-profit organisations can take advantage of Amazon Pay's discounted rates, which offer a wonderful method to collect gifts without incurring significant processing fees.	• **Difficult merchant account approval:** One problem with Amazon Pay is that following acceptance, companies must submit further paperwork. • This payment gateway service has **limited functionality** for in-person transactions because it does not provide facilities for such transactions. If you want a complete payment solution, take a look at another choice on the list.
Authorize.net	Visa created the online payment gateway known as	• **Integrations**: Merchants may easily	• **Geographical limitations**: Only

	Authorize.net. With its help, businesses can swiftly take card and cash payments and move money to their bank accounts.	add payment options because Authorize.net integrates with a large range of processors, POS systems, and well-known card companies. • **Packed with features**: It includes eCheck processing, automatic account updates, and fraud detection.	companies based in certain nations, such as the US, UK, Canada, and Australia, may use the service. • **Monthly fee**: Authorize.net charges a $25 gateway fee per month in addition to a combined transaction fee of 2.9% + $0.30. Therefore, individuals who wish to keep costs down can choose a different gateway that offers a free merchant account with no monthly fee.
Helcim	The payment gateway provided by Helcim has an intuitive user interface and a configurable billing structure. You can collect payments from clients both offline and online with a Helcim merchant account. The costs charged by Helcim are based on how many credit card payments your company accepts each month. They charge an average of 2.4% plus $0.25 for each online transaction.	• Helcim offers **transparent pricing** and has no hidden fees or commitments under contracts. There are no setup, monthly, Payment Card Industry (PCI), or cancellation costs for users to worry about. • **Cross-platform compatibility**: Merchants can use Windows, macOS,	• **Limited integrations of POS hardware from third parties:** The system does not support terminals from third parties. • **Unsuitable for high-risk industries**: It will be challenging for merchants to have their accounts approved if they have a poor personal credit score or

		smartphones, and tablets to use Helcim's payments app. • **Excellent customer service**: Helcim provides responsive phone, email, and ticket assistance.	a high-risk business profile.

Source: https://www.google.co.in

History Of Mobile Payments

In 1997, Coca-Cola in Helsinki introduced a beverage vending machine where customers could pay for the beverage with just an SMS message, ushering in the first mobile payment of services or goods in history.

Mobil, an energy corporation, also released an RFID gadget called Speedpass about the same time. By merely slipping the gadget at or close to the sensors installed on the pump, this device assisted its users in paying for their fuel at gas stations. These two services are regarded as mobile payment's forerunners. Both systems were SMS-based, and users' mobile devices were used to make payments using mobile accounts.

The payments were initially restricted to tiny sums, which is why they were sometimes referred to as micropayments.

The world's first phone-based banking service was introduced by the Merita bank of Finland in 1997 as a result of the rapid evolution of mobile payment systems based on SMS.

The mobile payment systems continued to advance over time. We began purchasing movie tickets using mobile devices in 1999.

In later years, we also began booking travel and placing pizza orders on our phones.

One of the biggest mobile payment systems in the world was introduced by Vodafone in 2007. It provided a variety of macro and micropayment options and was based on USSD/SMS technology. With the assistance of the regional telecom providers, Vodafone offered this service in Tanzania and Kenya.

Some significant players, including Apple and Google, entered the mobile payment market in 2011. Google was the first significant business to develop a mobile digital wallet system. Customers could pay with the wallet's NFC-based payment system, use discounts, and accrue loyalty points. However, only one phone model and a small number of retailers supported Google wallet. Even with all these restrictions, it nonetheless managed to become well-liked by consumers.

Apple released their Passbook app in 2012, following in Google's footsteps. Instead of mobile payments, Passbook targeted discounts and boarding passes. However, after the launch of the iPhone two years later, Apple launched its payment service in the US named Apple Pay.

Later, it was offered in China and the UK. Let's take a quick look at everything that is significant.

Mobile pay timeline

• 1997 saw the debut of SMS-capable vending machines from Coca-Cola. Exxon Mobile introduces Speedpass, a payment system that makes use of RFID technology.

• 1998 sees the launch of PayPal.

• In 1999, some mobile phones allowed for the purchase of movie tickets.

• Domino's Pizza starts accepting phone orders in 2001.

2004 saw the introduction of SMS donations to nonprofits.

Square launches its services in 2009. Sales for mobile payments have surpassed $69 billion.

November 2011 saw the launch of Google Wallet.

• 2014 saw the launch of Apple Pay.

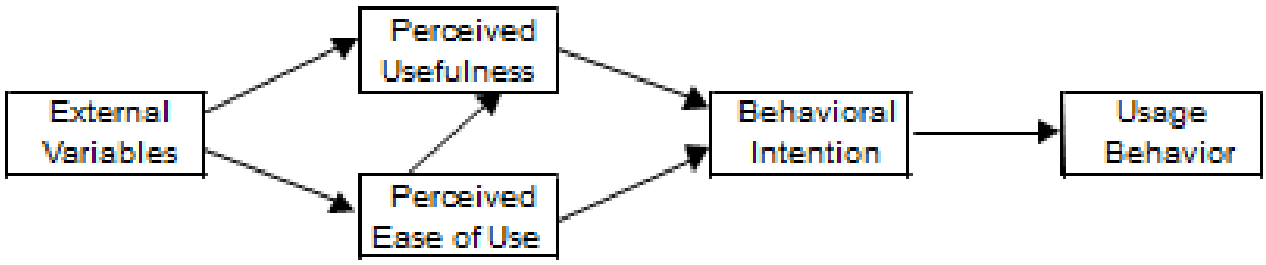
• Samsung Pay and Android Pay are made accessible in 2015.

Reason For Implementation Of Mobile Payments

A disruptive technology, mobile payments have had a significant impact on how business is conducted. Additionally, it has had a significant societal influence on low- and middle-income nations.

The Theory of Technology Acceptance Model can provide an explanation for the rapid uptake of mobile payments (TAM). The adoption and usage of technology by individuals are explained by this approach. This model suggests that there are two key variables that affect people's decisions on whether to use new technology:

1. ***Perceived utility***, or how well-being is improved by new technology.
2. ***Perceived ease of use***, which refers to the perceived effort required to use the technology. These two factors are the main ones that define a person's attitude towards new technology, but as the image below illustrates, they are also influenced by other factors.



Source: https://itchronicles.com

Mobile technologies are seen as being extremely practical and needing little work. Here are a few advantages of mobile payments that we should think about:

1. ***Simple Access:*** There is no denying that mobile payments are simpler for senders and recipients to use. You have quick access to your money thanks to a mobile device in your hand. Compare this to earlier cutting-edge technologies like ATMs, where you have to drive or go to a cash dispenser. Small and microbusinesses around the world stand to gain the most from mobile payments. They spend more time managing their enterprises and less time going to the bank to deposit and withdraw money. From the perspective of a single person, this might not seem like a big problem, but when millions of people in an economy are more productive because of time savings and improved logistics, economic growth is accelerated. Mobile payments are proven to be the leapfrog technology needed for economies that have trailed behind to catch up with developed economies.
2. ***Practicality and Security:*** Accessibility is convenient. The ability to send and receive payments with little physical effort is another advantage, though. With merely a cell phone as a tool, people are operating businesses from the comfort of their living rooms. Additionally, mobile payments are safer than traditional payment methods. To put it simply, no one can plan to rob you in an alley by seeing how much money you have in your mobile wallet. Additionally, unlike credit

cards, which are simple to hack and steal, the majority of mobile payments use superior encryption. There are various degrees of security, so a thief would have to first take your phone. They would then need to figure out how to unlock it, and after that, they would still have the difficult work of guessing or stealing your mobile wallet password. Mobile point-of-sale payments need customers to authenticate themselves using a PIN or a biometric. Increased economic activity and overall GDP growth are directly correlated with improved security (GDP).

3. ***Bank the Unbanked***: The bulk of the world's population lacked access to banks prior to mobile payments. Financial exclusion characterised the world. People who dealt with cash and developed informal financial structures to suit their requirements since their salaries were too low or irregular for traditional banking practises. As a result, they were unable to obtain traditional financing to grow their companies and pay for additional expenses like housing and schooling. These individuals have entered the mainstream thanks to mobile payments. Nearly 4 billion individuals worldwide currently have a bank account or an account with a mobile money service provider, according to the World Bank. For the purpose of reducing inequality and poverty, financial access is essential. Mobile payments support The United Nations Sustainable Development Goals on eradicating poverty and reducing inequality in this area.

Other benefits :

- ***Mobile transactions are secure and sanitary:***

  Mobile payments have been quickly adapted, in large part due to safety and security concerns. They aid in preventing fraud and theft because you don't need to enter your credentials because the cards are connected to the m-wallet. It is safer because, unlike credit card transactions, credentials are unlocked using the mobile password and payment requires confirmation with a password or fingerprint. In a mobile payment, credentials cannot be stolen because they are not kept by a third party. People and businesses are switching to mobile payments as a result of COVID-19, which raises concerns about handling possibly contaminated cash. Even if you don't have a credit card or bank account, it's simple to make cashless, contactless payments at merchants, send and receive money, and pay on delivery. Compared to handling cash, mobile payments are far more hygienic.

- ***They are quite practical:***

  Whether online or in physical establishments, using mobile payments reduces time spent in the checkout queue. Since there are no card data or OTPs to enter and QR code is supported by all major smartphone and mobile operating systems, certain mobile payment solutions employ it to

enable speedier payments. Showing the cashier, a QR code from the payment app and entering your pin, fingerprint, or face recognition information on your phone will complete the transaction.

- ***Transferring money is simple and quick:***

  Peer-to-peer (P2P) money transfers have been completely transformed by mobile payment alternatives. With mobile payments, sending and receiving money is quick, easy, and secure. Whether it's paying the check after a meal, contributing to a co-worker's birthday gift, or sending a monetary gift like Eidiya. You can send money to a friend or a new contact in your phone just as quickly as sending a text message using the mobile payment software PayBy, for instance. This feature comes in helpful when you don't have exact change on hand. It can be used to tip delivery personnel, professionals like plumbers and gardeners, and tutors for children. Card information can be added to the mobile wallet or topped off. Instant and practical withdrawals to a bank account from an m-wallet. Mobile payment is by far the simplest way to send money when handling cash raises the risk of transmitting germs and an online bank transfer takes significantly longer. Additionally, peer-to-peer transfers are free of transaction fees. There is no waiting or interacting with a chatbot, unlike traditional banking, to complete the transfer.

- ***They are practical for using e-government services:***

  The UAE is moving swiftly towards having a cashless society and smart services. Digital payments for services and fines are already required by Sharjah's government. Mobile payments have made it simpler for everyone - including the underbanked - to use smart government services and pay for utilities with the introduction of UAE Pay and Abu Dhabi Pay. Additionally, even if you don't have a bank account, using a mobile payment makes it simpler to keep track of costs, save money, and accomplish financial objectives.

- ***They're making financial services simpler:***

  Financial services aren't always the most straightforward to use. Consider a mobile wallet as a little ATM that fits in the palm of your hand and streamlines financial services to make them more convenient, safe, and accessible. To enhance clients' financial skills, some mobile payment providers are also including digital loans as a component of their offerings. Microfinance, the ability to buy now and pay later in instalments for things acquired, and microcredit, which

supports people's financial goals, are financial services that are given through mobile payment systems.

Future Of Mobile Payments

We observed the prevailing patterns in mobile payments. Let's now examine what mobile payments will look like in the future.

1. ***Machine learning-based advanced security:***

   The progress of payment technologies is being driven by security. The advancement of payment technologies is hampered if security standards are not met. Given that the bank receives a vast volume of payment data, security is essential to payments. It is quite a problem to identify frauds from such a large collection, and only particular tools and software are able to do it. Because of this, a lot of banks are resorting to machine learning to carry out this work. AI includes machine learning as a subset. Banks are a steady source of fresh transactions for ML. This continuous feed demonstrates to ML the distinction between a legitimate transaction and a fraudulent one. These cases are studied by ML software, which then has the ability to immediately spot fraudulent transactions. With increasing numbers of transactions and fraud detection, ML keeps improving. Your credit card provider may have sent you text messages asking if the transaction was fraudulent. The ML software sends out all of these alerts to warn you before any significant fraud. Cybercrime is on the rise, which is evidence that criminals are constantly coming up with new ways to deceive people. Banks use machine learning technologies to tighten their security as fraudsters step up their game.

2. ***Mobile point of sale***

   Not just people's preferred methods of payment are moving to mobile. The processing of credit card payments is also becoming mobile thanks to mobile point-of-sale (mPOS) technology. Mobile point of sale, or mPOS, units are wireless gadgets that resemble traditional cash registers and sale terminals. Merchants may accept payments easily, wirelessly, compactly, and conveniently with mPOS systems. With mPOS devices, businesses are free to take payments from customers wherever they are. This wasn't achievable in the past because of the merchant's antiquated in-store payment systems. There is no requirement for a central checkout location with mPOS. Customers can check out their packages from any of the staff members there rather than having to take them to the cashier. Business Insider predicts that by 2021, there will be 27.7 million mPOS devices, up from the 3.2 million that existed in 2014.

3. ***Authentication via biometrics:***

The term "biometric" simply refers to the measurement of bodily traits like fingerprints, iris, voice, vein infrared thermography, eye, or a combination of all these traits. Numerous banking organisations have quickly embraced the biometric authentication as the newest method of cyber protection. The PIN codes are expected to become obsolete, according to FinTech. Additionally, it is increasingly imperative for financial institutions to offer a secure authentication mechanism for mobile payments as billions of clients move to digital platforms. And it has been demonstrated that using biometric authentication is safer than using a PIN or any other method. The public is largely in favour of biometric authentication, with 56% of respondents admitting that they prefer it to PIN for account authentication.

4. ***Social business:***

The majority of today's tech-savvy generation's leisure time is spent scrolling through social media sites like Instagram, Facebook, Twitter, Snapchat, and many others. Retailers and merchants that have noticed this trend are trying to connect with them on social media and provide them with their products. Additionally, they make sure that users may check out via the social media platform rather than being redirected to a page where they must fill out a form. Additionally, this approach streamlines and expedites payment. Additionally, chatbots expedite checkouts and autofill assistance.

5. ***Quicker Payments for Services and Utilities***

Most likely, you pay your normal credit card bills by being charged for your utilities bills. So, in order to pay for gas, water, or electricity, you must first log into your bank account. However, in the near future, plug-and-play solutions that integrate the complete local ecosystem of utility service providers through a single endpoint are what mobile payment APIs want to make possible for businesses. In China, where the WeChat app includes dozens of lightweight APIs and enables more than a billion people to conveniently make routine purchases from a mobile phone, this is already evident. There is little doubt that such efficient real-time payments, which allow consumers to save time and avoid lengthy lines at governmental organisations like the Department of Motor Vehicles, would be appreciated everywhere. Additionally, this provides plenty of economic opportunities for organisations who deal with invoices.

6. ***Streamlined International Trade***

The majority of cross-border payments are still expensive and take a while. By enabling quicker international payments and remittances from the convenience of a digital wallet, mobile payments can simplify this procedure for cross-border trade. In addition to offering users unparalleled convenience for quick international money transfers, this would also create a tonne of economic opportunities. By 2026, the remittance market alone is anticipated to increase to $930.44 billion at an annualised rate of 3.9%.

7. ***Social Media and Mobile Payments convergence:***

Social media is a crucial component of daily life and is probably going to become much more significant in the near future. For instance, it is anticipated that such platforms will provide related financial services. Consider financial services like insurance, savings, and credit being integrated into an app where you currently spend a lot of time. In addition to giving customers the option to pay for more services, social media and messaging can be integrated with payment platforms to provide better customer assistance. Businesses are increasingly allowing customers to interact and make payments; see Venmo and xZelle applications.

8. ***Mobile Wallet Cloud Integrations***

A mobile wallet that features cloud-based technology is a solution that enables users to pay in a frictionless manner due to a network of remote servers. With all devices, modules, and network paths having a duplicate kept in a cloud environment, there is no SPOF (Single Point of Failure). Thus, apart from convenience, such solutions also enhance payment safety.

9. ***Sound Wave-Based Payments***

Payments made using audio signals are even more sophisticated than those made using NFC. Because of it, a user can make purchases without a credit card terminal, a banking app, or a mobile wallet. Such transactions are driven by sound waves that carry encrypted payment information, eliminating the need for an internet connection to complete the transaction.

Market research on payment gateways

Currently valued at USD 22.8 billion, the worldwide payment gateway market is anticipated to grow to USD 52.8 billion during the following five years, with a CAGR of 16.43%. Due to the COVID-19 pandemic's worldwide quarantines of millions of individuals, internet sales of goods, services, and entertainment also increased. According to a survey by ACI Worldwide of hundreds of transactions from international online retailers, the volume of transactions in the majority of the retail sectors increased by 74% this year compared to the same period the previous few years, fueling industry growth.

- Over the past few years, the payment mechanism has advanced at an astounding rate, moving from the token system to currency pooling and cashless transactions. Any company, including brick-and-mortar and online retailers, can accept payments through the customer's preferred bank without endangering important information thanks to a payment gateway. Integrating a payment gateway has become one of the fundamental elements of every organisation across all industries. Additionally, market growth is predicted to be fueled by increased online transactions throughout the course of the forecast period.

- Due to rising e-commerce sales and the high rate of internet penetration globally, financial service businesses are now able to provide customers with distinctive digital services, which supports the expansion of the payment gateway industry. The growing acceptance and accessibility of high-speed internet will support the growth of the payment gateway business.

- The rising global need for mobile-based payments is another factor driving the market for payment gateways. Over the course of the projection period, it is projected that the use of mobile payments for a variety of transactions, such as ordering takeout, buying movie tickets, and updating smartphone games, will drive the market's growth. Debit or credit cards are also used in both developed and developing countries to make these payments. This element is projected to aid in the market under investigation's further expansion. This is because smartphones allow for easy payment processing and the storage of credit card data.

- Due to the fact that most consumers keep their credit card information, there is a risk for the growing number of cyber-attacks that steal data, which is a constraint. The market may also be constrained over the course of the study by additional variables such a lack of internet connectivity in rural areas, a lack of global standards for cross-border payments, and varied regulatory prohibitions in various nations.

- The COVID-19 pandemic and the ensuing lockdowns negatively impact the payment gateway market due to a global shift towards e-commerce caused by lockdowns, which has resulted in the

launch of numerous payment gateways that facilitate online payments for online purchases made from e-commerce websites. As a result, despite the pandemic problem, the market has grown. The market would enjoy growth in the digital sector throughout the projected period as a result of UPI's increased prominence in the combined post-pandemic environment.

Sectors of the Payment Gateway Industry

A payment gateway is software and a server that communicates all pertinent data regarding an online transaction involving a particular bank account and informs customers as to whether their transaction was successful or unsuccessful. The payments sector is constantly growing and changing, and the amount of digital payments and transactions is increasing globally. As they strive for a bigger piece of the payment business, incumbent suppliers of closed and open payment systems should be expected to face more competition.

The Payment Gateway Market is Segmented as follows:

By Type	
	Hosted
	Non-Hosted
By Enterprise	
	Small and Medium Enterprise (SME)
	Large Enterprise
By End User	
	Travel
	Retail
	BFSI
	Media and Entertainment
	Other End-user Verticals
By Geography	
	North America
	Europe
	Latin America
	Asia Pacific
	Middle East and Africa

Market trends for payment gateways

Payment gateway usage increasing in retail

- Across the globe, retail establishments and services are quickly integrating mobile payment platforms like PayPal, Samsung Pay, Apple Pay, AliPay, and WeChat Pay to accept payments. Furthermore, this tendency is anticipated to persist during the projection period due to changing lifestyles, everyday commerce, and the quick expansion of internet retailing. Over the course of the forecast period, the payment gateway market is anticipated to be driven by the booming demand for online commerce around the world.

- Retailers are creating new business plans to benefit from the convenience economics of at-home delivery and internet shopping. The infrastructure supporting payments is increasingly dependent on payment gateways. They are a crucial link in the modern economy that allows point-of-sale systems, virtual terminals, and online shopping carts to connect to the payment process. The market for payment gateways is anticipated to develop as a result of this factor.

- Consumer behaviour is transforming the market under study. A few developments that are affecting the retail industry are the cashless economy, mobile banking, fast payments, digital commerce, and the expanding influence of regulatory bodies. Consumers that use online payments enjoy the benefits of shorter lines, the elimination of cash-on-hand issues, and lineups that move more quickly.

- The demand for local payment gateways associated with banks is primarily being driven by banks' increasing use of digital technologies. This payment gateway directs customers to banks so they can enter their financial information while making a transaction. The quick and easy deployment of this payment method has expedited its adoption in SMEs. Thus, the market for payment gateways in the retail sector is anticipated to increase as a result of the rising need for local bank-integrated payment gateway.

- For instance, PayU, a business with headquarters in India, is regarded as one of the most user-friendly e-commerce payment solutions created to fill in the gaps left by sophisticated service providers. Due to the highest conversion rates it provides, PayU is preferred. PayU is a well-known payment gateway used by organisations including Netflix, Airbnb, and Bookmyshow. Zepto, the 10-minute grocery delivery service, would now be able to provide a quicker and more user-friendly UPI experience through the integration of Cashfree Payments' Payment Gateway API into its mobile app. This would happen in November 2022. To help more merchants go online, the gateway has possibilities for added-value services. These programmes are anticipated to accelerate market expansion.

Despite many stores experiencing logistical difficulties, e-commerce sales have grown since the lockout, especially for grocery and health products. For instance, online retail order volumes in the United Kingdom have increased by nearly 200% for several products after the COVID -19 epidemic.

Analysis of the Payment Gateway Market's Rivals

Prominent players including PayPal, PayU, Amazon Payments, and Stripe have successfully consolidated a large portion of the payment gateway market. To attract more customers, other businesses, meanwhile, are attempting to acquire larger market shares through mergers and acquisitions.

In order to help online retailers throughout Europe and improve Magento integration for the changing EU Market, BlueSnap, the payment orchestration platform for top B2B and B2C enterprises, strengthened its cooperation with the premier eCommerce agency, objectsource, in November 2022.

With an emphasis on the e-commerce, retail, travel, cryptocurrency, and financial services industries, Paysafe, a British payments firm, partnered with Spreedly, a payments orchestration platform, in September 2022 to assist merchants with their international payments across the UK and Europe.
The Reserve Bank of India granted Mswipe Technologies, a financial services platform, an in-principle Payment Aggregator (PA) licence in August 2022. (RBI). Mswipe may create a private online payment gateway with this approval.

Top players in the payment gateway market

- PayPal Holdings, Inc.
- Amazon Pay (Amazon.com, Inc.)
- Stripe, Inc.
- Skrill Limited
- PayU Group

Current Developments in the Payment Gateway Market

• In November 2022, Instacart, the top grocery technology firm in North America, teamed with Adyen, a worldwide financial technology platform, to accept extra payments. Instacart will use Adyen technology, such as PINless debit transaction enablement, as part of the new agreement to further optimise and increase authorisation rates for a more smooth consumer experience.

• September 2022: PhonePe, the pioneer of the Unified Payments Interface (UPI), plans to introduce its own payment gateway as an addition to its in-app and QR code-based UPI Payments services. The first quarter of 2023 is when the gateway is anticipated to go live.

Source

CHAPTER IV
DATA ANALYSIS & INTERPRETATION

Charts and graphs

Pie charts and other graphs were used to assess the data that had been gathered, and the results are shown below.

We can determine whether or not our hypothesis is correct via data analysis.

Additionally, it is helpful to assess whether or not all of our objectives are being met. A conclusion or outcome to our research problem can be reached with the aid of data analysis.

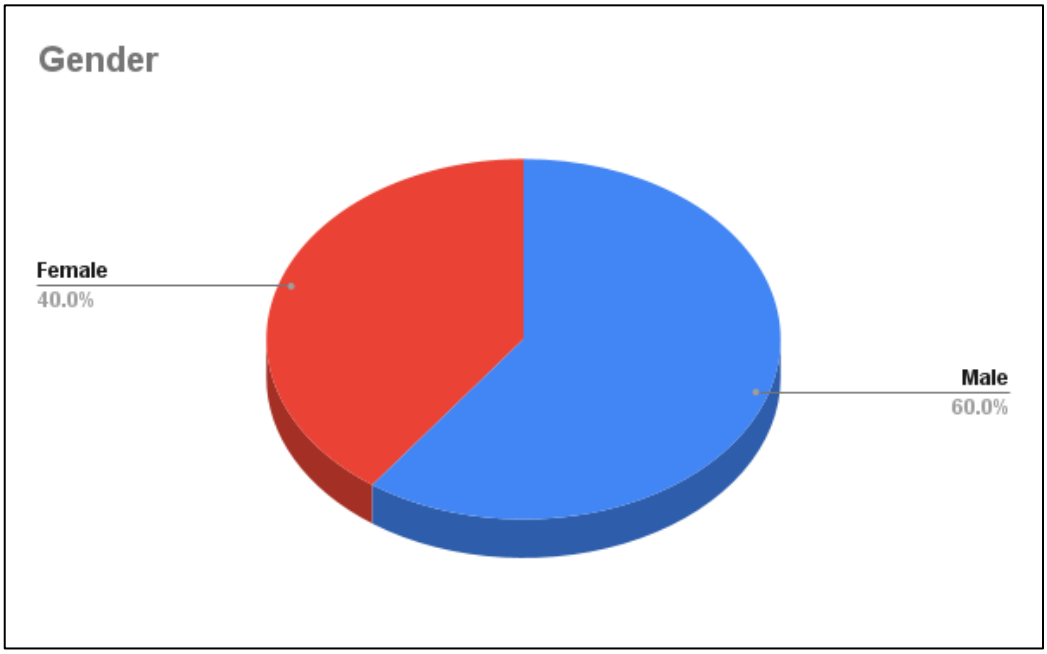
Total Respondents: 50 respondents

1. **Gender**

Table 1

OPTIONS	PERCENTAGE	COUNT
MALE	60	30
FEMALE	40	20

Figure 1



INTERPRETATION

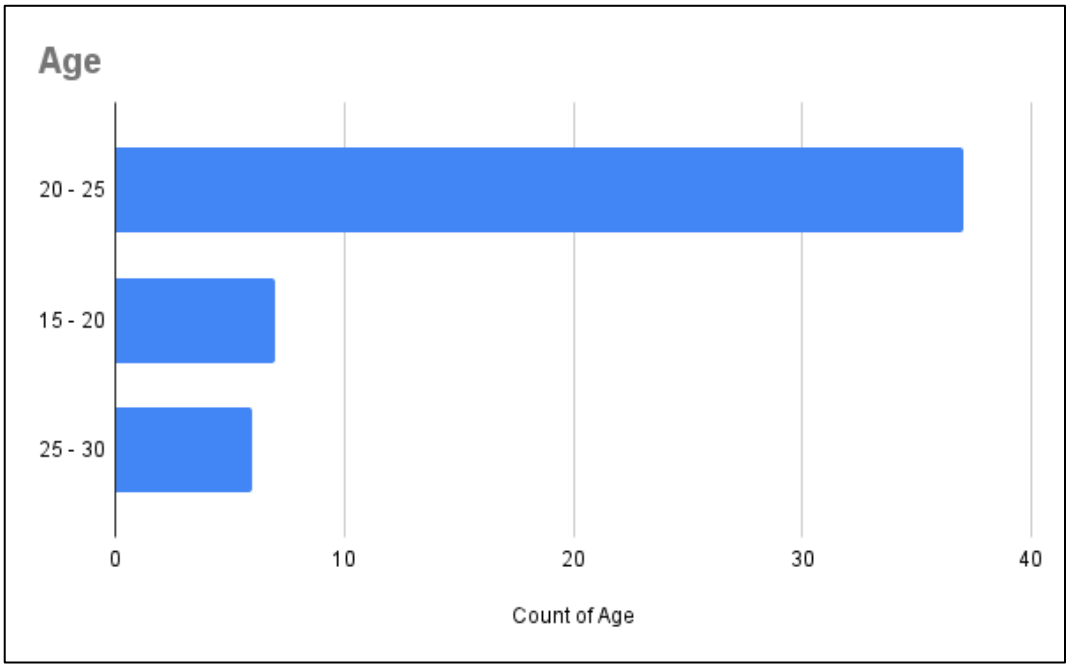
There were 50 responses in the sample, with 60% of them being male and 40% being female. This indicates that there are more male respondents than female responders.

2. **Age**

Table 2

OPTION	PERCENTAGE	COUNT
15-20	14	7
20-25	74	37
25-30	12	6

Figure 2



INTERPRETATION

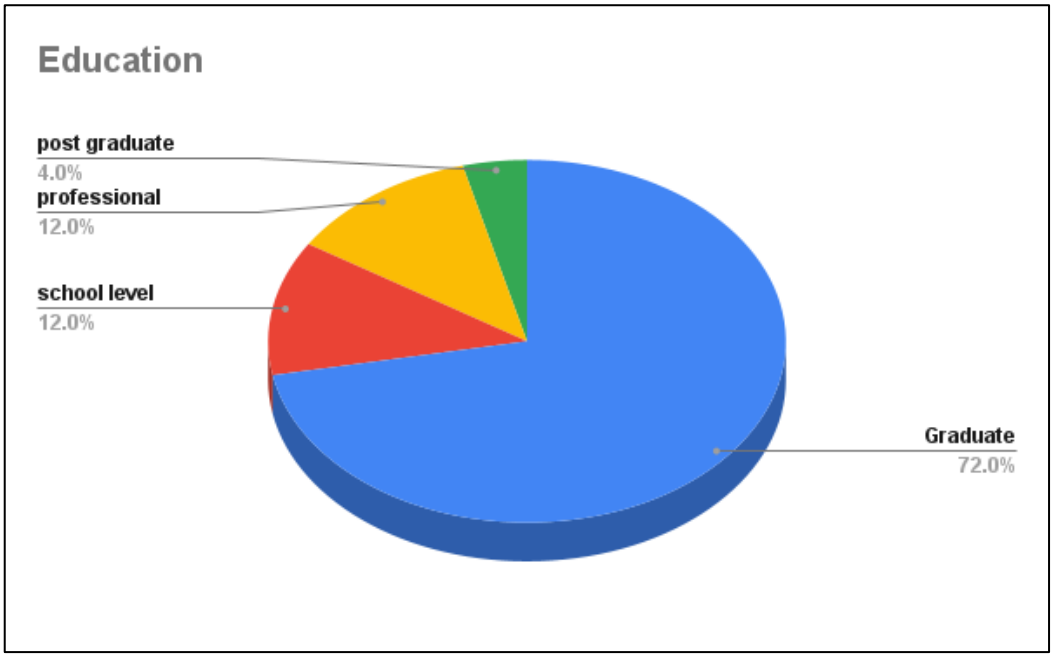
Of 50 respondents in the sample, 74% of the responses were from the age category between 20-25. This shows that young generation is more into e-wallet payment system.

3. **Education**

Table 3

OPTION	PERCENTAGE	COUNT
School Level	12	6
Graduate	72	36
Post Graduate	4	2
Professional	12	6

Figure 3



INTERPRETATION

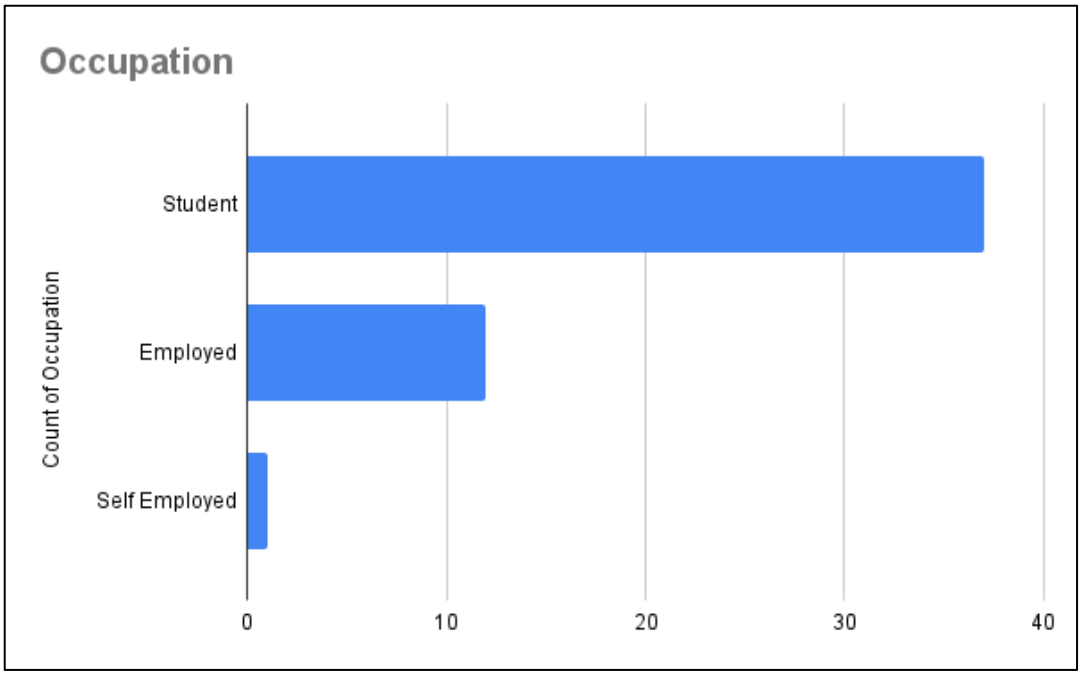
From 50 responses on the above category, 72% of the respondents are graduates.

4. Occupation

Table 4

OPTIONS	PERCENTAGE	COUNT
Student	74	37
Employed	24	12
Self-employed	2	1

Figure 4



INTERPRETATION

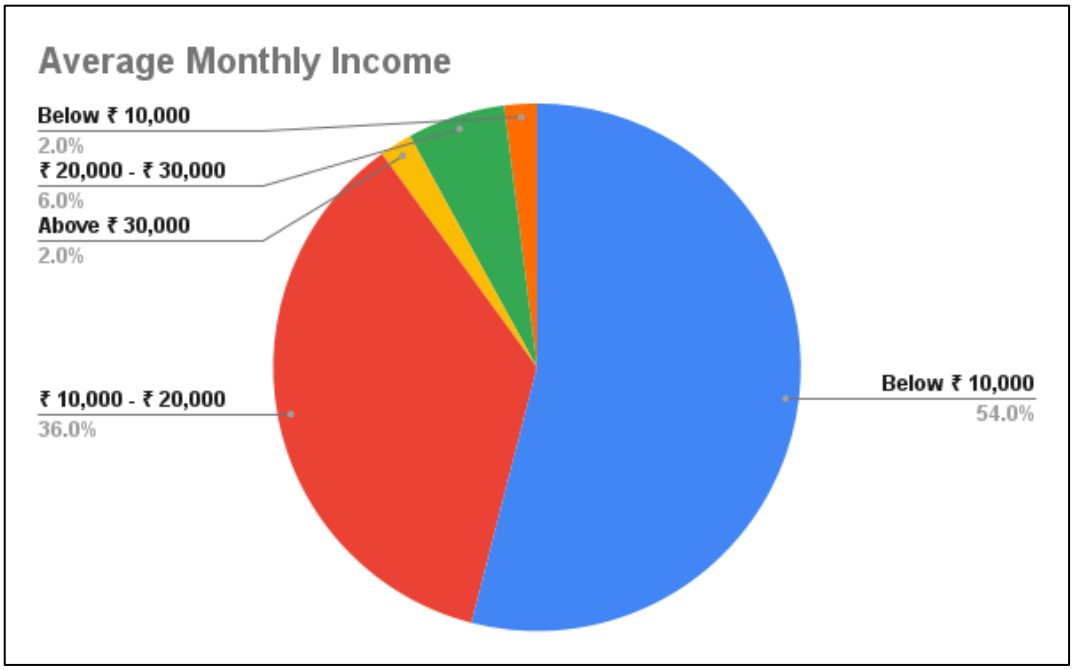
Of 50 respondents on the above topic, 74% are students, 24% of them are employed and 2% are self-employed, according to which the majority of the respondents are students.

5. Average Monthly Income

Table 5

OPTION	PERCENTAGE	COUNT
Below ₹ 10,000	56	28
₹ 10,000 - ₹ 20,000	36	18
₹ 20,000 - ₹ 30,000	6	3
Above ₹ 30,000	2	1

Figure 5



INTERPRETATION

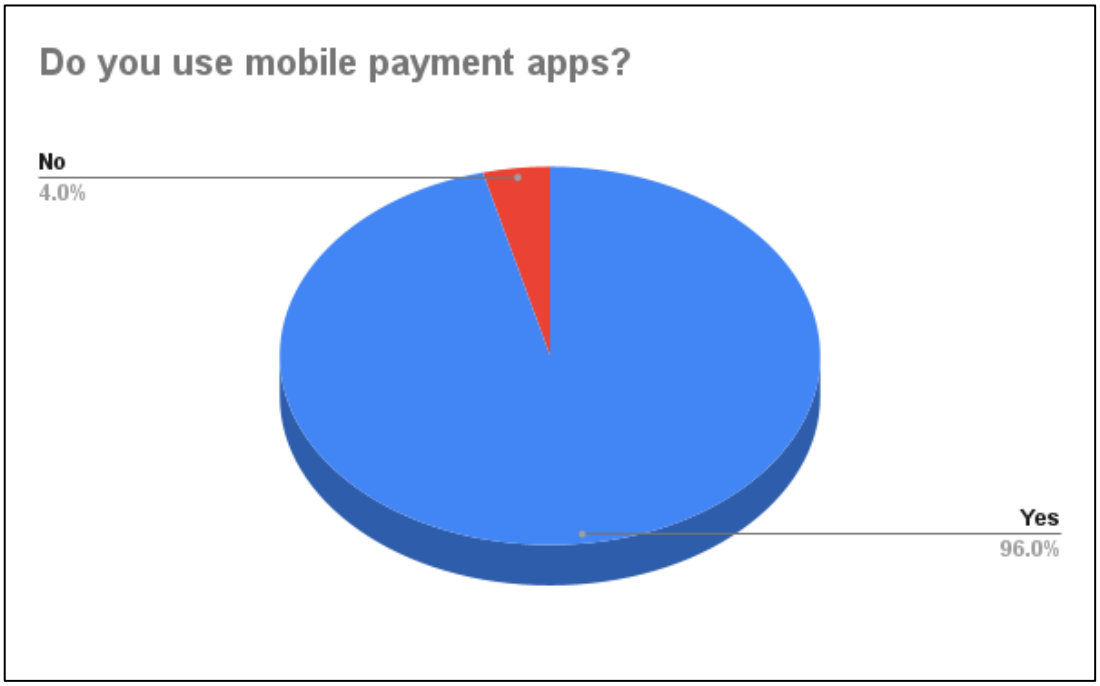
From 50 responses on the topic, 54% of them were of monthly income of below ₹10,000, 36% of them were of between ₹10,000 - ₹20,000, 6% of them of ₹20,000 - ₹30,000 and 2% of them of Above ₹30,000 of average, monthly income.

6. **Do you use mobile payment apps?**

Table 6

OPTIONS	PERCENTAGE	COUNT
YES	96	48
NO	4	2

Figure 6



INTERPRETATION

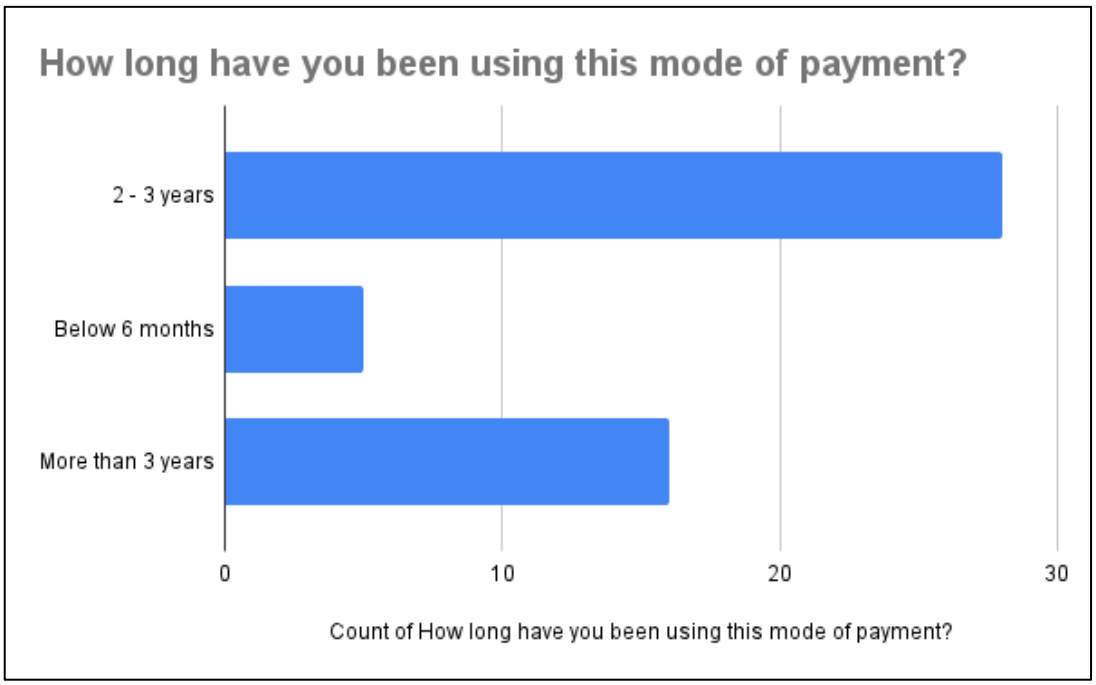
Of 50 respondents, 96% of them uses mobile payment apps and 4% of them didn't use mobile payment apps. This shows us that majority of the respondents were familiar to the use of mobile payments apps.

7. **How long have you been using this mode of payment?**

Table 7

OPTIONS	PERCENTAGE	COUNT
Below 6 months	10	5
2-3 years	62	31
More than 3 years	28	14

Figure 7



INTERPRETATION

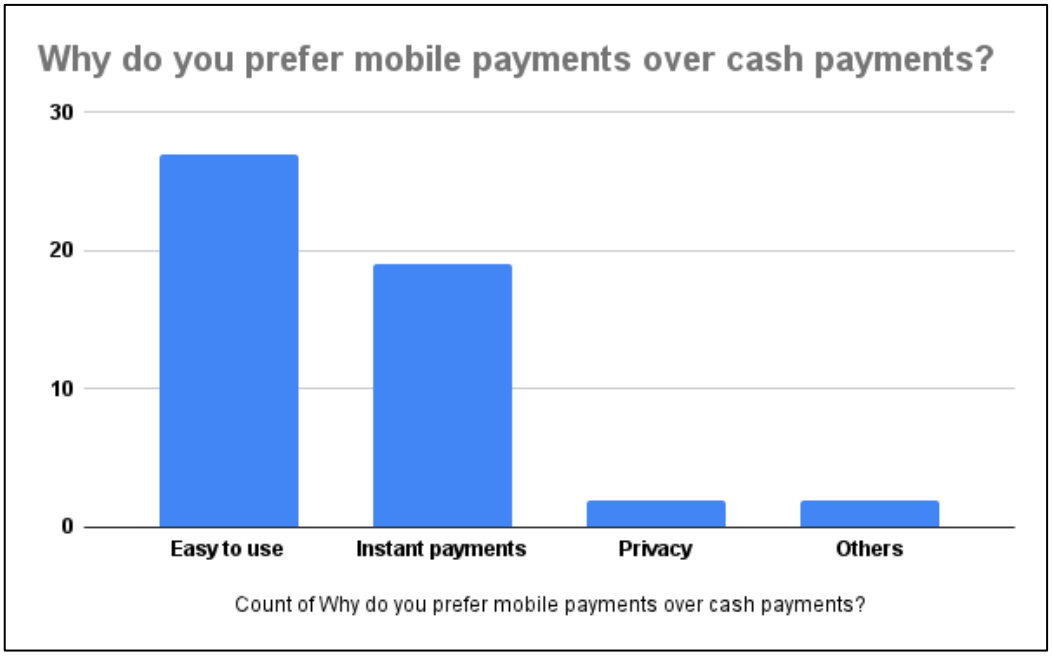
From the 50 respondents, 62% of them were using e-payment for 2-3 years, 28% of them were using for more than 3 years and 10 % of them were using for below 6 months.

8. **Why do you prefer mobile payments over cash payments?**

Table 8

OPTIONS	PERCENTAGE	COUNT
Easy to use	54	27
Instant payments	38	19
Privacy	4	2
Others	4	2

Figure 8



INTERPRETATION

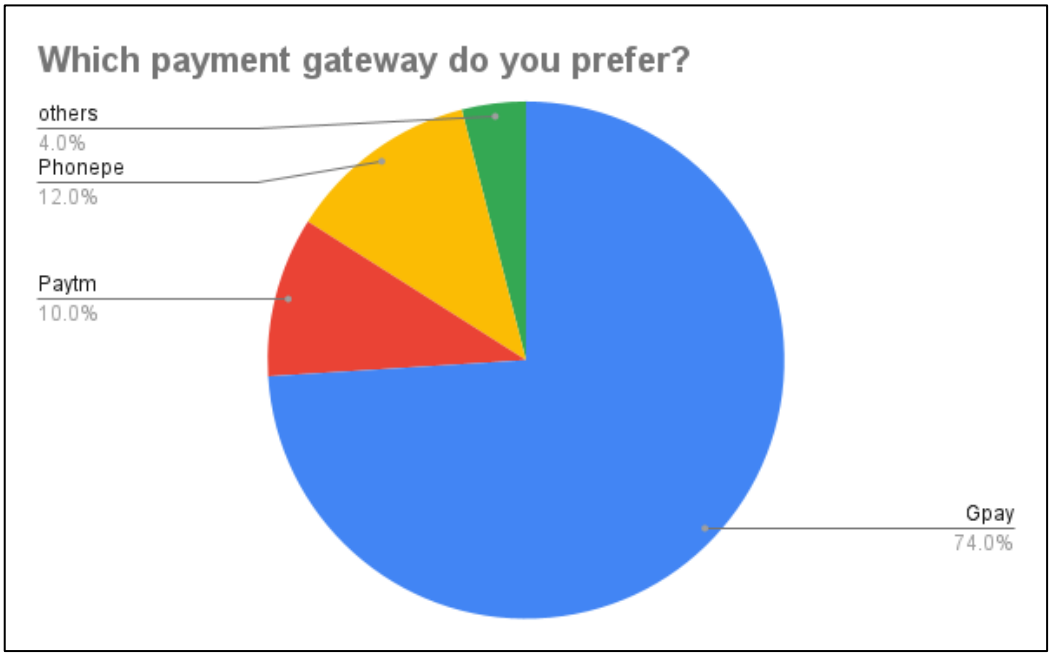
Among 50 respondents, 54% of people prefer for easy to use, 38% prefer for instant payments, 4% prefer for privacy and 4% for other reasons.

9. **Which payment gateway do you prefer?**

Table 9

OPTIONS	PERCENTAGE	COUNT
Gpay	74	37
Phonepe	12	6
Paytm	10	5
Others	4	2

Figure 9



INTERPRETATION

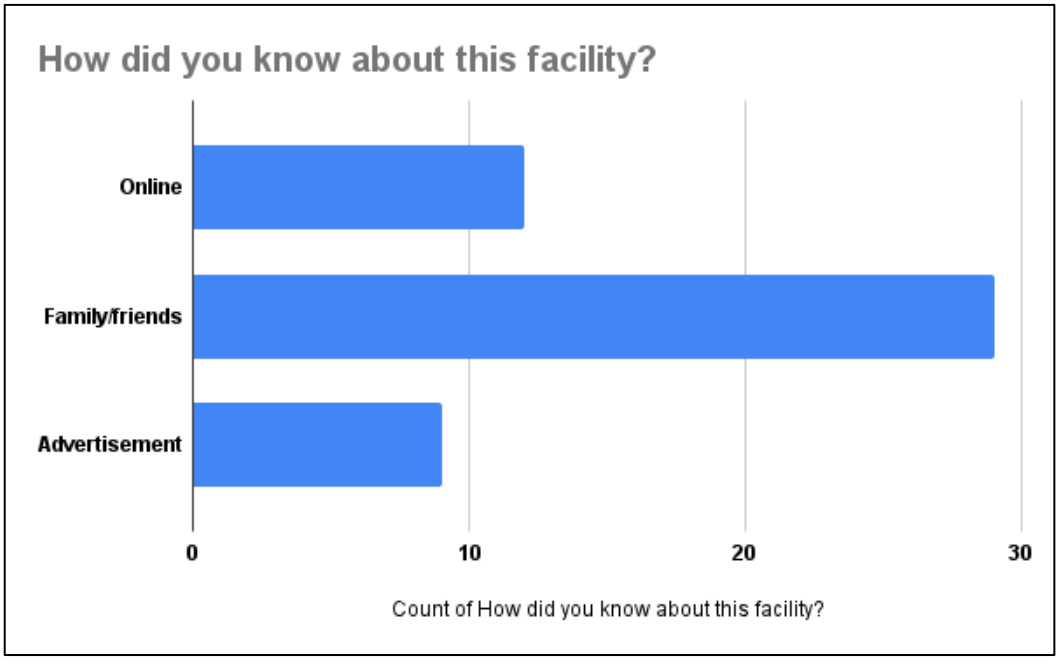
Of 50 respondents, 74% of people use Gpay for e-payments. This shows that majority of people prefer Gpay over others.

10. How did you know about this facility?

Table 10

OPTIONS	PERCENTAGE	COUNT
Online	24	12
family/friends	58	29
advertisement	18	9
Offline	0	0

Figure 10



INTERPRETATION

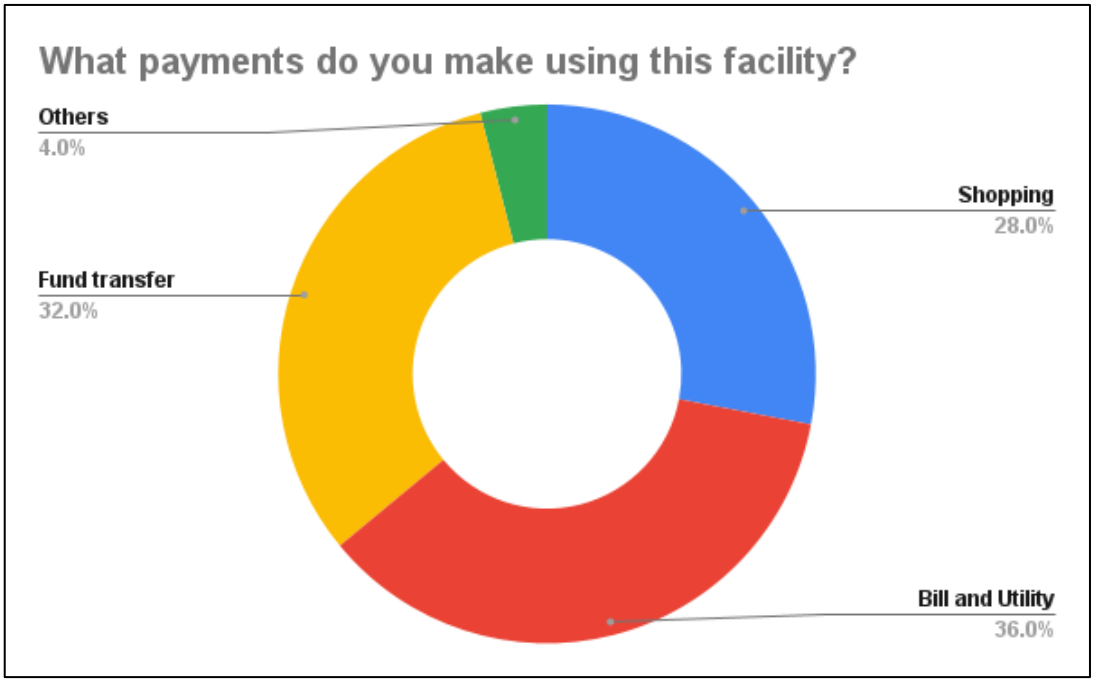
From 50 respondents, 58% of them known this facility by family/friends, 24% from online and 18% of them from advertisements. This shows us that majority of the respondents know about mobile payments is from their family/friends.

11. What payments do you make using this facility?

Table 11

OPTIONS	PERCENTAGE	COUNT
Fund transfer	32	16
Shopping	28	14
Bill and utility	36	18
Subscriptions	0	0
Others	4	2

Figure 11



INTERPRETATION

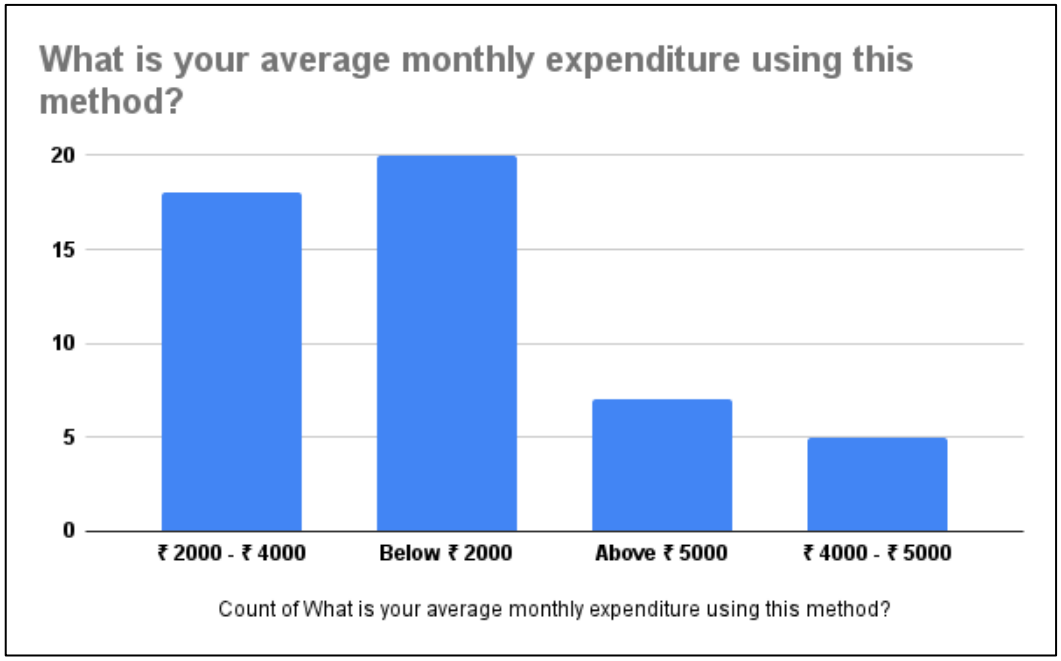
Of 50 respondents, 36% of them use this facility for paying bills and utility, 32% for fund transfer, 28% for shopping and 4% for others. This shows us that the more people use this facility to make payments for bill and utility comparatively than others.

12. What is your average monthly expenditure using this method?

Table 12

OPTIONS	PERCENTAGE	COUNT
Below ₹ 2000	40	20
₹ 2000 - ₹ 4000	36	18
₹ 4000 - ₹ 5000	10	5
Above ₹ 5000	14	7

Figure 12



INTERPRETATION

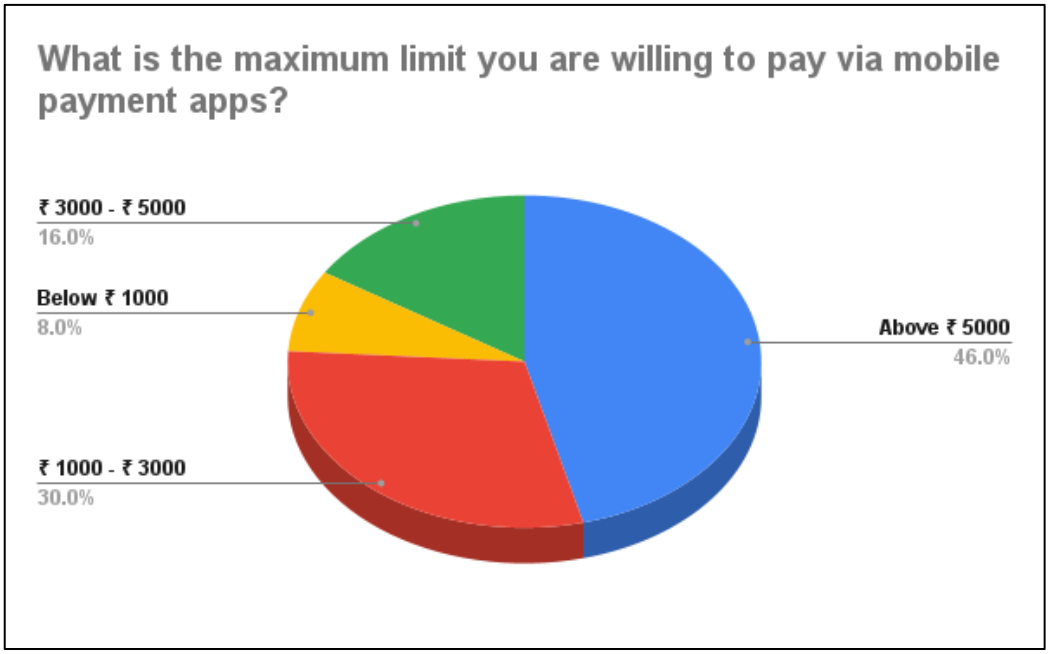
Among 50 respondents, 40% of peoples average monthly expenditure is Below ₹ 2000, 36% of them is between ₹ 2000 - ₹ 4000, 14% of them is Above ₹ 5000 and 10% of them is between ₹ 4000 - ₹ 5000. This shows us that comparatively more respondents average monthly expenditure using this facility is Below ₹ 2000.

13. What is the maximum limit you are willing to pay via mobile payment apps?

Table 13

OPTIONS	PERCENTAGE	COUNT
Below ₹ 1000	8	4
₹ 1000 - ₹ 3000	30	15
₹ 3000 - ₹ 5000	16	8
Above ₹ 5000	46	23

Figure 13



INTERPRETATION

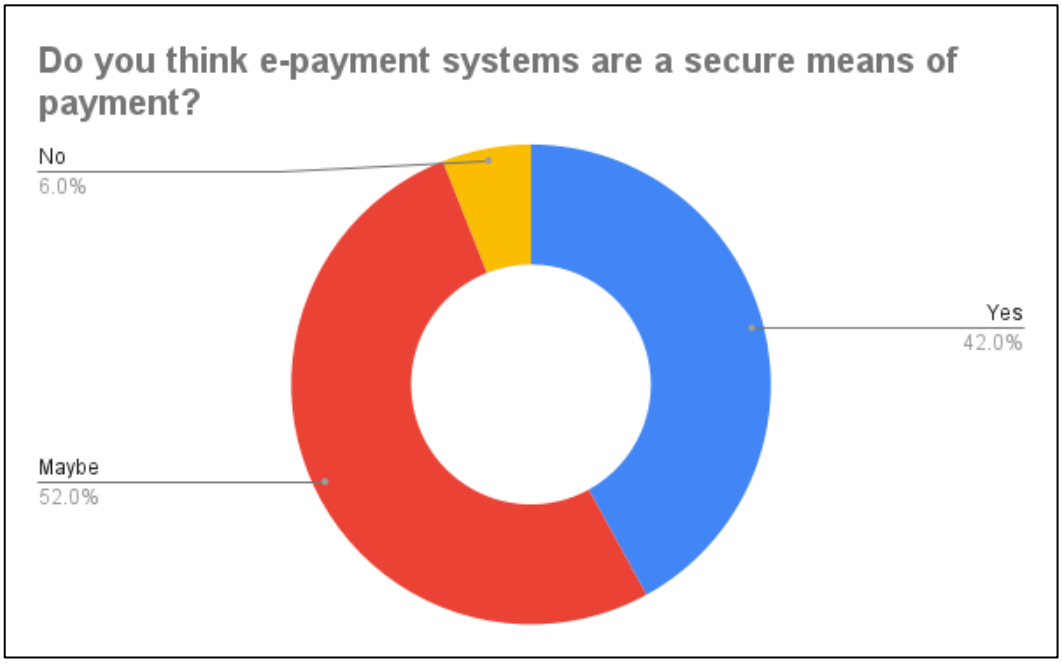
From 50 respondents, 46% of respondent's maximum limit via e-payment apps is Above ₹ 5000, 30% of them is ₹ 1000 - ₹ 3000, 16% of them is ₹ 3000 - ₹ 5000 and 8% of them is Below ₹ 1000. This shows that majority of the respondents maximum limit willing to pay via mobile payments apps is above ₹5000.

14. <u>Do you think e-payment systems are a secure means of payment?</u>

Table 14

OPTIONS	PERCENTAGE	COUNT
Yes	42	21
Maybe	52	26
No	6	3

Figure 14



<u>INTERPRETATION</u>

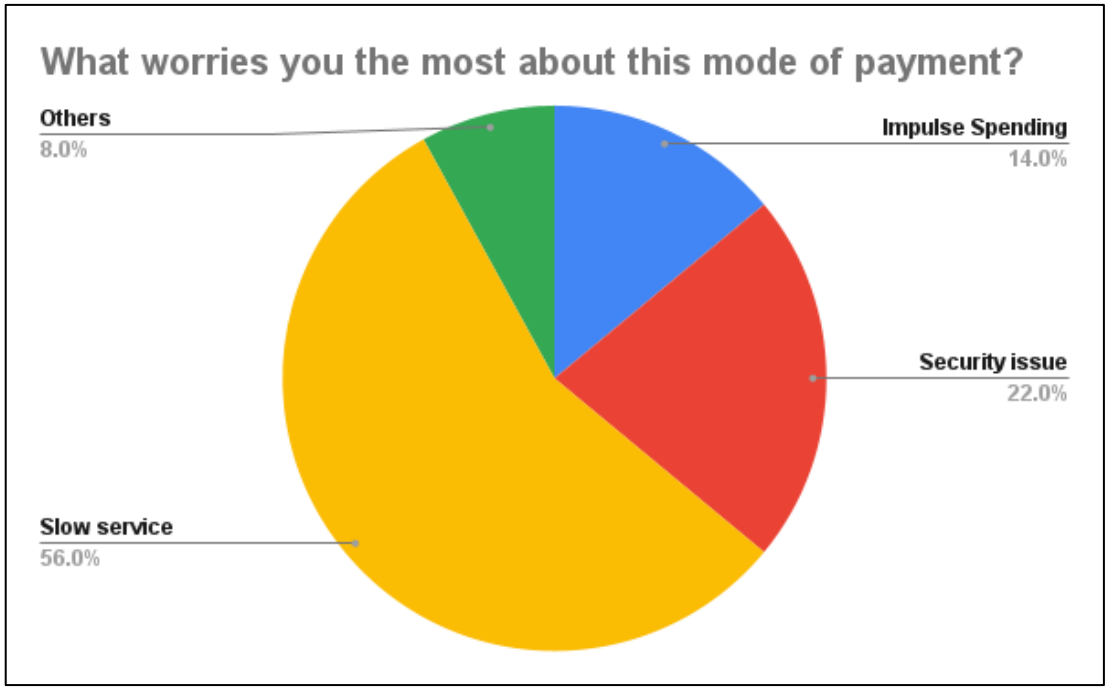
Of 50 respondents, 52% thinks e-payment systems might be a secure means of payment, 42% thinks it is a secure and 6 % doesn't think it as a secure mode of payment. This shows us that majority of the respondents thinks e-payments might be a secure mode of payment.

15. What worries you the most about this mode of payment?

Table 15

OPTIONS	PERCENTAGE	COUNT
Security issue	22	11
Slow service and network problems	56	28
Impulse spending	14	7
others	8	4

Figure 15



INTERPRETATION

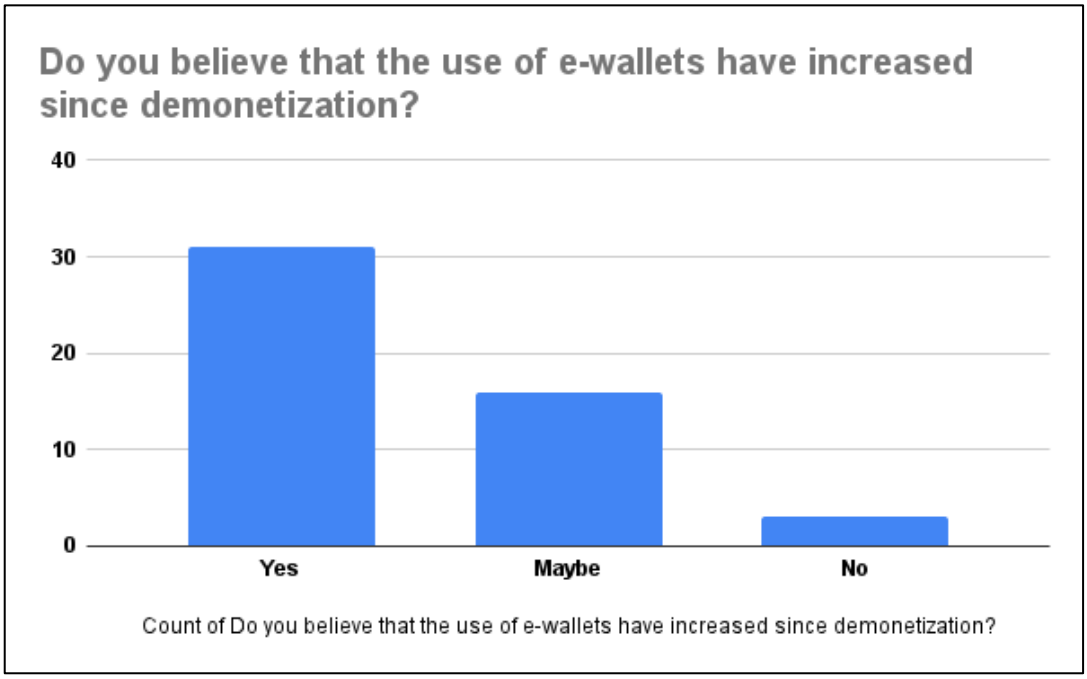
Among 50 respondents, 56% of them worries most on slow service and network problems, 22% of them on security issue, 14% of them on impulse spending and 8% on others. This shows that the majority of the respondents worries the most about e-payment is slow service and network problems.

16. Do you believe that the use of e-wallets has increased since demonetization?

Table 16

OPTIONS	PERCENTAGE	COUNT
Yes	62	31
Maybe	32	16
No	6	3

Figure 16



INTERPRETATION

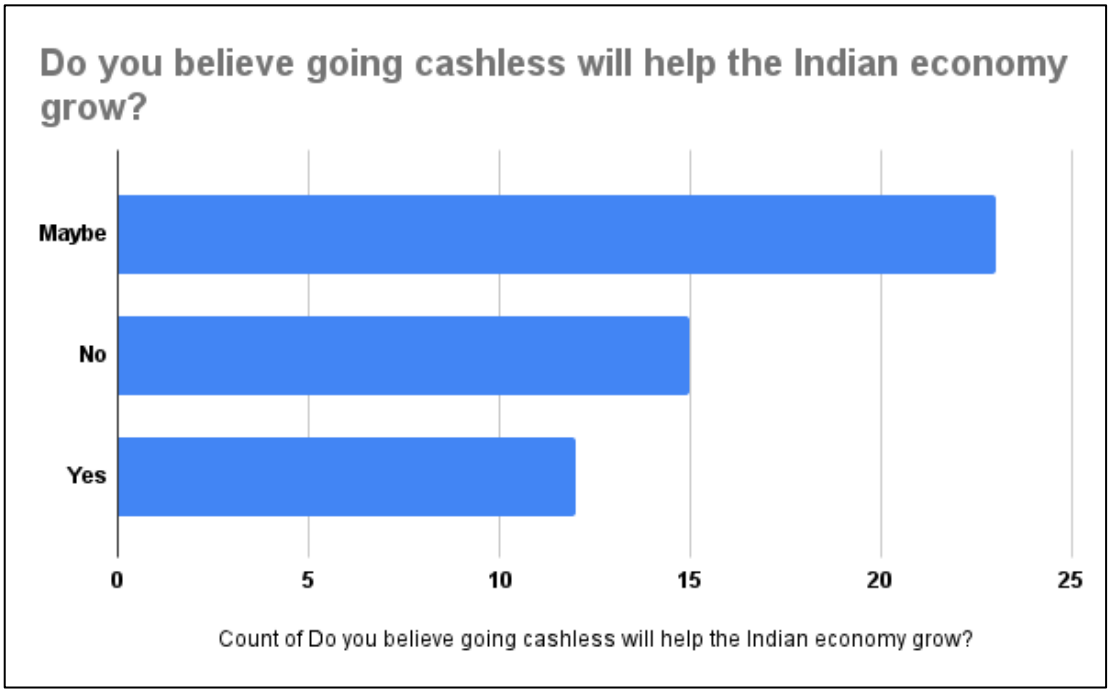
From 50 respondents, 62% of them believe e-wallets has increased since demonetization, 32% think it might have increased and 6% think that it hasn't increased since demonetization. This shows that majority of the respondents thinks that the use of e-wallets being increased after demonetization.

17. <u>Do you believe going cashless will help the Indian economy grow?</u>

Table 17

OPTIONS	PERCENTAGE	COUNT
Yes	24	12
Maybe	46	23
no	30	15

Figure 17



<u>INTERPRETATION</u>

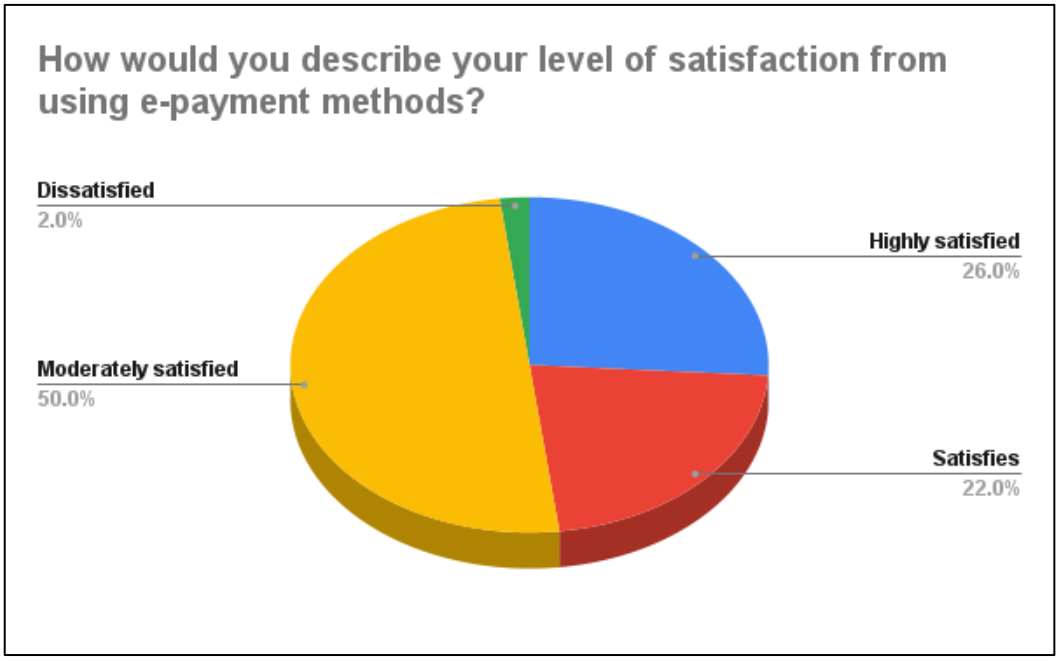
Among 50 respondents, 46% of them believe that going cashless helps the Indian economy grow, 30% of them think it will not help the country and 24% think it will help the country grow. This shows that majority of the respondents thinks going cashless might help the Indian economy to grow.

18. How would you describe your level of satisfaction from using e-payment methods?

Table 18

OPTIONS	PERCENTAGE	COUNT
Highly satisfied	26	13
Moderately satisfied	50	25
satisfies	22	11
dissatisfied	2	1

Figure 18



INTERPRETATION

Of 50 respondents, 50% of people are moderately satisfied from using e-payments methods, 26% of them are highly satisfied, 22% of people are satisfied and 2% of them are dissatisfied. This shows that the majority of the respondents thought on level of satisfaction from using e-payments was moderately satisfied.

Hypothesis Test

A hypothesis is an assumption, an idea that is proposed for the sake of argument so that it can be tested to see if it might be true. Hypothesis Testing is a type of statistical analysis in which you put your assumptions about a population parameter to the test. It is used to estimate the relationship between 2 statistical variables.

This study has adopted the ANOVA test to seek the significance between the average monthly income and average monthly expenditure through mobile payment gateways.

ANOVA is a statistical technique that divides observed variance data into various components for use in further testing. To learn more about the link between the dependent and independent variables, a one-way ANOVA is utilised when there are three or more groups of data.

Null hypothesis: there is no significant difference between the variables

Alternate hypothesis: there is significant difference between the variables.

Significance level = 0.05

ANOVA TABLE

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	4.32	1	4.32	4.926586	0.028801	3.940163
Within Groups	84.18	96	0.876875			
Total	88.5	97				

Conditions:

If p-value is less than 0.05, null hypothesis is rejected.

If p-value is greater than 0.05, null hypothesis is accepted.

Interpretation:

From the table it is evident that the p-value is less than the significance level, i.e., p-value 0.028801 < 0.05.

Thus the null hypothesis is rejected. Therefore, the hypothesis, “There is significant relationship between the variables average monthly income and average monthly expenditure” is strongly held. Average monthly income and average monthly expenditure go hand in hand. When a person acquires or receives a higher income, he is influenced to spend more than the actual basic needs. Money in hand influences a person to spend impulsively. In the same way, when a person receives lower salary, he restricts his consumption pattern. Thus we can conclude the hypothesis by stating that a significant relationship is present between average monthly income and average monthly expenditure.

CHAPTER V
FINDINGS, SUGGESTIONS AND CONCLUSION

FINDINGS

Following are the findings from the study:

- It is seen that majority of the mobile payment users are young adults in the age of 20-25
- Most of the people find mobile payments methods to be ‘Easy to use’ because of instant payments.
- It is seen that many of the users use GPay as their medium of mobile payment as it is well known.
- Majority of the people use mobile payment for their basic ‘bill and utility payment’ and ‘easy fund transfer’.
- Many of the users are unsure of the security provided by the mobile payments methods and slow service provider.
- The survey shows that many of the people had been started using mobile payments after demonetisation and there had been a increase in its use since then and they believe that using mobile payments will help in the growth of the economy.
- From the data analysed, it is clear that there is a close relationship between the amount of income received by the consumers and their spending behaviour. The public should be taught to control their desire to spend and instead focus on saving money.

SUGGESTIONS

Here are some suggestions based on the study:

- It is seen that majority of the users are of the age 20-30 ,So people above that age should be taught on How to use these Mobile Payment methods.
- Since of the major problems faced by the users while using the Mobile Payment methods is 'NETWORK PROBLEMS' , So that issue should be fixed by the payment gateways and network providers.
- The majority of the people use Mobile Payment method, so it should be made available in every store and service providers for easy payment by consumers
- All the Payment Gateways should make sure that there are no error in making payments/Transferring funds.
- People should be properly informed about the digital payment methods and the security provided by the payment gateways.
- All the users should be aware about the pros and cons of the available e-wallets before starting to use them.
- Since there are many frauds taking place through online payments, necessary security measures should be taken to ensure safety.
- The public should be made aware of the various digital payment gateways other than the most popular ones.

CONCLUSION

The introduction of various advanced technologies has impacted the Indian economy in a good way in all the fields. The mobile payment sector has gained huge importance, especially among the youngsters in the society. The transparency and conveniences provided by mobile payment systems have attracted the support and trust of the consumers in adopting this facility.

The use of mobile payment gateways has been in the economy for a good period of time. The implementation of this mode of payments has very well lead to the emergence of a cashless economy. From this study, it was evident that majority of the youngsters in the Ernakulam city are aware of the different payment gateways available as well as the facilities each of them provide for.

This study has analysed the different payment gateways available in the economy as well as the relationship between the monthly income and the monthly expenditure of the youth with reference to Ernakulam city. Most importantly we can understand the major gateways the customers prefer under this facility.

A major concern among youngsters while adopting the e payment system or the e wallet system is reckless and impulse purchasing. The youngsters must be taught about the importance and need for saving money and the significance of budget planning in their lifestyles.

Therefore, in general the implementation of the e-payment system and e-wallets have had a positive and good impact upon the development of the economy.

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ANNEXURE

Following is the questionnaire used for collecting the primary data.

Questionnaire on Mobile payments

Dear respondents,

We are Jithin Jose, Keerthana Krishnakumar and Milina Martin, currently pursuing Bachelor's Degree in Commerce, at Bharata Mata College, Thrikkakara. As part of our course, we are preparing a dissertation regarding the role of mobile payments, with reference to youngsters in Ernakulam City. As a source of primary data, we request you to kindly ll the below given questionnaire. This survey is purely for academic purposes and no personal details are collected.

*Required

1. Gender *

Mark only one oval.

- ◯ Male
- ◯ Female
- ◯ Other

2. Age *

Mark only one oval.

- ◯ 15- 20
- ◯ 20 - 25
- ◯ 25 – 30

3. Education *

Mark only one oval.

- ◯ School Level
- ◯ Graduate
- ◯ Post graduate
- ◯ Professional

4. Occupation *

Mark only one oval.

- Student
- Self Employed
- Employed
- Other

5. Average Monthly Income *

Mark only one oval.

- Below ₹ 10,000
- ₹ 10,000 - ₹ 20,000
- ₹ 20,000 - ₹ 30,000
- Above ₹ 30,000

6. Do you use mobile payment apps? *

Mark only one oval.

- Yes
- No

7. How long have you been using this mode of payment?

Mark only one oval.

- Below 6 months
- 2 - 3 years
- More than 3 years

8. Why do you prefer mobile payments over cash payments?

Mark only one oval.

- Instant payments
- Easy to use
- Interest free
- Privacy
- Others

9. Which payment gateway do you prefer?

Mark only one oval.

- Gpay
- Phonepe
- Paytm
- Others

10. How did you know about this facility?

Mark only one oval.

- Advertisement
- Online
- Offline
- Family/friends

11. What payments do you make using this facility?

Mark only one oval.

- [ ] Bill and Utility payments
- [ ] Subscriptions
- [ ] Fund transfer
- [ ] Shopping
- [ ] Others

12. What is your average monthly expenditure using this method?

Mark only one oval.

- [ ] Below ₹ 2000
- [ ] ₹ 2000 - ₹ 4000
- [ ] ₹ 4000 - ₹ 5000
- [ ] Above ₹5000

13. What is the maximum limit you are willing to pay via mobile payment apps?

Mark only one oval.

- [ ] Below ₹ 1000
- [ ] ₹ 1000 - ₹ 3000
- [ ] ₹ 3000 - ₹ 5000
- [ ] Above ₹5000

14. Do you think e-payment systems are a secure means of payment?

Mark only one oval.

- [ ] Yes
- [ ] Maybe
- [ ] No

15. What worries you the most about this mode of payment?

Mark only one oval.

- Security issue
- Slow service providers & Network problems
- Impulse Spending
- Others

16. Do you believe that the use of e-wallets have increased since demonetization?

Mark only one oval.

- Yes
- Maybe
- No

17. Do you believe going cashless will help the Indian economy grow?

Mark only one oval.

- Yes
- Maybe
- No

18. How would you describe your level of satisfaction from using e-payment methods?

Mark only one oval.

- Highly satisfied
- Moderately satisfied
- Satisfied
- Dissatisfied