

**CUSTOMER'S INTENTION TO ADOPT PAYMENT WALLET IN COIMBATORE  
CITY: A SEM MODEL APPROACH**

**BY**

**PRIYANKA.K**

**(20PEC009)**

**A DISSERTATION SUBMITTED TO**

**AVINASHILINGAM INSTITUTE FOR HOME SCIENCE AND HIGHER EDUCATION  
FOR WOMEN**

**COIMBATORE-641 043**

**IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF**

**MASTER OF ARTS IN ECONOMICS**

**APRIL-2022**

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Signature of the Head of the Department

  
Signature of the Guide

❖ **ACKNOWLEDGEMENT**

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❖ **INTRODUCTION**

## **CHAPTER –I**

### **INTRODUCTION**

Everyday people buy or sell goods and services for money. Money becomes the major medium of exchange. Later some payment systems were developed out of a need to facilitate the growth of commerce and economic development. The media used for transferring the value of money is very diversified, ranging from the use of simple payment instruments (e.g. cash) to the use of complex systems (e.g. crypto currency). Physical money (cash) is the traditional and most widely used payment instrument that consumers use, in their daily lives to buy goods and services. As the volume and variety of transactions expands, the volume of money also expands. Using cash for each of large transactions is neither feasible nor practically possible. Security and transportation problems arise in cases where large amounts of cash transactions are involved. Banks would support in such cases by offering other payment methods. The cashless society has been discussed for long time. The demise of cash and cheques could not be sudden. Though old habits hardly die, people do not hesitate adapting new things.

#### **History of Electronic Payments**

Throughout history, human beings have relied on some sort of payment system to purchase the goods or services we wanted or needed. Starting with the bartering system, humans began to use livestock, grain, shells, metal coins, pieces of white deerskin, the wampum, gold, the gold-backed dollar, charge cards, credit cards, the U.S. dollar and, most recently, electronic payments. If there has been one consistent theme regarding the evolution of payments, it's that we prefer payments that are convenient and transactional. These preferences began to take shape in the early 20<sup>th</sup> century with the introduction of the charge card.

Despite being first mentioned by Edward Bellamy in 1887's "Looking Backward," the first charge card didn't appear until 1921 when a charge card was issued to Western Union customers. Soon after, department stores, service stations and hotels also began offering charge cards to customers so they didn't have to travel to their hometown bank.

After the introduction of the Diners Club card in 1950, the credit card industry began to resemble what we're familiar with today. The Bank Americard, founded in 1958, was the first modern-day credit card issued by a third-party bank. The card became Visa in 1977. Since then, technology has given us the videotex systems of the late-1970s/mid-1980s; online banking and bill pay in 1994; the mobile web payment (WAP) in 1997; and the current wave of mobile payments apps.

With that in mind, here's a timeline of how electronic payments have advanced into the 21st century:

- **1983:** David Chaum, an American cryptographer, starts work on creating digital cash by inventing “the blinding formula, which is an extension of the RSA algorithm still used in the web’s encryption.” This is the beginning of cryptocurrencies.
- **1994:** Although this is disputed, some believe that the first online purchase, a pepperoni and mushroom pizza from Pizza Hut, occurs in this year.
- **1998:** PayPal is founded.
- **1999:** Thanks to Ericsson and Telnor Mobil, mobile phones could be used to purchase movie tickets.
- **2003:** 95 million cell phone users worldwide made a purchase via their mobile device.
- **2007:** Both the iPhone and the Android operating system are released.
- **2008:** Bitcoin is invented.
- **2011:** Google Wallet is released.
- **2014:** Apple Pay is launched, followed a year later by Android and Samsung Pay.
- **2020:** 90 percent of smartphone users will have made a mobile payment. It’s estimated that by 2017, there will be \$60 billion in mobile payment sales.

### **Payment Wallet Definition**

A payment wallet, also known as mobile payment or electronic payment, is a transfer of money from one account to another using an electronic medium. So, there is no exchange of physical money or instruments like cash, cheque, etc. However, you should know that digital payment is not limited to online payments as it also covers payments made on brick-mortar premises, at a physical location. For example, payment done through UPI to the grocery store or salon also qualifies for digital payment. Karnouskos and Fokus (2004) have referred mobile payment as a killer solution not just only for e-payments, but also to intensify e-commerce and m-commerce. They defined m-payment as any type of payment which requires a mobile device to begin, activate and/or approve that payment. Ondrus and Pigneur (2006) defined mobile payment as any wireless transaction made between two parties by use of any mobile device. Further they stated the physical appearance of the mobile device can vary and should be capable of securely processing the payment. Further Dahlberg et al (2015) extended definition of mobile payment as “type of virtual payment enabled by mobile device, in which money is transferred remotely or

near-by from a payer to receiver via an intermediary or directly in exchange for a service, a product or as a money transfer”. Mobile payment gives easy accessibility of anytime anywhere payment (Begonha et al., 2002) for various payment platforms, gives feel of security being cashless, and extra perks of cashbacks and offers. Major disadvantage being the money is stuck in phone, if battery dies or network is poor payment cannot be done.

## **Payment Wallet Types**

### **Google Pay**

As its part of the Google ecosystem, they have scaled up their user base quickly, despite being a late entrant. It is currently the No.1 digital wallet and one of the top online payments apps in India. With Google Pay you can send money to friends, pay bills and buy online, recharge your phone - all via UPI and directly from your bank account. Since Google Pay works with your existing bank account, which means your money is safe with your bank. There's no need to worry about reloading wallets and you don't need to do additional KYC - which is required for all the other apps. You can also earn scratch cards and other rewards, with the cashback directly being transferred into your bank account. Now you can also recharge your mobile or monthly utility bills. Since the introduction of UPI, wallets have become passé with users preferring account to account transfer via UPI.

### **PhonePe**

Next in the list of top online payment apps in India is PhonePe. PhonePe started in 2015 and in just 4 years it has been able to cross the 100 million download mark. From UPI payments to recharges, money transfers to online bill payments, you can do it all on PhonePe. It's got a very good user interface and is one of the safest and fastest online payment experience in India.

### **PayTM**

PayTM is one of the largest mobile commerce platforms and one of the top online payments apps in India, offering its customers a digital wallet to store money and make quick payments. Launched in 2010, this e-wallet app works on a semi-closed model and has a mobile market, where a customer can load money and make payments to merchants who have operational tie-ups with the company. It was originally the No.1 digital wallet in India before UPI being introduced. Apart from making e-commerce transactions, this e-wallet app can also be used to make bill payments, transfer money and avail services from merchants from travel, entertainment and retail industry. They also have UPI enabled payments now.

## **Yono by SBI**

This mobile wallet application was launched by State Bank of India to let users transfer money to other users and bank accounts, pay bills, recharge, book for movies, hotels, shopping as well as travel. This semi-closed prepaid wallet offers its services in 13 languages and is available for non-SBI customers as well. This app also allows its customers to set reminders for dues, money transfers and view the mini-statement for the transactions carried out.

## **Amazon Pay**

Amazon Pay is an online payments processing service that is owned by Amazon. It is also a top online payment app in India and the global market. Launched in 2007 globally and India in 2017, Amazon Pay uses the consumer base of Amazon and focuses on giving users the option to pay with their Amazon accounts on external merchant websites, including apps like Big Bazaar etc. You also get to shop on Amazon using Amazon Pay. Amazon Pay has also tied up with fin tech companies such as Zest Money to enable no-cost EMI payment options on its platform. This makes it easy for consumers to purchase products on Amazon and pay for it through affordable monthly instalments.

## **Credit Card**

A Credit card is a piece of plastic, 3-1/8 inches by 2-1/8 inches in size that carries information that allow you to make purchase now pay for them later. Credit cards from visa, master card or any other network allow you to pay for purchase or services by borrowing from the credit card company. To purchase goods from merchant who accept credit card such as merchant has credit card reader to purchase the payment transaction to withdraw cash from ATM. You then repay by making monthly payment toward the amount borrowed, that is you don't have to repay the whole borrowed amount in fill at one go.

## **Debit Card**

Debit card is a prepaid card and also known as ATM card. An individual has to open an account with the issuing bank which gives debit card with a personal id number, when he makes a purchase he enters his pin number on shop pin pad. When the card is slurped through the electronic terminal it dials the acquire a banking system either master card or visa card that validate the pin and finds out from the issuing bank whether to accept or decline the transaction the customer can never overspend because the system reject any transaction which exceeds the balance in his

account. The bank never faces a default because the amount spent is debited immediately from the customer account with almost every bank account you are issued a debit card.

### **Smart Card**

Smart card was first introduced in Europe mostly known as stored value card. A smart card is about the size of a credit card, made of a plastic with an embedded microprocessor chip that holds important financial and personal information. The microprocessor chip is loaded with the relevant information and periodically recharged. In addition to these pieces of information, systems have been developed to store cash onto the chip. The money on the card is saved in an encrypted form and is protected by a password to ensure the security of the smart card solution. In order to pay via smart credit is necessary to introduce the card into a hardware terminal. The device requires a special key from the issuing bank to start a money transfer in either direction. Smart cards can be disposable or rechargeable.

### **Digital Wallet**

Digital Wallet otherwise known as Electronic wallets are being very useful for frequent online shoppers are commercially available for pocket, palm-sized, handheld, and desktop PCs. They offer a secure, convenient, and portable tool for online shopping. They store personal and financial information such as credit cards, passwords, PINs, and much more. To facilitate the credit-card order process, many companies are introducing electronic wallet services. E-wallets allow you to keep track of your billing and shipping information so that it can be entered with one click at participating merchants' sites. E-wallets can also store e checks, e-cash and your credit-card information for multiple cards.

### **Electronic Cheque**

Electronic cheque is messages that contain all the information that is found on an ordinary Cheque but it uses digital signature for signing and endorsing and has digital certificate to authenticate bank account. There are many websites that accept Electronic Cheque. Electronic checks are typically used in orders processed online and are governed by the same laws that apply to paper checks. Electronic checks offer protective measures such as authentication and digital signatures to safeguard digital transactions.

### **Electronic Cash**

Similar to regular cash, e-cash enables transactions between customers without the need for banks or other third parties. When used, e-cash is transferred directly and immediately to the

participating merchants and vending machines. Electronic cash is a secure and convenient alternative to bills and coins. E-cash usually operates on a smartcard, which includes an embedded microprocessor chip. The microprocessor chip stores cash value and the security features that make electronic transactions secure. When e-cash created by one bank is accepted by other reconciliation must occur without any problem cash must be storable and receivable. Most E-cash is transferred directly from the customer's desktop to the merchant's site. Therefore, e-cash transactions usually require no remote authorization or personal identification number (PIN) codes at the point of sale.

### **National Electronic Funds Transfer (NEFT)**

The NEFT payment system was introduced in 2005 to facilitate one to one fund transfers. NEFT payment system can be used by both individuals and corporates. NEFT system processes payments in batches at hourly intervals, thus providing near real-time settlement of funds from one party to another. There is no minimum of maximum limit on the amount of funds that can be transferred through NEFT.

### **Real Time Gross Settlement (RTGS)**

In the RTGS system, funds are transferred from one bank account holder to another on a “real time” and on “gross” basis. Settlement in the RTGS system happens “Real Time” on a one on one basis and there is no bunching or batching like the NEFT system, wherein payments are processed in batches. Once a payment is processed through the RTGS system, it cannot be undone and is final and irrevocable. RTGS system has been operational since 2004 and is used for settling inter-bank payments.

### **Benefits of Payment Wallets**

- **Faster, easier, more convenient:** Perhaps, one of the biggest advantages of cashless payments is that it speeds up the payment process and there is no need to fill in lengthy information. There is no need to stand in a line to withdraw money from an ATM or carry cards in the wallet. Also, with the move to digital, banking services will be available to customers on a 24/7 basis and on all days of a year, including bank holidays. Many services like digital wallets, UPI, etc, work on this basis.
- **Economical and less transaction fee:** There are many payment apps and mobile wallets that do not charge any kind of service fee or processing fee for the service provided. The UPI interface is one such example, where services can be utilized by the customer free of cost. Various digital payments systems are bringing down costs.

- **Waivers, discounts and cashbacks:** There are many rewards and discounts offered to customers using digital payment apps and mobile wallets. There are attractive cash back offers given by many digital payment banks. This comes as boon to customers and also acts a motivational factor to go cashless.
- **Digital record of transactions:** One of the other benefits of going digital is that all transaction records can be maintained. Customers can track each and every transaction that is made, no matter how small the transaction amount this.
- **One stop solution for paying bills:** Many digital wallets and payment apps have become a convenient platform for paying utility bills. Be it mobile phone bills, internet or electricity bills, all such utility bills can be paid through a single app without any hassle.
- **Helps keep black money under control:** Digital transactions will help the government keep a track of things and it will help eliminate the circulation of black money and counterfeit notes in the long run. Apart from this, this may also give a boost to the economy as the cost of minting currency also goes down. Digital payments are slowly gaining popularity in India and there are many apps that are being launched in this sector. It has become a hassle-free and secure way to make payments.

### **History of Payment Wallet in India**

In today's world, a Smartphone has become essential part of daily life. There was a time when transactions happened through barter system. Thereafter was the emergence of notes and coins. And presently, the world is moving towards the "Digital Wallet". Due to technology, mobile users can use their Smartphone to make money transactions or payments by using applications installed in their phone. Digital wallet system is an essential part of electronic commerce. E-commerce provides the capability of trading on the internet. A digital wallet is a virtual service used as a substitute for physical cash.

According to Archaeologists, around the 7th-6th century BC and 1st century AD, 'Punch Marked' coins, made in silver and bronze, were issued in India, making us one of the earliest adopters of the currency system. Sher Shah Suri, who took control of the Mughal Empire in 1540, introduced Rupiyya, the predecessor of today's rupee, which later became the official currency of India, and later during the first world war, paper notes become popular due to an acute shortage of silver.

Then in 1980, the Central Bank of India introduced the first credit card while HSBC opened the first ATM in Bombay. In 2005, NEFT was introduced, and then, the country's first e-wallet, Oxigen Wallet, was launched in July 2004. Around the mid to late 2000s, debit cards became increasingly popular among Indians with more than 150 million people having one or more cards at their disposal. In the last decade, India witnessed a burgeoning growth in digital payments, including the introduction of innovative payment systems, the entry of non-bank players, and a gradual shift in customer behaviour from cash to digital payments. The decade of 2010-20 can be termed as the decade of payments in India as quoted by RBI in their booklet – payments systems in India.

In 2016, RBI and the government jointly rolled out the Unified Payments Interface (UPI), a uniquely secure and interoperable interface for retail payments, biometric-based as well as QR code-based payments. By 2018, total UPI transactions hit the \$7 billion mark and by 2019, it surpassed wallet and card-based and transactions, becoming India's most preferred payment method. In 2016, demonetization paved the way towards a cashless economy. Four years later, the COVID-19 pandemic further pushed the adoption of digital payment methods. People, wary of coming in contact with others, refrained from using cash. The ATMs started to look deserted and the use of cards, UPI, wallets, and e-banking soared. In November, UPI transactions hit an all-time high at 221 crore transactions worth Rs 3.9-lakh crore. The preference shifted from cash to contactless transactions.

Electronic payments, in general, have picked up, aided by large technology companies entering the fray. There has been solid growth in the volume and value of mobile wallet or payment wallet transactions in the last three years. According to the RBI, in FY19, mobile wallet transactions (in volume terms) stood at 414.2 crore, nearly six times more than the FY16 figure of 60.4 crore. In value terms, in FY19, it stood at Rs 1.83 lakh crore, nearly nine times higher than the FY16 figure. Mobile payment applications such as Google Pay, PhonePe and Bharat Interface for Money (BHIM) using the unified payments interface (UPI) are also becoming popular among consumers. Transactions through UPI in value terms were at an all-time high in October 2019. It crossed Rs 1.91 lakh crore.

## **India Witnesses Spike in Electronic Payments**

India has witnessed a stupendous growth in the digital payments space. With 1.18 billion wireless telecom subscriptions, the world's second-largest internet population, nearly 1 billion cards, 2.25 billion PPIs (Prepaid Payment Instruments) and a number of innovative digital payment modes, the country is poised to be one the largest and the fastest-growing digital payments market in the world. In April 2020, the number of transactions done through mobile apps was 1.12 billion and in June 2021 that number was 3.7 billion. Similarly, the value in April 2020 was INR 3.6 trillion while it was Rs 11.4 trillion in June 2021.

Interestingly, as per the report in terms of payments made at physical merchants by mobile (also called proximity payments), China leads the way with 81 percent of smartphone users having made payments in the previous six months. Denmark comes a distant second with 41 percent. In terms of penetration of mobile payment adoption (which is also a decent indicator of the potential market size), China again dominates at 39.5 percent followed by South Korea at 29.9 percent and Vietnam at 29.1 percent. India is at 6th with 20.2 percent and the US is at 17.7 percent. In terms of average annual transaction per user, the US dominates at \$7961 while China is at \$2300, and India is at \$80.

In India, the POS (Point of Sales) terminal count also saw an uptick throughout the year and the year. It was 4.71 million in January 2021 but rose to 4.97 million in September 2021. The growth can be attributed to operationalisation of Payments Infrastructure Development Fund (PIDF) Scheme by the RBI which envisages creating about 3 million merchant touch points every year from Jan 1, 2021 for three years. As of September 2021, the number of physical payment acceptance devices deployed under the PIDF Scheme was 0.245 million while digital devices were over 5.53 million. As per the report by World line India, Maharashtra, Tamil Nadu, Karnataka, Andhra Pradesh, Kerala, Gujarat, Delhi, Uttar Pradesh, Telangana and West Bengal are the Top 10 states with the highest transactions at physical touch points in 2021. Besides this the top ten cities with the highest number of transactions at physical touch points in 2021 are Hyderabad, Bengaluru, Chennai, Mumbai, Pune, Delhi, Kolkata, Coimbatore, Ahmedabad and Vadodara. As per the report, the number of transactions through mobile wallets in 2021 was 1.21 billion and its value was Rs 604.43 billion. This includes the purchase of goods and services and fund transfer through wallets. Transactions through wallets have also been growing steadily. In 2021, it recorded

a 10 percent increase in volume over the previous quarter i.e. 2021. The value of transactions grew by 34 percent against 2020.

In financial year 2022, electronic payments in India reached a total of over 239 billion Indian rupees. This marks a significant increase from 20.7 billion Indian rupees in financial year 2018. Among the cashless payment options the mobile payment app BHIM (Bharat Interface for Money) overtook debit card payments since 2018. The value of BHIM transactions and debit card transactions increased significantly between 2018 and 2022 (Sandhya Keelery, May 10, 2022). According to Blue Weave Consulting, the market is estimated to grow at a CAGR of 46.3%, earning revenue of USD 429.2 billion by the end of 2027. India's payment wallet market is, therefore, flourishing at a high rate owing to the increasing number of smart phone users and growing awareness among consumers regarding convenient payment options through payment wallets. In addition, merchants are adopting payment wallets at a rapid pace due to the lower set-up infrastructure and transaction fees compared to traditional card-based payment systems. However, poor internet connectivity, limited internet accessibility, and risks associated with cyber security may severely hamper the market's growth.

### **Significance of the study**

The traditional way of financial transaction has now been transferred by electronic way of transaction because of its widespread usage in the digital economy. The payment wallet or electronic payment can utilize in the way of online shopping, movie, train and flight ticket booking, fee payment in educational institutions, smartphone recharging, households bill payment etc. These services induced individuals as their daily events gets more enriched and easier. The innumerable innovations have been compelling in financial sector. Thus, it is worthwhile to detect about the new improvements and developments in financial transactions and also it's important to create awareness among women. It is also noteworthy to study about different mode of payment wallets and every singles get an idea of using various payment wallets and its safety and security threats.

### **Research Problem**

The development of Information and Communication Technology (ICT) had completely changed the life of individuals and society by making them simpler and easier than before. The most significant change has taken place in the domain of finance and payment system. Currently, e-payments have taken over the whole universal of financial dealings whether these are intended

for personal or business use because it offers abundant benefits to the customers with minimum cost and maximum of time and energy. Nowadays young generations are the trend setters, they will show the way to others. They are now widely using their smart phone for making online payment and showing others, how to use e-payment mechanism without losing privacy. Hence, the need to know the influencing factors which have impact on adoption of payment wallets for their financial transactions. With these back ground the current study throws light on “Customer’s Intention to Adopt Payment Wallet in Coimbatore City: A SEM Model” among the respondents and also carried out to identify the trust, security and problems faced by them while using p-wallet.

### **Objectives of the study**

- To analyses the socio-economic profile of the respondents who are using payment wallet for transaction purposes.
- To understand the usage, preferences and satisfaction level of payment wallet among sample respondents.
- To determine the influencing factors of customer intention to adopt payment wallet system in selected areas of Coimbatore City.
- To find out the relationship between adoption and customer trust, ease of use, data security and perceived risk.
- To identify the problems faced by the customers while using payment wallet and to undertake the adequate measures to solve the problems.

### **Hypothesis of the study**

- The most preferred payment wallet is independent of the marital status of the respondents.
- There is a significant relationship between purpose of using payment wallets and marital status of the respondents.
- There is a significant relationship between Marital Status, Occupation, Monthly Income and Number of times payment wallets used by the respondents.
- The most preferred payment wallet chosen by the respondents are ‘Google Pay’, ‘Phonepe’, ‘Paytm.
- Transferring money is the most important purpose for using payment wallets by the customers.
- There is a significant difference in the data security on payment wallets of the different groups.

- Customer's preference to use the payment wallet were information confidential, Steps to use, useful mode of payment and lack of complaints and redressal mechanism.
- There is a significant relationship between ease of use and adoption of payment wallet.
- There is significant relationship between customer trust and adoption of payment wallet.
- There is significant relationship between data security and adoption of payment wallet.
- There is significant relationship between perceived risk and adoption of payment wallet.
- Customers faced the major problems were language problems, connectivity issues & time consuming to setup the wallet.

### **Limitations of the study**

The current research is based on primary data. It is a known fact that primary data has its own limitations. The study relies only on the information gathered through surveys, observations and personal interviews, which are subject to bias. The study undertaken opinion on payment wallet with 100 respondents in the selected area of Coimbatore city and not the opinion of whole Coimbatore city. The opinion of individual differs from other individuals which may result in lacking accuracy in data collection. Time constraint was also regarded as a major limitation while collecting data prior to analysis.

❖ **REVIEW OF LITERATURE**

## CHAPTER - II

### Review of Literature

Review of literature mainly focuses on previous studies conducted on Payment Wallet usage of customers. This will help in avoiding duplication and also to know the background of our topic, discussed under the following heads;

- I. Studies related to Consumer's Adoption of Payment Wallet
  - II. Studies related to Customer's satisfaction of Payment Wallet
  - III. Studies related to Usage of Payment Wallet during Covid-19 Pandemic
  - IV. Other related studies to Payment Wallet
- I. Studies related to Consumer's Adoption of Payment Wallet

**Chaiyasoonthorn & Suksa-ngiam (2019)** conducted a cross-sectional survey on e-payment systems and its distribution and adoption in Bangkok, Thailand. The study was conducted to examine the different socio-economic behaviours towards e-payment systems and the factors that influence the users during e-payments. The study resulted in a positive correlation between income of people and usage of e-payment system. And it is further found that there is no relationship between area of residence and usage of e-payment. Additionally, they found that the use behaviour is possible with respect to income, readiness to adopt and availability of internet banking.

**Nguyen and Huynh (2018)** has studied the roles of trust and perceived risk from TAM to find out the adoption of e-payment in Ho Chi Minh City. The researchers studied about e-payment, its advantages and disadvantages with different versions of technology models such as TAM, TAM2, TAM3 and UTUAT. From the study, it was found that there was a positive influence of trust on e-payment and negative influence of perceived risk on the same. The result showed that there was 38% responded positively to e-payment adoption.

**Oyelami et.al, (2020)** conducted a study in Nigeria pertaining to intentions of consumers on purchase and payment using adoption of e-payment usage. Additionally, the growth on their spending was also studied and checked whether there is an increase of spending due to e-payment. It is found that people are more aware of e-payment system and they felt so comfort while using such system. The study suggested that government should imply more on e-payment so that the possibility of using e-payment would increase.

**Tiwari et.al, (2019)** in their research study has proposed an innovative model of digital wallet through biometric lock and its adoption in NCR consumers by collecting data using questionnaire among 200 NCR respondents. The researchers were investigated the usefulness of this product in current scenario as well the willingness of peoples to adopt this innovation using questionnaire survey method. The study summarized using SPSS software and conclusions were drawn which showed most of the respondents are willing to adopt this product if its repair cost and others are reduced.

**Yang et.al, (2021)** investigated the effect of perceived usefulness, perceived ease of use, social influence, facilitating condition, lifestyle compatibility, and perceived trust on both the intention to use an e-wallet and the adoption of an e-wallet among adults by using the unified theory of acceptance and use of technology (UTAUT). The quantitative study adopted a cross-sectional research design to gather data from 501 respondents using a Google Form. The collected data were analyzed using partial least square structural equation modeling (PLS-SEM). The study found, perceived usefulness, perceived ease of use, social influence, lifestyle compatibility, and perceived trust displayed a significant positive effect on both intentions to use an e-wallet and adoption of an e-wallet. The study evidenced the mediating effect of the intention to use an e-wallet on the correlations between the predictors and adoption of an e-wallet. Both the age and gender of the respondents moderated the effect of lifestyle compatibility on intention to use an e-wallet. The study outcomes serve to inform managers and policy makers to devise effective strategies that capture consumer's intention to use and experience of using an e-wallet in the midst of a turbulent market. Ultimately, such carefully sculpted policies may promote the digital platform and web-based application, apart from encouraging higher rates of e-wallet adoption in developing countries.

**Ajmera & Bhatt (2020)** analysed the cashless sector is growing in the economy; we had seen its presence and impact on various segments especially E-wallets had eased the way business transactions were carried out. E-wallet is emerging as an exceedingly huge approach. The study had administrated the cross sectional survey in Ahmedabad city and collected the data from the respondents who are using the E-wallet application. Structured Questionnaire had been applied and targeted to those clusters where the consumers are availing E-wallet services. A sample size of 420 respondents was targeted from the various areas of Ahmedabad. The study focused on the categorical variables like gender, age, occupation, income, education, qualification and various

questions related to factors affecting the adoption of E-wallets. The study focuses on understanding the opinion of consumer's with respect to perceived service quality, perceived trust, perceived benefits and perceived satisfaction. Attitude Likert Scale had been applied to understand the intensity of satisfaction and in turn adoption of E-wallet by consumers on different statements framed within the questionnaire. Eventually the study also considered one of the independent variable as dependent variable; overall perceived satisfaction to ascertain the effects of other three independent variables on perceived satisfaction derived which in turn lead to consumer's adoption of E-wallets.

**Kumar et.al, (2020)** investigated that the Mobile Wallet (M-Wallet) is a type of payment service by which individuals can send and receive money through mobile devices. It is a type of e-commerce created for the mobile devices for the ease accessibility. M-wallet is also identified as Digital wallet or e-Wallet. The study seeks to find out the relationship among Perceived usefulness (PU), Perceived Ease of Use (PEOU), Attitude Towards Use (ATU) and Behavioural Intension to Use (BINT) among the M-Wallet users and to study the mediating role of Attitude towards use have been used to evaluate mobile wallet adoption and acceptance in rural areas of India. The study was empirically tested by data collected from 450 prospective mobile wallet users, through online and offline survey. Data were analyzed using SPSS and structural equation modeling (SEM) technique. The study found that there is strong relationship and impact on Behavioural Intension to use by the independent variables.

**Lonare et.al, (2018)** analyzed Mobile wallets can be viewed as the digital version of a physical wallet someone would carry. The mobile wallet revolution is well underway, but the winning providers were far from decided. The study is to understand the factors affecting the increase in user proportion and its significance in adoption of e-wallet and also the disparity in user proportion in metro and tier-2 cities. A total 285 valid responses as a part of pilot test were analyzed to establish the outline of the study. In November 2016 aftermath of demonetization affected the user base and increased the number of e-wallets adoption by small vendors in Mumbai area. Looking at the user perspective, the majority of the respondents uses e-wallets; the proportion of users in the metropolitan cities is more as compared to the tier-2 cities. In addition, the only significant variable for e-wallet adoption that was indicated was 'Simplicity', which implies the ease of use of the wallet payment system. Looking at the vendor perspective, the e-wallet adoption is much less than what had anticipated. One of the unexpected factors was the fact that the vendors

are approached by the e-wallet representatives to adopt it. E-wallets adopted by the user population and are satisfied with it. The vendor market hadn't diffused into yet and seeing the difficulties and problem they face, it seems difficult that they will be able to penetrate it in the future.

**Soodan and Rana (2020)** determined the Intention to use e-wallets was affected by a number of factors are related to consumer perception about privacy, security, price value, benefits etc. A sample of 613 customers of e-wallets in Punjab state in India was validated through mall intercept method. The purpose of the study indicates that hedonic motivation, perceived security, general privacy, facilitating conditions, performance expectancy, perceived savings, social influence and price value in this order; influence the intention to adopt e-wallets. Habit and effort expectancy was the hindrances that had a negative impact on the e-wallet adoption. Factors such as hedonic motivations, security, and privacy have larger roles. The service provider's should maintain the privacy and security of users and engage customers by modifying the existing services range and features. The study endorses reduction in the efforts of using e-wallets and the conversion of habit into more willingly performed behaviour. The study showed model can draw meaningful insights about adoption of this emerging payment platform.

**Malik et.al, (2019)** explained how payment systems have witnessed a sea change. They had evolved from physical transfer of cash to transactions through mobile wallet apps. This incredible and quick transition ushers the need to examine the factors that influence the consumer's attitude to adopt wallet apps. Data were collected from 100 mobile wallet app consumers to empirically examine the factors that affect its adoption. Data was analysed by employing correlation and regression analysis using SPSS 20. The study indicated that performance expectancy, incentive and trust are positively significant factors in predicting consumers' attitude towards adoption of mobile wallet apps. Ease of use, social influence, enjoyment and aesthetics were found to have an insignificant effect on wallet app adoption. The findings of the study contribute towards the understanding of the factors that trigger wallet app adoption and provide useful implications for wallet service providers, marketers and academicians.

**Tusyanah et.al, (2021)** discussed that the factors on the behavioral intention to use e-Wallet based on the UTAUT model. The variables are performance expectancy, effort expectancy, social influence, facilitating conditions and experience as a moderating variable. Data were collected by questionnaire and analyzed using SEM-PLS. The population in the study was students of the Faculty of Economics at Universities Negeri Semarang who have adopted cashless

transactions in their payment activities. The population in the study was 4,156 students, with a sample of 365 students. The study showed that performance expectancy has a positive and significant effect on the behavioral intention for 18.4 %, Effort expectancy has a positive and significant effect on the behavioral intention for 20.1%, Social influence has a positive and significant effect on behavioral intentions for 22.8 %, Facilitating condition has a positive effect and significant impact on the behavioral intention for 24.7%, Effort expectancy has a positive and significant effect on behavioral intention through experience (moderating 1) for 24.6 %, Social influence has a negative effect and insignificant effect on behavioral intentions through experience (moderating 1) for -4.8 %, and Facilitating condition has a negative and insignificant effect on behavioral intentions through experience (moderating 1) for - 5.3 %.

**Singh & Rustagi (2018)** conducted with the rapid technological advancements taking place around the world every day, mobile phones and internet connectivity have posed as one of the most significant inventions done by mankind. Mobile wallet is a virtual wallet that stores payment card information on mobile devices. The mobile wallet industry is estimated to grow 150% to approximately \$4.4 billion by 2022. This accelerated increase is estimated due to increased adoption and inclusion of the platform that is backed by the government. The study aims to explain the impact and adoption of mobile wallets and consumer perception towards the same. A structured questionnaire was prepared for the study and data was collected from 299 valid respondents and factors affecting adoption and threats were analyzed using various statistical tools. An online survey was circulated and the data was collected through convenience sampling. The survey consisted of 15 objective questions which collected information regarding preference, adoption, threats and demographic details. Statistical analysis was performed on IBM SPSS 22. The data was tested for Reliability using Cronbach's Alpha, Normality using Shapiro-Wilks and ANOVA were performed to check significant difference in adoption, threat and preference for different groups of various demographic variables such as age, gender, occupation, education and income level. Regression analysis were conducted using linear regression to check impact of variables such as ease to use, security and safety and accessibility on the reputation of the company. The study showed many findings in relation to preference, adoption and threats relating to mobile wallets. Paytm emerged to be the current market 67 leaders with recharges and money transfer as the most popular services accessed. It was found that there was a significant difference for adoption of mobile wallets among age groups of 16-25 & 36-45 and students & businessmen with the first

group in each case showing favorable outcomes in adoption. Another finding was the presence of significant difference in relation to preference of mobile wallet over other cashless alternatives among the group of student & businessmen and the low income (0-15 lakhs per annum) and high income groups (16 lakhs and above per annum) with the latter group preferring other alternatives in both the situation. The study suffers from the limitation of sampling and since the data was collected through surveys it is open to subjective bias as well. Time constraint is also a major limitation of the study. The implication of the study is to determine factors that affect the adoption and reputation of the company in this fast paced, rapidly growing industries so that current market players can work with the findings to adapt and change to retain their position in the industry and also to sustain their market share. The study was conducted with primary data and the analysis was performed personally with the finding being drawn on first hand basis indicating the utmost originality of the study.

**Phumong et.al, (2020)** identified antecedents of mobile wallet continuance intention in Vietnam. A self-administered questionnaire was distributed to collect data from a total of 276 respondents. Partial least squares structural equation modeling was employed for analyzing the data. Five mobile wallet features such as mobile application quality, mobile wallet familiarity, situational normality, payment security, and feedback mechanism were introduced as fundamental elements, which influence customer's continuance intention to use mobile wallet in Vietnam. The study indicated that mobile quality application and familiarity could significantly influence perceived ease-of-use (PEOU) and perceived usefulness (PU), but situational normality has an impact only on PEOU. PEOU and PU are positively related to satisfaction. On the other hand, payment security and feedback mechanism affect positively customer's trust. The study found, the positive effects that satisfaction and trust have on electronic wallet continuance intention are confirmed. The findings could be used to advise mobile wallet provider's to improve their platform design and services to retain users. As a theoretical contribution, the study combined the Technology Acceptance Model, Unified Theory of Acceptance and Use of Technology to investigate the key determinants on continuance intention in the context of electronic wallet in Vietnam.

**Chawala and Joshi (2019)** examined the factors that influence a consumer's attitude and intention to use mobile wallets using a sample representative of Indian users. A multidisciplinary model was proposed, building on the technology acceptance model (TAM) and unified theory of

acceptance and use of technology (UTAUT) and other relevant research on factors, which influenced technology adoption. A nationwide primary survey was conducted using the questionnaire. Convenience sampling was used to select the respondents. In total, 744 respondents participated in the survey and 17 hypotheses were formulated and PLS-SEM was used to estimate and test the hypothesized model. The study showed that factors like perceived ease of use (PEOU), perceived usefulness (PU), trust, security, facilitating conditions and lifestyle compatibility had a significant impact on the consumer attitude and intention to use mobile wallets. Of the proposed 17 hypotheses, 15 were accepted. Ease of use significantly influenced usefulness and trust, whereas PU significantly influenced trust, attitude and intention. Security and trust were found to be playing an important role in determining trust.

**Ming et.al, (2020)** examined the factors affecting the adoption of E-wallet services in Sarawak. The questionnaire, which consisted of 26 questions were distributed to the respondents and successfully collected 450 feedbacks. The study applied factor analysis to construct all the variables. Also, Cronbach's  $\alpha$  coefficient was computed to determine internal consistency reliabilities. Then, the study used regression analysis to test the relationship between the variables. The results of the regression analysis showed that the users would adopt E-wallet when they perceive that the E-wallet is useful and easy to be used. The findings of the study showed that rewards tend to attract users to use E-wallet. Besides that, the study also found that higher perceived risk may act as a barrier to stop users from using E-wallet. It helped the E-wallet service providers to identify the significant factors that influence the user's intention to use E-wallet services. The study recommended the E-wallet service providers to take the security systems and rewards into consideration for the enhancement of their payment system.

**Abraham (2020)** aimed an adoption of the cashless transactions had been significantly pressed by the Prime Minister, Mr.Narendra Modi, as a part of government reforms after demonetization of high-value currency of Rs.500and 1000. The demonetization resulted in unprecedented growth in digital payments. On 8<sup>th</sup>November 2016 demonetization was announced and within a short period of three months, digital wallet companies had shown a growth of 271 percent for a total value of US \$ 2.8 Billion (Rs. 191crores). E-wallet is a type of prepaid account in which a user can store his or her money for any future online transaction. Due to the growth of Smartphone ownership and internet usage, the majority of these payments are done through mobile devices; stakeholders being the youth. A study on the perception of the youth on digital wallets is

highly imperative in the Indian context. The study administers the perception of youth towards the various services provided by digital wallets, the factors influencing their perception, their level of satisfaction and the problems encountered. A sample of 100 respondents from the Kottayam district of Kerala was selected for conducting the study. The study depicts that post demonetization e-wallet usage has become more popular in India. Internet connectivity issues and payment restrictions for huge amounts are the common problems faced by the respondents. Digital wallets have become the most convenient mode of payment in the New India. The country needs to move away from the conventional cash-based towards a cashless payment system. It will provide multiple advantages including reduction of currency management cost, transaction costs, avoidance of scam and embezzlement of cash.

**Chakraborty & Mitra (2018)** found out whether customer demographics influence adoption intention for e-wallets in India and to identify the parameters that are most important in predicting consumer's adoption intention and whether the market could be segmented into different customer groups. The regression model showed an impressive amount of variance explained for adoption intention ( $R^2 = 81.7\%$ ) and cluster analysis helped to reveal three different customer segments with their different set of criteria. The above findings would help digital wallet companies to have a better and clear understanding of factors that influence the adoption decision of Indian consumers concentrating particularly on the parameters that influence end-users to adopt their services.

**Campbell & Singh (2017)** tried to investigate the impact of customer innovativeness on the acceptance of mobile wallet in India using Perceived Usefulness and Perceived Ease of Use from Technology Acceptance Model (TAM). The study found Customer Innovativeness (CI), Perceived Usefulness (PU) and Perceived Ease of Use (PEU) for Mobile Wallet; influence Indian Behavioural Intention (BI) to use digital payment platforms (Mobile Wallets) with the emergence of Digital and Cashless India. The findings revealed that only the 'Perceived Ease of Use has direct influence on Behavioural Intention to use mobile wallet but 'Perceived Usefulness' and 'Innovativeness of Customers' do not have significant effect on 'behavioural Intention' which is indeed a matter of concern for establishing Mobile Wallet industry in India.

**Effendy et.al, (2020)** studied on the acceptance of the use of information technology often uses the Technology Acceptance Model (TAM) and the Unified Theories of Acceptance and Use of Technology (UTAUT) model, which provide an excellent theoretical basis for understanding

consumer intentions to use non-cash payment transactions. Non-cash payment methods used in the study were e-wallets such as OVO, Go-Pay, T-cash, and others. The study combined these two theoretical models mentioned above and aimed at determining the effect of perceived usefulness, perceived ease of use, and social influence on the intention to use e-wallets. The survey was conducted involving STMIK Rosma Karawang students in the information system study program (2019-2020) with a population of 160 students. Samples taken by purposive sampling obtained 137 respondents. The technique was used multiple linear regression using SPSS V23. The study showed that a positive and significant influence on perceived usefulness and perceived ease of use on intention. It turned out that social influence did not have a significant effect. The study results serve as a guideline or reference for companies developing e-wallet applications in the future. The company expects to make a more comfortable and easier to use applications and always be consistent in providing users.

**Padiya & Bantwa (2018)** observed on 8<sup>th</sup> November 2016 Honorable Prime Minister of India took a phenomenal step by declaring that two highest denomination currency notes in India (500 rupee notes and 1000 rupee notes) will not remain legal tender. Demonetization decision coupled with government initiative to make India a cashless economy is expected to bring a phenomenal transformation in the way people make payments and expected to increase inclination towards online payment. Among the various modes of online payments the mode gaining popularity during present time is E-wallets. In a nation India where larger part of clients still favoured Cash-on-Delivery, it is difficult to fasten the pace of process of innovation diffusion such as digital wallets. The study generated the readiness of people to use E-wallets and factors influencing the adoption of E-wallets including the factors refraining the usage of it, during the post demonetization period. The study aimed at examining the adoption of E-wallets as a mode of payment in Ahmedabad City and to ascertain the factors encouraging and preventing the usage of E-wallets during the post demonetization period. The study throws light on adjuvant issues like impact of demonetization decision on preference for online payments, impact of various demographic factors on usage of E-wallets, problems faced by people while using E-wallets etc. The study is based on 318 valid responses received through a structured questionnaire. Data collected were analyzed by using percentages, cross tabulation and statistical tools like ANOVA. The study researchers found that, E-wallet users give very high level of importance to attributes like security, privacy concerns and pricing (Fees). The major problems frequently encountered by

the respondents while using E-wallet were long transaction time taken by E-wallet for processing the transaction, security breach and delayed payment. Demonetization drive of government of India has contributed immensely towards awareness, usage and acceptance of online payment.

**Abdullah et.al, (2020)** estimated the evolution of financial technology into digital payment has led to a new era of cashless society. In line with the global trend, the Malaysian Government committed to strengthen the agenda of a cashless society by actively promoting the use of e-Wallet through the establishment of the Interoperable Credit Transfer Framework (ICTF) policy in 2018. Although e-Wallet implemented since 2016, several previous studies found that the level of acceptance is still relatively low while the main factors that influence the acceptance of e-Wallet in Malaysia still remain unclear. The study aimed to identify the factors that influence the acceptance of e-Wallet towards establishing cashless society in Malaysia. Online survey using closed-ended questionnaires have been conducted among 400 respondents from students and employees of Malaysian public universities in Klang Valley. Collected data had analyzed using descriptive statistics and inferential statistics which consist of Factor Analysis, Pearson Correlation and Multiple Linear Regression in Statistical Package for the Social Sciences (SPSS). Based on the findings, four factors were found to significantly influence e-wallet acceptance, which consist of Performance Expectancy (PE), Social Influence (SI), Facilitating Conditions (FC) and Trust (T). Facilitating Conditions (FC) is the most influential significant factor behind the acceptance of e-wallet among Malaysians.

**Ameerbakhsh et.al, (2021)** studied that the advancement of Electronic Payment (E-P) was aided by the global spread and usage of the internet and cell phones. In Saudi Arabia, there is a scarcity of research that offers a systematic synthesis and study of the factors influencing the utilize and acceptance of electronic payment approaches. E-P popularity has been reached out to a mass in Saudi Arabia which brings more research on its consumers. E-payment (E-P) have been widely accepted to a large number of consumers in Saudi, which brings a great demand of this sector, this research has been done to check over it, pros and cons. In view of the promising growth of e-payment in Saudi Arabia, the aim of the study is to discover the factors affecting e-payment acceptance from the perspective of Saudi consumers. Consumer adoption of e-payment is influenced by factors such as perceived protection, subjective standard, self-efficacy, ease of use, trust, and benefits, according to the literature. The link between the decision of an e-payment and the actual use of an e-payment is then investigated. A self-reporting survey has been created and

distributed to 850 people, with 406 eligible statistical answers considered. According to the conclusions, only perceived easy use has a positive effect on perceived utility. According to the SPSS multi-regression study, gains, subjective standard, self-efficiency, and usage simplicity affect the perceptions of e-payment systems by Saudi consumers, whereas confidence and protection are not significantly related with e-payment systems perceptions by consumers. In addition, important coefficients were discovered between e-payment acceptance by e-payment consumers and actual e-payment use. The research found that e-payment acceptance and use, in Saudi Arabia, is now available. It has advanced knowledge. The implications of the results have been discussed further for e-payment system developers, policymakers, financial institutions, online providers, and software developers.

## **II. Studies related to Customer's Satisfaction of Payment Wallet**

**Prasad & Arora (2018)** attempted to study customer satisfaction in use of e-wallet as dependent variable and problems in e-wallets, risk and solution to boost the use of e-wallet as independent variables. 351 respondents were considered duly completing forms and AMOS graphic is used for further analysis to test the formulated null hypotheses and to check validity of the results. Findings includes that there is positive relationship of customer satisfaction with solutions in e-wallets and negative relation with problems in using e-wallets.

**Singh et.al, (2020)** examined that potential for the use of mobile wallet is enormous and it is drawing attention as an alternative mode of payment worldwide. The study aimed to provide important insights into the TAM (Technology Acceptance Model) and UTAUT2 (Unified Theory of Acceptance and Use of Technology) models. The study developed a conceptual model to determine the most significant factors influencing user's intention, perceived satisfaction and recommendation to use mobile wallet. The study model included 206 responses from an online and manual survey in India. The study tested the moderating effect of innovativeness, stress to use and social influence on users perceived satisfaction and recommendation to use mobile wallet services. The study found use, usefulness, perceived risk, attitude, to have significant effect on user's intention, which further influenced user's perceived satisfaction and recommendation to use mobile wallet services. The study also determined the significant moderating effect of stress to use and social influence on user's perceived satisfaction and recommendation to mobile wallet services. The study provides an integrated framework for academicians to measure the moderating effect of psychological, social and risk factors on technology acceptance. It could help practitioners

by identifying important factors affecting user's decision, which affects user's perceived satisfaction and recommendation to use mobile wallet services.

**Tiwari & Singh (2019)** discussed the massive adoption of Information and Communication Technology, in the field of digital payment systems; there are very few researches on consumer satisfaction with cashless payment systems. The exploratory research is the first to test consumer satisfaction level towards cashless payment systems through two leading companies (Paytm and BHIM), providing digital payment platform. The primary objective of the study is to identify the factors affecting adoption of cashless payment services and consumer satisfaction in India through survey method. Adoption of cashless payment systems can help society in the development of the economy. Study recommends that companies like Paytm and BHIM need to know the factors affecting 'consumer satisfaction' with cashless payment systems in India. Cashless payment system providers focus not only on the adoption of cashless payment systems but also the satisfaction of the consumers in India. The study also presented a model for enhancing the rate of customer satisfaction with respect to e-wallets in India. With the help of close-ended questionnaire, total 200 respondents have been participated in the survey. Through comparative analysis it is found that BHIM to be a much more secure platform as compared to Paytm since it is a government-owned platform. However, Paytm aids in providing an instant solution to problems but has a few disadvantages.

**Brahmbhatt (2018)** attempted to study and measure the customer's perception regarding E-wallets in Ahmedabad city. A survey had been used to collect primary data and 102 questionnaires were used in final analysis. SPSS and Microsoft Excel had been used to analyze and interpret the data. Graphical Representation, t-test, ANOVAs and chi-square analysis have been used. Study showed that people were aware and willing about the online payments through E-wallets and there is a tremendous increase in growth rate after demonetization. Word to Mouth publicity have higher impact on information spread compare to other methods such as advertisement on social media, Magazine, TV and Government promotion. So companies and government both should create awareness by organizing cashless society workshops/seminars. The study set out to enlarge understanding of how consumers evaluate E-wallets services in Ahmedabad city. The study makes a valuable contribution given the fact that there are only a limited number of comprehensive studies dealing with the E-wallets services in Ahmedabad city.

**Prasad (2018)** analysed that the role of customer satisfaction in buying the same brand of good (brand loyalty) of an e-wallet service provider. The study examined by means of observation and its impact on customer satisfaction, on brand loyalty in regular usage of e-wallet. Based on the theoretical model, could be defined as a theory that is developed to explain a situation or a phenomenon to able to forecast it, a proposition made as a basis for reasoning were formulated. The primary was collected from the respondents which consist of 400 e-wallet users. The study gives an outcome of e-wallets, describes its functional behaviour of different e-wallets in India. The systematic research of population is the e-wallet users in Hyderabad which is considered to be a finite number. For sample selection, a convenience sampling method was used. A standard 5-point structured instrument is used to collect the primary data. The data was analyzed using SPSS and PLS software. A structural equation modelling test was used for the analysis of the data. The study proved that customer satisfaction carries great impact on brand loyalty of e-wallet.

**Chaudhary & Anand (2021)** focused on identifying the perception of the customers regarding the use of e-wallets in Sonipat District. The objective of the study, to ascertain demographic attributes and its impact on e-wallets use and aimed to study the awareness and satisfaction about e-wallet services in people in Sonipat District. After demonetization, the popularity of various digital payment systems increased significantly. Within this context, it is especially important to study and understand the perception of rural customers towards wallets. The study has utilized descriptive research design along with non-probability convenience sampling method to collect required data about the use of e-wallets. To conduct the research, the researcher prepared a structured questionnaire and utilized a sample of 775 people for the purpose of analysis. There was a set of 23 questions that were designed for the satisfaction and awareness of people of Sonipat District with respect to e-wallet services. The questionnaire was based on a 5-point Likert scale and the researcher utilized a survey to collect the data. It is identified that Paytm is the most popular e-wallet and the reason behind using it is trust. The study also identified that there is no significant relation between the demographic factors like gender, income and occupation on e-wallet usage.

**Savior (2019)** expressed the smart phone has become an essential part of one's daily life. Mobile users can nowadays use their Smart phones to make money transactions or payments by using applications installed in the phone. There were several mobile wallets which provide these services. Mobile wallets are digital versions of traditional wallets that someone would carry in

their pocket. They offer payment services through which the individuals/business can receive/send money via mobile devices. The present study throws light on the customer satisfaction level towards thee-wallet services provided by paytm. It focuses on the services provided by Paytm wallet and its satisfaction level.

**Miruna (2019)** investigated that in recent times technology plays a very vital role with this, the way we transact in daily life has changed drastically with the advent of smart phone the life has become easier where all payments & transaction are taking place on online. This paved the way for the emergence of platform termed has a digital wallet. The study focused on measuring customer satisfaction towards E-wallet in Tirunelveli city. Both primary and secondary data were collected for the study. The primary data was collected through questionnaire from 50 E-Wallet users. The study makes a valuable contribution given the fact that there are only a limited number of comprehensive studies dealing with the E-wallets services in Tirunelveli city.

**Argimbayeva et.al, (2020)** analyzed the effects of E- Wallet on Abu Dhabi National Oil Company (ADNOC) customer's satisfaction. A comprehensive discussion of the various services provided by ADNOC was presented to capture related and unrelated product offerings. Given that the primary offering is fueling, ADNOC also provides services such as lubrication, car wash options and tire centers. The ADNOC stations also have alliances with the food and beverage industry such as McDonald's corporation, Costa Coffee as well as Starbucks. The first study of ANDOC's utilization of the E-Wallet and customer satisfaction, results from other industries was reviewed to establish an overview of customers' utilization of E-Payment facilities. For the study a survey was administered to solicit responses from ADNOC's customers to ascertain the satisfaction level of the utilization of the E-Wallet. Coefficient alpha was used to measure the internal consistency reliability of both E-wallet and Customer Satisfaction subsets. The research also used Pearson's correlation coefficient to assess the degree of possible relationship between the Pearson's correlation coefficient. Coefficient alpha was 0.85 and 0.95 for E-wallet and Customer Satisfaction respectively. Pearson's correlation coefficient test was 0.815 indicates that there is strong relationship between Pearson's correlation coefficient. The finding is expected to help ADNOC management to better understand the concept of "know your customers".

**Aggarwal & Vaish (2020)** provided that in today's world we come across so many different modes of payments and one of the most commonly used medium is E-wallet which is used by almost everyone around us. There are many E-wallets available in the market like Paytm, Google

Pay etc. which were very common among people. These E-wallets are a very convenient mode of payment making life easier for us. The study seeks to find out the impact of different E-wallets and study the consumer preference for the same among a group of a sample of 200 around us. The various factors were studied which are dependent on independent factors which have significant effect on E-wallets. Techniques like 2 sample T-tests and graphs/tables are used in the analysis of the primary data collected. The study established that E-wallets were affected by different consumer preferences depending on various factors.

**Mathiraj et.al, (2019)** identified that the Government of India initiative such as Digital India and increased use of mobile and internet are the main reasons for the exponential growth in use of digital payment. Even though the thought of digitalization raised long years ago, it took growth pace recently. This is because of lack of awareness and knowledge among people, fear to make online payment, security issues etc. The E-Payment system will be boosted only when the awareness is created in the minds of the people. Digital Wallets have eased our buying experience by providing another convenient money transfer platform. It is a significant role and positive impact on adoption of digital wallets. The study attempted to evaluate the consumer perception of e-wallet. The primary data collected through questionnaire, 200 consumers were selected as the sample size using convenient sampling techniques. The statistical tools used for the analysis is univariate one-way ANOVA and Hendry Garret Ranking Method. Uni-variate ANOVA is used to identify the significance of the difference in the levels of perception, influencing the factors and satisfaction of e-wallets between two groups. The Hendry Garret Ranking analysis is used to identify the problems of e-wallets services.

### **III. Studies related to Usage of Payment Wallet during Covid-19 Pandemic**

**Undale et.al, (2020)** aimed that Coronavirus (COVID-19) pandemic forced nationwide lockdown in India. During the period of lockdown usage of e-Wallet increased by 44%. With the increased usage of digital transactions, cyber-crime attacks also increased as much as by 86%. The socio-economic environment and the peoples' mindset in the country yet not ready for this kind of rise in digital transactions. The purpose of the study is to capture "security concern" and "comfortability" in regard to using e-Wallet during the COVID-19 pandemic situation. The study investigated the influence of demographics status such as gender and income on "security concern" and "comfortability" in using e-Wallet. The respondents were selected using a purposive sampling method. Only those people who had been using e-Wallet were included in the survey. The

questionnaire was circulated to 100 respondents who agreed to participate in the survey. After scrutiny total of 43 questionnaires were found to be completely filled in all aspects, and thus used for analysis. The study used an innovative multi-method approach for analysis. The hypotheses were tested using two methods: the conventional p-value method and the robust BC a bootstrap method. The study suggested that female users are more concerned about e-Wallet security than male users. The study showed that people from the middle-income group are more concerned about the security of digital payments than the people from the lower-income group.

**Rajbirsaha (2021)** explained that in recent statement made by the Chairman of Payment Council of India, smaller towns such as Guwahati, Bhubaneswar, Dehradun and Imphal are witnessing one of the sharp growths in digital payments, both in terms of volume and new users. The use of digital transactions and electronic cash transfer were encouraged during the lockdown days of Covid19 pandemic. Further, e-wallets usage should be encouraged to avoid unnecessary visit to banks, implementation social distancing, avoidance of physical touch while exchange of cash amid of Covid19 pandemic in India and also to create positive attitude among citizens of the country towards adoption of cashless economy. Hence, the study was aimed to investigate the e-wallet usage in amid of Covid19. The study was adopted empirical research design to online survey method to gather the perception of e-wallet users in Guwahati city area.

**Revathy & Balaji (2020)** described the Government of India had announced nationwide lockdown in four phases from 24<sup>th</sup> of March 2020 in India due to eradication and elimination of COVID-19 from the country. The essential services including food industry, petrol pumps, banks and ATMs were exempted from Lockdown. Citizens of the country were had no other choice rather than staying at home due to COVID-19 pandemic India. The use of digital transactions and electronic cash transfer were encouraged in every nook and corner of the country. The study was aimed to investigate the significant predictors of behavioral intention on e-wallet usage in amid of COVID-19 lockdown period. The study was adopted empirical research design to online survey method to gather the perception of e-wallet users in the study area. The study indicated that perceived security, social influence, performance expectancy are the positive and significant predictors of e-wallet usage whereas, effort expectancy do not have significant influence on e-wallet usage. E-wallets usage should be encouraged to avoid unnecessary visit to banks, implementation social distancing, avoidance of physical touch while exchange of cash amid of

COVID-19 pandemic in India and to create positive attitude among citizens of the country towards adoption of cashless economy.

**George et.al, (2021)** discussed the use of mobile wallets in India was on a rise from the past few years on account of its various advantages such as ease of use, simplicity, convenience, and cost-effectiveness. It was during the COVID-19 pandemic in 2020, that the usage of mobile wallets increased drastically. People who were hesitant in using e-wallets till then saw no choice but to switch their mode of payment due to quarantine restrictions placed across the nation. Customers who converted to e-wallets during this time saw its advantages first hand and were reluctant to go back to their previous modes of payment, primarily cash. It studies the reasons for the increasing popularity and use of mobile payment apps in India during the COVID-19 pandemic in 2020, and the surge would continue to sustain even after the pandemic. The three most popular payment apps used in India, namely, Google Pay, PhonePe, and Paytm are considered for the study. The population of the study is users of mobile wallets in India. The studies have chosen “Convenience Sampling Method” to collect the relevant data by circulating the questionnaire link through social media to receive responses. A sample of 120 responses had been selected and analyzed for the research study. The study revealed that, since 2020, people have been increasing their usage of mobile wallets significantly and would continue to do so in the future. The study also indicated that the usage of mobile wallets would continue to sustain even after the COVID-19 pandemic, although new techniques will need to be designed and deployed to keep this surge going.

**Noviyasari et.al, (2021)** studied during this pandemic era, innovation such as e-wallet should be useful to help the society to reduce the risk by reducing direct contact while doing their business transaction. However, a slow pace of continuance usage especially in Indonesia had attracted the study to be carried out. The base framework used is the Expectation-Confirmation Model (ECM) together with trust, hopefully can shed new understanding about the phenomena. Quantitative approach through questionnaire as a tool had the data to be processed using Smart PLS. Out of 6 hypotheses listed in the study, only one is being rejected which related to relation of perceived usefulness to continuance of usage. The data collected manage to support the other five hypotheses in which these findings are in line with current knowledge. The study has a limitation due to the biased sampling method toward urban population and urban area.

**Patel & Rathod (2021)** focused demonetization effect, Government promotion, Merchant acceptance, Effect of COVID-19, availability of internet and smart phones etc. are in favour of adoption of E-wallet in market as payment alternative but still Consumer inertia towards use of E-wallet prevails in India. In spite of many advantages to use E-wallet over traditional payment system, Consumers having hesitation due to concerned factors associated with it. Perceived Risk associated with E-wallet usages are safety, privacy, digital literacy, language, cost, fraud etc. makes impact on intention to use and consumer adoption behaviour. The study aims to examine the major factors concern for consumer's inertia to use of E-wallet. It is an attempt to find out reasons of adoption and impact of demographic variable on concern factors with statistical analysis using SPSS.

**Alwi et.al, (2021)** studied Mobile e-wallet or digital e-wallet is one of the emerging Financial Technologies (FinTech) that has become extremely prevalent during the last few years. As even the technology is growing, it is crucial that researchers recognize the factors that affect technology adaptation. Even, with the world's pandemic and the digitalization of the banking system and modes of payment, it might have and disability. The study, therefore concentrate on defining the factors affecting behavioral intent to implement mobile e-wallet after the COVID-19 outbreak. The indicators highlighted in the study were perceived usefulness, perceived ease of use, perceived health, perceived social impact and perceived value. The data were analyzed using multiple regression analysis and factor analysis from Cronbach Alpha. The study revealed that a significant impact including its estimated model on the behaviour intent to implement mobile e-wallet.

**Kaur et.al, (2021)** purposed to understand the adoption of e payment services and study whether consumer intention is affected by Perceived Security, Perceived Health Security, Perceived Benefits and Technology Acceptance Model in India especially in the region of Delhi NCR. Qualitative and quantitative research is the main methodology in the research. The main reason of the research is to check the adoption of e payment services amidst the COVID-19 pandemic specifically due to increased health security awareness. Data of survey was collected from total of 201 participants who include undergraduate and post graduate college students by sending mails online. Out of which only 173 responses found to be fully completed and satisfactory for analysis. Frequencies, Cronbach's alpha, Factor Analysis, Multiple linear regression and one-way ANOVA techniques have been employed by using SPSS. The result has shown that all the

five variables used are significantly influencing the intentions to use the e payment services in India, particularly, in Delhi NCR. Even though, PEOU, PB are the main factors affecting the intention to use e payment system, perceived health security (PHS) is also found to be positively affecting people in adopting e payment systems. Study also found that people who are using and likely to use e- payment preferred debit card (35.8%), e wallet (29.5%) and UPI (23.1%) as first mode of payment than credit card (11.6%).

#### **IV. Other related studies of Payment Wallet**

**Ahuja (2019)** reviewed on challenges faced by the users of e-payment system in India. This review has gone through various e-payment systems like debit and credit cards, e-wallets, e-cheques, e-cash, NEFT, RTGS and AEPS. The study resulted in some issues faced by users of e-payment system such as more possibility to steal the information like user ID and passwords, lack of consistent digital literacy, more dependency on cash transactions rather cashless, lack of infrastructure in rural and remote locations and lack of knowledge to choose right e-payment method.

**Vetrivel & Razack (2020)** discussed that demonetization in India of stripping Rs.500 and Rs.1000 notes as no longer as legal tender is highly affected the common people of the country but, it paves the way for the digital push towards cashless economy and digital banking. The digital banking revolution has made it possible to provide ease and flexibility in banking operations for the benefit of customers. Technological innovations such as mobile money, e-wallets, payment aggregators, etc., have also helped in bringing the people online. Digital or E-wallet refers to an electronic, internet-based payment system which is a store house for financial value as well as personal identity. Such electronic payment systems empower a customer to pay online for the goods and services, including transferring funds to other, by using an incorporated hardware and software system. The study, an attempt has been made to explore the underlying dominant dimensions of e-wallet usage purposes and its determinants. The study revealed that deliberation and design are dominant dimensions of e-wallet usage purposes. The perception of e-wallet users started using e-wallets in the pre and post demonetization period have significant differences with respect to different usage purposes. The study found that increased use of technological products in a payment industry gives new outlook to banking industry as well as helps to work in efficient and better way. E-wallets saves more time and are found to be convenient by the customer through their mobile phones at any point of time as a form of digital platform. To conclude, e-wallets are

really a catalyst towards expedition of cash to cashless economy especially, in the aftermath of demonetization.

**Pawankalyani (2016)** covered about the transaction in earlier times when there was no currency system, people used to work on barter system, later on people started transaction in terms of currency notes /coins. In the modern digital age people were using money in many forms to pay the bills like through credit card, debit card, using Internet and Mobile devices. People were making transaction digitally over the internet. People were purchasing, making transactions through mobile devices, ATM, Credit cards, Bitcoin, E-wallet, third party like PayPal etc. they feel convenience, easy to use design for transaction and perceived usefulness of the system. The study was focused upon the paperless e-currency transaction that were getting popular all over the world, India is a growing market for the world and many services and products are available online and they accept payments online, but how many people are actually relying on it, how many people were using it for making payments.

**Sujith& Julie (2017)** studied world changed to digital world. India tried to stepping towards e-payment system. Electronic payment system is a payment system through an electronic network. In other words e-payment is a method in which a person can make Online Payments for his/her purchase of goods and services without physical transfer of cash and cheques, irrespective of location and time. Today India is at a stage of demonetization so in the present scenario the study is inevitable to makes electronic payments at any time through the internet directly to manage the e-business environment. The study aimed to identify the issues and challenges of electronic payment systems and offered some solutions to improve the e-payment system and also not only provides more opportunities but many threats.

**Vijai (2019)** estimated in the present world, smart phones play an important role in the daily life of people. The technological advancement had made the smart phones as devices were the mobile users could make money transaction or payment by using an application installed in the phone. The study aimed to explain concept of mobile wallets, functions of mobile wallets, types and their benefits of mobile wallets and usage of wallet money endorsed by different companies and various factors that affect the consumer's decision to adopt mobile wallet and various risks and challenges faced by the users of the mobile wallets. A structured questionnaire was prepared and data were collected from 100 respondents.

**Seam et.al, (2017)** validated a mobile wallet is a digital alter-ego of the physical wallet. It stores the digitized valuables for authorization and uses it accordingly to grant permission for accessing goods. The permission was granted by various forms, ranging from password, QR code, facial image. With the context of tremendous growth of m-commerce industry in our country an empirical research was undertaken to determine factors impacting consumer's choice to use mobile wallet service. The study described how these factors were determined using Logistic Regression, and Structural Equation Modeling.

**Davis et.al, (2017)** determined Demonetization in India of stripping Rs.500 and Rs.1000 notes as no longer as legal tender is highly affected the common people of the country but, it paves the way for the digital push towards cashless economy and digital banking. The digital banking revolution has made it possible to provide ease and flexibility in banking operations for the benefit of customers. Technological innovations such as mobile money, e-wallets, payment aggregators, etc., have also helped in bringing the people online. Digital or E-wallet refers to an electronic, internet based payment system which is a store house for financial value as well as personal identity. Such electronic payment systems empower a customer to pay online for the goods and services, including transferring funds to other, by using an incorporated hardware and software system. The study, an attempt had been made to explore the underlying dominant dimensions of e-wallet usage purposes and its determinants. The study revealed that deliberation and design were dominant dimensions of e-wallet usage purposes. The perception of e-wallet users started using e-wallets in the pre and post demonetization period had significant differences with respect to different usage purposes. The study found that increased use of technological products in a payment industry gives new outlook to banking industry as well as helps to work in efficient and better way. E-wallets saves more time and were found to be convenient by the customer through their mobile phones at any point of time as a form of digital platform. To conclude, e-wallets were really a catalyst towards expedition of cash to cashless economy especially, in the aftermath of demonetization.

**Prasad &Arivazhagan (2021)** examined the Mobile Wallet is an electronic wallet that keeps the information about payment cards on a mobile device. It presents a great opportunity for the user to make online or offline payments across platforms instantly. As no opportunity comes without risk, if the system is not robust, the economic importance given to this technology would lead to cybercrimes that would eventually result in a financial loss for the users. But, the financial

institutions and mobile wallet companies were taking effective measures to ensure the user interest is protected and transactions are secured. While steps were being taken to ensure safer transactions, not sure about the customers were considering this, while transacting through mobile wallets. The study proposed to investigate, the users perception towards Mobile Wallet's security and trust. Descriptive research design is adopted and data were collected from people who were using mobile wallets. Around 147 responses were collected by using the non-probability, purposive sampling technique through an online survey, email survey, and personal interview. Then data were analyzed through suitable statistical tools and results were validated through appropriate discussions. Study reveals five significant variables that influence trust among users and out of which technology was playing a significant role.

**Chattopadhyay (2017)** described India is experiencing a paradigm shift with respect to the way funds are being accessed and utilized. The currency exchange in India was undergoing a transformation from its age old physical form to an absolutely new virtual form; the e-form. Thus, physical wallets are changing to virtual wallets, also known as e-wallets. The service-scape in e-wallet domain is shared by both multinational as well as Indian companies with many of them up-scaling to diversified service offerings. These e-service providers were all geared up to transform the conventional Indian banking system with disruptive marketing thoughts and initiatives. The e-wallet service providers with the power of technological innovation and government's proactive initiatives aim to make financial services available to 100s of millions of un-served or underserved Indians. The study had made a sincere effort to delve and understand the perception and attitude of young Indians towards the e-wallet service providers and their core service as a whole. The study used semantic differential scale to profile the e-wallet service provider brands in India; urban India to be precise with focus on Kolkata city. The importance of the different attributes or dimensions that makeup this service i.e. how consumers perceive them had been studied using a method that was fundamentally based on entropic concept. Primary research forms the basis of the study with youth being the target group (21 – 30 years). The study concluded that Paytm is the most preferred E-wallet service provider in India with safety being the most critical dimension of this service.

**Gupta &Singh (2017)** conducted the success of any organization depends on customized strategies and its dedicated team to implement the strategies, without which an organization may fail. In order to achieve increased and sustainable results, organizations need to execute strategies

and engage customers to retain them. The focus of relationship management is to keep and retain existing customers and not focus on new ones. Retained customers many times work as the catalyst for the new customers as they share their experiences with them. The study is all about the effects of relationship management strategies being implemented by Paytm Enterprise to retain the e-wallet customers. In other words the aim of the study is to check the impact of relationship marketing strategies on customer loyalty. To conduct the study four independent variables reliability, dedication, conversation and handling of customer issues were checked on one dependent variable, i.e., customer loyalty. A well-structured questionnaire was developed to collect the responses through purposive sampling from 151 respondents of Varanasi city. Data was analyzed by the means, standard deviation, and multiple regression. The study showed the correlation between relationship management and customer's loyalty. On the basis of the results it could be concluded that the regression model is good fit. In order to have loyal customer in Paytm Enterprise, the marketer needs to build a solid relationship with the customer by focusing on these independent variables.

**Gupta (2017)** explained that Payments mode used have varied over the years for the purpose of transaction any type of business. From barter to use of gold and silver to IOU's to cheques, bank transfers, credit and debit cards, internet transfer and M-transfer. The banks become a very integral part of transactions. Bank had very strict norms in terms of issuing debit or credit cards and an economy which function too much on cash found it difficult to have bank accounts and minimum deposits system. Thus large groups of the population were left out of this cashless transaction system. Though many private operators had introduced different new transaction modality to reduce the usage physical legal tenders, out of which e-wallet is one of the new payment gateway. A huge market and lots of investment by the e-transaction service providers, its risk to get the return as the people in rural area were not literally advance to access and accept the new payment technology. They had fear of security and trust in doing online transaction. Moving towards a cashless economy is not an easy task in a nation where cash is king. The study aims to understand the challenges while using e-wallet and the contingencies plan for rural market where still people were either not aware of e-transaction or afraid of moving towards cashless. The sample has been taken from different rural areas of Dhanbad district of Jharkhand.

**Hamid and Cheng (2020)** conducted a study among Malaysian adults on the risks involved on usage of electronic payment systems and the usage of different payment methods

using Technology Acceptance Model (TAM). The study was resulted in less significance of risk when compared with the volume of transactions and high significant difference between risk and cash transactions. A study conducted by **Salloum et al. (2019)** resulted that there is updated information on payment made by the students and there are factors affected by e-payment system such as perceived benefit, perceived risk, trust, privacy and performance expectancy. The authors used partial least square - structural equation modelling to analyse the result.

**Sriram & Vanithamani (2020)** investigates the usage of e-payment system among bank account holders in Coimbatore district, Tamil Nadu and how it influences digital financial inclusion in the study area. Using simple random sampling, the study collected data from 390 respondents. One-Way Analysis of Variance with Tukey's HSD post-hoc test and Pearson's Chi Square test were used to analyse the data. The study resulted that there is a significant difference between age groups 18 to 41 and 42 and above on frequency of usage of debit and credit card. In case of internet and mobile banking, except age groups 26 to 41, other age group respondents showed a significant difference in usage frequency. It is further found that device users are more in the age group of 18 to 25, which are salaried and the highly preferred device is mobile phone for frequent use for e-payment. Further more than 50% of the respondents said that they have stored their password information in their device. So, they are prone to Novelty risks, Agent-related risks, and Digital-technology related risks. From the study it is evident that the study area is too far from digital financial inclusion and it is the responsibility of the bank account holders to use e-payment system for speedy, secured and smooth transaction.

❖ **METHODOLOGY**

## **CHAPTER - III**

### **METHODOLOGY**

The methodology adopted in the current study is discussed under the following heads:

- Locale of the study
- Selection of sample
- Data base of the study
- Period of study
- Techniques of analysis

#### **Locale of the Study**

Coimbatore, popularly known as the Manchester of South, is the third largest city and the second among the most industrialized cities in TamilNadu. It is located in the western part of Tamil Nadu, on the banks of river Noyyal. It is surrounded by the Fairy Queen; The Nilgiris (the Blue Hills) in the north, the revolutionary Western Ghats side of Kerala in the west, newly formed Tirupur in the south and south east, and the highly agriculturally commercial turmeric Erode District in the East. This highly progressive, entrepreneurial and commercial district of Tamil Nadu lies between 10, "10' and 11," -30' Northern latitude and 76,"-40' and 77,"-30' Eastern longitude. The district has a geographical area of 7469 sq.kms. With the formation of Tirupur district in 2008, the geographical area of Coimbatore shrank to 4,849.89 sq.kms. The district is divided into three revenue divisions, 9 taluks, 19 blocks and 482 revenue villages.

Coimbatore has a population of 1,601,438. As per the 2011 census based on pre-expansion city limits, Coimbatore had a population of 1,050,721 with a sex ratio of 997 females for every 1,000 males, much above the national average of 929. It is the second largest city in the state after capital Chennai and the sixteenth largest urban agglomeration in India. A total of 102,069 were under the age of six, comprising 52,275 males and 49,794 females. The average literacy of the city was 82.43%, compared to the national average of 72.99%. There were a total of 425,115 workers, comprising 1,539 cultivators, 2,908 main agricultural labourers, 11,789 in house hold industries, 385,802 other workers, 23,077 marginal workers, 531 marginal cultivators, 50 marginal agricultural labourers, 1,169 marginal workers in household industries and 20,877 other marginal workers.

Located in the rain shadow region of Western Ghats, Coimbatore enjoys pleasant weather throughout the year. The rich red loam soil and red sandy soil in the district are favourable for

production of cotton and a wide variety of cereals and food grains, spices, and condiments. The region has a total cultivable area of 330,584 hectares. Forest coverage spans across 158,801 hectares and is primarily suitable for timber, mango, walnut, and silk cotton.

Coimbatore has been among the front runners in attracting a large amount of domestic and foreign industrial investments. The city is fast evolving into diversified activities such as engineering, textiles, power loom, hosiery, auto components, pumps, and motor sets. Rapid urbanization and improved standard of living is making the region one of the most preferred destinations for industrialization.

A major hub for manufacturing, education and healthcare in Tamil Nadu, Coimbatore is among the fastest growing tier-II cities in India. It houses more than 25,000 small, medium and large industries with the primary industries being engineering and textiles. Coimbatore is called the "Manchester of South India" due to its extensive textile industry, fed by the surrounding cotton fields. TIDEL Park Coimbatore in ELCOT SEZ was the first special economic zone (SEZ) set up in 2006. In 2010, Coimbatore ranked 15th in the list of most competitive (by business environment) Indian cities. Coimbatore also has a 160,000 square feet (15,000 m<sup>2</sup>) trade fair ground, built in 1999 and is owned by CODISSIA.

Coimbatore region experienced a textile boom in the 1920s and 1930s. Though, Robert Stanes had established Coimbatore's first textile mills as early as the late 19th century, and it was during this period that Coimbatore emerged as a prominent industrial centre. In 2009 Coimbatore was home to around 15% of the cotton spinning capacity in India. Coimbatore has trade associations such as CODISSIA, COINDIA and COJEWEL representing the industries in the city. Coimbatore houses a number of textile mills and is the base of textile research institutes like the Sardar Vallabhbhai Patel International School of Textiles & Management, Central Institute for Cotton Research (CICR) and the South India Textile Research Institute (SITRA). Kovai Cora Cotton saree is a recognized Geographical Indication.

Coimbatore is the second largest producer of software in the state, next to capital Chennai. TIDEL Park Coimbatore and other Information technology parks in the city has aided in the growth of IT and Business process outsourcing industries in the city. It is ranked at 17th among the top global outsourcing cities by Tholons. Software exports stood at Rs.7.1 billion (US\$93 million) for the financial year 2009–10 up 90% from the previous year. Coimbatore has a large and diversified manufacturing sector and a number of engineering colleges producing about 50,000 engineers'

annually. Due to huge demand from IT Companies for space at Coimbatore, TIDEL Park Coimbatore-Phase-II is planned to be built within ELCOT SEZ on an additional 9 acres of land with 5 Lakh sq.feet space at Rs.250 crores. TICEL Bio-Park III, a Bio-Technology Park is being constructed in 10 acres of land at Somayampalayam, Coimbatore.

Coimbatore is a major centre for the manufacture of automotive components in India with car manufacturers Maruti Udyog and Tata Motors sourcing up to 30%, of their automotive components from the city. G.D. Naidu developed India's first indigenous motor in 1937. India's first indigenously developed diesel engine for cars was manufactured in the city in 1972. The city is also a major centre for small auto component makers catering to the automobile industry, from personal to commercial and farm vehicles. The city contributes to about 75% of the 1 lakh total monthly output of wet grinders in India. The industry employs 70,000 people and had a yearly turnover of Rs.2, 800 crore (US\$370 million) in 2015. The term "Coimbatore Wet Grinder" has been given a Geographical indication.

Coimbatore is also referred to as "the Pump City" as it supplies nearly 50% of India's requirements of motors and pumps. Coimbatore is largest pump manufacturer CRI pumps, contributes a lot towards the "pump city" status of Coimbatore. The city is one of the largest exporters of jewellery renowned for diamond cutting, cast and machine made jewellery. There are about 3,000 jewellery manufacturers employing over 40,000 goldsmiths.

Coimbatore has a large number of poultry farms and is a major producer of chicken eggs. The city contributes to nearly 95% of processed chicken meat exports. Coimbatore has some of the country's oldest flour mills and these mills which cater to all the southern states have a combined grinding capacity of more than 50,000 MT per month. The hospitality industry has seen a growth in the 21st century with new upscale hotels being set up. Coimbatore is the largest non-metro city for e-commerce in South India.

Coimbatore has a well-connected communications infrastructure. Till the 1990s the state owned Bharat Sanchar Nigam Limited (BSNL) was the only telecommunication service provider in the city. In the 1990s, private telecom companies too started offering their services. As of 2019, BSNL, Reliance Communications, Bharti Airtel, Tata Communications, Tata Teleservices, Reliance Jio and ACT offer broadband service and fixed line services. MTS offers mobile broadband services. Cellular telephony was first introduced in 1997 and mobile telephone services available. Coimbatore is the headquarters of the Tamil Nadu circle of cellular service providers.

## **Selection of Sample**

The study was conducted in urban and rural areas of North Coimbatore and Veerakeralam village were selected purposively, the people who are using payment wallet as a mode of transaction such as students, housewives, business people, and professionals were selected. In the above selected samples of 100 p-wallet users were identified and selected based on random sampling. Among them, 71 sample women were students, 4 were housewives, 8 were business people and 17 were professionals. Therefore, the sampling technique adopted in the study was purposive random sampling.

## **Data Base of the Study**

Data pertaining to the study were collected by personal interview method. The interview schedule consisted of questions relating to the socio-economic background of the customers using various types of payment wallet, the intention factors that to adopt payment wallet, customer trust, ease of use, data security and perceived risk of payment wallet, the problems faced by the customers and level of satisfaction attained through utilizing payment wallet. The schedule was first pre-tested with few selected sample units and based on their responses the questions were reformulated and the final interview schedule used in the study is given in Annexure I.

## **Period of the Study**

Data for the study were collected from the sample units by administering a pre-tested interview schedule during the period December 2021 to January 2022.

## **Techniques of Analysis**

Besides averages, percentages and graphs, the following techniques were applied.

### **Chi-square test**

The  $\chi^2$  test is one of the simplest and most widely used non-parametric test in statistics. The quantity  $\chi^2$  describes the magnitude of the discrepancy between theory and observation and is symbolized as:

$$\chi^2 = \frac{\Sigma (O-E)^2}{E}$$

Where O refers to observed frequency and E refers to expected frequency.

In the present study, Chi-square test was applied to find the association between the most preferred payment wallets with demographic factors like age, gender, marital status, monthly income, educational status, occupation and place of residence of the respondents.

### Garrett's Rating Scale

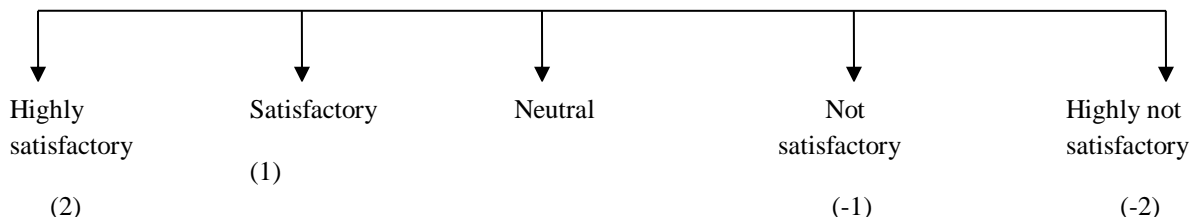
To find out the strength of factors ranked by the selected sample groups in relation to payment wallet users, Garrett's rating scale technique was used. From the ranks given for each factor, percent positions were calculated by using the formula.

$$\text{Percent position} = 100 * (R - 0.5) / N$$

Where R is the rank assigned and N is the number of items ranked. The percent position was then converted into scores using Garrett's scores table (Garrett H, 2005). Garrett ranking scale technique was used in ranking the most preferred payment wallet and purpose of using payment wallet.

### Likert's Summated Scale

The Likert summated scaling technique were used to scale the customers preferences to use payment wallet, reasons for using p-wallet over other mode of payment, problems faced by the customers while using p-wallet and measures to solve the problems faced by p-wallet users. In the Likert scale, the respondent was asked to respond to each of the statements in terms of several degrees, usually five degrees of agreement or disagreement.



Each point on the scale carries a score. Response indicating the least favourable degree of satisfaction is given the least score (say 1) and the most favourable is given the highest score (say 5). These score values are normally not printed on the instrument but are shown here just to indicate the scoring pattern. The Likert scaling technique, thus, assigns a scale value to each of the five responses. The same procedure is repeated for each and every statement in the instrument. This way the instrument yields a total score for each respondent, which would then measure the respondent's favourableness toward the given point of view.

### Factor Analysis

Factor analysis is a generic name given to a class of multivariate technique whose primary purpose is to define the underlying structure in a data matrix. Broadly speaking, it addresses the

problem of analyzing the structure of the interrelationships (correlations) among a large number of variables by defining a set of common underlying dimensions, known as factors. With factor analysis, the researcher can first identify the separate dimensions of the structure and then determine the extent to which each variable is explained by each dimension. Once these dimensions and the explanation of each variable are determined, the two primary uses for factor analysis, namely summarization and data reduction can be achieved. In summarizing the data, factor analysis derives underlying dimensions that, when interpreted and understood, describe the data in a much smaller number of concepts than the original individual variables. Factor analysis was used in the present study to find out the reasons, preferences of using payment wallet, to identify the problems faced by customers while using payment wallet and measures to solve the problems.

### **Pearson's Correlation Analysis**

**Correlation** is a measure of the linear correlation between two variables  $X$  and  $Y$ . it has a value between +1 and -1, where 1 is total positive linear correlation, 0 is no linear correlation, and -1 is total negative linear correlation.

Karl Pearson's correlation coefficient

$$r = \frac{\Sigma xy}{\sqrt{\Sigma x^2} \sqrt{\Sigma y^2}}$$

**Where**  $\Sigma x = \Sigma(X - \bar{X})$  and  $\Sigma y = \Sigma(Y - \bar{Y})$

To analyse the relationship between the monthly income, marital status, occupation and Number of times used payment wallet, Pearson correlation analysis is employed.

### **Path analysis**

Path analysis is a straightforward extension of multiple regressions. In addition to being thought of as a form of multiple regression focusing on causality, path analysis can be viewed as a special case of structural equation modeling (SEM) – one in which only single indicators are employed for each of the variables in the causal model (i.e.,) path analysis is SEM with a structural model, but no measurement model. Other terms used to refer the path analysis include causal modelling, analysis of co-variance structures, and latent variable models. Its aim is to provide estimates of the magnitude and significance of hypothesized causal connections between sets of

variables, which is best explained by a path diagram. To construct a path diagram the names of the variables are written, arrow is drawn from one variable to other variable which it affects. One can distinguish between input and output path diagrams. An input path diagram is one that is drawn beforehand to help plan the analysis and represents the causal connections that are predicted by the hypothesis. An output path diagram represents the results of a statistical analysis, and shows what was actually found. The objective of path analysis is to understand the pattern of correlations among the variables and explain the variations with the model specified. The path of the model is shown by a square and an arrow, which shows the causation.

In the present study, Customer trust, ease of use, data security and perceived risk were hypothesized to positively affect customer's intention to adopt payment wallet for their transaction purposes. The interaction between these variables was analyzed by using structural equation method.

### **One Way ANOVA**

A **one-way ANOVA** ("analysis of variance") compares the means of three or more independent groups to determine if there is a statistically significant difference between the corresponding population means.

A one-way ANOVA uses the following null and alternative hypotheses:

- **H<sub>0</sub> (null hypothesis):**  $\mu_1 = \mu_2 = \mu_3 = \dots = \mu_k$  (all the population means are equal)
- **H<sub>1</sub> (alternative hypothesis):** at least one population mean is different from the rest

Typically use some statistical software (such as R, Excel, Stata, SPSS, etc.) to perform a one-way ANOVA since it's cumbersome to perform by hand. If the p-value is less than your chosen significance level (e.g. 0.05), then you can reject the null hypothesis and conclude that at least one of the population means is different from the others. To find out the difference in the data security on payment wallets of the different groups the ANOVA test is applied.

## ❖ RESULT AND DISSCUSSION

## **CHAPTER - IV**

### **RESULTS AND DISCUSSTION**

The data collected in the research were not simply because it contained unnecessary information and over or under emphasized facts. Therefore only relevant data were included in the analysis chapter. For better understanding, the collected data are simply represented in the form of diagram and charts. Interpretation of the data is also given to share the meaningful information. Hence, the findings of the current study are presented and discussed under the following heads:

- 1. Socio-economic profile of the respondents**
- 2. Usage of the Payment Wallet**
- 3. Preferred use of Payment Wallet**
- 4. Reasons for using Payment Wallet over Other Mode of Payment**
- 5. Convenient Mode and Purpose of Using P-Wallet**
- 6. Customers Intention to Adopt P-Wallet-PLS SEM Model Approach**
- 7. Preferences for using Payment wallet**
- 8. Problems faced and Measures to Solve Payment wallet**

#### **1. Socio-economic Profile of the Respondents**

The emergence of Information and Communication Technology (ICT) had completely changed the lives and operations of individuals and organizations respectively. ICT and Digital technologies had made great evolutionary development in finance, economics, operational costs (Slozko & Pello, 2015) and enhanced organizational performance (Ali, 2010). As a result of this, the world payments system is gradually changing from coins and paper based money to electronic forms that provide more convenient, fast and secured process of making payments among individual and organizations. Furthermore, e-payment system tends to bring many electronic modes of payments through which financial institutions offer different e-payment opportunities and services to their customers such as the credit cards, debit cards, on-line banking and mobile banking (Premchand & Choudhry, 2015). With this background, an attempt was made in this section to explore the socio-economic profile of the customers of payment wallets so as to identify important parameters crucial for improving the customer base in the electronic payment system. A total of 100 p-wallet customers were surveyed, as shown in table 1.

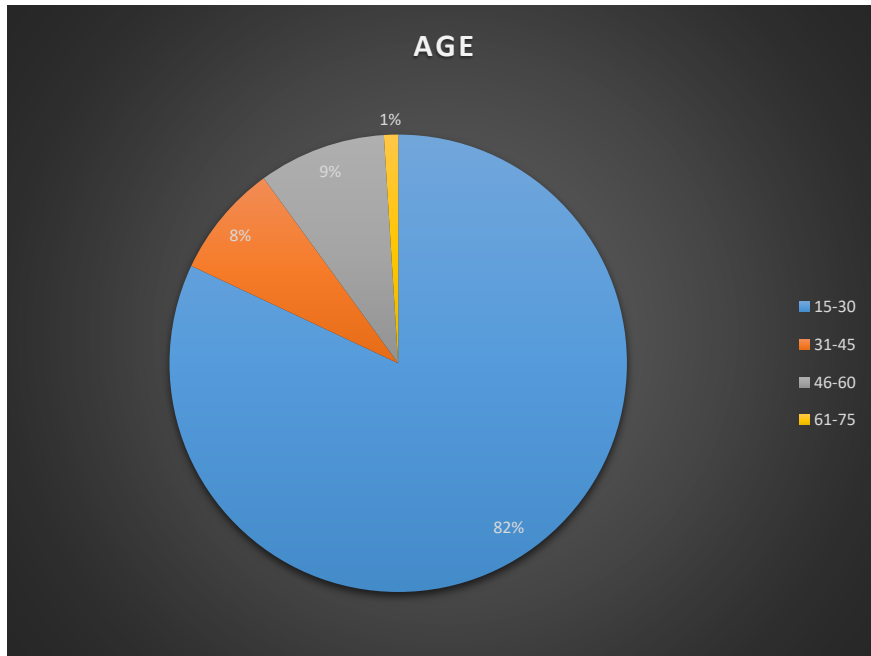
**Table -1**  
**Socio – Economic Profile of the Respondents**

S.No.	Socio - Economic Profile	Characteristics	Frequency	Percentage (%)
1.	Age (In years)	15-30	82	82.0
		31-45	8	8.0
		46-60	9	9.0
		61-75	1	1.0
2.	Gender	Female	78	78.0
		Male	22	22.0
3.	Educational Qualification	Under Graduate	59	59.0
		Post Graduate	35	35.0
		Diploma Holder	6	6.0
4.	Marital Status	Married	27	27.0
		Unmarried	73	73.0
5.	Occupation	Students	71	71.0
		House Wives	4	4.0
		Business People	8	8.0
		Professionals	17	17.0
6.	Monthly Income	No Income	74	74.0
		Below Rs. 20,000/-	11	11.0
		Rs.20,000/- to Rs.40,000/-	6	6.0
		Above Rs,40,000/-	9	9.0
7.	Place of Residence	Rural	43	43.0
		Urban	57	57.0

**Source: Field Survey, 2022**

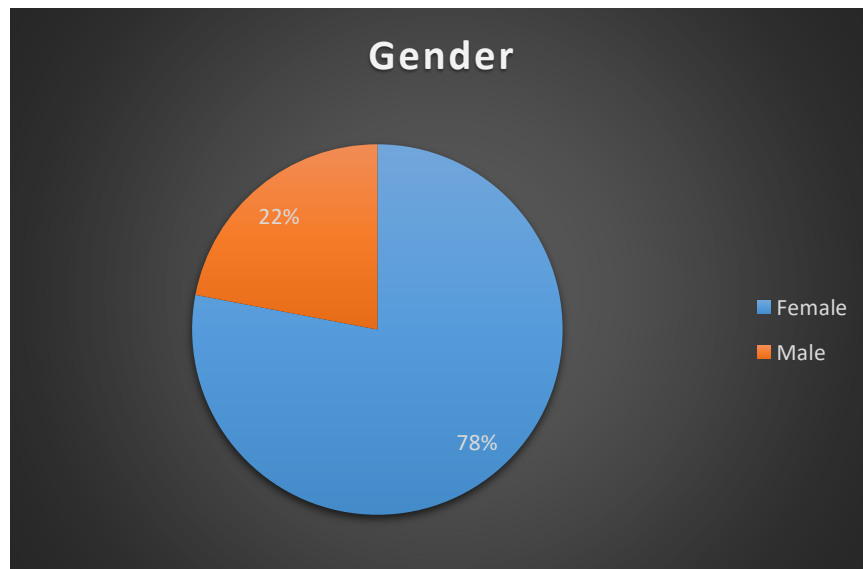
**Age:** the table and figure shows the age of the respondents who are participated in the survey. It's clearly stated that 82 percent respondents were in the age group of 15-30 years which is the highest percentage among other age groups. The next highest category of age group was belonged to 46-60 years (9%) and the lowest categories of age group were belonged to 61-75 years (1%).

**Figure -1**  
**Age of the Respondents**



**Gender:** The above table and figure shows the classification of respondents on the basis of gender. Out of 100 percent, 64% of respondents are males and the remaining 36% are females.

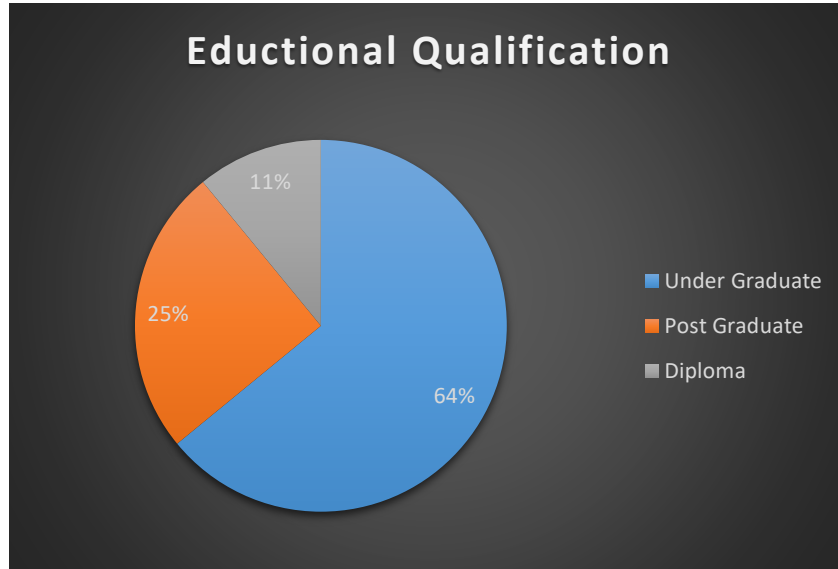
**Figure -2**  
**Gender of the Respondents**



**Education:** in the present study undergraduate degree holders occupied the largest proportion of the respondents which is 59 percent; followed by 35 percent of the respondents are postgraduates

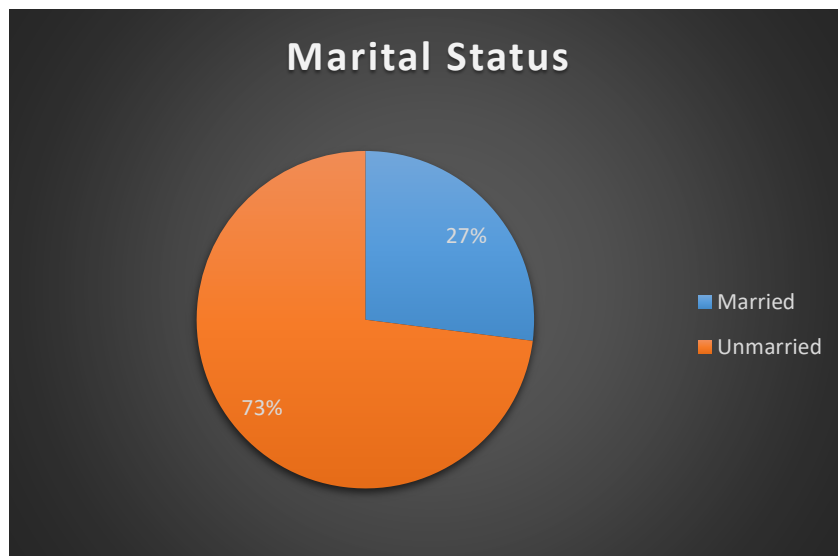
and rest 6 percent of the respondents were diploma. Thus, there was a definite preference among the educated respondents for payment wallets.

**Figure -3**  
**Education Qualification of the Respondents**



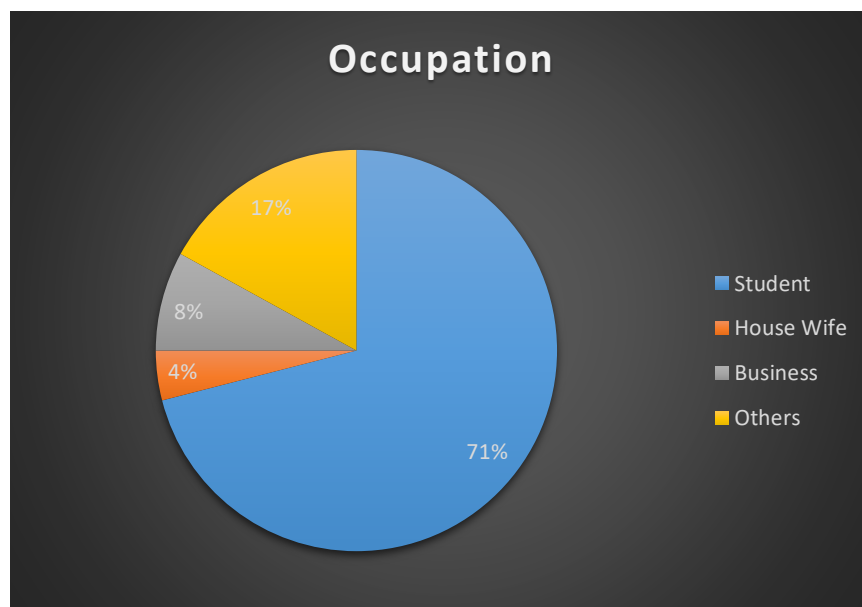
**Marital status:** of the individuals is quite important in any socio-economic study. There is a change in the life style of the individual after marriage, which is more pronounced in the case of women. In the study, majority of them were unmarried (73 percent). The next important category comprised of married persons which is 27 percent according to the survey.

**Figure -4**  
**Marital Status of the Respondents**



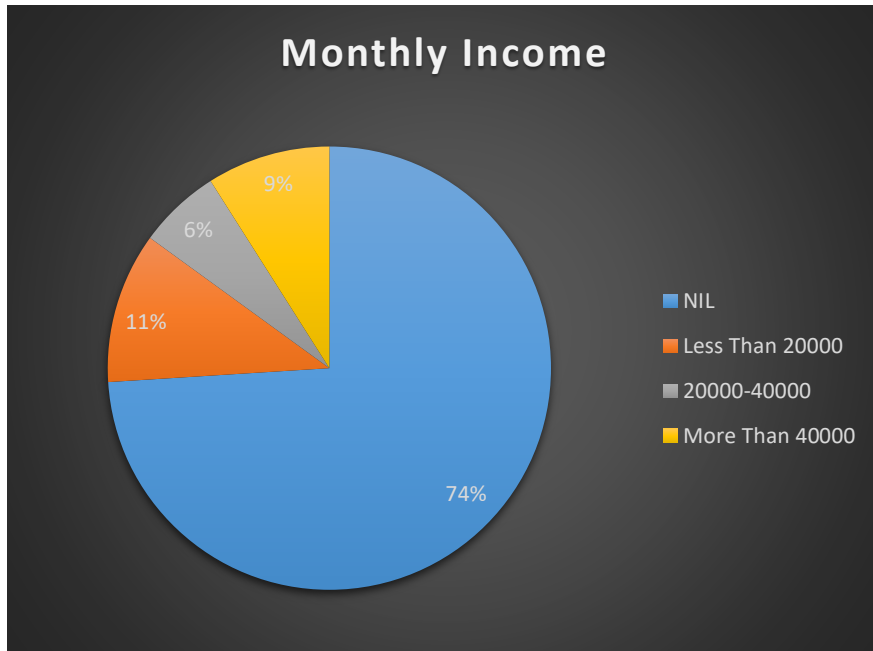
**Occupation:** or employment is central in determining the well-being of the individual or households. Being time savvy, payment wallet is becoming very popular among businessmen, professionals and students. The occupation of the respondents included students, business people, professionals and home makers. Among the respondents majority of them were students (71 percent) who are all using the Payment Wallet for their educational purpose; followed by 17 percent were professionals; 8 percent of them were doing business and rest 4 percent of them were home makers.

**Figure -5**  
**Occupation of the respondents**



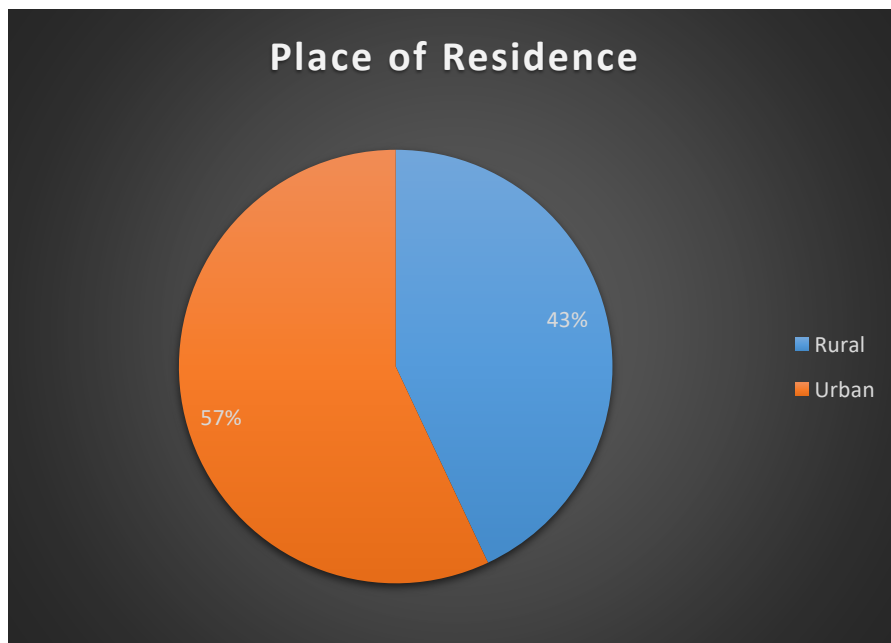
**Monthly Income:** Income was one of the demographic variables that influence the Payment Wallets. In the present study majority of the respondents were students (74%), so they are all considered as unemployed, though they are unemployed, they do use the Payment Wallets for various purposes for their day-to-day expenses. Eleven percent of the respondent's income range is below Rs. 20,000/-; followed by 9 percent of the income of the respondents was above Rs. 40,000/- and the remaining 6 percent of the respondents income range is from Rs.20, 000/- to Rs.40,000/- .

**Figure -6**  
**Monthly Income of the Respondents**



**Place of Residence:** Place of residence was one of the demographic variables that influence the usage of Payment Wallets. In the present study majority of the respondents were belong to urban area i.e 57 percent and the remaining 43 percent of the respondents were belong to rural area.

**Figure -7**  
**Place of Residence of the respondents**



## 2. Usage of Payment Wallets

Payments by p-wallets are currently assumed as the utmost popular transaction methods because of its multiple benefits including flexibility, convenience and protection (Uddin and Akhi, 2014). As highlighted by Hayashi et al. (2014) buyers are not only at the receiving end moreover the merchants also adopt e-wallets as payment method due to their fast transaction operation, robust cash handling and lower labour costs. The purchases made using p-wallets are performed by consumers by scanning the QR code using their mobile device to validate payment at the stores (Lu, 2018). Hence, in this section an attempt was made to discuss about usages of payment wallet.

### Awareness about Payment Wallets

The present study taken the survey on the awareness about the functionality of payment wallets.

**Table - 2**

#### Aware About Functionality

<b>Variable</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	100	100.0
No	0	0
<b>Total</b>	<b>100</b>	<b>100.0</b>

Source: Field Survey, 2022.

**Figure -8**

**Aware about P-Wallets**



By analyzing the above table and chart, it is found that 100 percent of the respondents are aware about new trends in payment wallets for their easy mode of transactions.

**Sources of Awareness about Payment Wallets**

In the initial stage of new technology adoption, increasing awareness is important to increase the rate of new technology usage. The following table shows the awareness level of the respondents towards the payment wallets systems.

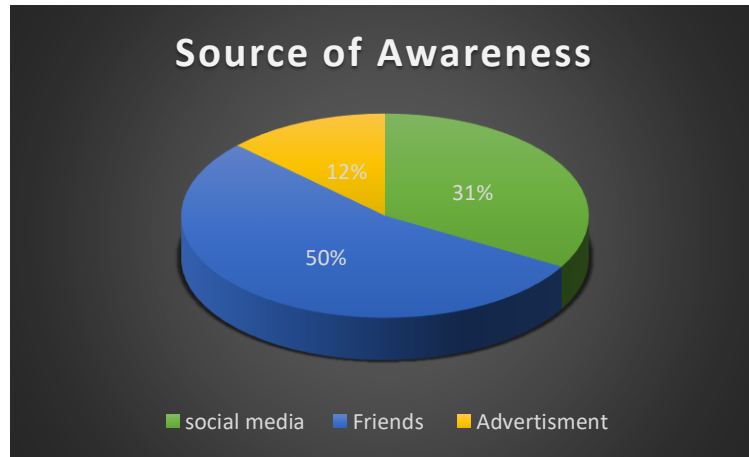
**Table -3**

**Sources of Awareness**

<b>Variable</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Social Media</b>	<b>31</b>	<b>31.0</b>
<b>Friends</b>	<b>50</b>	<b>50.0</b>
<b>Advertisement</b>	<b>12</b>	<b>12.0</b>
<b>Magazine</b>	<b>3</b>	<b>3.0</b>
<b>Television</b>	<b>4</b>	<b>4.0</b>
<b>Total</b>	<b>100</b>	<b>100</b>

Source: Field Survey, 2022.

**Figure -9**  
**Source of Awareness**



The table and figure revealed that the maximum number of respondents (50%) were got awareness about payment wallets from their friends; followed by the popular social media sites (31%); twelve percent of the respondents got awareness from various source of media advertisements; four percent through television and rest three percent of the respondents got awareness through Magazine.

### **3. Most Preferred Payment Wallets**

A digital wallet is an electronic device or software that allow us to make transactions electronically or digitally. It is a faster way to send or receive money or make payments at online and offline stores as it eliminates the need to enter the receiver's bank details. Payment wallets are one of the most preferred modes of payment nowadays due to their immense ease of use and wide range of applications. In this section, the study made an attempt to prove the most preferred payment wallets among the respondents. In the present study, the customers were asked to rank the most preferred payment wallets in their order of priority. The ranks were then converted into percent position and from the percent position the individual scores were determined on a scale of 100 points by using Garrett's rating scale. The average scores and the ranks corresponding to each preference are shown in table 4.

**Table –4**

**Most Preferred Payment Wallets – Average Score and Ranks**

<b>S.NO</b>	<b>Payment wallets</b>	<b>Garrett Mean score</b>	<b>Mean Rank</b>
1.	Amazon Pay	48.59	5
2.	Google Pay	70.17	1
3.	Paytm	53.71	3
4.	Phonepe	58.07	2
5.	NEFT/RTGS	33.55	8
6.	Rupay card	49.52	4
7.	Debit cum credit card	47.15	6
8.	YONO by SBI	35.80	7

**Source: Estimation based on Field Survey, 2021**

Based on the survey, the most preferred payment wallet chosen by the respondents are ‘Google Pay’, ‘Phonepe’, ‘Paytm’ and the scores obtained by these payment wallets were 70.17, 58.07 and 53.71 respectively. The payment wallets which was of least priority was ‘NEFT/RTGS’, the score being 33.55 points.

**4. Reasons for Using P-Wallets over Other Mode of Payment**

The advancements in technology have eliminated the traditional methods of performing transactions using cash and lose money. Now, smart phones have taken the roles of cheques, credit and debit cards, etc. in a smart and digital manner. With the introduction of electronic wallets, people have started using mobile payment applications and paving the way forward by allowing customers to make faster, smarter, and safer payments for performing everyday transactions. Therefore, the present study analyses the reasons attracted by customers to use the payment wallets over the other mode of payment methods.

**Factor Analysis**

The foremost question while examining the customer’s intention to adopt payment wallet is whether customers feel p-wallets are necessary. Keeping in mind the above statement, customers of p-wallets were asked to express their views regarding the reasons for preferring p-wallets over other mode of payment. Twelve statements were prepared and customers were asked to state their opinion on these statements. The opinions were classified on a five point scale with designated attributes such as strongly agree/ agree/neutral/disagree and strongly disagree. Factor analysis was used in the present study to identify the underlying pattern of relationship between various reasons for preferring p-wallets and whether these reasons can be grouped in terms of a composite variable.

To determine the appropriateness of applying factor analysis, the KMO and Bartlett's test measures were computed and the results are presented in table 5.

**Table -5**  
**KMO and Bartlett's Test**

<b>Reasons</b>	<b>Payment Wallet</b>
Kaiser-Mayer-Olkin Measure of Sampling Adequacy	.847
Bartlett's test of sphericity: Approx. Chi-Square	576.432
Degrees of Freedom	78
Sig.	.000

Source: Estimation based on field survey

KMO statistics for customers of p-wallets were .847 signifying higher than acceptable adequacy of sampling. The Bartlett's test of sphericity was also found to be significant at one percent level providing evidence of the presence of relationship between variables to apply factor analysis.

The communalities for each variable were computed to determine the amount of variance accounted by the variables to be included in the factor rotations and the results are shown in table

**Table-6**  
**Communalities**

<b>Reasons for using Payment Wallet</b>	<b>Initial</b>	<b>Extraction</b>
Time savings	1.000	.810
Ease of use	1.000	.736
Payment security	1.000	.398
Wide acceptability	1.000	.621
Quick transfer	1.000	.655
Exciting rewards	1.000	.739
Minimum financial risk	1.000	.686
Alternate choice	1.000	.792
Discount and cashback offers	1.000	.570
Anytime and anywhere accessibility	1.000	.660
Easy to track the record of payments	1.000	.491
No need to carry huge cash	1.000	.612

Source: Extraction Method: Principal Component Analysis

All the variables had values greater than 0.50 signifying substantial portion of the variance accounted by the factors. Table 7 presents the Eigen values, their relative explanatory powers and factor loadings for 12 linear components identified within the data set. The Eigen value greater than one alone was considered for inclusion in the analysis.

**Table -7**

**Rotated Component Matrix**

Reasons	Component		
	1	2	3
Time savings	.895		
Quick transfer	.780		
No need to carry huge cash	.744		
Anytime and anywhere accessibility	.721		
Ease of use	.709		
Easy to track the record of payments	.680		
Payment security	.535		
Minimum financial risk		.802	
Discount and cash back offers		.718	
Alternate choice			.809
Exciting rewards			.698
Wide acceptability			.588
<b>Eigen values</b>	<b>5.661</b>	<b>43.550</b>	<b>43.550</b>
<b>Percentage of variance explained</b>	<b>1.483</b>	<b>11.410</b>	<b>54.960</b>
<b>Total variance explained</b>	<b>1.054</b>	<b>8.150</b>	<b>63.065</b>

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 12 iterations.

The results indicates that for the sample data, The Eigen value of the all factors alone was greater than one indicating that these factors alone were appropriate for inclusion in the analysis. These factors together accounted for nearly 63 percent of the variations in the factors. Factor 1 had significant loadings on seven dimensions namely ‘Time savings’, ‘Quick transfer’, ‘No need to carry huge cash’, ‘Anytime and anywhere accessibility’, ‘Ease of use’ ‘Easy to track the record of payments’ and ‘Payment security’ and these dimensions explained 1 percent of the variance. For the factor 2 had significant loadings 2 dimensions namely ‘Minimum financial risk’ and ‘Discount and cash back offers’ and these dimensions explained 11 percent of the variance. For the factor 3 had significant loadings 3 dimensions namely ‘Alternate choice’, ‘Exciting rewards’ and ‘Wide acceptability’ and these dimensions explained nearly 55 percent of the variance. To sum up, the major reasons for preferring the payment wallet by the respondents were time saving, low risk while using it and they have many alternative choices to use p- wallets for their routine expenses or financial transactions.

## 5. Convenient Mode of Device and Purpose of Using P-Wallets

The present study surveyed among the customers which is the most convenient mode of device for utilising payment wallets for their mode of transactions. The following table and figure represent the convenient mode of device.

**Table -8**  
**Convenient Mode of Device**

<b>Variable</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Smart Phone</b>	62	62.0
<b>Laptop</b>	9	9.0
<b>Personal Computer</b>	9	9.0
<b>All The Above</b>	20	20.0
<b>Total</b>	<b>100</b>	<b>100.0</b>

Source: Field Survey, 2022.

The present survey revealed that majority (62 percent) of the customer's opinion, supreme mode of device for making their routine financial transactions is smart phone. Twenty percent of the samples were using all three devices as their convenient mode of device and each 9 percent of the respondents were using Laptop and Personal Computer as their convenient mode of device respectively.

### **Purpose of Using Payment Wallets**

The respondents were asked to rank the various purposes of using payment wallets for their daily expenses. The purposes of using p-wallets were listed and the customers were asked to rank these purposes in their order of priority. The ranks were then converted into percent position and from the percent position the individual scores were determined on a scale of 100 points by using Garrett's Rating Scale. The average scores and the ranks corresponding to each purpose are presented in table 9.

**Table-9**

**Purpose of Using Payment Wallets- Average Score and ranks**

<b>S.NO</b>	<b>Factors</b>	<b>Garrett Mean score</b>	<b>Mean Rank</b>
1.	Money transfer	66.91	1
2.	Mobile Recharge	63.12	2
3.	Utility and bill payment	49.41	4
4.	Booking movie and train tickets etc	41.69	6
5.	Buying Food and beverages	49.66	3
6.	Tollgate payment	37.40	7
7.	Online shopping/Vouchers	42.17	5

Source: Estimation based on Field Survey, 2022

The main purpose for using payment wallets by the customers was ‘Money Transfers’ (1<sup>st</sup> rank), ‘Mobile Recharge’ (2<sup>nd</sup> rank) and ‘buying food and beverages’, (3<sup>rd</sup> rank). The ‘Tollgate payment’ (7<sup>th</sup> rank) had given the least significant purpose of using payment wallet by the customers.

**Frequency of using Payment Wallets in a Month**

A customer can enquire balance, status of cheques, perform fund transfer, order drafts, request issue of cheque books etc (Srivastava, 2008). In fact, recent mode of payment channels are often considered as potential substitutes for tradition mode of transactions. Table 10 summarises the extent of usage of payment wallets by the customers during a month.

**Table -10**

**Frequency of Using Payment Wallets in a Month**

<b>Frequency of Use per Month</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Only Once</b>	16	16.0
<b>5-10 Times</b>	36	36.0
<b>10-15 Times</b>	14	14.0
<b>More Than 15 Times</b>	34	34.0
<b>Total</b>	100	100.0

Source: Field Survey, 2022.

The present study revealed that majority (36 percent) of the respondents have stated that the frequency of utilising payment wallets were 5-10 times in a month while other major

percentage of customers (34 percent) have utilised it more than 15 times. Sixteen percent of them were using only once in a month and remaining 14% of the respondents were using 10-15 times in a month. This indicates the growing popularity of electronic payment system among the customers for meeting their all types of financial transactions.

**Duration of Usage of P-Wallets**

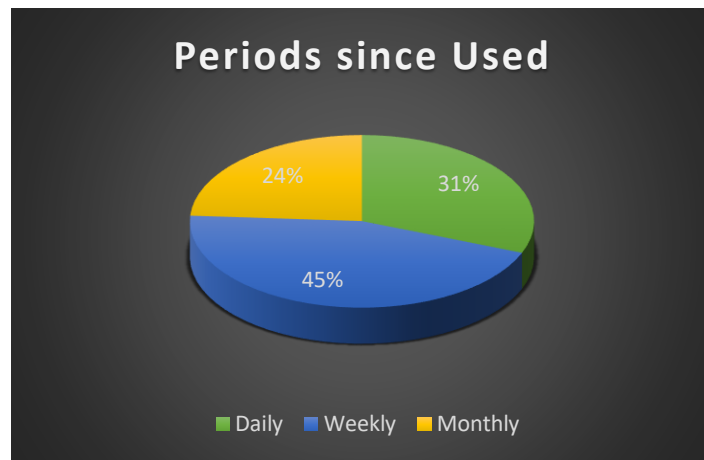
The electronic mode of transaction and other means of electronic commerce came into effect with the passing of the Information Technology Act in 2000. Hence the widespread use of electronic transaction may still be years away. Table 11 precise the details of the period of usage of payment wallets by the respondents.

**Table -11**  
**Periods since Used P-Wallets**

<b>Duration</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Daily</b>	31	31.0
<b>Weekly</b>	45	45.0
<b>Monthly</b>	24	24.0
<b>Total</b>	<b>100</b>	<b>100.0</b>

Source: Field Survey, 2022.

**Figure-10**  
**Periods since Used P-Wallets**



From the above table and chart evident that nearly one half (45 percent) of the customers have been using the payment wallets for mode of transaction in weekly basis. Next major portion of the respondents were using for daily or regularly and remaining 24 percent of the samples were using p-wallets in a monthly basis. Hence, the study indicated that the growing acceptance of P-wallets among the customers.

## **6. Customer's Intention to Adopt Payment Wallet- PLS-SEM Model Approach**

For quantitative data analysis, the Partial Least Squares (PLS) is applied as a method for Structural Equation Modelling (SEM) with common evaluation such as coefficients of determinant of path coefficient. Concept and results of these will be discussed as

### **Consumer Adoption**

Consumer adoption involves the consumer's tendency to accept and to assimilate new technologies, specifically a payment wallet in this instance. Payment wallet consumer adoption consists of three variables, as derived from the technology acceptance model, to include ease of use, data security, consumer trust and perceived risk toward using the payment wallet. These factors of payment wallet consumer's adoption, while separately important, form the basis for a higher-level construct that aggregately measure the consumer's overall tendency to use the payment wallet in a way that it will find useful.

### **Data Security**

Based on Grandinetti (1996), security is unofficial persons, or unlawful modifications or destruction that the protection of data is accidental or purposely disclosure to. Perceived security defines as the customer's subjective valuation of the e-payment system's security (Linck et al. 2006). This study is even supported by Stroborn et al. (2004) that e-payment systems meet the users' security requirements in all aspects. Kurnia and Benjamin (2007) recognize the security concerns of users will affect the adoption of e-payment systems. Furthermore, respondents mentioned that they would reject to use online transactions if they encountered any breach of security. However, the significant relationship in between security and intention of using e-payment systems was substantially perceived in a particular study. Therefore, by enhancing and developing better and safer security level in the systems could conveniently encourage customers to begin with switching to an electronic payment system.

### **Ease of Use**

Many studies such as Legris, Ingham and Collette (2003) and Zhu, Luo, Wang and Li (2011) have defined that a user-friendly technology or system which easier to use and apply are more likely beneficial. Thong, Hong, and Tam (2006) and Chiu, Chang, and Cheng (2009) had proved that perceived ease of use influence in repurchase intention. For the reason, Guriting and Ndubisi (2006) found that in Malaysia context to use e-payment, perceived ease of use had a significant positive relationship on the behavioural intention of Malaysians. Abrashevich (2001)

had concludes that an effective design of e-payment systems in terms of usage is important to attract users' adoption towards e-payment. Hence, perceived ease of use is being said to have a significant relationship with the intention to adopt e-payments.

### **Perceived Risk**

Perceived risk is defined as the subjective belief of suffering a loss in pursuit of a desired outcome. It is especially important as “expectations of negative and harmful consequences if giving information to a mobile seller, thus creating negative attitudes toward giving information to a seller using a mobile device”. Luo, Li, Zhang and Shim noted that previous studies on Internet banking have mainly focused on transaction security risk or privacy risk. Trust can be helpful in dealing with perceived risk. Previous findings suggest that perceived risk is positively related to perceived security and privacy and negatively related to trust perceived usefulness attitude and behavioral intention to use.

### **Customer's Trust**

Trust explained as the degree of risk in financial transactions that the consequence of the trust is reduced perceived risk and thus this will lead users to positive intentions toward use of e-payment (Yousafzai et al., 2003). E-payment transactions are performed within users' expectations that explain users' trust (Tsiakis & Sthephanides, 2005; Mallat, 2007). This is proven in previous studies from Hoffman et al. (1999), Friedman et al. (2000), Jarvenpaa et al. (2000), Gefen (2003) and Wang et al. (2003) had stated trust involve in online exchanges of money have significant that determinant influencing customers' willingness to adopt e-commerce transactions. According to Kniberg (2002), consumers and merchants are more willing to use an unstable payment system that provided by a trusted company more than an untrustworthy company. Study's results from current survey are lightly inconsistent to the past statistical evidence. Hence, trust alone is not sufficient enough to persuade consumers to switch to e-payment with the existence of various critical factors (Hoffman et al., 1999). Therefore, the current study had state the outcomes that customer trust is not the only motivator that will influence in adoption of payment wallet.

### **Hypotheses**

The following Null hypotheses are tested in the present study;

H<sub>1</sub>: There is a significant relationship between ease of use and adoption of payment wallet.

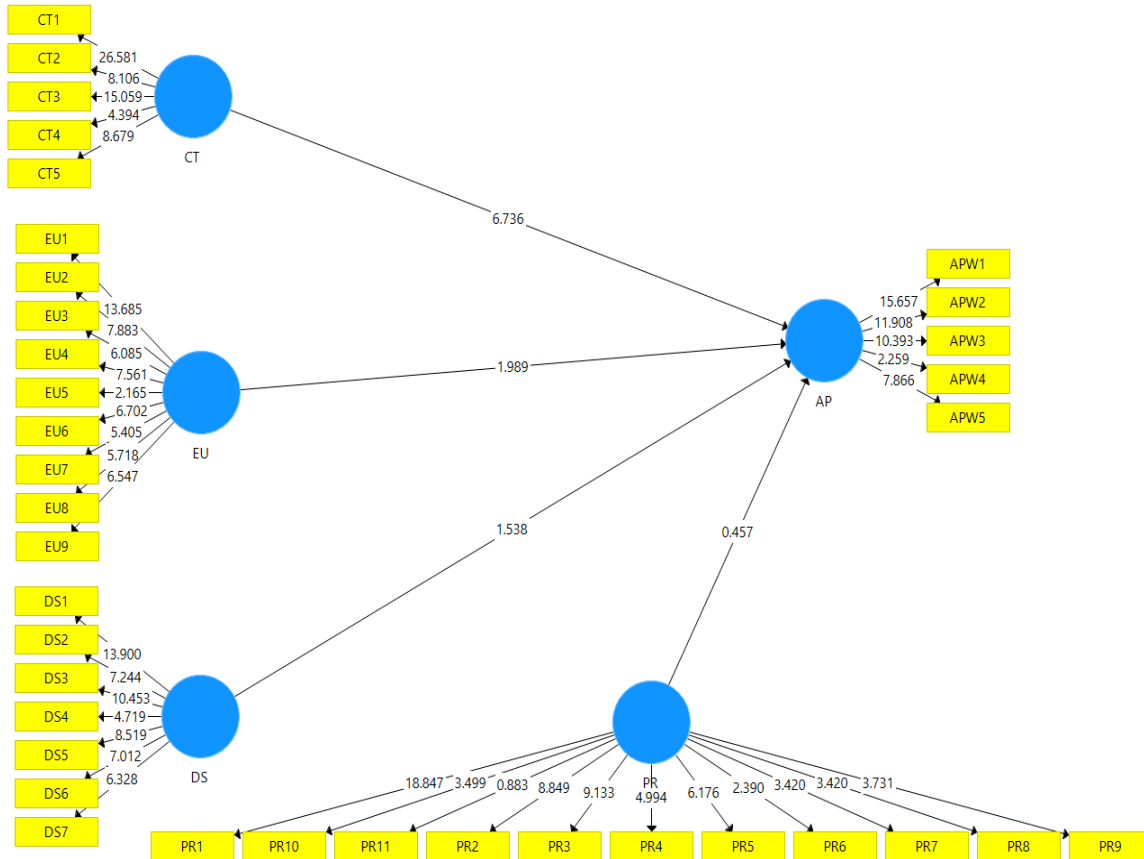
H<sub>2</sub>: There is significant relationship between customer trust and adoption of payment wallet.

H<sub>3</sub>: There is significant relationship between data security and adoption of payment wallet.

H4: There is significant relationship between perceived risk and adoption of payment wallet.

Figure -11

Customer's Intention to adopt P-Wallets-PLS- SEM Model Approach



The path coefficient pertaining to individual components of **customer trust** such as the system of the payment wallet app is highly secured with data protected function, trust the payment wallet apps is reliable, payment wallet service providers are honest with their customer, payment wallet service provides sufficient facilities to handle online transaction and payment wallet service providers have sufficient expertise to conduct online transactions were statistically significant. It showed that all the above components significantly determined the customer trust.

Similarly, the selected indicators of **ease of use** such as fewer safety steps need to accomplish only when you make transaction, able to use this cashless apps effortless, no longer notice any difficulty when use it, can get rid from mistakes and control it perfectly, able to make transaction successfully every time, found my first payment wallet transaction easy and effortless, choose payment wallet providers that are well known, prefer certain payment wallet system over

other because it is easier to use, paying for goods using payment wallet is convenient were statistically significant to determine the ease of use. All the selected indicators of **data security** had significantly influenced the data security.

The estimated path coefficient of **perceived risk** such as possibility of funds misappropriation will influence your decision to use payment wallet, temporary or sudden errors will influence your decision to use payment wallet, transaction data inaccuracy will influence your decision to use payment wallet, bank performance will influence your decision to use payment wallet, the behaviour affect your decision to use payment wallet, does other people affect your emotional to use payment wallet, able to control daily activities in term of financial, payment wallet has record of all payments history, trust affect your decision to use payment wallet, payment wallet transaction for payment wallet reload is secure, using payment wallet put my privacy at risk had also exhibited significant relationship.

The indicators pertaining to **adoption of payment wallet** such as able to control my daily activities in term of financial, like to use it because save time, need this cashless app in daily rather use cash, this apps are included every functions I expect it, will you share the benefit of payment wallet to your friends and family members had exhibited significant relationship with payment wallet.

The path coefficients between customer trust and payment wallet adoption was statistically significant. It revealed that all the **customer trust** indicators had not significantly influenced the payment wallet. The path coefficient pertaining to ease of use and adoption was 1.989 which had exhibited significant relationship. It showed that the **ease of use** of payment wallet had significantly influenced the adoption of payment wallet. The path coefficient of **data security** to payment wallet adoption had not exhibited significant relationship. All the indicators of **perceived risk** had collectively determined the adoption of payment wallet. In total, the indicators of **customer trust** and **ease of use** had significantly determined the adoption of payment wallet in the study. The financial institutions must consider the above indicators when a payment wallet is introduced.

**Table-12**  
**Estimated Structural Model- BOOTSTRAP**

<b>Construct</b>	<b>Original Sample (O)</b>	<b>Sample Mean (M)</b>	<b>Standard Deviation</b>	<b>'t' Value</b>	<b>P Value</b>
PR->AP	-0.046	-0.002	0.101	0.457	0.648
EU->AP	0.163	0.172	0.082	1.989	0.047
DS->AP	0.127	0.130	0.082	1.538	0.125
CT->AP	0.655	0.620	0.097	6.736	0.000

Source: Field survey, 2022

Above table gives the path co-efficient values and the related t-statistics which test the significance of the path co-efficient and the extent of relationship between constructs. A path to be significant, its t value needs to be greater than 1.96.

In the current study, customer trust has the strongest relationship with adoption of payment wallet as the standardization coefficient was equals to 0.097 and t-Statistic was 6.736, which was higher than the accepted rate 1.96. Ease of use positive relationship with adoption of payment wallet as the standardization coefficient was equals to 0.082 and t-Statistic was 1.989, which was higher than the accepted rate 1.96. The study confirms the important effect of customer trust and ease of use has relationship with adoption of payment wallet. Hence, the customers were given higher priority to customer trust and ease of use is determined factor to adopt payment wallet.

### **7. Preferences for Payment Wallet**

E-payment is among the revolutionary changes caused by technology in the field of financial services that tremendously changed humans' life by making them simpler and easier than before. Currently, e-payments have taken over the entire world of financial transactions whether these are meant for personal or commercial use because it offers numerous benefits to the consumers including cost-effectiveness and conservation of time and energy. In this section, the current research discussed about the factors that influenced to preferred payment wallets for their daily transactions.

## Factor Analysis

Factor analysis was used in the present study to identify the underlying pattern of relationship between various reasons for preferring payment wallets and whether these preferences can be grouped in terms of a composite variable. The respondents were asked questions relating to their preferences on p-wallets on a five point scale ranging from -2 (strongly disagree) +2 (strongly agree). To determine the appropriateness of applying factor analysis, the KMO and Bartlett's test measures were computed and the results are presented in the table 13.

**Table-13**

### **KMO AND BARTLETT'S TEST**

Kaiser-Mayer-Olkin Measure of Sampling Adequacy	.640
Bartlett's test of sphericity: Approx. Chi-Square	286.656
Degrees of freedom	45
Sig.	.000

Source: Estimation based on Field Survey

KMO statistics for preference of payment wallets were .640 signifying acceptable adequacy of sampling, Bartlett's test of Sphercity was also found to be significant at one percent level, providing evidence of the presence of relationship between variables to apply factor analysis.

The communalities for each variable were assessed to determine the amount of variables accounted by the variables to be included in the factor rotations and the results are shown in the table 14.

**Table-14**

**COMMUNALITIES**

<b>Preferences</b>	<b>INITIAL</b>	<b>EXTRACTION</b>
Are you believe your transactions are secured	1.000	.618
Payment wallet services are a useful mode of payment	1.000	.758
The interaction with Payment wallet services are clear & Understandable	1.000	.664
It is easy to perform steps required to use Payment wallet Services	1.000	.744
When using Payment wallet, I believe my information (bank/card details) are kept confidential	1.000	.650
The cost of using Payment wallet is higher than using payment/banking channels	1.000	.706
using Payment wallet can save my time in performing Online transactions	1.000	.299
In a few years people will hardly use cash to make purchases	1.000	.505
There is a lack of complaints and redressal mechanism for Payment wallet services	1.000	.818
There are additional charges for using Payment wallets		

**Extraction Method: Principal Component Analysis. Extraction**

All the variables had value greater than 0.50 signifying sustainable portions of the variables accounted by the factors. The Eigen values, their relative explanatory powers and factors loadings for 9 components identified within the data set. The Eigen value greater than one alone was considered for inclusion in the analysis.

**Table-15****Rotated Component Matrix**

<b>Preferences</b>	<b>COMPONENT</b>		
	<b>1</b>	<b>2</b>	<b>3</b>
When using Payment wallet, I believe my information (bank/card details) are kept confidential	.805		
The interaction with Payment wallet services are clear & Understandable	.775		
Are you believe your transactions are secured	.744		
Using Payment wallet can save my time in performing Online transactions	.514		
It is easy to perform steps required to use Payment wallet Services		.819	
Payment wallet services are a useful mode of payment		.814	
In a few years people will hardly use cash to make purchases		.682	
The cost of using Payment wallet is higher than using payment/banking channels		.615	.540
There is a lack of complaints and redressal mechanism for Payment wallet services			.856
<b>Eigen values</b>	<b>3.026</b>	<b>30.265</b>	<b>30.256</b>
<b>Percentage of variance explained</b>	<b>2.063</b>	<b>20.634</b>	<b>50.899</b>
<b>Total variance explained</b>	<b>1.060</b>	<b>10.601</b>	<b>61.500</b>

Extraction Method: Principal Component Analysis, Rotation Method: Varimax with Kaiser Normalization, Rotation converged in 9 iterations.

The results indicates that for the sample data, Eigen value of the all factors was greater than one indicating that these factors alone were appropriated for inclusion in the analysis. These factors together accounted for nearly 62 percent of the variations in the factors. Factor 1 had significant loadings on 4 dimensions namely ‘When using Payment wallet, I believe my information (bank/card details) are kept confidential’, ‘The interaction with Payment wallet services are clear & Understandable’, ‘Believe your transaction secure’, and ‘Save my time online transactions’. These dimensions explained two percent of the variance. For the factor 2 had significant loadings four dimension namely ‘Steps required to use’, ‘Service useful mode of payment’, ‘People use hard cash to make purchase’, and ‘Cost of using higher than and explained nearly 21 percent of the variance. Factors 3 had significant loadings for only two dimensions i.e. ‘Cost of using p-wallet is higher than using payment/banking channels and ‘Lack of complaints and redressal mechanism’ and explained nearly 51 percent of the variance.

## 8. Problems of Payment Wallets

Digital wallet payment risk is associated with data theft, data leak, malware attack, hacking, etc. This risk is one of the main reasons why many individuals avoid p-wallets using p-wallets or abandon them. Over the years technology has advanced so much that this threat can be avoided by developers. Hence, an attempt was made to explain the problems faced by the respondents while using p-wallets in this section.

### Factor Analysis

Factor analysis was used to identify the underlying pattern of relationship between the various dimensions of problems in using payment wallets and whether these problems can be grouped in terms of a composite variable. The respondents were asked questions relating to the problems while using payment wallets, a five-point scale ranging from -2 (strongly disagree) +2 (strongly agree). To determine the appropriateness of applying factor analysis, the KMO and Bartlett's test measures were computed and the results are presented in the table 16.

**Table-16**

#### **KMO AND BARTLETT'S TEST**

Kaiser-Mayer-Olkin Measure of Sampling Adequacy	.846
Bartlett's test of sphericity: Approx. Chi-Square	490.559
Degrees of Freedom	66
Sig.	.000

**Source: Estimation based on field survey**

KMO statistics for problems of payment wallets were .846 signifying higher than acceptable adequacy of sampling, Bartlett's test of Sphercity was also found to be significant at one percentage level, providing evidence of the presence of relationship between variables to apply factor analysis.

The communalities for each variable were assessed to determine the amount of variables accounted by the variables to be included in the factor rotations and the results are shown in the table17.

**Table-17**  
**Communalities**

<b>Problems</b>	<b>Initial</b>	<b>Extraction</b>
Feel lack of safety and security	1.000	.443
Too much time consuming to set up	1.000	.688
Involves danger of losing money	1.000	.615
Cannot be used for international transaction	1.000	.646
Lack of knowledge and awareness among uneducated	1.000	.556
Loss of internet connection sometimes	1.000	.723
Facing language problems	1.000	.715
Charges transaction and service fees	1.000	.555
Difficult to understand all mobile payment options	1.000	.476
Less reliability due to scams and hacking	1.000	.649
Delay in cash back processing	1.000	.677
Sometimes the payments get blocked and no confirmation is sent to customer	1.000	.746

**Source: Estimation based on Field Survey, Extraction method: principal component analysis**

All the variables had value greater than 0.50 signifying sustainable portions of the variables accounted by the factors. The Eigen values, their relative explanatory powers and factor loadings for 12 linear components identified within the data set. The Eigen value greater than one alone was considered for inclusion in the analysis.

**Table-18**  
**Rotated Component Matrix**

Problems	Component		
	1	2	3
Time consuming to setup	.771		
Less reliability	.754		
Cannot used for international transaction	.745		
Charges transaction and service fees	.706		
Feel lack of safety and security	.519		
Too much time consuming to set up		.797	
Involves danger of losing money		.701	
Cannot be used for international transaction		.615	
Lack of knowledge and awareness among uneducated		.545	
Loss of internet connection sometimes			.781
Facing language problems			.726
Charges transaction and service fees			.685
<b>Eigen values</b>	<b>5.279</b>	<b>43.991</b>	<b>43.991</b>
<b>Percentage of variance explained</b>	<b>1.203</b>	<b>10.027</b>	<b>54.018</b>
<b>Total variance explained</b>	<b>1.008</b>	<b>8.399</b>	<b>62.417</b>

**Extraction Method: Principal Component Analysis,**  
**Rotation Method: Varimax with Kaiser, Normalization, Rotation converged in 12 iterations.**

The results indicates that for the sample data, Eigen value of the all factors was greater than one indicating that these factors alone were appropriated for inclusion in the analysis. These factors together accounted for nearly 62 percent of the variations in the factors. Factor 1 had significant loadings on 5 dimensions namely ‘Time consuming to setup’, ‘Less reliability’, ‘Cannot used for international transaction’, ‘Charges transaction and service fees’, ‘Feel lack of Safety and security’. These dimensions explained nearly 1 percent of the variance. For the factor 2 had significant loadings only 4 dimension namely ‘Too much time consuming to set up, ‘Involves danger of losing money’, ‘Cannot be used for international transaction’, ‘Lack of knowledge and awareness among uneducated’ and explained 10 percent of the variance. For the factor 3 had significant loadings 3 dimension namely ‘Loss of internet connection sometimes ’, ‘Facing language problems’ and ‘Charges transaction and service fees’ and explained 54 percent of the variance.

### **Willingness to Continue P-Wallets**

The predominant challenge faced by the government in the present scenario is to convince the customers to move away from physical based transactions into electronic transactions. This shift

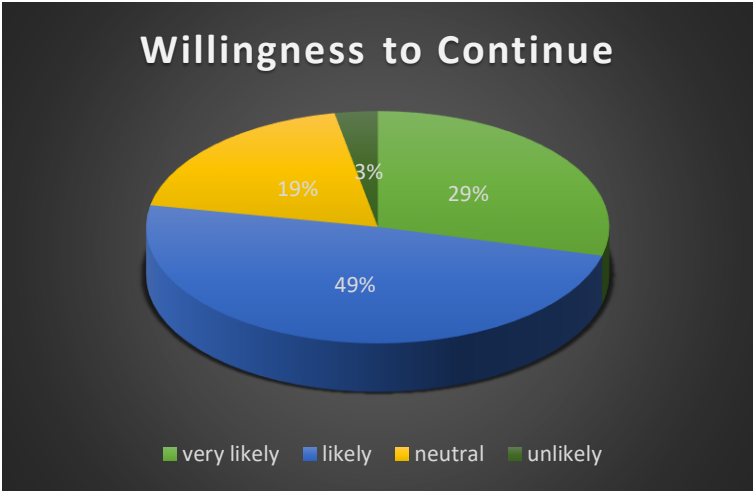
is an intimidating task that needs co-operation from its entire people as it involves a cultural shift from cash-based to limited cash society (digital society). Hence the study identifies their willingness to continue p-wallets for their routine mode of transactions. The findings are discussed below with help of table and figure.

**Table - 19**  
**Willingness to Continue**

Willingness	Frequency	Percentage
Very Likely	29	29.0
Likely	49	49.0
Neutral	19	19.0
Unlikely	3	3.0
<b>Total</b>	<b>100</b>	<b>100.0</b>

Source: Field Survey, 2022.

**Figure-12**  
**Willingness to Continue**



The present study exposed that nearly one half (49 %) of the respondents were likely to continue their mode of transaction through P-wallets, 29 percent of the respondents were very much likely to continue, 19 percent of the samples were neutral and remaining 3 percent of the them were unwillingly to continue their mode of transaction as P-wallets. Therefore, the foremost challenge facing by the government is to influence the people about the merits of p-wallets and creating awareness among them to retention it.

**Payment Wallets Promote Savings**

Over time we are witnessing the rise in the online monetary transactions compared to the physical monetary payments. Technology has helped us to make this process easy and seamless. But, along with suppressing the need of using your physical wallet, Digital or payment wallet has also helped us save money in numerous ways. The below table and figure represents that how payment wallets are promoting their saving while using the payment wallets.

**Table – 20**

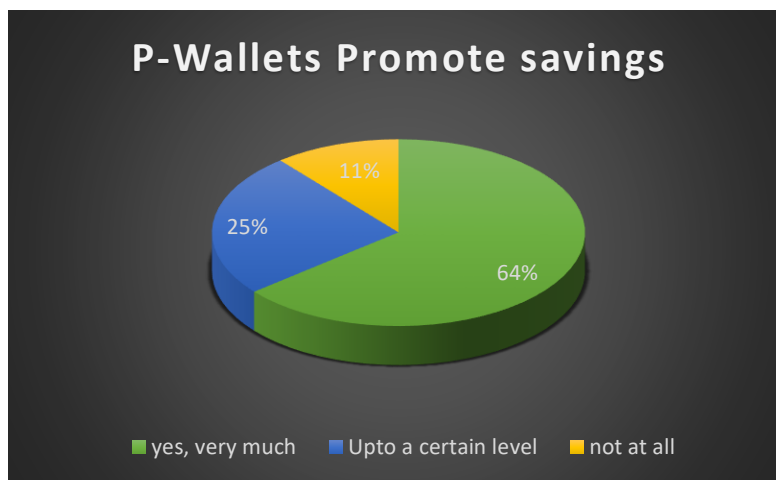
**P-Wallets Promote Savings**

<b>Variable</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Yes, Very Much</b>	31	31.0
<b>Up to A Certain Level</b>	45	45.0
<b>Not At All</b>	24	24.0
<b>Total</b>	<b>100</b>	<b>100.0</b>

Source: Field Survey, 2022.

**Figure-13**

**Promote Savings**



Payment wallets tag along with its perks. While making payments through p-wallet, the customers must have noticed the cashback offers while recharging your prepaid phone or discount offers while shopping online or transferring money to the bank accounts. This is an added advantage for the customers and be rewarded for making the transactions through payment wallets. Thus, in the present study, the majority (45 percent) of the customers who are all utilising the payment wallets, are receiving some amount of cash back up to a certain level, 31 percent of the respondents were getting cashback or savings at maximum level. But the remaining 24 percent of the respondents were not at all receiving any cashback or saving amount while using the payments.

**Suggestions to Improve Payment Wallets**

The global pandemic has played a vital role in fast-tracking the adoption of digital wallets and online payment methods across various user segments. As we gravitate towards a world of digital payments or electronic wallets, it is important to be aware of the challenges that come along. One of the biggest challenges when it comes to digital payments or payment wallets is security. That is why it becomes a must for consumers and businesses to remain vigilant and take the required steps toward off the potential threats. Thus, the study take a look at some of the established best practices which massively enhance the security of payment wallets.

**Factor Analysis**

An attempt was made to examine the suggestions to solve problems faced by the respondents while using payment wallets. The respondents were asked questions relating to their own suggestions for utilizing payment wallets a five point scale ranging from -2 (strongly disagree) +2 (strongly agree).To determine the appropriateness of applying factor analysis, the KMO and Bartlett’s test measures were computed and the results are presented in the table 21.

**Table -21  
KMO AND BARTLETT’S TEST**

Kaiser-Mayer-Olkin Measure of Sampling Adequacy	.752
Approx. Chi-Square	357.852
Bartlett’s test of sphericity df	66
Sig.	.000

**Source: Field Survey**

KMO statistics for suggestions were .752 signifying acceptable adequacy of sampling, Bartlett’s test of Sphercity was also found to be significant at one percentage level, providing evidence of the presence of relationship between variables to apply factor analysis.

The communalities for each variable were assessed to determine the amount of variables accounted by the variables to be include in the factor rotations and the results are shown in the table.

**Table-22**  
**Communalities**

<b>Measures</b>	<b>Intial</b>	<b>Extraction</b>
Use unique passwords	1.000	.642
Don't save card details	1.000	.634
Verify your payment recipient	1.000	.699
Submit minimal personal information	1.000	.593
Always check your financial statements	1.000	.530
Use only private networks	1.000	.660
Do not share your details	1.000	.600
Never use a debit card	1.000	.703
Take advantage of one-time passwords	1.000	.777
Transactions more safe, fast and flexible needs to be improved	1.000	.791
More features can be introduced	1.000	.670
Spread payment wallets usage among shopkeepers	1.000	.683

**Extraction Method: Principal Component Analysis.**

All the variables had value greater than 0.50 signifying substantial portions of the variables accounted by these factors. The Eigen values, their relative explanatory powers and factors loadings for 12 linear components identified within the data set. The Eigen value greater than one alone was considered for inclusion in the analysis.

**Table-23****Rotated Component Matrix**

Measures	COMPONENT			
	1	2	3	4
Spread payment wallets usage among shopkeepers	.759			
Do not share your details	.694			
Always check your financial statements	.671			
Don't save card details	.636			
Submit minimal personal information	.563			
Transactions more safe, fast and flexible needs to be improved		.801		
Never use a debit card		.796		
Verify your payment recipient			.828	
Use unique passwords			.719	
Use only private networks			.634	
More features can be introduced			.527	.517
Take advantage one time password				.874
<b>Eigen values</b>	3.973	33.105	33.105	1.155
<b>Percentage of variance explained</b>	1.668	13.900	47.005	9.628
<b>Total variance explained</b>	1.187	9.892	56.897	66.525

Extraction Method: Principal Component Analysis, Rotation Method: Varimax with Kaiser Normalization, Rotation converged in 12 iterations.

The results indicates that for the sample data, Eigen value of the all factors was greater than one indicating that these factors alone were appropriated for inclusion in the analysis. These factors together accounted for nearly 67 percent of the variations in the factors. Factor 1 had significant loadings on five dimensions namely 'Spread payment wallets usage among shopkeepers', 'Do not share your details', 'Always check your financial statements', 'Don't save card details', 'Submit minimal personal information'. These dimensions explained nearly 2 percent of the variance. Factor 2 had significant loadings on two dimensions namely 'Transactions more safe, fast and flexible needs to be improved' and 'Never use a debit card'. These two dimensions explained nearly 14 percent of the variance. Factor 3 had significant loadings on four dimensions namely 'Verify your payment recipient', 'Use unique passwords', 'Use only private networks' and 'More features can be introduced' and explained 47 percent of the variance. Factor 4 had significant loadings on two dimensions namely 'More features can be introduced' and 'Take advantage one time password'. These two dimensions explained nearly 10 percent of the variance.

To sum up, the above-mentioned suggestions can not only reduce the underlying risks in electronic payments for you but also save you from data and monetary loss. It is also expected from the financial technology players that they will work towards the betterment of payment wallet security, making it an inseparable aspect of customer's endures.

**❖ CONCLUSION AND RECOMMENDATION**

## CHAPTER – V

### CONCLUSION AND RECOMMENDATIONS

Technology has arguably made our lives easier. One of the technological innovations in banking, finance and commerce is the Electronic Payments. Electronic Payments refers to the technological breakthrough that enables us to perform financial transactions online, thus avoiding hindrances and other hassles. Payments wallets provides greater freedom to individuals in paying their taxes, licenses, fees, fines and purchases at unconventional locations and at 24/7 & 365 days of the year. Past few years' smartphones are having a tremendous growth due to accessibility and availability of the internet.

The payment wallet providers with the payback schemes also attracting many consumers to use electronic payment modes aiding the organizations with significant growth. The p-wallets are further enabling economies to a cashless society. Electronic wallets or payment wallets are moreover digital version of the hard cash in physical wallet with more features and functions. E-payments wallets reduce cost of cash holding and handling for the retailers. Retailers on online platform have introduced lucrative discounts and cashback offers to get payment orders for all the cashless payments. The online platform retailers have encouraged more customers to choose a payment mode other than Cash on Delivery, it also helps a business to retain their customer. Consumers will return to the same website where his or her details are stored for making payments, this way the transaction process reduces making the online shopping smoother. With this background the present study throw lights on 'customer's intention to adopt payment wallets; PLS –SEM Model Approach' in the selected areas of Coimbatore District. The objectives of the study as follows;

- To analyses the socio-economic profile of the respondents who are using payment wallet for transaction purposes.
- To understand the usage, preferences and satisfaction level of payment wallet among sample respondents.
- To determine the influencing factors of customer intention to adopt payment wallet system in selected areas of Coimbatore City.
- To find out the relationship between adoption and customer trust, ease of use, data security and perceived risk.

- To identify the problems faced by the customers while using payment wallet and to undertake the adequate measures to solve the problems.

### **Hypothesis of the study**

- The most preferred payment wallet is independent of the marital status of the respondents.
- There is a significant relationship between purpose of using payment wallets and marital status of the respondents.
- There is a significant relationship between Marital Status, Occupation, Monthly Income and Number of times payment wallets used by the respondents.
- The most preferred payment wallet chosen by the respondents are ‘Google Pay’, ‘Phonepe’, ‘Paytm.
- Transferring money is the most important purpose for using payment wallets by the customers.
- There is a significant difference in the data security on payment wallets of the different groups.
- Customer’s preference to use the payment wallet were information confidential, Steps to use, useful mode of payment and lack of complaints and redressal mechanism.
- There is a significant relationship between ease of use and adoption of payment wallet.
- There is significant relationship between customer trust and adoption of payment wallet.
- There is significant relationship between data security and adoption of payment wallet.
- There is significant relationship between perceived risk and adoption of payment wallet.
- Customers faced the major problems were language problems, connectivity issues & time consuming to setup the wallet.

### **Methodology**

The study was conducted in urban and rural areas of North Coimbatore and Veerakeralam village were selected purposively, the people who are using payment wallet as a mode of transaction such as students, housewives, business people, and professionals were selected. In the above selected samples of 100 p-wallet users were identified and selected based on random sampling. Among them, 71 sample women were students, 4 were housewives, 8 were business people and 17 were professionals. Therefore, the sampling technique adopted in the study was purposive random sampling. Data pertaining to the study were collected by personal interview method. The schedule

was first pre-tested with few selected sample units and based on their responses the questions were reformulated and the final interview schedule used in the study. Data for the study were collected from the sample units by administering a pre-tested interview schedule during the period December 2021 to January 2022. Techniques were applied like Chi-square test, Pearson's Correlation, ANNOVA, Garrtt's Rating Scale, Likert's Summated Scale, Factor analysis and Path Analysis.

## **Results and Discussion**

### **Socio-economic profile of the respondents**

- Eighty two percent respondents were in the age group of 15-30 years which is the highest percentage among other age groups.
- Out of 100 percent, 64% of respondents are males and the remaining 36% are females.
- Undergraduate degree holders occupied the largest proportion of the respondents which is 59 percent.
- Majority of them were unmarried (73 percent).
- Among the respondents majority of them were students (71 percent) who are all using the Payment Wallet for their educational purpose.
- Majority of the respondents were students (74%), so they are all considered as unemployed, though they are unemployed, they do use the Payment Wallets for various purposes for their day-to-day expenses.
- Majority of the respondents were belong to urban area i.e 57 percent and the remaining 43 percent of the respondents were belong to rural area.

### **Usage of the Payment Wallet**

- All sample respondents are aware about new trends in payment wallets for their easy mode of transactions.
- Maximum number of respondents (50%) were got awareness about payment wallets from their friends.

### **Preferred use of Payment Wallet**

- Based on the survey, the most preferred payment wallet chosen by the respondents are 'Google Pay', 'Phonepe', 'Paytm' and the scores obtained by these payment wallets were 70.17, 58.07 and 53.71 respectively. The payment wallets which was of least priority was 'NEFT/RTGS', the score being 33.55 points.

### **Reasons for using Payment Wallet over Other Mode of Payment**

- The main reasons for preferring the payment wallet by the respondents were time saving, low risk while using it and they have many alternative choices to use p- wallets for their routine expenses or financial transactions.

### **Convenient Mode and Purpose of Using P-Wallet**

- The present survey revealed that majority (62 percent) of the customer's opinion, supreme mode of device for making their routine financial transactions is smart phone.
- The main purpose for using payment wallets by the customers was 'Money Transfers' (1<sup>st</sup> rank), 'Mobile Recharge' (2<sup>nd</sup> rank) and 'buying food and beverages', (3<sup>rd</sup> rank). The 'Tollgate payment' (7<sup>th</sup> rank) had given the least significant purpose of using payment wallet by the customers.
- The present study revealed that majority (36 percent) of the respondents have stated that the frequency of utilising payment wallets were 5-10 times in a month while other major percentage of customers (34 percent) have utilised it more than 15 times.
- Nearly one half (45 percent) of the customers have been using the payment wallets for mode of transaction in weekly basis.

### **Customers Intention to Adopt P-Wallet-PLS SEM Model Approach**

- In the current study, customer trust has the strongest relationship with adoption of payment wallet as the standardization coefficient was equals to 0.097 and t-Statistic was 6.736, which was higher than the accepted rate 1.96. Ease of use positive relationship with adoption of payment wallet as the standardization coefficient was equals to 0.082 and t-Statistic was 1.989, which was higher than the accepted rate 1.96. The study confirms the important effect of customer trust and ease of use has relationship with adoption of payment wallet.

### **Preferences for using Payment wallet**

- In the present study, sample respondents were interested to use the payment wallets are 'When using Payment wallet, I believe my information (bank/card details) are kept confidential', 'It is easy to perform steps required to use Payment wallet Services' and 'there is a lack of complaints and redressal mechanism for Payment wallet services'.

### **Problems faced and Measures to Solve Payment wallet**

- In the present study majority of the respondents were felt that they faced problems like ‘too much time consuming to set up’, ‘Loss of internet connection sometimes’, ‘Less reliability’, ‘Cannot used for international transaction’ and ‘facing language problems’.
- The present study exposed that nearly one half (49 %) of the respondents were likely to continue their mode of transaction through P-wallets.
- Majority (45 percent) of the customers who are all utilising the payment wallets, are receiving some amount of cash back up to a certain level.
- The factor analysis used to undertake suggestions to solve the problems faced by the respondents while using p-wallets were ‘Transactions more safe, fast and flexible needs to be improved’, ‘Spread payment wallets usage among shopkeepers’, ‘Verify your payment recipient’ and ‘Take advantage one time password’.

### **Conclusion**

To be conclude, due to the developments in modernized world each and every activities of human being had changed. As a part of policy change cash is no longer becoming a mode of transaction. The country needs to move away from the cash-based towards a cashless payment system. This will provide multiple advantages like, reduce currency management cost, track transactions, check tax avoidance or fraud etc., enhance financial inclusion and gradually integrate the parallel economy with the main stream. Therefore, the present study revealed that the respondents were preferring to use the payment wallets are time saving, low risk while using it and they have many alternative choices to use p- wallets for their routine expenses or financial transactions. The study confirms the important effect of customer trust and ease of use has relationship with adoption of payment wallet. Hence, the customers were given higher priority to customer trust and ease of use is determined factor to adopt payment wallet. The study also found that while people are getting comfortable with cashless transaction, some kind of negative perceptions are holding back many from adopting the new system. The problems faced by the respondents are like ‘too much time consuming to set up’, ‘loss of internet connection sometimes’, ‘Less reliability’, ‘Cannot used for international transaction’ and ‘facing language problems’. Finally the study suggested that, financial technology players that they will work towards the betterment of payment wallet transactions more safe, fast and flexible needs to be improved, making it an inseparable aspect of customer’s endures.

## **Recommendations**

- Awareness programs must be done at educational sector in order to educate people about electronic payment system. As respondents are well aware of the digital payment system as per our findings steps must be taken to minimize the deficiencies involved in digital payments like security issues, trustworthiness etc.
- Many people use cards for all their needs but there is an additional charge on the use of debit or credit cards. In order to encourage people to engage in digital modes it is important to remove additional charges for just mere use of cards.
- Cash payment is still to be seen everywhere. If government to implement digital system of payment or cashless society it must act on that behalf by encouraging people to use digital modes and giving proper incentives.
- Different customers have different needs so it is necessary to provide them with number of payment methods so it gives option to user to select the mode of payment which is best suited to him.
- User friendly atmosphere must be created so that user can be retained to one particular mode of payment. While making payment customer needs to give essential information. There must be a better mechanism for maintaining the privacy of the information provided by the user.

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❖ ANNEXURE

## ANNEXURE

### Customer's Perception and performance towards Payment Wallets in Coimbatore City

#### Demographic profile

1. Name:
2. Age:
3. Gender:
  - a) Female b) Male c) others
4. Educational Qualification
5. Marital Status
6. Occupation
7. Monthly Income
8. Place of Residence

#### Usage of Payment Wallets

9. a). Do you aware about the functionality of payment wallets?
  - a). Yes b). No
- b). if yes, from where did you get the information about payment wallets?
  - a) Social media
  - b) Friends
  - c) Advertisements
  - d) Magazine
  - e). Television
10. Which payment wallet do you prefer the most (Kindly **Rank them**)
  - a) Amazon Pay
  - b) Google Pay
  - c) Paytm
  - d) Phonepe
  - e) NEFT/RTGS
  - f). Rupay card
  - g). Debit cum credit card
  - h). YONO by SBI

**11. Reasons for using payment wallets over other modes of payment**

<b>S.No</b>	<b>Items</b>	<b>SDA</b>	<b>DA</b>	<b>N</b>	<b>A</b>	<b>SA</b>
<b>1.</b>	Time saving					
<b>2.</b>	Ease of use					
<b>3.</b>	Payment Security					
<b>4.</b>	Wide acceptability					
<b>5.</b>	Quick transfer					
<b>6.</b>	Exciting rewards					
<b>7.</b>	Minimum financial risk					
<b>8.</b>	Alternate choice					
<b>9.</b>	Discount and Cash Back Offers					
<b>10.</b>	Anytime and Anywhere accessibility					
<b>11.</b>	Cash on delivery					
<b>12.</b>	Easy to track the record of Payments					
<b>13.</b>	No need to carry huge cash					

12. Which device is most convenient for making the payment via payment wallets?

- a) Smart phone
- b) Laptop
- c) Personal Computer
- d) All of the above

13. Purpose of using payment wallets? (Kindly **Rank them**)

- a) Money transfer
- b) Recharge mobile
- c) Utility and Bill payment
- d) Booking movie and train tickets etc.
- e). Food and beverages
- f). Tollgate payment
- g). Online shopping/Vouchers

14. How many times have you used payment wallets?

- a) Only once
- b) 5-10 times
- c) 10-15 times
- d) More than 15 times

15. How often do you use payment wallets?

- a) Daily
- b) Weekly
- c) Monthly
- d) Yearly

16. **Adoption of payment wallet**

S.No	Items	SDA	DA	N	A	SA
1.	Able to control my daily activities in term of financial					
2.	like to use it because save time					
3.	need this cashless app in daily rather use cash					
4.	This apps are included every functions I expect it					
5.	Will you share the benefit of payment wallet to your friends and family members					

(SA -> strongly agree A->Agree SDA->strongly disagree D->Disagree N->Neutral)

**17. Customers trust**

<b>S.No</b>	<b>Items</b>	<b>SDA</b>	<b>DA</b>	<b>N</b>	<b>A</b>	<b>SA</b>
1.	The system of the payment wallet app is highly secured with data protected function					
2.	Trust the payment wallet apps is reliable					
3.	payment wallet service providers are honest with their customer					
4.	payment wallet service provides sufficient facilities to handle online transaction					
5.	payment wallet service providers have sufficient expertise to conduct online transactions					

**18. Ease of use**

<b>S.No</b>	<b>Items</b>	<b>SDA</b>	<b>DA</b>	<b>N</b>	<b>A</b>	<b>SA</b>
1.	Fewer safety steps need to accomplish only when you make transaction					
2.	able to use this cashless apps effortless					
3.	no longer notice any difficulty when use it					
4.	can get rid from mistakes and control it perfectly					
5.	able to make transaction successfully every time					
6.	found my first payment wallet transaction easy and effortless					
7.	choose payment wallet providers that are well known					
8.	prefer certain payment wallet system over other because it is easier to use					

<b>9.</b>	Paying for goods using payment wallet is convenient					
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**19. Data security**

<b>S.No</b>	<b>Items</b>	<b>SDA</b>	<b>DA</b>	<b>N</b>	<b>A</b>	<b>SA</b>
<b>1.</b>	payment wallet more safe					
<b>2.</b>	deposit your money into payment wallet for your daily expenses					
<b>3.</b>	believe payment wallet help you to arrange your money					
<b>4.</b>	personal details or information have never been revealed or stolen by third- party when using payment wallet					
<b>5.</b>	Data transferred over the internet is securely protected					
<b>6.</b>	Data security is important to me, when buying goods in online					
<b>7.</b>	fully trust the payment wallet to handle my personal information					

**20. Perceived Risk**

<b>S.No</b>	<b>Items</b>	<b>SDA</b>	<b>DA</b>	<b>N</b>	<b>A</b>	<b>SA</b>
<b>1.</b>	Possibility of funds misappropriation will influence your decision to use payment wallet					
<b>2.</b>	Temporary or sudden errors will influence your decision to use payment wallet					
<b>3.</b>	Transaction data inaccuracy will influence your decision to use payment wallet					
<b>4.</b>	Bank performance will influence your decision to use payment wallet					

5.	The behaviour affect your decision to use payment wallet					
6.	Does other people affect your emotional to use payment wallet					
7.	Able to control daily activities in term of financial					
8.	payment wallet has record of all payments history					
9.	trust affect your decision to use payment wallet					
10.	payment wallet transaction for payment wallet reload is secure					
11.	Using payment wallet put my privacy at risk					

#### 21. Preference payment wallet

S.No	Items	SDA	DA	N	A	SA
1.	Are you believe your transactions are secured					
2.	Payment wallet services are a useful mode of payment					
3.	The interaction with Payment wallet services are clear & Understandable					
4.	It is easy to perform steps required to use Payment wallet Services					
5.	When using Payment wallet, I believe my information (bank/card details) are kept confidential					
6.	The cost of using Payment wallet is higher than using payment/banking channels					
7.	using Payment wallet can save my time in performing Online transactions					
8.	In a few years people will hardly use cash to make purchases					

9.	There is a lack of complaints and redressal mechanism for Payment wallet services					
10.	There are additional charges for using Payment wallets					

**22. Problems faced by you while using payment wallets?**

S.No	Problems	SDA	DA	N	A	SA
1.	Feel lack of safety and security					
2.	Too much time consuming to set up					
3.	Involves danger of losing money					
4.	Cannot be used for international transaction					
5.	Lack of knowledge and awareness among uneducated					
6.	Loss of internet connection sometimes					
7.	Facing language problems					
8.	Charges transaction and service fees					
9.	Difficult to understand all mobile payment options					
10.	Less reliability due to scams and hacking					
11.	Delay in cash back processing					
12.	Sometimes the payments get blocked and no confirmation is sent to customer					

**23. Would you like to continue using payment wallets?**

a) Very likely b) Likely c) Neutral d) Unlikely e) Very unlikely

**24. Does payment wallets promote your savings?**

a) Yes, very much b) Upto a certain level c) Not at all

## 25. Measures to solve problems faced by customers

S.No	Measures	SDA	DA	N	A	SA
1.	Use unique passwords					
2.	Don't save card details					
3.	Verify your payment recipient					
4.	Submit minimal personal information					
5.	Always check your financial statements					
6.	Use only private networks					
7.	Do not share your details					
8.	Never use a debit card					
9.	Take advantage of one-time passwords					
10.	Transactions more safe, fast and flexible needs to be improved					
11.	More features can be introduced					
12.	Spread payment wallets usage among shopkeepers					