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Research Article

Exploring Consumer Behavior Towards Mobile Wallet Adoption In Rural Surat, Gujarat

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ABSTRACT

The advent of digital transformation has significantly simplified and expedited our daily routines, opening doors to novel experiences. Modern-day banking and commerce are more complex and reliant on technology than ever before, to the extent that envisioning a day without technological intervention seems challenging. The swift evolution of technology has profoundly impacted the banking sector, with the surge in digital banking demands from millennials causing significant disruptions. Particularly, younger generations, such as Generation Z (born between 1997 and 2012, aged 11 to 26), are adopting cutting-edge technologies like blockchain and artificial intelligence at a faster pace than their predecessors. A notable trend within the banking industry is the utilization of APIs (Application Programming Interfaces), enabling businesses to access customer data securely. This technology is widely adopted by fintech companies to enhance operational efficiency. According to a 2020 survey by Insider Intelligence, over 60% of industry leaders anticipate that the banking sector will be transformed by advancements in artificial intelligence, blockchain, and the Internet of Things by 2025. Many banks are reportedly investigating blockchain technology to reduce expenses and optimize processes.

A mobile wallet, essentially a digital wallet holding details of credit cards, debit cards, and loyalty cards, can be accessed via applications installed on smartphones or tablets. Retailers partnered with mobile service providers accept payments made through mobile wallets. These wallets either come pre-installed on mobile devices or can be downloaded from app stores. The introduction of the Oxigen wallet in India in July 2004 marked the beginning of digital transactions in the country. Following suit, Wallet365.com emerged, paving the way for digital transactions. The Indian digital wallet market subsequently saw dominance by major players like Paytm, Google Pay, Amazon Pay, and Airtel Money. E-wallets form the backbone of India's e-commerce sector, with projections indicating a compound annual growth rate (CAGR) of 41% from 2018 to 2023, driven by the rapid expansion of the e-commerce market. The growth of the mobile wallet market in India is closely tied to the booming e-commerce sector.

Given the increasing popularity of mobile wallets, coupled with the government's push towards a cashless economy and the aftermath of demonetization, mobile wallets are poised to gain greater traction in rural India. As ICT penetration expands, the effects of demonetization, and digital initiatives aimed at rural development become more pronounced, it becomes imperative to explore the adoption trends of digital payment models in rural India. Rural regions play a pivotal role in the nation's economic growth. Therefore, this study seeks to investigate the factors influencing the adoption of mobile wallets in the rural outskirts of Surat, aiming to understand rural consumers' attitudes towards mobile marketing. Employing a quantitative research approach, a questionnaire was designed to assess the applicability

of the Unified Theory of Technology Acceptance and Utilization (UTAUT2) in this context.

Key Words: Mobile wallet Adoption, Rural Customer, Consumer Behavior, Digital Payments, Financial Inclusion, Technology Acceptance

1. Introduction:

The 21st century has witnessed a profound transformation in the realm of digital innovation, fundamentally altering the consumer landscape through the introduction of contactless transactions. This innovative technology permeates every facet of a consumer's day, from dawn till dusk, becoming an integral part of their lifestyle. Consumers rely on these technologies for a myriad of needs—be it shopping, beauty treatments, education, bill payments, meal deliveries, monetary transfers, or commuting—making technology a constant companion throughout their daily activities. The expanding dimensions and opportunities presented by these technologies encourage consumers to embrace new technologies and innovations. Over time, technological advancements have radically transformed traditional payment systems, with mobile devices now serving as primary conduits for transactions.

Technology continues to evolve, bringing significant improvements to human life. This evolution is particularly noticeable in the payment sector. Smartphones have gained prominence in facilitating payments, especially following India's demonetization policy. Users need to install a tailored application on their mobile devices, which becomes active after inputting basic credentials. When smartphones emulate the functionality of traditional leather wallets, they are termed digital or mobile wallets, with these terms often used interchangeably. Beyond transactional purposes, mobile wallet apps enable users to save receipts, manage budgets, and access numerous other sophisticated features. These enhancements have substantially enriched the daily lives of individuals, making it easier and more efficient than before.

Despite the existence of numerous digital payment alternatives in India since 2002, the inception of electronic wallets truly began with Oxigen's launch in 2004. Following this, in 2006, the Times Group collaborated with YES Bank to introduce Wallet365.com. Initially, the adoption of digital wallets was gradual, but momentum started to build post the introduction of Mobikwik in 2009, founded by Bipin Preet Singh. This marked a significant contribution to India's digital transaction landscape. Recently, platforms like Google Pay, Amazon Pay, and PhonePe have significantly expanded their presence in India's digital wallet segment. Amidst the proliferation of apps for virtually every need, the notion of mobile wallets has gained considerable traction. Often referred to as digital wallets, electronic wallets, or mobile wallets, these platforms facilitate seamless and secure financial transactions through mobile devices. They serve as mobile money transfer or mobile money platforms, simplifying e-commerce transactions for users.

2. Literature Review:

Performing a comprehensive literature review is crucial for aligning with the research's objectives. This involves a thorough examination of existing studies, including research papers, reports, books, and theses, to gain a deep understanding of the key concepts, models, and analytical techniques relevant to the investigation.

Alqahtani, M. S. A., & Erfani, E. (2021) delve into the various components of IT infrastructure and their collective role in achieving corporate objectives. Highlighting the significance of establishing security measures, the authors emphasize that while efforts to enhance cybersecurity often focus on deploying new technologies, a holistic understanding of the factors impacting a company's cybersecurity compliance is crucial. This paper serves as a resource for policymakers and tech professionals, offering insights into the multifaceted nature of cybersecurity compliance and the steps required for effective implementation. Furthermore, the article employs the UTAUT2 model to examine the relationship between technology acceptance and usage, shedding light on the dynamics of cybersecurity.

Chawla, D., & Joshi, H. (2021) investigate India's high adoption rate of mobile wallets, attributing it to the country's extensive internet access and relatively affordable smartphones. Despite the growing interest, limited research exists on its adoption. This study aims to categorize user segments and their maturity levels, constructing a model to explain their adoption perspectives and how these factors might influence their attitudes. Utilizing the TAM and UTAUT frameworks, the study develops a pilot tool based on a literature review synthesis. Focus group discussions reveal that mobile wallet providers should concentrate on six aspects of their product, with Security, Effort Expectancy, Performance, and Enjoyment receiving the most emphasis. The findings could inform the development of effective marketing strategies and enhance product adoption behaviors.

Mew, J., & Millan, E. (2021) discuss mobile wallets as transformative technologies that could revolutionize consumer shopping and purchase management. However, their adoption has been slower than expected, particularly in the UK. Reliable, trustworthy, and consistently accessible services are crucial for mobile wallets. This study explores factors that may hinder or influence the use of such technology, employing a mixed-method approach to gain a deeper understanding. The findings, grounded in empirical data, highlight the importance

of each component in the model, indicating their direct or indirect impact on consumers' willingness to adopt and use mobile wallets.

BalKrishnan & Shuib (2021) explore Malaysians' use of cashless applications and their readiness for a cashless society. Developing a Cashless Society Readiness-Adoption model, the study evaluates driving factors and their direct and indirect effects. Utilizing UTAUT 2 and the Technological Readiness Index 2.0, the research analyzes 258 valid responses from both online and offline sources. Factors such as Ease of Use, Usefulness, Innovation, Optimism of use, and Absence of Awareness significantly influence users' readiness to adopt cashless transactions. The study's findings could assist stakeholders, including service providers, financial institutions, and governmental bodies, in devising strategies to boost digital payment adoption.

Shobha, B. G. (2021) investigates "awareness" and "preferences" for using M Wallets in rural Surat. Employing a non-probability Judgmental sampling method, the study selects 200 samples and collects data using structured questions on a Likert five-point scale. The findings suggest moderate awareness levels for preferred e-wallets like Google Pay, PayTM, and PhonePe. Cybersecurity remains a concern that needs careful consideration to protect M- Wallet users' interests.

Yuen, K. F., et al. (2020) examines the factors influencing the adoption of self-driving cars, exploring how successful these vehicles operate based on passengers' willingness to accept them. Conducted in Da Nang, Vietnam, the study gathers information from 268 participants through surveys. Various factors, including cost, habit, and expectations, influence the adoption of new technologies. Constructs such as attitude and subjective norms can predict the likelihood of people using self-driving cars, informing government and transport agency strategies to improve services and policies related to these vehicles.

Chawla, D., & Joshi, H. (2020) investigates the mediating roles of attitude, perceived utility, and trust on a user's inclination to use m-wallets in India. Applying the PLS model to test the research model with data from 744 survey participants, the study reveals that two of the nine mediation paths have full mediation, while the other eight have partial mediation. This research expands understanding of intention and attitude through various mediating relationships.

Cruces, G., et al., (2020) analyzes how financial inclusion is promoted as a benefit of mobile wallets, noting its popularity in underdeveloped countries, particularly in Africa, despite significant barriers to adoption. The study seeks to understand how a lack of knowledge and costly mobile money products deter people from using them. Findings suggest that increasing awareness of the platform's features and functionality, while addressing concerns about high costs, could encourage acceptance and use of m-money in developing countries.

Dorotic, M. & Pauwels, K. (2020) discuss the importance of mobile apps and payment methods, distinguishing between app-based mobile wallets and SMS carrier billing for micropayments. Their study shows that branded app mobile wallets (BAMWs) reduce payment awareness and are easier to use than carrier billing option (CBO) payments, leading to increased customer spending. Adoption of mobile money capabilities significantly impacts post-adoption purchase amounts and frequencies, highlighting the importance of actual app use over mere downloads.

Bhagat, S. (2020) explores the phenomenon of m-wallets in India post-demonetization, identifying factors influencing Delhi residents' intentions to use mobile wallets. The study uses the Technological Acceptance Model to identify variables affecting users' intentions to use cashless wallets, revealing key factors like usefulness, ease of use, risk security, and attitude. The findings contribute to policy formulation and consumer attitude understanding towards mobile wallets.

Ligon, E., et al., (2019) examines digital payment options, including online banking, mobile money, and credit/debit cards, in developing countries. Despite efforts to promote financial inclusion, adoption rates remain low in several low-income countries, including India. The study hypothesizes that demand-side variables, such as customer preference against digital payments and concerns about increased tax liabilities due to mobile payment records, rather than supply-side constraints, contribute to low adoption rates.

Sinha, I. (2019) investigates the shift from cash to debit/credit cards to online payments and now to UPI in India, highlighting the advent of mobile wallets. The study identifies factors affecting mobile wallet adoption, suggesting that future developments in mobile wallet technology are uncertain yet promising.

Odusanya, K., et al., (2019) analyzes e-commerce platforms and their potential to deliver goods and services to consumers in developing countries, aiming to improve a predictive model for site acceptance. The study finds that habit and risk-trust relationships significantly influence e-commerce site usage in Sub-Saharan Africa.

Mittal, S., & Kumar, V. (2018) analyzes the adoption of m-wallets in the Indian business market, noting the shift from credit and debit card use to mobile wallets due to attractive discounts, promotions, and cashbacks. The study examines consumer transaction patterns and preferences when choosing an m-wallet for payments.

Al-Amri, R., et al., (2018) aims to develop a model to enhance the perceived security of Near Field Communication (NFC) mobile payments, considering factors like awareness, trust, and safety. The study conducts a survey to gather data on the ease of use and security of NFC mobile payments, analyzing the collected data using correlation analysis.

Putri, D. A. (2018) identifies the behavioral intention of individuals to adopt the M-payment system using the UTAUT2 framework, analyzing exogenous variables influencing adoption and the effects of societal influence and performance expectations on the acceptance of the WeChat mobile payment system.
Sanjeev Padashetty and Krishna Kishore SV (2018) identifies determinants consistently related to the acceptance of mobile payment, collecting survey data from Surat to identify factors facilitating mobile payment system adoption, including usefulness, trust, ease of use, and targeting the teenage demographic for marketing campaigns.
Nitika Rai et al (2018) discusses alternative payment systems in India, highlighting the emergence of M-Wallet as a faster, safer, and network-independent method replacing traditional payment systems like credit and debit cards and cash.
Mia Olsen et al., (2018) develops e-wallet prototypes through user and artifact interaction, involving four different user groups in the development process. The study concludes with the proposal of updated features for mobile wallet service providers to consider during service design.
Jos Heijmans (2018) researches "Trustworthy Tap - Payment with a Mobile Wallet," analyzing traditional wallets with different types of cards and consumer usability expectations for mobile wallets. The study proposes a conceptual mobile wallet lifecycle model and conducts a lab-based user study to assess trustworthiness.
Yi-Horng Lai (2018) analyzes the demand for e-wallet apps in the domestic retail market and the factors influencing IC card usage in this sector, providing recommendations for advancing and enhancing such apps for banking and retail industries.

Javed Sarfaraz (2017) identifies the major driving factors of m-banking adoption, collecting data through surveys and interviews to identify factors positively influencing purchase intention, including perceived usefulness, perceived ease of use, and perception of risk.

Research Gap: The advent of digital banking has significantly broadened the scope of retail banking services and facilitated the integration of various technological platforms, thereby simplifying financial management for consumers. A prevalent challenge encountered by individuals when engaging with digital financial services pertains to selecting the optimal solution. Mobile wallets serve as instrumental tools in fostering trade and commerce, enabling effortless transactions and withdrawals. Given the profound impact of demonetization on consumer behavior, it becomes crucial to explore their perceptions towards mobile wallets. This study aims to delve into the "factors influencing the acceptance of mobile wallets," employing the UTAUT-2 model as its analytical framework, a model initially proposed by Venkatesh et al. in 2012.

3. Objectives of the study:

The primary goal of this study is to investigate the adoption of mobile wallets among consumers and pinpoint the elements that shape their decision-making regarding their use. Specifically, the study aims to:

1. To analyze the reactions to each construct designed for mobile wallet adoption.
2. To examine the constructs that influence the promotion of mobile wallet usage.
3. To investigate the moderating effects of demographic factors such as age, gender, and experience on mobile wallet adoption influences.
4. To identify the reasons for mobile wallet non-adoption among users who do not utilize them.

4. Research Methodology:

Research Design: P.M. Cook emphasizes that an excellent research endeavor is a meticulous journey focused on uncovering truths and their relevance to specific challenges. It entails a structured approach to collecting and scrutinizing data, striving for accuracy and comprehensiveness to facilitate wise decision-making. Francis Rummel concurs, asserting that research endeavors are dedicated to discovering, refining, and validating knowledge, a pursuit that has been ongoing for centuries and continues to evolve. The surge in technological advancements, particularly within computing, has led to the creation of innovative models and theories designed to gauge organizational readiness for adopting new technologies. Consequently, it is imperative to periodically reassess these models and theories to ensure they effectively bolster an organization's operational core. As digital wallets rapidly gain traction worldwide, India stands at the forefront of this global shift towards digitization. Nonetheless, despite the proliferation of mobile wallets, many consumers in less developed regions continue to favor cash transactions. This investigation aims to uncover the underlying reasons for the slow adoption of digital payment methods in rural Surat, utilizing the UTAUT 2 model to dissect the factors influencing the acceptance and utilization of mobile wallets. The ultimate goal is to generate a thorough understanding of why individuals hesitate to employ mobile wallets for their transactions.

Problem Statement: Despite India's significant strides towards becoming a cashless economy, facilitated by the adoption of mobile wallets post-demonetization, the country faces substantial challenges including inadequate infrastructure, low digital literacy, and a persistent urban-rural divide in technology access and financial services. This situation necessitates a comprehensive understanding and strategic intervention to

overcome barriers to digital financial inclusion and accelerate the transition to a cashless society across all regions and demographics.

5. Scope of the study:

- This research delves deeply into the landscape of mobile wallet payment services within the rural district of Surat, Gujarat, driven by the escalating demand for m-payment transactions.
- It concentrates on the adoption and application of mobile wallets, alongside examining consumer behavior towards these digital tools through the lens of the UTAUT 2 Model. This model, known for its effectiveness in understanding consumer adoption behavior and evaluating the benefits associated with mobile wallet usage, distinguishes itself as a superior theoretical framework among others.
- The UTAUT 2 Model aims to synthesize accepted theories of innovation, creating a comprehensive model that encapsulates the essence of technological adoption.

Hypothesis of the study:

H01: Age acts as a negative moderator in the positive association between constructs such as Perceived Ease of Use (PE), Effort Expectancy (EE), Social Influence (SI), Facilitating Conditions (FC), Hedonic Motivation (HM), Price Value (PV), and Reliability (R) with Trust.
H02: Gender functions as a negative moderator in the positive connection between constructs (PE, EE, SI, FC, HM, PV, R) and Trust.
H03: Experience serves as a negative moderator in the positive relationship between constructs (PE, EE, SI, FC, HM, PV, R) and Trust.
H04: The combined effect of Age, Gender, and Experience acts as a negative moderator in the positive relationship between constructs (PE, EE, SI, FC, HM, PV, R) and Trust.

Sampling Method:

Snowball sampling, alternatively referred to as chain sampling or network sampling, initiates with one or more participants and progresses through referrals from these initial participants. This method continues until the desired sample size is achieved. It is widely recognized in qualitative research, particularly when investigating challenging-to-access populations characterized by:

1. Being numerically smaller compared to the broader population.
2. Presence across a wide geographical area, resulting in varied distribution.
3. Possessing certain social stigmas or shared attributes of interest.

In scenarios where accessing the population is challenging for non-members due to the absence of a sampling frame, snowball sampling proves invaluable.

Sample Size: The term "sample size" refers to the quantity of data to be gathered for a research study from a specified population, as defined by Ranjit Kumar in 2009. According to Hinkin (1995) and Hair et al. (1998), for every variable, it is recommended to have between 5 to 10 respondents; however, if the questionnaire contains up to 50 items, the sample size should ideally range from 100 to 150. In this study, a total of 145 responses were collected, but due to insufficient or incomplete answers, 31 responses were excluded, leaving a final count of 114 valid responses.

Data Collection Tools:

Research depends on two sources of data i.e. primary and secondary data source (Ranjit Kumar. 2009). This research has used both sources but the major source of information depends on primary data.

Primary Data Collection: The primary data was obtained via a survey methodology employing a structured questionnaire, divided into three segments. The initial segment gathered demographic details of mobile wallet users. The subsequent portion contained eight items derived from the UTAUT-2 model, focusing on mobile wallet usage. The final segment was dedicated to non-users. The questionnaire utilized a closed-ended format, anchored on a five-point Likert scale, as suggested by C.R. Kothari in 2004. The data collection took place in the rural district of Surat, established in 1520 and located in the southeastern region of Gujarat. This area encompasses four taluks—Olpad, Kamrej, Udhna, and Palsana across 98-gram panchayats. According to the 2011 Indian Census, Surat rural had a population of 990,923, with 509,172 males and 481,751 females. Data was compiled at the village, gram panchayat, and taluk levels.

Secondary Data: Secondary data encompasses information previously analyzed by other researchers. This study also incorporated secondary data, sourcing additional relevant information from various sources including RBI reports, NPCI reports, reference books, Shodhganga, manuals, research websites, authoritative reports, business magazines, and academic journals & Websites.

Statistical Data Analysis Technique:

The data gathered underwent analysis through two distinct methodologies: descriptive analysis and Factor Analysis, the latter involving a variety of statistical tools.

Descriptive Statistics

Descriptive statistics offer a concise numerical and graphical representation of the data. After collecting data from the questionnaire, all information was processed and coded. Various statistical tools, including frequency, mean scores, percentages, and visual aids such as tables, charts, and graphs, were employed in the research to interpret the data.

Demographic Factors Analysis:

In this study, demographic factors, which encompass the social and economic traits of the sample population, were examined to understand their influence on the adoption of mobile wallet payment systems in Rural Surat, Gujarat. Specifically, the analysis focused on gender, age, educational background, income level, occupation, marital status, and the duration of mobile wallet usage among individuals. To gain insights into these demographic factors, the research employed descriptive statistics, presenting data through frequencies and percentages. Additionally, cross-tabulation was utilized as part of univariate analysis to further explore the relationships between these demographic characteristics and mobile wallet usage patterns. This approach aimed to identify key demographic factors that contribute significantly to the utilization of mobile wallet payment systems within the specified region.

6. Demographic Profile and Mobile Wallet Users and Non-users – Frequency and Percentage Analysis; Graphical Representation and Chi-square test

In this segment, the demographic characteristics of the respondents were examined through percentages to discern fundamental trends among them.

Respondents using Mobile Wallets:

Do you use Mobile Wallet	Frequency	Percent
No	25	22
Yes	89	78
Total	114	100.0

From the above table, it is observed that out of 114 respondents 89 i.e. 78% of the respondents use Mobile Wallets for payment while 25 i.e. 22% respondents do not use Mobile Wallets for payment.

Mobile Wallets association with Gender:

Gender	Non-users	%	Users	%	Total	%
Female	11	44	36	40	47	41
Male	14	56	53	60	67	59
Total	25	100	89	100	114	100

From the above table, amongst 25 respondents who are non – user of Mobile Wallet Payments 11 i.e. 44% of them are female against 14 i.e. 56% being male. Amongst the 89 respondents who are user of Mobile Wallet Payments 36 i.e. 40% of them are female as against 53 i.e. 60% being male.

Mobile Wallets association with Age:

Age	Non-users	%	Users	%	Total	%
18-35	7	28	42	47	49	43
36-50	15	60	38	43	53	46
51-60	3	12	9	10	12	11
Total	25	100	89	100	114	100

From the above table, out of 114 respondents 49 respondents i.e. 43% respondents belong to the age category 18-35 years, 53 i.e. 46% to the age category 36-50 years and 100 constituting 11% to 51-65 years. Among 25 respondents who are non-users of mobile wallet 7 i.e. 28% belong to 18-35 years, 15 i.e. 60% belong to 36-50 years age group and 3 i.e. 12% belong to 51-65 years age. Out 89 total users of mobile wallet 42 i.e. 47% belong to 18-35 years, 38 i.e. 43% belong to 36-50 years and 9 i.e. 10% belong to 51-65 years.

Mobile Wallets association with Education Qualification:

Educational Qualification	Non-users	%	Users	%	Total	%
Post-graduation	8	32	42	47	50	44
Graduation	14	56	28	32	42	37
HSC	3	12	17	19	20	17
SSC	0	0	2	2	2	2
Total	25	100	89	100	114	100

From the above table, out of 114 respondents 50 respondents i.e. 44% of them are post graduates, 42 i.e. 37% are graduates, 20 i.e. 17% are HSC passed out and 2 i.e. 2% are only SSC passed out. Out of 89 respondents who are users of mobile wallet 42 i.e. 47% are post-graduates, 28 i.e. 32% are graduates, 17 i.e. 19% are HSC passed out and 2 i.e. 2% are only SSC passed out. Out of 25 respondents who are non-users of mobile wallet 8 respondents i.e. 32% are post-graduates, 14 i.e. 56% are graduates, 3 i.e. 12% are HSC passed out and 0 i.e. respondents are SSC passed out.

Mobile Wallets association with Income Level (Monthly):

Monthly Income	Non-users	%	Users	%	Total	%
No Income	2	8	11	12	13	11
Upto 15000	2	8	14	16	16	14
15001-30000	3	12	32	36	35	30
30001-60000	11	44	9	10	20	18
Above 60000	7	28	23	26	30	27
Total	25	100	89	100	114	100

From the above table, out of 114 respondents 13 respondents i.e. 11% of them belong to no income group, 16 i.e. 14% belong to Rs. 15000 and below, 35 i.e. 30% belong to income level between Rs. 15001 to 30000, 20 i.e. 18% belong to income level between Rs. 30001 to 60000, and 30 i.e. 27% belong to income level above 60000.

Mobile Wallets association with Occupation:

Occupation	Non-users	%	Users	%	Total	%
Business/Professionals	3	12	17	19	20	17
Farming	4	16	7	8	11	10
Home	7	28	28	32	35	31
Salaried	8	32	24	27	32	28
Student	3	12	13	14	16	14
Total	25	100	89	100	114	100

From the above table, out of 114 respondents 20 respondents i.e. 17% of them belong to Business/Profession by occupation, 11 i.e. 10% of them belong to Farming by occupation, 35 i.e. 31% of them are home makers, 32 i.e. 28% of them belong to Salaried category, and 16 i.e. 14% of them are Students.

Mobile Wallets association with since how long they are using:

Since how long are you using M-Wallet	Frequency	%
Up to 1 year	26	29
1 to 3 years	47	53
3 to 5 years	9	10
More than 5 years	7	8
Total	89	100

From the above information, out of 89 respondents who are users of mobile wallet 26 respondents i.e. 29% of them have been using mobile wallet for less than a year, 47 of the respondents i.e. 53% have been using mobile wallet between 1 to 3 years, 9 respondents i.e. 10% have been using mobile wallet for a period of 3-5 years, and 7 respondents i.e. 8% have been using mobile wallet for a period more than 5 years.

Frequency and Percentage of Performance Expectancy:

Performance Expectancy	Frequency and Percentage	Strongly Disagree(1)	Disagree(2)	Neutral (3)	Agree(4)	Strongly Agree (5)	Total
PE1	Frequency	9	0	10	28	42	89
	%	10	0	11	31	47	100
PE2	Frequency	16	0	18	22	33	89
	%	18	0	20	25	37	100
PE3	Frequency	2	0	28	17	42	89
	%	2	0	32	19	47	100
PE4	Frequency	13	6	19	31	20	89
	%	15	7	21	35	22	100
PE5	Frequency	14	0	16	36	23	89
	%	16	0	18	40	26	100
PE6	Frequency	12	0	89	21	37	89
	%	13	0	21	24	42	100

Under the UTAUT-2 model effort expectancy (ease to use) denotes the level of easiness while using mobile wallet is carried out. In other words, how much mental or physical effort an individual has to make a to use the technology.

List of Questions used to measure Effort Expectancy:

EE1	Use of Mobile wallet is easy and convenient from traditional payment
EE2	Downloading Mobile wallet applications are hassle free
EE3	While using Mobile wallet for payment instructions are clear and understandable
EE4	Mobiles wallets are convenient for shopping 24/7
EE5	Mobile wallet Facilitate ample number of transactions

Descriptive Statistics - Effort Expectancy:

	Range	Minimum	Maximum	Mean	Std. Error	Std. Deviation
EE1	3	2	5	4.29	0.030	0.710
EE2	4	1	5	4.08	0.042	0.975
EE3	4	1	5	4.00	0.041	0.958
EE4	4	1	5	4.20	0.037	0.870
EE5	3	2	5	4.11	0.033	0.767
Average				4.14		0.86

From the above descriptive statistics table indicates that the respondents' answers have varied from strongly disagree to strongly agree for EE2, EE3, and EE5. Whereas EE1 and EE5 0 respondents have strongly disagreed. The mean score of the responses is 4.14 for the construct effort expectancy and a standard deviation of 0.86 which is less than 1, shows moderate variability in the responses of effort expectancy.

List of Questions used to measure Risk:

R1	M- Wallet transactions are scrupulous and free from fraudulent practices
R2	M-Wallet offers (discounts, coupon code, etc.) are genuine trade practices
R3	M- Wallets provides scope for unauthorized access to the personal information of the users
R4	Have you experienced unwarranted promotional offers through cross selling mechanisms
R5	Refund policy of M-Wallet is swift and easy
R6	There is a scope for transaction reversals (wrong payments) while using M-Wallet platform
R7	Mobile M- wallet hacking is not possible

Descriptive Statistics of Risk:

	Range.	Minimum.	Maximum.	Mean.	Std. Error.	Std. Deviation.
R1	4	1	5	3.26	0.050	1.175
R2	4	1	5	3.50	0.042	0.993
R3	4	1	5	3.67	0.035	0.824

R4	4	1	5	3.56	0.039	0.914
R5	4	1	5	3.65	0.041	0.948
R6	4	1	5	3.60	0.039	0.906
R7	4	1	5	3.12	0.050	1.159
Average				3.48		0.99

From the above descriptive statistics table of the survey clearly indicate that respondent's answers have varied from disagree to strongly agree. The mean score of the responses is 3.48 for the construct risk and a standard deviation of 0.99 which is less than 1, shows moderate variability in the responses of risk.

Factor Analysis

Factor analysis finds application in research depending on the objectives. It can serve either as an exploratory tool to uncover relationships among different factors affecting a dataset or as a confirmatory method to validate the plausibility of hypothesized structures for a given set of variables. Exploratory Factor Analysis (EFA) allows researchers to delve into the underlying structure of the data without adhering strictly to assumptions. Confirmatory Factor Analysis (CFA), on the other hand, seeks to validate whether a pre-specified structure accurately represents the relationships among variables. The distinction between EFA and CFA lies in the requirement for CFA to explicitly define the underlying structure beforehand, often guided by existing empirical findings and theoretical propositions. Although both approaches aim to understand the main factor model, the procedural differences lead to distinct outcomes. Thus, it is crucial to differentiate these methods within the same overarching framework.

7. Findings of the study:

- Out of 114 respondents 89 i.e. 78% of the respondents use Mobile Wallets for payment while 25 i.e. 22% respondents do not use Mobile Wallets for payment.
- Out of 114 respondents 49 respondents i.e. 43% respondents belong to the age category 18-35 years, 53 i.e. 46% to the age category 36-50 years and 100 constituting 11% to 51-65 years.
- Out of 114 respondents 50 respondents i.e. 44% of them are post graduates, 42 i.e. 37% are graduates, 20 i.e. 17% are HSC passed out and 2 i.e. 2% are only SSC passed out.
- out of 114 respondents 13 respondents i.e. 11% of them belong to no income group, 16 i.e. 14% belong to Rs. 15000 and below, 35 i.e. 30% belong to income level between Rs. 15001 to 30000, 20 i.e. 18% belong to income level between Rs. 30001 to 60000, and 30 i.e. 27% belong to income level above 60000.
- Majority of the respondent who users of mobile wallet belong to business/profession by occupation on the contrary among the non -users of mobile wallet belong to home maker.

8. Limitation of the Study:

While efforts have been made to ensure the study is as thorough as possible, several assumptions have been taken into account:

1. Given the presumed lower adoption rates of mobile wallets among the rural population in the Surat rural district, the study has focused solely on the selected sample.
2. Potential biases may exist in the survey data due to respondents' self-assessments possibly not reflecting their actual perceptions of the subjects discussed in the questionnaire. Factors such as deliberate misrepresentation and social desirability bias are also acknowledged as considerations during the study. Despite these potential limitations, the study remains impactful, as the selection and analysis of respondent opinions are conducted meticulously.
3. The sample frame chosen for this study, although intended to be representative, only includes individuals with internet access and prior experience with online shopping. This limitation restricts the ability to generalize the study's findings.
4. All respondents provided information about their gender, indicating no refusal to disclose this information.
5. Responses from individuals younger than 18 or older than 65 were excluded from the study, as data from these age groups was unavailable.
6. No respondent indicated having qualifications not listed in the questionnaire.

9. Conclusion:

In India, the country is moving toward becoming a digital society. There are various types of wallets available. According to the World Bank's development indicators, the rural population has increased to 64.61% in 2021. The rapid emergence and evolution of new technologies and the increasing number of people living in rural areas have made India's economic progress more significant. The government's decision to demonetize old notes has also highlighted the need for better digital payment models in the country. By understanding the various moderating factors that affect the usage and penetration of their mobile wallet services, they can then

cater to the needs of their customers. This framework aims to help mobile wallet providers provide more effective and personalized offers to their customers by analyzing the demographic data collected from the research.

Further researchers could study integration of block chain technology in to m-wallets, effects of offline m-wallet transaction; network-based m-payment will also be a scope for further research. Also, comparative study may be taken up to between the states or country wise for policy purpose.

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