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Behavioral Insights into Digital Payment Innovations

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ABSTRACT

The growth of digital payments in India has been tremendous, driven by advancements in technology and supportive policy measures. This investigation explores the usage of digital payment systems through the lens of the Technology Acceptance Model (TAM), emphasising Perceived Usefulness (PU) and Perceived Ease of Use (PEU) as key predictors of Behavioural Intention (BI). A survey of 550 respondents reveals that both PU and PEU significantly influence BI, underscoring the significance of perceived utility and simplicity in driving adoption. Furthermore, BI strongly correlates with the Actual Usage of digital payment systems, validating its applicability to real-world behaviour. The study finds no discernible difference in satisfaction levels between male and female consumers. Younger and middle-aged individuals report higher satisfaction than older users, with age as a critical influence. Users' most significant concern is a perceived lack of security. These findings provide insights to improve digital payment acceptance.

SARI PATI

Pertumbuhan pembayaran digital di India sangat pesat, didorong oleh kemajuan teknologi dan kebijakan yang mendukung. Penelitian ini mengeksplorasi penggunaan sistem pembayaran digital melalui pendekatan Technology Acceptance Model (TAM), dengan menekankan pada Perceived Usefulness (PU) dan Perceived Ease of Use (PEU) sebagai prediktor utama terhadap Behavioural Intention (BI). Survei terhadap 550 responden menunjukkan bahwa baik PU maupun PEU berpengaruh signifikan terhadap BI, yang menegaskan pentingnya persepsi terhadap kegunaan dan kemudahan dalam mendorong adopsi. Selain itu, BI berkorelasi kuat dengan Penggunaan Aktual sistem pembayaran digital, yang membuktikan relevansinya dengan perilaku di dunia nyata. Studi ini tidak menemukan perbedaan yang signifikan dalam tingkat kepuasan antara konsumen pria dan wanita. Individu yang lebih muda dan paruh baya melaporkan tingkat kepuasan yang lebih tinggi dibandingkan pengguna yang lebih tua, menjadikan usia sebagai faktor pengaruh yang penting. Kekhawatiran terbesar pengguna adalah persepsi kurangnya keamanan. Temuan ini memberikan wawasan untuk meningkatkan penerimaan pembayaran digital.

INTRODUCTION

India is well known for its rich ethnic heritage and diversity and is rapidly marching towards a digital future. India's financial services sector exemplifies the nation's economic growth and potential. The payment system will become more digital as society moves towards a cashless future (Sumathy & Vipin, 2017). Technology has become crucial for the survival of organizations in the financial services sector, driven by consumer demand for more affordable alternatives to traditional financial services (Nagarjuna, 2019). The widespread acceptance of digital payment solutions has largely driven the digitalization of India's financial sector. India is among the developing nations that has accelerated the digital payment system revolution by integrating with other nations, particularly in the financial sector (Singh & Malik, 2019). Online banking platforms, digital payment solutions, and mobile applications have made financial transactions more convenient, accessible, and secure. Digital payments are becoming increasingly popular in India, and the Digital India initiative aims to promote their adoption further. The growth of digital payments has not only transformed the lifestyle of people but has also shown drastic growth in the economy of our nation. Demonetization and the COVID-19 pandemic situation made people aware of the digital payment system. The demonetization drive in 2016 played a significant role in accelerating the adoption of digital payments in the country. The introduction of the Unified Payments Interface (UPI) by the National Payments Corporation of India (NPCI) has revolutionized the payments ecosystem, enabling seamless and immediate fund transactions between bank accounts through mobile devices. Other initiatives, such as Aadhaar (biometric identification), e-KYC (electronic know-your-customer), and the Goods and Services Tax Network (GSTN), have also contributed to the digitization of financial services. The government has reported nearly a 400 to 1,000% increase in digital transactions since the demonetization. When the COVID-19 pandemic erupted, most of the world moved online, accelerating the digital transformation that has been going on for decades (Tregua et al., 2021). The accessibility of contactless digital payment options promoted social distancing and continuity of businesses, including small retailers. People are reaping numerous benefits from digital payments like, improved speed and timely delivery, safe and secure, instant and convenient payment methods, enhanced credit access, improved financial inclusion etc.

In 2005, fund transfers became easier with the help of National Electronic Funds Transfer (NEFT). As per the PSS Act 2007, the Reserve Bank of India is the regulatory and supervisory body of digital payment systems in India. It provides guidelines, rules, and regulations relating to the security and safety of digital payment solutions, client protection, risk management, and some other factors. In 2008, the National Payments Corporation of India (NPCI) was established and it provided a few digital payment options (RuPay, APBS, BBPS, etc.,) to create a stronger retail payments system in India. In 2010, there are some other online payment channels were introduced such as Magnetic Ink Character Recognition (MICR) clearing channels, Electronic Clearing Service (ECS), and Real Time Gross Settlement (RTGS). The Government of India conjoined with banks and pressed digital payments system in the country. Post- COVID-19 creates a tremendous digital revolution in the country. The situation brought about an essential for contactless payment systems. Most of the people all around the nation moved to digital payments, such as Unified Payments Interface (UPI), BHIM Aadhaar Pay (BAP), Mobile wallets and Bharat Bill Payments System (BBPS). Contactless cards and other card-based payments, such as RuPay, also became popular. By providing quick, safe, and simple methods of conducting financial transactions, digital payments may be advantageous to businesses as well as consumers (Sahi et al., 2021). The sustained utilisation of these services by customers will dictate their enduring success (Chawla, 2023).

Review of Literature

The process by which individuals or organizations adopt new technology can be analyzed using technology acceptance models (Najib & Fahma, 2020). Technology acceptance models and theories were utilised across several sectors to comprehend and forecast user behaviour (Taherdoost, 2018). Various frameworks and models have been developed to elucidate user adoption of new technologies, incorporating aspects that influence user acceptability, such as the Theory of Reasoned Action (Fishbein & Ajzen, 1977), Theory of Planned Behavior (Ajzen, 1985), Technology Acceptance Model (Davis, 1986; Davis, 1989; Davis, Bagozzi, & Warshaw, 1989), Diffusion of Innovation theory (Rogers, 2003), Unified Theory of Acceptance and Use of Technology (Venkatesh et al., 2003), Model of PC Utilization (Thompson, Higgins, & Howell, 1991), Social Cognitive Theory (Bandura, 1977; Bandura, 1978; Bandura, 1982; Bandura, 1986), and Motivational Model (Davis, Bagozzi, & Warshaw, 1992). Panetta, Leo, & Delle Foglie (2023) They investigate research hotspots and evolving trends in digital payments to pinpoint significant facets of research streams and published works. The sample is made up of 723 Web of Science articles that were published between 1985 and 2021. The findings indicate that mobile payments are the most studied digital payments, and the primary methods of study are usually associated with models of technology adoption. In the area of technological adoption, TAM is most likely one of the models that is most frequently discussed (Wu, 2009). It has received strong empirical backing in decades (Taherdoost, 2018).

Prior research indicates that a considerable portion of the articles have analyzed the variables that affect the result, consumer acceptability, and the usage of digital payments (Gupta & Xu, 2010; Kapoor, Dwivedi, & Williams, 2015; Apanasevic, Markendahl, & Arvidsson, 2016; See-To & Ho, 2016; Makki, Ozturk, & Singh, 2016; Bagla & Sancheti, 2018; Johnson, 2018; Sinha, 2019; Al-Okaily et al., 2020). Digital payments have the potential to greatly enhance the lives of millions in developing nations by offering financial services to unbanked populations. Patil, Dwivedi, and Rana (2017) reviewed the literature on the adoption of digital and mobile payments and found that perceived usefulness and performance expectancy were the most significant determinants of consumers' behavioral intention to use mobile payments, followed by perceived ease of use (PEOU). Additionally, the majority of research used TAM and its extension to comprehend the adoption of mobile payments, followed by UTAUT. During COVID-19, Parashar et al., (2023) conducted research to determine and investigate the elements influencing users' behavioural intentions, attitudes, and perceptions towards mobile payment services. Based on statistical data, customers' inclination to use mobile payment wallets or services is shaped by factors like Ease of use, familiarity, safety, and security. An extensive assessment of the literature on the newest digital payment systems and the difficulties were given in a study conducted by Khando, Islam, & Gao (2022). This study proposes an advanced categorization of four types of digital payment solutions by methodically examining previous empirical investigations: mobile payment, card payment, e-payment, and cryptocurrency. Hassan et al., (2020) provide a qualitative analysis of 131 research papers on electronic payments that were published between 2010 and 2020. Using a systematic literature review methodology, the findings indicate a large increase in interest in e-wallets and online payments throughout this time, with academics focussing more on security-related concerns due to the growing usage of e-payments.

The rapid expansion of e-banking and payment systems, together with the intricacy of factors affecting their adoption and usage, have resulted in a growing number of studies on digital payments over the past few years (Sahi et al., 2021). In spite of the benefits and extensive advertising around digital payment methods, customers in India and other nations are reluctant to adopt mobile payment among other digital payment methods (Patil, Dwivedi, & Rana, 2017). The High-Level Committee

on Deepening Digital Payments (Nilekani et al., 2019) recommends conducting recurring surveys to determine user experience and perceptions toward digital payments. In this context, the current work takes a modest step toward addressing the research gap. The study intends to analyze the adoption, degree of satisfaction, and difficulties associated with digital payments.

Objectives

To analyse the influence of perceived usefulness and perceived ease of use to intention and usage of digital payments.

To examine the difference in gender and age towards the level of satisfaction with digital payments.

To identify the challenges faced by the respondents in using digital payment services.

Conceptual Model

This study has employed factors from Davis's (1989) Technology Acceptance Model (TAM)—such as perceived usefulness, perceived ease of use, behavioural intention, and actual usage. TAM is an information systems theory that illustrates how individuals adopt and utilize technology. Venkatesh (2000) states that the most extensively utilized model for understanding consumer acceptance and use of technology is Davis's TAM (Davis, 1989; Davis, Bagozzi, & Warshaw, 1989). Numerous studies have utilised it to comprehend and forecast how users perceive using the system and how likely they are to embrace it (Davis, 1986; Davis, 1989). Numerous applications and extensions, such as Mobile Payments, have evaluated and proven TAM's robustness over time (Schierz et al., 2010; Zhong et al., 2013), Mobile Banking (Luarn & Lin, 2005; Amin et al., 2008; Noor, 2011), Mobile Learning (Huang et al., 2007), and Internet Banking (Wang et al., 2003; Guriting & Ndubisi, 2006; Al-somali et al., 2009; Nasri & Charfeddine, 2012).

People truly engage with technology when they actively use the system. A contributing factor influencing their use of technology is their behavioral intention. Fred Davis defined Perceived usefulness (PU) as «the degree to which a person believes that using a particular system would enhance their job performance." It denotes whether an individual believes they can use that technology to accomplish their goals. Davis defined Perceived ease-of-use (PEOU) as «the degree to which a person believes that using a particular system would be free from effort» (Davis, 1989). It is empirically confirmed that the two main fundamental constructs of the Technology Acceptance Model are crucial antecedents of user intention to adopt various technological applications across different cultural contexts: When the technology is easy to use, it effectively overcomes barriers to adoption; if it is complicated and difficult to use, then no one has a positive attitude towards it (Luarn & Lin, 2005;

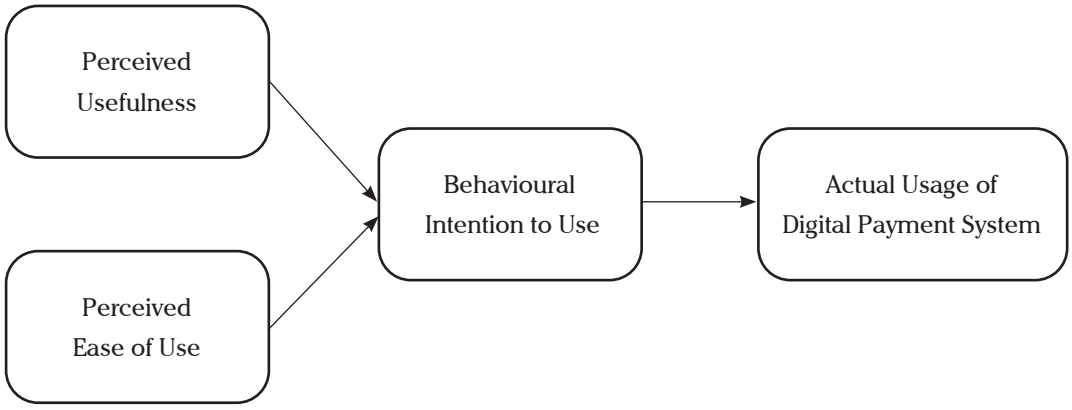

Figure 1. Conceptual Model

Ramayah et al., 2005; Ramayah, 2006; AbuShanab & Pearson, 2007; Ramayah & Lo, 2007; Liu & Min, 2009; Zolait, 2010; Noor, 2011; Thakur & Srivastava, 2013; Faqih, 2016; Tan et al., 2016).

There is a positive association between intentions and actual behavior, as proposed by Ajzen (1991) in the Theory of Planned Behavior. Technology Acceptance Model (TAM) is one of the most commonly applied frameworks for explaining the relationship between behavioural intention and actual usage in the realm of technology (Alleyne & Lavine, 2013). Davis et al. (1989) defined Behavioural Intention as "the degree of an individual's intention to perform a particular behaviour or act." The attitude construct was initially included in the theoretical model of TAM; however, empirical evidence led to its removal from the final model, as it did not adequately mediate the relationship between perceived usefulness of intention and perceived ease of use (Davis et al., 1989). According to research by Kleijnen et al. (2007), a user's attitude cannot influence their willingness to adopt mobile services.

METHODS

In order to gather primary data, a structured questionnaire was circulated online, disseminated on several social media sites, and also conducted utilising a scheduled method. The study's target respondents were Thrissur district residents who used digital payments, chosen using a simple random sampling procedure. In 2021, Thrissur became the first district in the state of Kerala, India, to introduce digital banking under the scheme. This initiative represented a key advancement in the state's push toward digitization, and the government anticipates that it will greatly enhance Kerala's economic growth. As per Krejcie and Morgan table for sample size determination, 384 is the minimum sample size required for the study. There were 600 questionnaires issued, and a final sample size of 550 carefully selected replies were included in our study, drawn from a pool of 576 possible participants. There are 4 sections to the questionnaire: demographics; actual usage of digital payments; statements on perceived usefulness, perceived ease of use, and behavioural intention to use digital payments on a five-point Likert scale; satisfaction level with digital payments; and a ranking of the difficulties encountered when using digital payments. A pilot study with fifty participants was done to verify the suitability and precision of the questionnaire. The surveys were altered in response to their input to make sure every question was clear and straightforward to answer. The respondents included individuals in railway stations, bus stands, super markets, shopping malls, retail stores, autorickshaw drivers, working professionals, students, housewives, along with consumers who are using digital payments. Statistical tools like Multiple Regression, Independent Sample T-test, ANOVA using SPSS (Statistical Package for the Social Sciences) software, and Garrett Ranking were also applied in this study.

RESULTS AND DISCUSSION

The normality of the data was tested in the study using the one-sample Kolmogorov-Smirnov test, and it was determined that the test distribution was normal as all the variables (Perceived Usefulness PU – 5.998, Perceived Ease of Use PEU – 7.007, Behavioural Intention BI – 6.608, Actual Usage AU – 7.109, Gender – 8.484, Age – 4.461, and Satisfaction – 5.075) have values greater than 0.05.

Table 1 and 2 demonstrate the gender and age of the respondents as the total sample responses is 550 where female respondents are higher than male. The respondents from age group between 40 and 60 are more and up to 20 are less in this study and it has been clearly shown in the tables.

Table 1. Gender of Respondents

Gender	Frequency (N)	%
Male	253	46.0
Female	297	54.0
Total	550	**100.0**

Source: Compiled Data, 2024

Table 2. Age of Respondents

Age Group	Frequency (N)	%
Up to 20	110	20.0
21 to 40	154	28.0
41 to 60	165	30.0
Above 60	121	22.0
Total	**550**	**100.0**

Source: Compiled Data, 2024

H1: The Perceived Usefulness of digital payment systems is significantly related to Behavioural Intention to Use.

H2: The Perceived Ease of Use of digital payment systems is significantly related to Behavioural Intention to Use.

All the constructs (Perceived Usefulness, Perceived Ease of Use, Behavioural Intention, and Actual Usage) have Cronbach's Alpha values above .90, indicating that the items within each construct are very consistent and reliable (Hair et. al., 2006). This high level of internal consistency supports the validity of using these items to measure their respective constructs in further analysis.

Table 4, 5, and 6 shows the multiple regression analysis of hypotheses 1 and 2 to analyse the significant relationship between the variables Perceived Usefulness and Perceived Ease of Use of digital payment systems with Behavioural Intention to Use. The regression model is highly significant and explains 93.1% of the variance in Behavioral

Table 3. Reliability Analysis

Variables	Cronbach's Alpha	No. of items
Perceived Usefulness	.936	4
Perceived Ease of Use	.988	4
Behavioural Intention	.975	4
Actual Usage	.949	4

Source: Compiled Data, 2024

Table 4. Regression Model Summary[b]

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.965[a]	.931	.931	.24871	.931	3690.246	2	547	.000

a. Predictors: (Constant), PEU, PU
b. Dependent Variable: BI

Table 5. ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	456.544	2	228.272	3.690E3	.000[a]
	Residual	33.836	547	.062		
	Total	490.380	549			

a. Predictors: (Constant), PEU, PU
b. Dependent Variable: BI

Table 6. Coefficients[a]

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.386	.056		-6.855	.000
	PU	.885	.040	.801	22.146	.000
	PEU	.152	.032	.171	4.727	.000

a. Dependent Variable: BI

Intention (BI). Since the p-value is less than .05, we reject the null hypothesis. PU significantly predicts BI. For every unit increase in PU, BI increases by .885 units, holding PEU constant. PEU significantly predicts BI. For every unit increase in PEU, BI increases by .152 units, holding PU constant. Both hypotheses (H1 and H2) are supported by the regression analysis. Perceived Usefulness (PU) and Perceived Ease of Use (PEU) both significantly predict Behavioral Intention (BI). However, PU has a stronger effect on BI compared to PEU, as indicated by the higher Beta value and B coefficient for PU. This suggests that customer's perceptions of usefulness play a more crucial role in influencing their behavioral intentions towards the service compared to ease of use.

Numerous previous research have indicated that the original TAM constructs, PU and PEU, impact users' adoption of technology-enabled products and services (Chen, 2008). Several prior TAM studies have consistently shown reliable results indicating perceived usefulness has a strong influence on intention to technology usage (Sathye, 1999; Guriting & Ndubisi, 2006; Zolait, 2010; Luo et al., 2010; Wessels & Drennan, 2010; Riffai et al., 2012; Sun et al., 2012; Cudjoe et al., 2015; Sarrab et al., 2016). The study conducted by Essel & Wilson (2017) on Moodle usage among university students found that the rate of Moodle usage is highly impacted by the perceived usefulness of Moodle, as indicated by multiple linear regression analysis. Perceived usefulness was determined as the most significant and potent predictor. Numerous contexts have seen extensive research on the substantial impact of perceived ease of use on behavioural intention (Hanafizadeh et al., 2012; Mawona & Mpogole 2013; Badwelan et al., 2016; Koksal, 2016).

H3: The Behavioural Intention to Use digital payment systems is significantly related to Actual Usage.

Table 7. Regression Model Summary[b]

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.980[a]	.961	.961	.21587	.961	1.351E4	1	548	.000

a. Predictors: (Constant), BI
b. Dependent Variable: AU

Table 8. ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	629.600	1	626.600	1.351E4	.000[a]
	Residual	25.536	548	.047		
	Total	655.136	549			

a. Predictors: (Constant), BI
b. Dependent Variable: AU

Table 9. Coefficients[a]

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.451	.039		-11.558	.000
	BI	1.1332	.010	.980	116.238	.000

a. Dependent Variable: AU

Table 7, 8, and 9 shows the multiple regression analysis of hypotheses III to analyse the significant relationship between Behavioural Intention to Use with Actual Usage of digital payment system. The model is highly significant and explains 96.1% of the variance in Actual Usage (AU) based on Behavioral Intention (BI). This indicates that users' intentions to use digital payment systems are very strongly related to their actual usage of these systems, hence supporting Ajzen's (1991) claims that intention is a reliable indicator of conduct. The very high R and Beta values demonstrate a strong positive relationship between BI and AU. The high R Square value and low standard error indicate an excellent alignment of the model with the data. The p-value is less than .05, confirming the statistical significance of the model. For every one-unit increase in BI, AU increases by 1.133 units. Behavioral Intention (BI) is a significant predictor of Actual Usage (AU), indicating that users' intentions to use digital payment systems have a strong and positive impact on their actual usage of these systems. Previous studies have discovered empirical evidence in favour of behavioural intention having a direct and favourable impact on actual usage (Ajzen, 1991; Shih & Huang, 2009; Aoun, Vatanasakdakul, & Li, 2010; Alleyne & Lavine, 2013).

H4: There is no significant difference in the sample mean of Gender in Satisfaction level of Digital Payments.

The analysis compares satisfaction levels between males and females, revealing minimal differences. Males (N=253) have a mean satisfaction level of 3.87 with a standard deviation of 1.036, while females (N=297) show a slightly higher mean of 3.89 and a standard deviation of 1.068. This indicates that both genders report similar satisfaction levels with little variability within each group. Levene's Test for Equality of Variances returns an F-value of 0.218 and a p-value of 0.641, which is well above the standard significance level of 0.05. This means we can assume that the variances in satisfaction levels between genders are equal. Overall, the findings suggest that there is no significant difference in the sample mean of Gender in Satisfaction level of Digital Payments, as both the mean values and variability are almost identical across the two groups. The widespread adoption of mobile-based technology has been found to be influenced by disparities in gender (Faqih & Jaradat 2015; Glavee-Geo, Shaikh, & Karjaluoto, 2017). There are several studies proved the gender difference in satisfaction level. However, in this study, it is clear that the majority of customers, irrespective of gender, have an almost similar level of satisfaction with the digital payment system.

H5: There is no significant difference in the sample mean of Age of respondents in Satisfaction level of Digital Payments.

Table 10. Mean and Standard Deviation – Gender and Satisfaction Level

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Satisfaction	Male	253	3.87	1.036	.065
	Female	297	3.89	1.068	.062

Table 11. Independent Samples Test – Gender and Satisfaction Level

		Levene's Test for Equality of Variances	
		F	Sig.
Satisfaction	Equal variances assumed	.218	.641

Table 12. Mean and Standard Deviation – Age and Satisfaction Level

Age Groups	N	Mean	Std. Deviation
Up to 20	110	4.60	.492
21 to 40	154	4.50	.502
41 to 60	165	3.47	.808
Above 60	121	3.00	1.285
Total	**550**	**3.88**	**1.052**

Table 13. ANOVA Result – Age and Satisfaction Level

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	238.113	3	79.371	117.137	**.000**
Within Groups	369.967	546	.678		
Total	608.080	549			

Source: Compiled Data

The analysis examines satisfaction levels across different age groups, revealing significant variations. The youngest group (Up to 20 years) has the highest average satisfaction level (Mean = 4.60) with low variability (Std. Deviation = .492). The 21 to 40 group follows closely with a mean of 4.50 and similar low variability (.502). However, a significant decline in satisfaction is observed in the 41 to 60 age group (Mean = 3.47, Std. Deviation = .808), and this trend continues in the Above 60 group, which reports the lowest satisfaction (Mean = 3.00) and the highest variability (Std. Deviation = 1.285).

The ANOVA results further support these findings. The significant F-value (117.137) and the p-value of .000 indicate that the differences in satisfaction levels between these age groups are statistically significant. Hence we accepted the alternate hypothesis. This suggests that age plays a crucial role in determining satisfaction, with younger individuals as well as the middle-aged groups generally reporting higher satisfaction compared to older age groups. While most of the respondents from old age groups have expressed neutrality and dissatisfaction towards digital payment systems, this indicates that satisfaction levels may differ age by age. Customers' or users' age affects their usage and behaviour as consumers (Liébana-Cabanillas et al., 2012; Okazaki & Mendez, 2013; Liébana-Cabanillas, Sánchez-Fernández, & Muñoz-Leiva, 2014).

The Garrett Ranking analysis of challenges in digital payments highlights several key issues impacting user experience and adoption:

Lack of Security ranks as the most critical challenge, with the highest mean score. Users are deeply concerned about the safety and protection of their financial transactions. Addressing security vulnerabilities is essential to building user trust and boosting the wider adoption of digital payment solutions. Lack of Trust is the second-highest concern. Users are worried about the reliability and integrity of the digital payment platforms they use. Trust is crucial in financial transactions, and without it, users may be hesitant to engage with these platforms. Building transparency and fostering trustworthy relationships with users are vital for the growth of digital payments. Time-Consuming processes are ranked the lowest, indicating that while users acknowledge that digital payments can sometimes be inefficient, this issue is less significant compared to security and trust concerns. Improving transaction speed is beneficial, but the priority should be on enhancing security and trust to ensure broader adoption and satisfaction with digital payment systems. Technical/Network Issues is the second-lowest ranked challenge. While technical difficulties and network failures can disrupt the payment experience, they are less critical compared to issues of security and trust.

Table 14. Garrett Ranking – Challenges in Digital Payments

Sl. No.	Factors	Rank Scale Value	I	II	III	IV	V	VI	VII	Total Score	Garret Mean Score	Mean Rank
		x	79	66	58	50	43	34	21			
1.	Lack of Trust	f	82	8	21	5	-	-	-	116	73.05	II
		fx	6478	528	1218	250	-	-	-	8474		
2.	Time-Consuming	f	-	-	-	9	20	42	45	116	31.75	VII
		fx	-	-	-	450	860	1428	945	3683		
3.	Lack of Security	f	91	20	5	-	-	-	-	116	75.85	I
		fx	7189	1320	290	-	-	-	-	8799		
4.	Transaction Costs	f	-	-	61	35	-	9	11	116	50.22	IV
		fx	-	-	3538	1750	-	306	231	5825		
5.	Inadequate Digital Literacy	f	22	26	-	41	-	27	-	116	55.36	III
		fx	1738	1716	-	2050	-	918	-	6422		
6.	Difficulty to Use	f	6	6	-	34	21	32	17	116	42.40	V
		fx	474	396	-	1700	903	1088	357	4918		
7.	Technical/ Network issues	f	-	8	13	-	35	19	41	116	37.02	VI
		fx	-	528	754	-	1505	646	861	4294		

Source: Compiled Data

These problems can affect transaction reliability, but their impact is not as severe as the concerns about safety and trustworthiness.

Findings

The statistical significance of perceived usefulness and perceived ease of use on behavioral intention to use digital payments, along with the significance of behavioral intention on actual usage, underscores the critical role these factors play in user adoption of digital payment system. When users perceive a digital payment system as useful and user-friendly, they are more inclined to plan to use it. This intention significantly predicts actual usage, indicating that enhancing both the usefulness and ease of use can effectively increase their adoption and utilization of digital payment systems.

The absence of a significant difference in gender in satisfaction levels with digital payments in Thrissur district suggests that both males and females express similar levels of satisfaction with these services. When the analysis fails to reject the null hypothesis (no difference in satisfaction between genders), it indicates that any observed variations are not statistically meaningful. This parity in satisfaction levels could be attributed to factors such as equal access to digital payment options, similar usage patterns, or comparable experiences with the technology within the district. While, satisfaction levels of digital payment methods vary significantly across age categories. Younger respondents in the age category upto 20 have a mean satisfaction score of 4.60, indicating high satisfaction with digital payments among those who rated their satisfaction in this range. The low standard deviation of 0.492 suggests a high level of agreement among respondents in this category. They often prioritize convenience, speed, and innovative features, leading to generally high satisfaction levels. Conversely, satisfaction decreases notably for those in the 41 to 60 and Above 60 categories. However, their satisfaction levels may be influenced by factors such as simplicity, security, and reliability, with a greater emphasis on clear interfaces and robust customer support. Overall, tailored approaches that address the unique preferences and concerns of different age groups are essential for enhancing usage and satisfaction across the digital payment landscape.

Security concerns and a lack of trust pose significant

challenges to the extensive usage of digital payment methods, as users fear potential fraud, data breaches, and cyberattacks compromising their sensitive information and financial assets. To address these challenges, digital payment providers must prioritize the application of robust security measures, including multi-factor authentication and encryption, while also enhancing transparency and educating users about safe digital transaction practices. Additionally, regulatory bodies are essential in establishing and implementing frameworks that ensure adherence to data protection laws and cybersecurity standards., thereby promoting trust in digital payment ecosystems.

MANAGERIAL IMPLICATIONS

The study underscores the critical importance of perceived usefulness and ease of use in promoting the use of digital payment systems. For developers and businesses, this implies a focus on creating intuitive, user-friendly interfaces that clearly demonstrate the benefits of digital payments. Simplifying user interactions and showcasing tangible advantages can enhance user engagement and increase adoption rates. Additionally, the study highlights significant age-based differences in satisfaction. Younger users prioritize convenience and innovation, suggesting that digital payment systems targeting this group should offer advanced features and seamless experiences. Conversely, older users place higher value on simplicity, security, and reliability, indicating a need for systems that emphasize these aspects. Gender parity in satisfaction levels suggests that digital payment services in the Thrissur district are effectively addressing the requirements of both males and females, reinforcing the importance of equitable service delivery. The significant concerns around security and trust mean that providers need to prioritize strong security measures and transparent practices to build user confidence. Regulatory bodies also have a vital function in enforcing data protection and cybersecurity standards to foster trust in digital payment systems.

CONCLUSION

The study underscores the critical importance of perceived usefulness and ease of use in promoting the use of digital payment systems. For developers and businesses, this means prioritizing user-friendly interfaces and demonstrating clear benefits to boost user engagement and usage rates. Additionally, the study highlights significant age-based differences in satisfaction. Younger users prioritize convenience and innovation, suggesting that digital payment systems targeting this group should offer advanced features and seamless experiences. Conversely, older users place higher value on simplicity, security, and reliability, indicating a need for systems that emphasize these aspects. Gender parity in satisfaction levels suggests that digital payment services in the Thrissur district are effectively addressing the requirements of both males and females, reinforcing the importance of equitable service delivery. Continuous improvement efforts, including proactive monitoring, addressing user feedback, and enhancing service reliability, are essential for building and maintaining trust among users, ultimately fostering greater confidence and satisfaction in digital payment platforms.

The growth of digital payments has not only transformed the lifestyle of people but has also shown drastic growth in the economy of our nation. The industry is projected to experience significant growth until 2035, propelled by rising incomes, a heightened government commitment to financial inclusion, and increased digital adoption. By 2030, India's digital payments may surpass $1 trillion. In 2020, global digital payment transaction volume exceeded 726 billion, with a total value surpassing $5.1 trillion. Mobile payment transactions are projected to reach $14 trillion globally by 2025, showcasing the increasing reliance on digital payment methods. By embracing digital payment solutions, businesses and consumers can unlock new opportunities, enhance financial resilience, and promote sustainable development in the digital economy. ■

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