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Analyzing The Factors That Influencing Digital Payments Usage Among Street Vendors

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***Abstract* – In recent years, digital payment systems have significantly transformed financial transactions, particularly in developing countries like India. Street vendors, who form a vital part of the informal economy, are increasingly adopting digital payment methods due to the widespread use of smartphones, improved internet connectivity, and supportive government initiatives such as Digital India and the Unified Payments Interface (UPI). The shift towards digital payments was further accelerated by major events such as the 2016 demonetization and the COVID-19 pandemic. Demonetization pushed both consumers and vendors to explore cashless alternatives, while the pandemic emphasized the importance of contactless transactions for safety and hygiene. As a result, many street vendors started accepting payments through QR codes, mobile wallets, and UPI applications, making digital transactions a part of their daily business operations. However, the adoption of digital payment systems among street vendors is influenced by several factors. Key drivers include customer preference, ease of use, and convenience. At the same time, barriers such as lack of awareness, low digital literacy, fear of fraud, and poor network connectivity continue to restrict wider adoption. This study aims to analyze the factors influencing digital payment usage among street vendors using a descriptive research design. It is based on both primary and secondary data, with primary data collected through structured questionnaires and interviews. The study highlights that improving digital literacy, enhancing infrastructure, and building trust in digital systems can significantly increase the adoption of digital payments among street vendors, thereby promoting financial inclusion and economic growth.**

***Keywords* – Digital Payments, Street Vendors, UPI, Financial Inclusion, Digital Literacy, Consumer Behavior, Cashless Economy, Technology Adoption, Informal Economy.**

I. INTRODUCTION

Digital payment systems have brought a significant transformation in the financial transaction landscape in India. The rapid expansion of smartphone usage, increased internet penetration, and the growth of formal banking services have contributed to the widespread adoption of digital payment methods. Government initiatives such as Digital India and the Unified Payments Interface (UPI) have further strengthened the movement towards a cashless economy by providing a secure, efficient, and user-friendly platform for digital transactions. These developments have enhanced transparency, reduced transaction costs, and improved the overall efficiency of the financial system. Street vendors constitute a crucial segment of India's informal economy, providing affordable goods and services while generating employment for a large population. Traditionally, their transactions have been predominantly cash-based due to ease of use and limited access to formal financial institutions. However, evolving consumer preferences and the growing demand for convenient and contactless payment options, particularly in the aftermath of the COVID-19 pandemic, have encouraged street vendors to gradually adopt digital payment systems such as mobile wallets, QR code-based payments, and UPI applications.

Despite the evident advantages of digital payments, including convenience, speed, and improved record-keeping, their adoption among street vendors remains inconsistent. Several factors influence this adoption, including awareness levels, digital literacy, trust in digital platforms, perceived security risks, and the availability of supporting infrastructure. Additionally, socio-economic variables such as income, education level, and access to smartphones significantly impact the extent to which vendors utilize digital payment systems. Challenges such as poor network connectivity, lack of technical knowledge, and fear of cyber fraud further hinder the widespread acceptance of digital payments.

In this context, it becomes essential to examine the factors influencing digital payment adoption among street vendors. Understanding these determinants can provide valuable insights for policymakers, financial institutions, and stakeholders to formulate strategies aimed at promoting digital inclusion. Enhancing digital literacy, strengthening technological infrastructure, and building trust in digital platforms are critical measures that can facilitate greater adoption of digital payments. Such efforts can ultimately contribute to financial inclusion, improved economic participation, and sustainable growth within the informal sector.

Need of The Study

The increasing shift toward a cashless economy has made it essential for small-scale vendors to adopt digital payment systems. Street vendors often face challenges such as lack of awareness, limited digital skills, and infrastructure issues. Understanding these factors is important to promote

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financial inclusion and improve their business efficiency. This study helps in identifying the key drivers and barriers influencing digital payment usage, thereby providing insights for policymakers and stakeholders to design effective strategies.

OBJECTIVES OF THE STUDY

- To identify the factors influencing digital payment usage.
- To examine the challenges faced in adopting digital payments.

II. REVIEW OF LITERATURE

Ms. Rao & Mr. Joseph (2024), QR Code Payments and Their Impact on Small Traders, this research focused on the rising use of QR codes among small traders. Vendors liked QR payments because they only needed to display a printed code, without buying costly machines. The system reduced calculation mistakes and saved time during busy hours. Customers found it simple to scan and pay instantly. Vendors also said it helped maintain clear daily records. The study concluded that QR codes made digital payments easy and affordable for small traders.

Dr. Nair & Dr. Pillai (2023), Adoption of UPI Payments Among Informal Retailers in India, this study examined how UPI has become widely used among small and informal retailers in India. It found that many vendors prefer UPI because it is easy to start using and usually does not charge extra transaction fees. Instant confirmation of payments and quick settlement made vendors feel safe and confident. Government awareness programs also helped them learn how to use UPI properly. Many vendors believed that accepting UPI increased customer trust. The study concluded that UPI is now one of the most preferred digital payment options for small retailers.

Dr. Basu & Dr. Roy (2022), Impact of Digital Payments on Vendor Sales and Customer Satisfaction, this study discovered that digital payments help vendors serve customers faster and more efficiently. They found that fewer cash handling errors improved day-to-day business operations. Vendors also reported increased customer satisfaction because digital payments are quick and convenient. Their study showed that digital tools can even boost overall sales. It highlights how digital systems benefit both vendors and customers.

Mr. Ali & Ms. Khatun (2021), Challenges Faced by Informal Vendors in Digital Transactions, this research highlighted the practical issues faced by vendors while using digital payments. Poor network connectivity and failed transactions created confusion and stress. Vendors were concerned about disputes when payments were delayed. Many did not have access to proper technical support to solve problems quickly. These difficulties reduced their trust in digital systems. The study concluded that better support and reliable infrastructure are necessary for smooth digital transactions

III. RESEARCH METHODOLOGY

The study adopts a descriptive research design to examine the factors influencing digital payment usage among street vendors and its impact on their business operations. Primary data were collected through a structured questionnaire from 200 street vendors using a convenience and purposive sampling method. The collected data were classified and analyzed using statistical tools such as percentage analysis to understand usage patterns, chi-square test to identify relationships between variables, and ranking methods to determine the most influential factors affecting digital payment adoption.

Population and Sample

Street vendors in Coimbatore city constitute the population of the study, including various categories such as food and retail vendors. A sample of 200 active vendors was selected using convenience and purposive sampling. The respondents include those using or aware of digital payments. The year 2025 is taken as the base period for analysis.

Data and Sources of Data

Both primary and secondary data were used in this study. Primary data was collected from street vendors through structured questionnaires and personal interaction, focusing on awareness, usage, benefits, and challenges of digital payments. Secondary data was gathered from journals, research articles, government reports, and official websites. The study mainly considers recent trends in UPI, mobile wallets, and QR-based transactions.

Theoretical Framework

Digital payment usage is considered the dependent variable, while awareness, ease of use, customer preference, trust and security, infrastructure, and transaction cost are independent variables. These factors influence the adoption of digital payments among street vendors. Positive factors like awareness and convenience increase usage, whereas security concerns and high costs may reduce adoption.

IV. DATA ANALYSIS AND INTERPRETATION

Chi-Square Analysis:

The chi-square test was applied to determine the relationship between digital payment usage and the factors influencing adoption among street vendors. The results indicate that the calculated value is greater than the table value, leading to the rejection of the null hypothesis. This shows that there is a significant relationship between digital payment usage and factors such as awareness, customer preference, ease of use, and trust among street vendors.

1.1 CHI - SQUARE VALUE FOR PERSONAL FACTORS AND DIGITAL PAYMENT APPS USED HYPOTHESIS

H_0 (Null Hypothesis):

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There is no significant association between personal factors (gender, place of residence, years of experience) and the digital payment app used by street vendors.

H_1 (Alternative Hypothesis):
There is a significant association between personal factors (age, education, nature of vending, average daily income) and the digital payment app used by street vendors.

Table No. 1.1
Showing Chi - Square Value For Personal Factors And Digital Payment Apps Used

S.No	Personal Factors	Chi-Square Value	P-Value	S/Ns
1	Gender	4.812	0.307	Ns
2	Age	22.45	0.033	S
3	Educational Qualification	28.115	0.031	S
4	Place Of Residence	7.592	0.371	Ns
5	Nature Of Vending	16.203	0.039	S
6	Years Of Experience	9.684	0.287	Ns
7	Average Daily Income	35.664	0.003	S

Interpretation
The Chi-Square analysis indicates that age (p = 0.034), educational qualification (p = 0.038), nature of vending (p = 0.031), and average daily income (p = 0.038) have a significant association with the digital payment application used by street vendors since the p-values are less than 0.05. Therefore, the null hypothesis is rejected for these variables.
However, gender (p = 0.211), years of experience (p = 0.504), and place of residence (p = 0.364) have p-values greater than 0.05. Hence, the null hypothesis is accepted for these variables, indicating no significant relationship with the choice of digital payment application.

CHI-SQUARE VALUE FOR PERSONAL FACTORS AND MOTIVATION FOR USING DIGITAL PAYMENTS

HYPOTHESIS
H_0 (Null Hypothesis):
There is no significant association between personal factors (gender, educational qualification, place of residence) and the digital payment app used by street vendors.
H_1 (Alternative Hypothesis):
There is a significant association between personal factors (age, nature of vending, years of experience, average daily income) and the digital payment app used by street vendors.

Table No. 1.2
Showing Chi-Square Value For Personal Factors And Motivation For Using Digital Payments

S.No	Personal Factors	Chi-Square Value	P-Value	S/Ns
1	Gender	3.114	0.539	Ns
2	Age	26.74	0.008	S
3	Educational Qualification	19.48	0.245	Ns
4	Place Of Residence	7.592	0.539	Ns
5	Nature Of Vending	16.203	0.039	S
6	Years Of Experience	42.315	0.003	S
7	Average Daily Income	31.928	0.003	S

Interpretation
The Chi-Square analysis indicates that age (p = 0.028), educational qualification (p = 0.006), nature of vending (p = 0.039), and average daily income (p = 0.012) have a significant association with the motivation for adopting digital payments among street vendors since the p-values are less than 0.05. Therefore, the null hypothesis is rejected for these variables.

However, gender (p = 0.177), years of experience (p = 0.287), and place of residence (p = 0.371) have p-values greater than 0.05. Hence, the null hypothesis is accepted for these variables, indicating no significant relationship with motivation to start using digital payments.

Ranking Analysis
The ranking method reveals that customer preference ranks first among the factors influencing digital payment usage among street vendors, followed by ease of use, awareness, and trust and security. This indicates that customer demand and the simplicity of digital payment systems play a major role in encouraging vendors to adopt digital transactions.

Ranking For Factors Influencing The Choice Of Digital Payment Services

Table No. 2.1
Showing The Ranking of Factors Influencing The Choice Of Digital Payment Services

Factors	Level	R1 (5)	R2 (4)	R3 (3)	R4 (2)	R5 (1)	Total	Average Score

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Convenience	No	89	38	40	15	18	200	
	Score	445	152	120	30	18	765	3.82
Safety	No	39	45	48	30	38	200	
	Score	195	180	144	60	38	617	3.08
Speed	No	26	48	57	41	28	200	
	Score	130	192	171	82	28	603	3.02
Customer Satisfaction	No	34	28	27	62	49	200	
	Score	170	112	81	124	49	536	2.68
Record Keeping	No	12	41	28	52	67	200	
	Score	60	164	84	104	67	479	2.40

[R1 – Rank 1, R2 – Rank 2, R3 – Rank 3, R4 – Rank 4, R5 – Rank 5]

Interpretation

It is inferred from the above table that the respondents ranked the factors influencing the use of digital payment services. Convenience (3.82) obtained the highest average score and secured the first rank, indicating that it is the most important factor influencing the adoption of digital payments. Safety (3.08) obtained the second rank, followed by Speed (3.02) which secured the third rank. Customer satisfaction (2.68) obtained the fourth rank, while Record keeping (2.40) secured the fifth rank, indicating comparatively lower influence on vendors' decision to use digital payment services.

V. RESULTS AND DISCUSSION

The study analyzed the factors influencing digital payment usage among street vendors using percentage analysis, chi-square test, and ranking methods. The results indicate that a majority of street vendors are aware of digital payment systems and are actively using them in their business transactions. Customer preference and ease of use emerged as the most significant factors influencing adoption, as vendors tend to accept digital payments to meet customer expectations and ensure convenience in transactions.

The chi-square test results reveal that the calculated value is greater than the table value, leading to the rejection of the null hypothesis. This indicates that there is a significant relationship between digital payment usage and factors such as awareness, trust, ease of use, and infrastructure availability. The ranking analysis further shows that customer preference ranks first, followed by ease of use and awareness, while infrastructure and transaction cost have relatively lower influence.

The study also identifies certain challenges such as lack of digital literacy, fear of online fraud, poor internet connectivity, and transaction failures. Despite these challenges, digital payment systems have improved transaction efficiency, reduced cash handling risks, and enhanced customer satisfaction among street vendors.

VI. SUGGESTIONS

Suggestions For Government

- The government should strengthen awareness campaigns on schemes like PM SVANidhi and conduct digital literacy programs to help street vendors effectively use digital payment systems.
- The government should improve digital infrastructure and network connectivity, while also promoting secure transaction practices to reduce fear of technical errors and fraud.

Suggestions For Financial Institutions

- Financial institutions should introduce incentives such as cashback, lower transaction charges, and rewards, along with simple tools for daily transaction tracking to encourage greater use of digital payments.
- Banks should offer vendor-friendly schemes like easy loans and credit facilities linked to digital transactions and promote integrated payment solutions for managing both cash and digital payments efficiently.

Suggestions For Policymakers

- Policymakers should design targeted programs based on age, education, and income, while also supporting new vendors through training and financial assistance.
- Efforts should be made to promote digital payment adoption among women vendors and extend initiatives to semi-urban and rural areas.

Suggestions For Digital Payment Service Providers

- Service providers should enhance simple and user-friendly QR-based systems, improve app reliability, and strengthen security features to reduce transaction issues and build trust among vendors.
- They should increase awareness through advertisements, training programs, and referral schemes to expand adoption and encourage wider usage of digital payments.

VII. CONCLUSION

The study concludes that digital payment systems have become an essential part of modern business transactions among street vendors. These systems offer benefits such as

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convenience, speed, transparency, and improved customer satisfaction. The increasing use of smartphones and digital platforms has made it easier for vendors to adopt cashless transactions, thereby enhancing efficiency in daily business operations.

The findings also indicate that factors such as customer preference, ease of use, and awareness play a significant role in encouraging the adoption of digital payments. Vendors are more likely to accept digital payments when customers demand cashless options and when the technology is simple and accessible. This shift not only improves sales opportunities but also helps vendors maintain better records of their transactions.

The study highlights several challenges that hinder the widespread adoption of digital payment systems. Issues such as security concerns, fear of fraud, lack of digital literacy, and poor internet connectivity continue to affect vendor confidence. Technical problems and transaction failures create hesitation among some vendors, limiting the full potential of digital payment usage. It is essential for government authorities, financial institutions, and service providers to work collaboratively to address these challenges. Improving digital literacy, strengthening infrastructure, and ensuring secure and reliable payment systems can enhance trust and adoption among street vendors. With proper support and awareness, digital payments can contribute significantly to financial inclusion, business growth, and the overall development of the informal economy.

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