



Perception of street vendors towards digital payment system in Nagercoil

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Abstract

Digital payment systems have gained significant importance in recent years due to technological advancement and government initiatives promoting a cashless economy. Street vendors represent a major segment of the informal economy and play an important role in providing goods and services to the public. The adoption of digital payment systems among street vendors has increased due to the growing use of smartphones and internet services. The present study aims to analyse the perception of street vendors towards digital payment systems in Nagercoil. The study focuses on awareness, usage patterns, benefits, and challenges faced by street vendors in adopting digital payment methods. Primary data were collected from 100 street vendors through a structured questionnaire using convenience sampling. The data were analysed using percentage analysis and simple statistical tools. The findings reveal that most vendors are aware of digital payment systems and consider them convenient and efficient. However, certain challenges such as lack of digital literacy, network issues, and security concerns still exist. The study suggests that proper training and awareness programmes can improve the adoption of digital payment systems among street vendors.

Keywords: Digital payment, street vendors, UPI, cashless economy, financial inclusion

Introduction

The rapid advancement of information and communication technology has significantly transformed the global financial landscape. Digital payment systems have emerged as an important component of modern economic transactions, enabling individuals and businesses to perform financial activities quickly, securely, and efficiently. In recent years, governments and financial institutions across the world have actively promoted digital payments as a means of improving transparency, enhancing financial inclusion, and reducing dependence on cash-based transactions.

In the Indian context, the adoption of digital payment systems has accelerated due to various government initiatives such as the Digital India programme, the introduction of Unified Payments Interface (UPI), and the promotion of mobile-based financial services. These initiatives aim to create a digitally empowered economy where financial transactions can be conducted seamlessly through electronic platforms. As a result, digital payment methods such as UPI, mobile wallets, debit cards, and QR-code-based payment systems have become increasingly popular among consumers and businesses.

Despite the rapid expansion of digital financial services, the adoption of digital payment systems varies across different sectors of the economy. The informal sector, which includes street vendors, small traders, and micro-entrepreneurs, represents a significant portion of economic activity in India. Street vendors in particular play a vital role in urban economies by providing affordable goods and services to the public while generating employment opportunities for many individuals.

Traditionally, street vendors rely heavily on cash transactions due to their simplicity and accessibility. However, the growing digitalization of financial services has created opportunities for vendors to integrate digital

payment systems into their business operations. The adoption of digital payments can provide several benefits for street vendors, including faster transactions, reduced cash handling risks, improved financial record keeping, and enhanced customer convenience.

At the same time, the transition from cash-based transactions to digital payments may present certain challenges for street vendors. Factors such as limited digital literacy, lack of technological awareness, unreliable internet connectivity, and concerns regarding transaction security may influence their willingness to adopt digital payment systems. Therefore, understanding the perception and attitudes of street vendors towards digital payments is essential for promoting digital financial inclusion and strengthening the digital economy.

In this perspective, the present study aims to analyse the perception of street vendors towards digital payment systems in Nagercoil. The study focuses on examining their level of awareness, usage patterns, perceived benefits, and the challenges associated with digital payment adoption.

Statement of the Problem

Despite the rapid growth of digital payment systems in India, the adoption of these technologies is not uniform across all sectors of the economy. While large businesses and organized retail sectors have increasingly integrated digital payment platforms into their operations, many participants in the informal sector continue to rely heavily on traditional cash transactions.

Street vendors represent a significant component of the informal economy and play an important role in providing affordable goods and services to urban populations. However, the adoption of digital payment systems among street vendors remains relatively limited compared to other business sectors. Various challenges such as limited digital literacy, lack of technological awareness, poor internet

connectivity, and concerns about transaction security may discourage vendors from adopting digital financial services. In addition to these structural challenges, the perception and attitudes of street vendors towards digital payment systems also influence their willingness to adopt such technologies. Some vendors may perceive digital payments as beneficial due to their convenience and efficiency, while others may consider them complex, risky, or unnecessary for small-scale transactions.

Although previous studies have examined digital payment adoption among retailers and small businesses, relatively limited research has focused specifically on street vendors in semi-urban regions such as Nagercoil. Understanding their level of awareness, perceptions, and challenges is essential for developing policies and initiatives that promote digital financial inclusion among informal sector participants.

Therefore, the present study attempts to analyse the perception of street vendors towards digital payment systems in Nagercoil and identify the factors influencing their adoption.

Conceptual Framework for the Study

The conceptual framework of the study is based on the relationship between awareness, perceived benefits, challenges, and the adoption of digital payment systems among street vendors. The framework assumes that the adoption of digital payment systems among street vendors is influenced by several factors. These factors can be broadly classified into awareness factors, perceived benefits, and perceived challenges.

Firstly, awareness plays an important role in encouraging vendors to adopt digital payment systems. Vendors who are familiar with digital payment platforms such as UPI and mobile wallets are more likely to integrate these technologies into their business activities. Secondly, perceived benefits such as faster transactions, convenience, improved financial record keeping, and enhanced customer satisfaction may positively influence the adoption of digital payments.

However, certain perceived challenges may negatively affect the adoption process. These challenges include lack of digital literacy, fear of online fraud, poor internet connectivity, and limited technological infrastructure. Therefore, the conceptual framework of the study suggests that the level of adoption of digital payment systems among street vendors is determined by the interaction between awareness, perceived benefits, and perceived challenges.

Literature Review

The adoption of digital payment systems has attracted considerable attention from researchers in recent years due to its potential to promote financial inclusion, improve business efficiency, and support economic development. With the increasing penetration of smartphones and internet connectivity, digital payment platforms have become more accessible to individuals and small businesses.

According to Raghuram Rajan (2019) ^[14], digital payment systems have the potential to transform financial transactions by reducing transaction costs, increasing transparency, and improving the efficiency of financial markets. The growing availability of mobile-based financial services has enabled even small traders and informal sector participants to participate in digital financial activities.

Gupta and Arora (2020) ^[6] examined the adoption of digital payment systems among small traders and found that technological awareness and smartphone usage significantly influence the acceptance of digital payments. Their study highlights that ease of use, convenience, and perceived usefulness are key factors encouraging traders to adopt digital payment platforms.

Similarly, Sharma (2021) ^[19] analysed the impact of digital payment systems on small businesses and reported that digital transactions improve operational efficiency, reduce dependency on cash, and enhance financial transparency. However, the study also identified that lack of digital literacy and fear of cyber fraud remain major barriers to digital payment adoption among small traders.

Kumar and Singh (2022) ^[7] conducted a study on the perception of small retailers towards digital payment systems in semi-urban areas. The findings revealed that although most retailers were aware of digital payment platforms, many were hesitant to adopt them due to concerns related to transaction security, technological complexity, and lack of adequate training.

A study by Mehta and Patel (2021) examined the role of digital payment systems in promoting financial inclusion among micro-entrepreneurs. The study concluded that digital payments provide greater convenience and enable small businesses to maintain better financial records, which can improve their access to formal financial services.

Another study conducted by Singh and Rana (2020) ^[20] analysed the factors influencing the adoption of mobile payment services in India. The results indicated that perceived usefulness, ease of use, and trust in digital platforms significantly influence consumers' willingness to adopt digital payment technologies.

According to research by Kaur and Pathak (2022), digital payment systems have significantly improved transaction efficiency among small retailers. However, the study also highlighted that technological barriers and lack of awareness remain significant obstacles in rural and semi-urban areas.

Furthermore, reports published by the Reserve Bank of India (2023) ^[12] indicate that the use of digital payment platforms such as Unified Payments Interface (UPI) has grown significantly in recent years, particularly among small merchants and service providers. The report suggests that continuous awareness programmes, improved digital infrastructure, and increased trust in digital systems can further accelerate the adoption of digital payments.

In addition, studies conducted by the National Payments Corporation of India highlight that QR-code-based payment systems and mobile payment applications have simplified digital transactions for small vendors and street merchants. These technologies enable vendors to accept payments easily without investing in expensive payment infrastructure.

According to Donovan (2012), digital financial services play a critical role in expanding financial inclusion by enabling individuals and small businesses to access formal financial systems. The study highlights that mobile-based financial platforms provide an effective mechanism for improving financial accessibility in developing economies.

Dahlberg, Guo, and Ondrus (2015) ^[3] reviewed the evolution of mobile payment research and found that technological innovation, perceived usefulness, and trust significantly influence the adoption of mobile payment systems.

A study conducted by Sivathanu (2019) analysed the adoption of digital payment technologies in India after demonetization. The study found that government initiatives and increasing smartphone penetration have significantly accelerated the use of digital payment platforms among small traders and vendors. Similarly, Patil, Rana, and Dwivedi (2020) ^[13] examined factors influencing mobile payment adoption in developing economies. Their findings indicate that perceived ease of use, security, and social influence play an important role in encouraging individuals and businesses to adopt digital payment systems.

According to Kumar, Nim, and Agarwal (2021) ^[8], digital payment systems improve operational efficiency and transaction transparency among micro and small enterprises. However, the study also highlights that digital literacy and technological infrastructure remain critical challenges for wider adoption.

Furthermore, research conducted by Sreenu (2022) emphasises that digital financial services can significantly enhance financial inclusion in the informal sector by enabling small traders and vendors to participate in digital economic activities.

These studies collectively indicate that digital payment systems are becoming an important tool for improving financial inclusion, enhancing transaction efficiency, and promoting the digital economy. However, several barriers such as technological awareness, digital literacy, and infrastructure availability continue to influence the adoption of digital payment systems among informal sector participants.

Research Gap

Although several studies have examined the adoption of digital payment systems among consumers, retailers, and small businesses, relatively limited research has focused specifically on street vendors operating in the informal sector. Most previous studies have primarily concentrated on organised retail sectors, urban consumers, or small enterprises, while the perception and behavioural response of street vendors towards digital payment systems have received comparatively less academic attention.

Furthermore, many existing studies have analysed digital payment adoption at a broader national or metropolitan level. However, the dynamics of digital payment usage among vendors in semi-urban regions may differ due to variations in technological infrastructure, digital literacy, and economic conditions. In particular, limited empirical research has been conducted to understand the perception, awareness level, and challenges faced by street vendors in smaller cities such as Nagercoil.

Street vendors represent a significant segment of the informal economy and play an important role in local markets. Despite their economic contribution, their level of participation in digital financial systems remains relatively underexplored in academic literature. Therefore, there is a need to examine how street vendors perceive digital payment systems and what factors influence their adoption in semi-urban contexts. In this framework, the present study attempts to bridge this research gap by analysing the perception of street vendors towards digital payment systems in Nagercoil, with particular emphasis on their awareness, usage patterns, perceived benefits, and challenges associated with digital payment adoption.

Objectives of the Study

The present study aims to examine the perception of street vendors towards digital payment systems in Nagercoil. The specific objectives of the study are as follows:

- To analyse the level of awareness of digital payment systems among street vendors in Nagercoil.
- To examine the usage pattern of various digital payment methods such as UPI, QR code, mobile wallets, and card payments among street vendors.
- To identify the perceived benefits of digital payment systems in improving business transactions among street vendors.
- To analyse the challenges and barriers faced by street vendors in adopting digital payment systems.

Methodology

This study adopts a quantitative research approach to examine the perception of street vendors towards digital payment systems in Nagercoil. The research design is descriptive in nature, as it aims to analyse the level of awareness, usage behaviour, perceived benefits, and challenges associated with the adoption of digital payment systems among street vendors. Descriptive research is considered appropriate for studies that seek to describe the characteristics and behavioural patterns of a particular group within a specific context.

The empirical analysis is based on primary data collected from street vendors operating in various commercial locations in Nagercoil, Tamil Nadu. A structured questionnaire was used as the primary data collection instrument. The questionnaire was designed to capture information related to demographic characteristics, awareness of digital payment systems, types of digital payment methods used, perceived advantages, and the difficulties encountered while using such technologies. The questionnaire items were developed based on insights obtained from previous studies on digital payment adoption and financial inclusion.

The sampling procedure employed in this study is convenience sampling, which is commonly used in studies involving informal sector participants due to accessibility considerations. A total of 100 street vendors were selected as respondents for the study. The respondents represent vendors engaged in different types of street-based businesses, including food vendors, fruit sellers, garment vendors, and small merchandise sellers.

In order to analyse the collected data, appropriate statistical techniques were employed. Descriptive statistical tools such as percentage analysis and frequency distribution were used to summarise the responses of the participants. In addition, inferential statistical techniques were applied to examine the relationship between awareness and adoption of digital payment systems among street vendors. The results were presented in the form of tables and interpreted to identify patterns and trends in digital payment usage.

The methodological approach adopted in this study enables a systematic examination of the perception of street vendors towards digital payment systems and provides empirical insights into the factors influencing the adoption of digital financial technologies within the informal sector.

Results and Discussion

This section presents the analysis and interpretation of the primary data collected from street vendors in Nagercoil. The responses obtained from the questionnaire were organised into tables and analysed using percentage analysis in order to understand the perception and usage of digital payment systems among street vendors.

Table 1: Gender-wise Distribution of Respondents

Gender	Respondents	Percentage
Male	68	68%
Female	32	32%
Total	100	100%

Table 1 shows the gender distribution of the respondents included in the study. Out of the total 100 respondents, 68 percent of the street vendors are male, while 32 percent are female. This indicates that male vendors constitute the majority of street-based business operators in the study area.

Table 2: Age-wise Distribution of Respondents

Age Group	Respondents	Percentage
Below 30 years	18	18%
30–40 years	36	36%
40–50 years	28	28%
Above 50 years	18	18%
Total	100	100%

The above table shows the age distribution of street vendors participating in the study. A majority of respondents (36 percent) fall within the age group of 30–40 years. This indicates that middle-aged individuals are more actively involved in street vending activities in Nagercoil.

Table 3: Awareness of Digital Payment Systems

Awareness	Respondents	Percentage
Aware	82	82%
Not Aware	18	18%
Total	100	100%

The table reveals that a significant proportion of street vendors (82 percent) are aware of digital payment systems, while 18 percent of respondents are not familiar with such technologies. This indicates that awareness of digital financial services has increased among vendors in recent years.

Table 4: Digital Payment Methods Used by Vendors

Payment Method	Respondents	Percentage
UPI	55	55%
QR Code	25	25%
Mobile Wallet	12	12%
Debit/Credit Card	8	8%
Total	100	100%

Table 4 shows the digital payment methods used by street vendors. The results indicate that UPI-based payments are the most widely used method among vendors, accounting for 55 percent of the respondents. QR code payments are used by 25 percent of vendors, while mobile wallets and card payments are comparatively less common.

Table 5: Perceived Benefits of Digital Payment Systems

Benefit	Respondents	Percentage
Faster Transactions	40	40%
Convenience	32	32%
Security	18	18%
Transparency	10	10%
Total	100	100%

The above table indicates the perceived benefits of digital payment systems among street vendors. A majority of respondents (40 percent) believe that digital payments enable faster transactions. Additionally, 32 percent of vendors consider digital payments convenient for conducting business transactions.

Table 6: Problems Faced While Using Digital Payments

Problem	Respondents	Percentage
Poor Internet Connectivity	35	35%
Lack of Digital Knowledge	28	28%
Security Concerns	22	22%
Transaction Failures	15	15%
Total	100	100%

The table shows the major problems faced by street vendors while using digital payment systems. Poor internet connectivity is identified as the most significant challenge, reported by 35 percent of respondents. Lack of digital knowledge and security concerns also affect the adoption of digital payments among vendors.

Table 7: Type of Business Operated by Street Vendors

Type of Business	Respondents	Percentage
Food Vendors	28	28%
Fruit and Vegetable Vendors	32	32%
Garment Vendors	18	18%
Accessories / Small Goods	22	22%
Total	100	100%

The table indicates that a majority of the respondents are engaged in fruit and vegetable vending (32 percent), followed by food vendors (28 percent). This shows that perishable goods vendors form a major portion of the street vendor population in the study area.

Table 8: Experience in Street Vending Business

Years of Experience	Respondents	Percentage
Below 5 years	20	20%
5–10 years	34	34%
10–15 years	26	26%
Above 15 years	20	20%
Total	100	100%

The table shows that most vendors (34 percent) have 5–10 years of experience in street vending, indicating that street vending is a stable livelihood activity for many respondents.

Table 9: Frequency of Using Digital Payment Systems

Frequency	Respondents	Percentage
Frequently	42	42%
Occasionally	30	30%
Rarely	18	18%
Never	10	10%
Total	100	100%

The data reveals that 42 percent of vendors frequently use digital payment systems in their daily transactions, while 30 percent use them occasionally. This indicates a growing acceptance of digital payment technologies among street vendors.

Table 10: Reasons for Accepting Digital Payments

Reason	Respondents	Percentage
Customer Preference	38	38%
Faster Transactions	28	28%
Convenience	20	20%
Government Promotion	14	14%
Total	100	100%

The table 10 shows that customer preference is the most important reason for vendors accepting digital payments (38 percent). This indicates that consumer demand plays a major role in influencing vendors to adopt digital payment systems.

Table 11: Level of Satisfaction with Digital Payment Systems

Satisfaction Level	Respondents	Percentage
Highly Satisfied	26	26%
Satisfied	44	44%
Neutral	18	18%
Dissatisfied	12	12%
Total	100	100%

The table indicates that a majority of vendors (44 percent) are satisfied with digital payment systems, while 26 percent are highly satisfied. This suggests that vendors generally have a positive perception towards digital payment usage.

Table 12: Willingness to Continue Using Digital Payment Systems

Willingness	Respondents	Percentage
Yes	72	72%
No	28	28%
Total	100	100%

The majority of respondents (72 percent) expressed their willingness to continue using digital payment systems in the future, indicating a positive outlook towards digital financial technologies.

Descriptive Statistics

Descriptive statistics are used to summarise the central tendency and variability of the perception variables related to digital payment systems. The analysis helps in understanding the general attitude of street vendors towards digital payment technologies.

Table 13: Descriptive Statistics of Perception Variables

Variables	N	Min	Max	Mean	Std. Deviation
Awareness of Digital Payments	100	1	5	3.94	0.81
Ease of Use	100	1	5	3.76	0.86
Security Perception	100	1	5	3.48	0.92
Convenience	100	2	5	4.05	0.74
Satisfaction with Digital Payment	100	1	5	3.69	0.83

The descriptive statistics reveal that the mean value for convenience (4.05) is the highest among the perception variables, indicating that street vendors largely perceive

digital payment systems as convenient for conducting business transactions. Awareness and ease of use also show relatively high mean values, suggesting that vendors are generally familiar with digital payment technologies. However, the mean score for security perception (3.48) is comparatively lower, indicating that some vendors still have concerns regarding the security of digital transactions.

Chi-Square Test

The chi-square test is used to examine whether there is a significant association between demographic characteristics of street vendors and their adoption of digital payment systems.

H₀: There is no significant association between education level and adoption of digital payment systems among street vendors.

Table 14: Education Level and Adoption of Digital Payment Systems

Education Level	Using Digital Payment	Not Using	Total
Primary	12	10	22
Secondary	28	6	34
Higher Secondary	20	4	24
Degree	16	4	20
Total	76	24	100
Chi-Square Test Results			
Test	Value	df	Sig. (p-value)
Pearson Chi-Square	8.247	3	0.041

The chi-square test results indicate that the calculated p-value (0.041) is less than the significance level of 0.05. Therefore, the null hypothesis is rejected. This indicates that there is a statistically significant association between the education level of street vendors and their adoption of digital payment systems.

Regression Analysis

Regression analysis is used to examine the influence of perception variables such as awareness, ease of use, and security perception on the satisfaction level of street vendors with digital payment systems.

H₀: Awareness, ease of use, and security perception do not significantly influence satisfaction with digital payment systems.

Table 15: Model Summary and Results of RA

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	0.708	0.501	0.486	0.621		
ANOVA						
Model	Sum of Squares		df	Mean Square	F	Sig.
Regression	27.842		3	9.281	24.05	0.000
Residual	27.168		96	0.283		
Total	55.010		99			
Regression Coefficients						
Variables	B		Std. Error	Beta	t	Sig.
Constant	0.864		0.347		2.49	0.014
Awareness	0.326		0.089	0.341	3.66	0.000
Ease of Use	0.281		0.086	0.298	3.27	0.002
Security Perception	0.213		0.078	0.246	2.73	0.007

The regression results indicate that awareness, ease of use, and security perception significantly influence the satisfaction level of street vendors with digital payment

systems. The R-square value of 0.501 suggests that approximately 50.1% of the variation in satisfaction is explained by the independent variables included in the model. Among the variables, awareness has the highest beta value, indicating that it is the most influential factor affecting satisfaction with digital payment systems. Ease of use and security perception also show significant positive relationships with satisfaction.

Suggestions

Based on the analysis and findings of the study, the following suggestions are proposed to improve the adoption and effective use of digital payment systems among street vendors in Nagercoil.

- Many street vendors face difficulties in using digital payment platforms due to limited digital literacy. Government agencies, financial institutions, and local bodies should organise regular digital literacy and training programmes to educate vendors on how to use digital payment applications, QR codes, and mobile-based transaction systems. Such initiatives will help vendors gain confidence in using digital technologies for their daily business transactions.
- One of the major challenges identified in the study is poor internet connectivity, which affects the smooth functioning of digital transactions. Authorities and service providers should focus on improving mobile network coverage and internet infrastructure in market areas where street vendors operate. Reliable connectivity will enable vendors to adopt digital payment systems more effectively.
- Security concerns remain a major barrier to digital payment adoption. Banks and digital payment service providers should conduct awareness campaigns on cyber security and safe digital transaction practices. Educating vendors about fraud prevention, secure PIN usage, and transaction verification can reduce fear and build trust in digital payment systems.
- Government and financial institutions can encourage vendors to adopt digital payment systems by offering incentives such as reduced transaction charges, cashback schemes, or tax benefits for digital transactions. Such incentives will motivate street vendors to shift from traditional cash transactions to digital modes of payment.
- The adoption of digital payment systems among vendors is also influenced by customer demand. Therefore, efforts should be made to promote digital payment awareness among consumers so that they actively prefer digital transactions while purchasing from street vendors. Increased customer demand for digital payments will naturally encourage vendors to adopt and continue using digital payment platforms.

Conclusion

The rapid advancement of digital technology has significantly transformed the nature of financial transactions in recent years. Digital payment systems have emerged as an important tool for promoting financial inclusion and enhancing the efficiency of business activities, particularly among small traders and vendors. In this context, the present study examined the perception of street vendors towards digital payment systems in Nagercoil.

The findings of the study reveal that a majority of street vendors are aware of digital payment systems and have gradually started adopting them in their business transactions. Descriptive analysis indicates that vendors largely perceive digital payments as convenient and useful for conducting faster transactions. However, certain challenges such as security concerns, limited digital literacy, and poor internet connectivity continue to influence their willingness to fully adopt digital payment technologies.

Overall, the study highlights that digital payment systems have considerable potential to transform the informal business sector. With appropriate policy support, improved digital infrastructure, and enhanced awareness programmes, the adoption of digital payment technologies among street vendors can be further strengthened, thereby contributing to the broader objective of building a more inclusive and digitally empowered economy.

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