ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 11| Issue: 7| July 2025|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2025: 8.691 || ISI Value: 1.188

CASHLESS PAYMENTS TRENDS AMONG STREET VENDORS IN BENGALURU'S UNORGANISED SECTOR

Neha Prasad[1], Dr. Jahnavi M[2]
[1]*RV Institute of Management*
[2]*RV Institute of Management*

Article DOI: https://doi.org/10.36713/epra22385
DOI No: 10.36713/epra22385

ABSTRACT

Street vendors are an integral component of India's vibrant urban economy, providing critical goods and services to millions every day. In the past, street vendors have existed solely on cash transactions, taking advantage of the ease, intimacy and instantaneity that cash allows. But with the accelerated development of India's digital ecosystem and the government's aggressive thrust towards a cashless economy, the payment ecosystem is being rewritten. Even in the unorganized sector, there is a seen shift towards cashless payment systems like UPI (Unified Payments Interface), mobile wallets, QR code payments and card-based payments. Bengaluru, which boasts a thriving street vending culture and robust tech ecosystem, is the perfect setting to examine this change. This research delves into the way street vendors in Bengaluru have adjusted to the increase in digital transactions. Most vendors have already started adding digital payment options to their business operations, driven by customer preference, convenience, and security. Vendors said that accepting payments without cash minimized the risks involved in dealing with large amounts of cash, like theft or loss. It has also made it easier for them to manage their finances, as it is simpler to monitor sales, keep records, and plan business expansion more methodically. Others even stated that electronic records have enhanced their access to small loans and banking facilities, aligning them more directly with the formal economy. Simultaneously, the transition has not been flawless. Many vendors experience issues such as intermittent internet connectivity, particularly in dense markets or fringe urban areas, resulting in transaction failure or delays. Additionally, insufficient digital literacy and lack of experience in mobile payment platforms continue to be a hindrance for most, especially among older vendors less familiar with smartphones. Vendors also cited instances of technical errors while effecting transactions, along with concerns regarding fraudulent activity, cybersecurity threats, and instances of mistrust from customers regarding online payments. Managing both cash and digital payments simultaneously has added operational complexity, as vendors must cater to all customer preferences to avoid losing business. Despite these obstacles, the willingness to adopt digital payments is strong, particularly among younger vendors and those who see clear business advantages. Traders know that providing a variety of payment options makes them more competitive and assists in satisfying the changing demands of technology-savvy customers who want speedy, contactless transactions. The objective of this research is to investigate the adoption of digital payment modes by street vendors in Bengaluru, considering the advantages, disadvantages, and effects on their business operations. Primary data was gathered using standardized questionnaires and interviews from vendors from various sections of the city. For understanding relationships among variables like awareness, perceived benefits, perceived difficulties, and adoption intentions, Structural Equation Modeling (SEM) was utilized. It yielded an extensive picture of how the adoption of digital transactions is changing in the context of street vendors in an urban Indian setting. The research indicates that the transition to digital payments among Bengaluru street vendors is already in full swing but is not yet mature. There are many vendors at various stages of adoption, with some being early adopters and others being cautiously optimistic. While the advantages of improved financial security, opportunities for business growth, and customer trust are well-known, the hurdles such as technical problems, non-support and infrastructural obstacles need to be addressed systematically. This research underscores that if India's vision for a digitally inclusive economy is to be a success, it is essential to focus on empowering and facilitating even the smallest of the unorganized sector players. Strengthening infrastructure, providing easy-to-use training programs, providing affordable access to the internet, and establishing trust in digital systems are all important steps. Street vendors will be able to make a smooth transition into the digital economy, earning improved livelihoods, and supporting the urban economic ecosystem more securely if these support mechanisms are provided.

KEYWORDS: *Awareness, Perceived challenges, Perceived Benefits, Digital Adoption, Economic contribution, Cashless Payments*

INTRODUCTION

Street vendors have been a part of India's vibrant urban existence from time immemorial, bringing color, convenience, and vibrancy to cities such as Bengaluru. From morning vegetable vendors to evening snack stalls, they have met the daily requirements of millions using the bare minimum of resources and little support. Historically, their businesses have been fueled solely by cash - a straightforward, instant, and widely accepted medium which demanded no bank accounts, no apps, and no official systems. Cash transactions naturally

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cooperate with the daily beat of street vending: fast, flexible, and paperwork-free. Yet the breeze of change has been blowing reliably across India's economy. With accelerating technology upgrades, low-cost smartphones, expanding internet penetration, and a massive push by the government through initiatives such as Digital India, the payments space is being dramatically reformed. Now, digital payments via platforms such as UPI, Google Pay, PhonePe, Paytm, and so on, are no longer the exclusive domain of tech-knowledgeable urbanites; they are gradually finding their way into the very heart of the informal economy such as Bengaluru's bustling chain of street vendors. This trend marks a significant break from tradition. Traders who used to handle only coins and crumpled bills now scan QR codes, verify transaction messages, and handle digital wallets. For most, this change is thrilling and full of promise. Digital payments have ushered in a number of actual, concrete advantages. Security is perhaps the most direct one without having to carry or store large sums of money, traders feel less exposed to theft and loss. Speed and ease are other benefits: payments take seconds, customers are more satisfied, and queues move quicker. Electronic records of transactions enable vendors to monitor their revenues better, budget their expenses, and even dream bigger maybe about taking a small loan to grow their business or investing in quality inventory. There's increasing realization that engagement with the digital economy has the potential to unlock entry points into formal financial services previously unattainable. Certain vendors have actually noticed that consumers currently prefer making their purchases from stalls that deal in cashless products, particularly among younger, technologically adept purchasers who themselves handle little or no cash. Still, despite the positive tale of digital takeup, it isn't problem-free. Reality on the ground is still complicated and multi-layered. Not all street vendors have access to smartphones, and those who do might still face restricted data plans, poor batteries, or a lack of experience with payment apps. Internet connectivity, while getting better, remains patchy in much of Bengaluru, and transaction failures, delays and considerable frustration ensue on busy days. Technical snafus, disorienting app interfaces, and even fears of cyber fraud give many vendors pause before fully committing to digital solutions. Trust developed over many years with real cash handling does not so quickly move to virtual solutions that float invisibly in the cloud. Older vendors particularly struggle to get familiar with the new systems, afraid that an accidental press of a button will mean losing money hard earned. For them, the learning curve is steep and intimidating. Compounding these issues is the fact that customers themselves are not all digital. Most customers, particularly those belonging to lower income groups or aging population, still use cash payments. Accordingly, vendors are usually required to handle two systems cash and digital resulting in complexity in managing their day-to-day accounts. In addition, there are tiny but substantial transaction fees levied by certain platforms, cutting into already meager profit margins. The specter of cyber scams, hacking attacks, and phishing attacks, while comparatively infrequent, still looms in the background, deterring some vendors from going all out for digital payments. In spite of these challenges, the overall trend towards digital adoption is unmistakable. Most street vendors are realizing that the world they live in is transforming and in order to keep up and be seen, they must also transform themselves. The younger vendors and those having the support of family members like children who assist with running digital gadgets are especially quick to change. Some vendors have even begun using digital applications not only for transactions but also in marketing their products through WhatsApp groups, social media, and loyalty programs. With every successful QR scan and seamless UPI transfer, their confidence grows a little stronger. Moreover, seeing fellow vendors benefit from digital adoption creates a ripple effect, encouraging others to explore the possibilities. Government initiatives aimed at promoting financial inclusion have also played a supportive role, offering incentives for vendors to register digitally, providing micro-loans, and running training programs to improve digital literacy. Banks, NGOs, and technology firms have also joined in by providing workshops, easy-to-use app layouts, and even toll-free lines to answer vendor questions. Steadily but surely, there is a digital revolution even in the grassroots levels of Bengaluru's street economy. But then there is also a general feeling among vendors that for digital payment to become an integral and at-ease feature of their commercial lives, extra support is the need of the hour. Infrastructure must be enhanced stable internet, cheap smartphones, easy-to-use apps, and robust cyber-security solutions are essential pillars. Just as crucial is the necessity for continuous digital training, customized to the particular realities and capabilities of street vendors. They require more than a show-and-tell; they require handholding assistance, tolerance, and intuitive rather than complicated solutions. Policies must also be attuned to the micro-economics of street vending, with low transaction fees, speedy resolution of grievances, and fraud protection readily available. There is also a cultural dimension changing attitudes from an ingrained belief in tangible cash to a faith in intangible digital money that will take time and effort. The tale of Bengaluru street vendors going cashless is really not so much a tale about technology. It's a tale about hope, resilience, and ambition. It is about entrepreneurs who are prepared to take risks into the unknown in a bid to create a better future for themselves and their loved ones. Their path is one that reflects both the potential and the danger of creating an inclusive digital economy. It reminds us that genuine progress is not merely about introducing cutting-edge technologies but about making sure the most marginalized and poor in society are able to access and benefit from them. As Bengaluru's street vendors read QR codes beneath sunlight skies and crowded city streets, they are at the intersection of tradition and change traveling a new world with valor, optimism and an entrepreneurial spirit that is inspiring.

LITERATURE REVIEW

Pal et al (2018) have done a study on digital payments and cashless transactions that provides insights into the problems of the public and the efforts of the government. The research also demonstrates how vital online payment systems are and to what extent they are accepted in India, as most small vendors, street vendors, and owners of retail stores may be unaware of the efforts of the government to introduce a cashless economy or this technological revolution.

Nariyanuri et al (2020) India Mobile Payments Market Report, S & P Market Intelligence, in the 2020 India Mobile Payments

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Market Report, it was stated that the Indian economy is shifting towards cashless payments as a superior and more convenient means of doing business. The study indicates that payments through mobile apps have overtaken card payments, which registered an impressive 163 percent increase in 2019 to a total value of $286 billion. Credit card payments have been affected by the coronavirus lockdown. Throughout the pandemic, mobile payments and online transactions via apps started growing rapidly.

Chattopadhyay, Subho., Gulati, Payal., Bose, Indranil., (2018) Awareness and Participation of Small Retail Businesses in Cashless Transactions: An Empirical Study. It was discovered in the study that while there were a large number of small retailers who were aware of the potential of the cashless transaction and its types, their rate of conducting cashless transactions was woefully lower compared to that of cash transactions. They were discovered to feel that managing cash was simpler compared to managing cashless transactions. The fear of losing money through defective transactions was discovered to be a strong disincentive in becoming cashless among the small retailers covered under the study.

Shradhanjali, Panda., and Ansuman, Sahoo., (2022) Impact of Digital Payment on Business Performance: A Study of Street Vendors in Odisha. this empirical study uses both primary and secondary data to give an adequate response towards the aforementioned goal. Collected data are evaluated using statistical means, including gap study, principal component analysis, ANOVA, and regression method. Results of the study indicate street vendors are a financially excluded segment of the economy. A careful examination of the finding indicates there is significant correlation between the above-mentioned areas of awareness in digital payment and the operational performance of street vendors. It ends by stating the managerial implication of its research findings.

Mahfuzur, Rahman., Izlin, Ismail, Shamshul, Bahri., Muhammad, Khalilur, Rahman., (2022) The results of this research hold important practical implications for Malaysian stakeholders and technology suppliers to identify influences on a firm's adoption of cashless payment systems to facilitate business transactions. Through the study of the phenomenon using the TOE framework, this research contributes an integrated model of cashless payment systems by firms. Our results also provide implications for future use of the PLS approach in cashless payment and its studies. The paper presents a broader picture of determinants affecting cashless payment systems among companies.

Dr. Bhawna, Agarwal., Upasana, Gupta., (2022) the study results show that awareness regarding various digital payments and their benefits among small business units is high, but their adoption is low. The findings of the research suggest that the baseline TAM model i.e., perceived ease of use and perceived usefulness along with others i.e., subjective norm and self-efficiency have a very strong influence on the behavioural intention of MSMEs. Moreover, demonetization and COVID-19 compelled numerous small businesses to go for Cashless transactions but even then, they use cash.

Dr. Shivangani, Rathore., (2021) The purpose of this study is to identify whether the implementation of digitalization is able to generate a remarkable influence on the urban street vendors' businesses. It discusses the advantages and disadvantages of implementing digitalization. It further examines the platforms and applications used for the digitalization of the street vendors' business processes. The various initiatives taken by the government of India to bring street vendors under the formal system are also examined.

Dr. Archana et al (2018) Even though the major mode of payment has been cash for many years it is not simple to completely adopt another mode of payment system in such an economy where the unorganized sector prevails. Individuals are from various education segments and from middle-income groups or low-income groups in the instance of semi-urban or rural regions. They possess specific mentalities, are partially aware of the digital payment system, traditional, and are not fully convinced about the same. Some research works have already been conducted to investigate the cashless payment system of India and in foreign countries as well.

Sivasubramanian, K., Rajendran, G., (2020) Evaluating the Impact of Digital Transformation on Economic Conditions of Unorganised Small and Petty Traders in Bangalore. The research indicates petty trade as an important economic activity in an unorganized sector and plays a vital position in the economic life of the urban poor and to the migrants as well. Petty traders were initially struggling with technical problems and technology awareness but now they accept digital payments, taking advantages of instant fund transfers, effortless money transfers, and m-wallets for cash withdrawals. It was also observed that electronic payments that have been enabled by e-wallet service providers and other payment apps, have turned small transactions into national income.

Jaheer, Mukthar, K, P., Sivasubramanian (2021) Paradigm Shift in Economic Empowerment of Street Vendors through Digital Payment Applications for Transactions in Chennai. This research identified that including a digital payment system in street vendors raises the income, investment, and sales volume. The raising of the income level makes them satisfied and helps their family to rise economically and socially. The research also recommends the government offer and make known the advantages and use of digital payment systems to small street vendors and lead them to open and sustain a bank account.

RESEARCH GAP

Whereas other studies have investigated the wider take-up of digital payments in small enterprises and retailers, there is a specific research gap when focusing on street vendors that operate within Bengaluru's unorganized sector. Such vendors represent a critical component of the city's informal economy and frequently encounter unfamiliar and under-researched challenges when shifting to digital payment systems. Most of the current literature focuses mainly on digital awareness, technological penetration, and access to infrastructure. They mostly don't explore the real, everyday hurdles these vendors face like erratic internet connectivity, digital illiteracy, recurring transaction failures, or even mistrust of online

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payments by customers. These can seriously impact the seamless adoption of digital platforms. Additionally, there is insufficient in-depth analysis regarding the role of perceived benefits, awareness, and perceived obstacles in determining actual intention to adopt digital payments. Not many studies examine the interplay between these factors, especially through stringent analytical frameworks. Most importantly, extremely few studies use sophisticated statistical methods such as Structural Equation Modeling (SEM) to examine both the direct and indirect associations between these constructs. By concentrating specifically on Bengaluru street vendors and using SEM for analysis, this research addresses a significant research gap. It provides a holistic and context-specific investigation of the motivations, challenges, and behavioural tendencies involved in digital transaction adoption in the informal urban economy.

OBJECTIVE

- To analyze the trends of digital payment methods among street vendors in Bengaluru.
- To measure the awareness of street vendors from cash to cashless transactions.
- To measure the benefits, challenges and adoption of digital payments.

HYPOTHESIS DEVELOPMENT

H1: *Higher awareness of digital payment methods (UPI, cards, wallets) positively influences the adoption of digital payments.*
H2: *Perceived benefits (e.g. increased sales, improved revenue, customer spending) positively influence the adoption of digital payments.*
H3: *Perceived challenges (e.g. technical glitches, transaction fees, poor internet connectivity) negatively influence the adoption of digital payments.*
H4: *Awareness of digital payment methods positively influences perceived benefits.*
H5: *Awareness of digital payment methods negatively influences perceived challenges.*
H6: *Perceived benefits mediate the relationship between awareness and adoption of digital payments.*
H7: *Perceived challenges mediate the relationship between awareness and adoption of digital payments.*

RESEARCH METHODOLOGY

The present work takes a quantitative research design to study the digital payment adoption among Bengaluru street vendors. Structural Equation Modeling (SEM) is applied to study the direct and indirect effects of digital payment awareness, perceived benefits, and perceived challenges on adoption behaviour. Primary data are gathered using structured questionnaires designed based on validated scales from previous studies. All key constructs awareness, perceived benefits, perceived challenges, and adoption are measured with more than one item rated on a 5-point Likert scale. For ascertaining the reliability and validity of the measurement model, Confirmatory Factor Analysis (CFA) is carried out before the structural analysis. This step checks the dimensionality and internal consistency of the constructs. SEM is then utilized to test the hypothesized paths and investigate potential mediating effects among variables. The discussion yields understanding into the interaction between these constructs to impact adoption decisions. Statistical software packages SmartPLS are employed to carry out data analysis based on SEM-based modeling.

DATA ANALYSIS AND METHODS

For this research, data analysis was carried out in a systematic and structured manner to guarantee the findings are reliable and significant. The main analytical method employed was Structural Equation Modeling (SEM), which is particularly effective in researching complex interactions among several variables simultaneously. SEM enables us not only to measure the direct impact of variables such as digital payment awareness, perceived advantages, and perceived difficulties on adoption, but also to examine how some of these variables could have an indirect effect on one another. Prior to diving into the structural model, a Confirmatory Factor Analysis (CFA) was conducted first. This involved checking that measurement items in the questionnaire were, in fact, capturing the conceptual dimensions they aimed to measure. It also made sure that the used scales were valid and reliable, i.e., the questions were consistent and actually measuring the constructs such as "awareness" and "perceived benefits." The responses on the questionnaire were anchored on a 5-point Likert scale from "Strongly Disagree" to "Strongly Agree," which was easier for the vendors to rate their level of agreement with statements. The software that was used for analysis was Python and R, both of which are robust packages for SEM and CFA processing.

These measures assisted in judging whether the model was a good fit of the real data gathered. Descriptive statistics were also executed first to obtain an overview of the sample features like the age of the vendors, years of business, and their acquaintance with digital tools. Once the measurement model was confirmed through CFA, the structural model was examined to test the hypotheses. Particularly, the research tested whether awareness results in higher perceived benefits, whether perceived obstacles reduce adoption, and whether benefits and obstacles act as mediators between awareness and adoption. This systematic and tiered process of data analysis helped ensure that not only did the research test the hypotheses well, but it also revealed deeper information regarding how digital payment systems are being adopted or rejected among Bengaluru street vendors.

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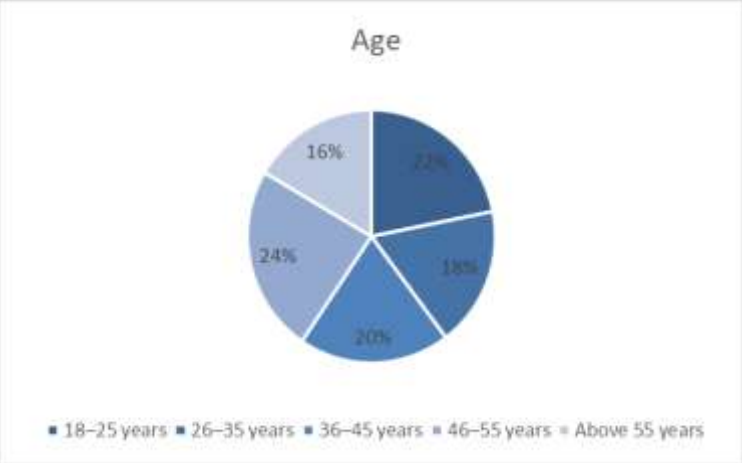
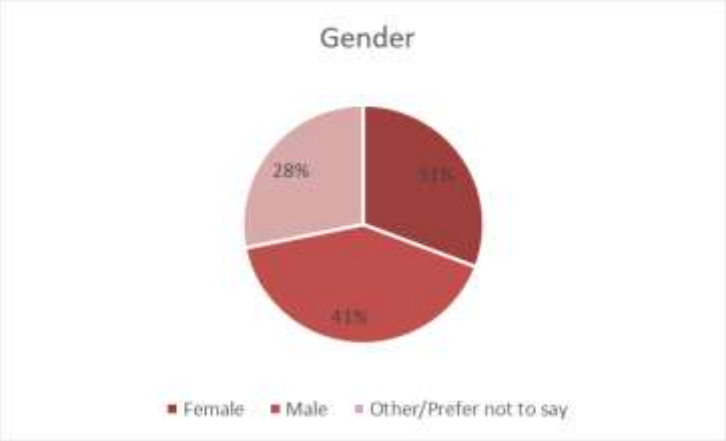


-36–45 age group leads with 24% of total respondents.

-Next most common are 18–25 (22%) and 46–55 (20%) age groups.

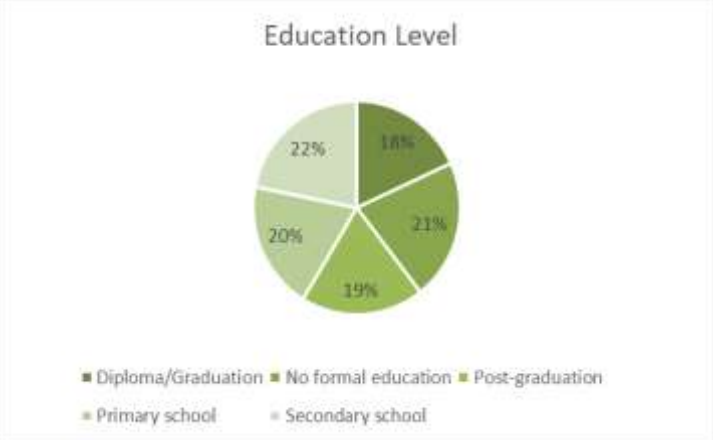
-Respondents over 55 are fewest, making up just 16% of the sample.



-Males form the largest group, accounting for 41% of the respondents.

-Females represent 31%, while others make up a notable 28%.

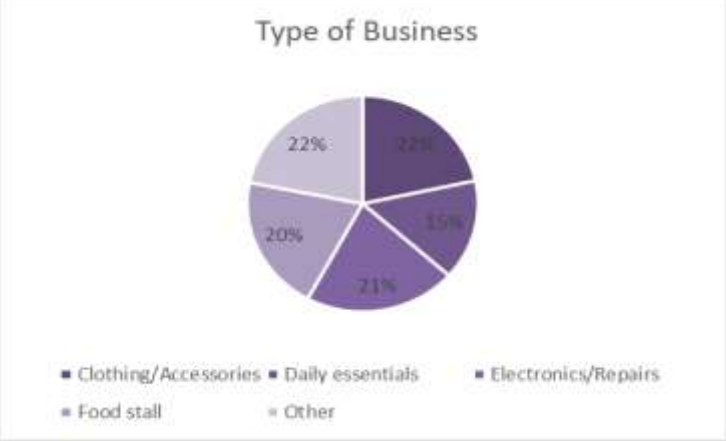
-Gender distribution is fairly balanced, indicating inclusive participation across demographics.



-Educational levels are fairly balanced, with no group dominating significantly.

-Secondary (22%), no schooling (21%), primary (20%) are the most common levels.

-Higher education still notable, with 19% post-graduates and 18% diploma/graduate holders.



-Business types are evenly spread, showing no overwhelming dominance by one category.

-Clothing/Accessories and "Other" lead at 22%, followed by daily needs (21%) and food (20%).

-Electronics/repairs are slightly lower, making up 15% of vendor businesses.

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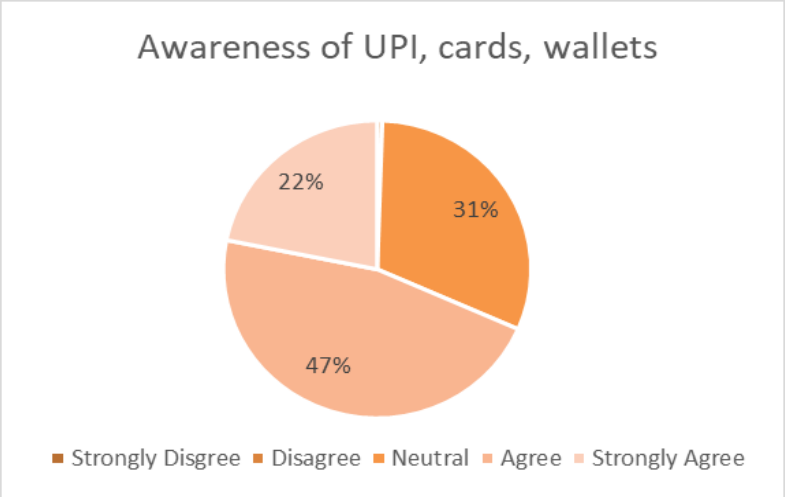
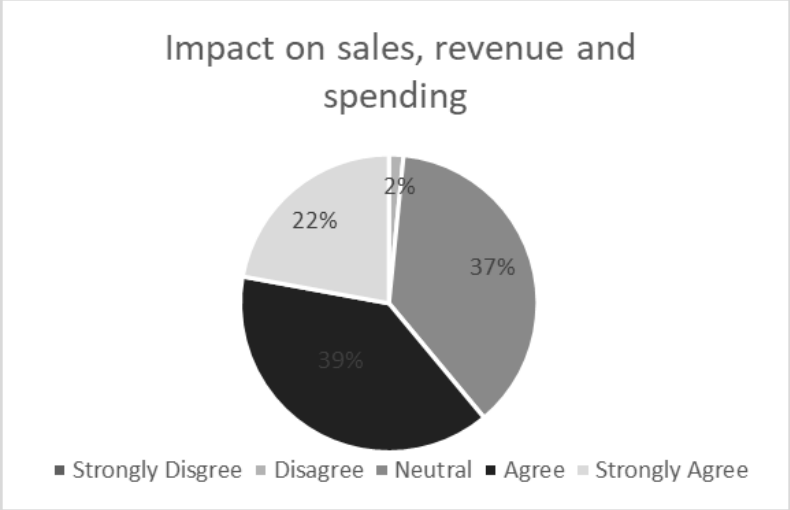


-Majority show positive awareness, with 47% agreeing and 22% strongly agreeing.

-31% express disagreement, indicating a notable awareness gap to address.

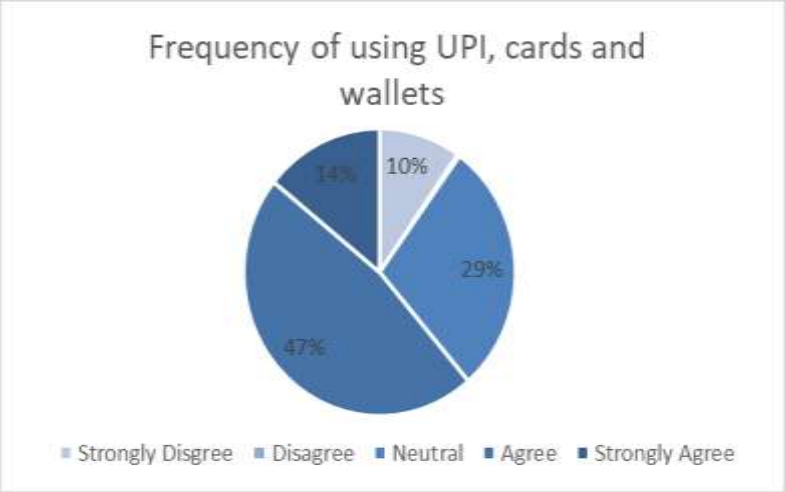
-No strong opposition or neutrality, suggesting opinions are clearly formed, not indifferent.



-Majority see positive impact, with 39% agreeing and 22% strongly agreeing on sales and financial effects.

-37% remain neutral, suggesting some uncertainty or limited noticeable change.

-Minimal resistance at 2%, with no strong disagreement, indicating overall acceptance of financial effects.



-47% agree and 14% strongly agree, showing a clear majority regularly use digital payments.

-29% remain neutral, indicating moderate or occasional usage without strong opinions.

-Only 10% strongly disagree, with no simple disagreement, reflecting limited but firm resistance.

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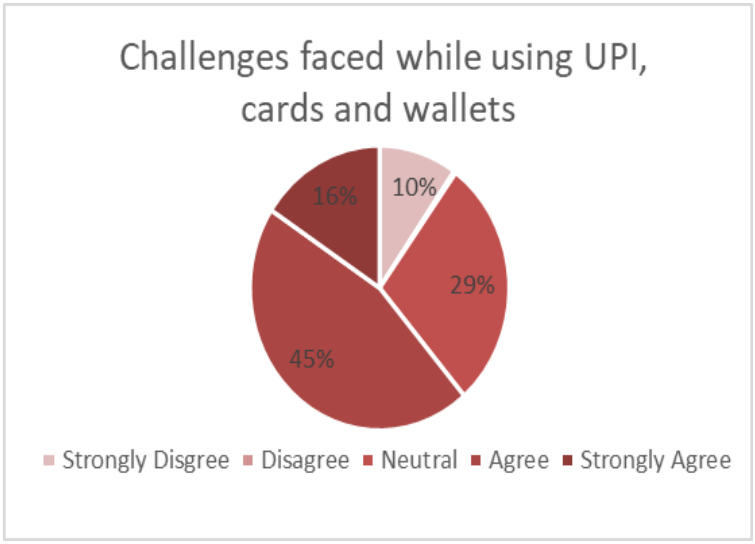
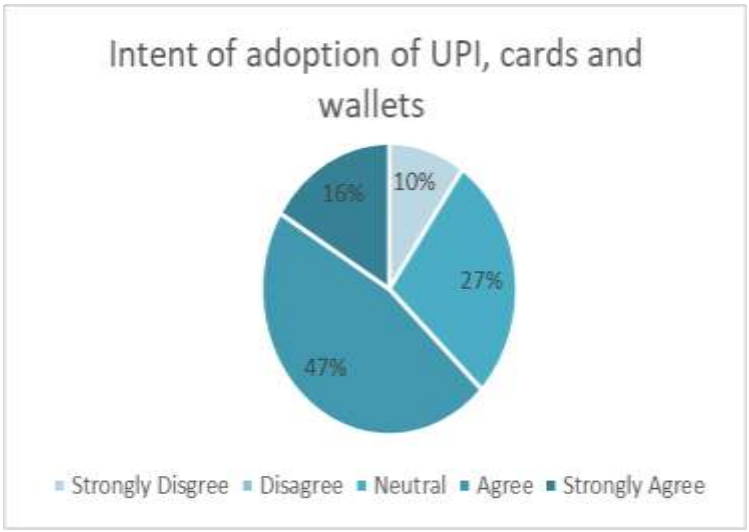


-Majority show positive intent, with 47% agreeing and 16% strongly agreeing on adoption.

-About 27% remain hesitant, highlighting the need for more awareness and confidence-building.
-Overall, resistance is low, indicating strong potential for further digital payment growth.



-63% show positive intent to adopt, highlighting strong readiness for digital payments.

-27% remain neutral, offering potential for conversion through awareness and trust-building.

-Only 10% strongly oppose, indicating low resistance and high growth potential.

The charts together indicate significant information regarding adoption of digital payment among the respondents. There is strong awareness of utilizing UPI, cards, and wallets, with almost half of them assenting they know these platforms. The effect on sales, revenue, and expenditure is positive, indicating that most vendors have realized visible gains following the use of digital payments. Frequency of usage of UPI, cards and wallets is also high, with a significant percentage using UPI, cards, and wallets on a regular basis for payments. Notably, intention towards adoption of these platforms further also shows promise, reflecting readiness to adopt in the future, subject to proper support being extended.

But, while utilizing these platforms as technical issues, transaction costs, and bad network connectivity were identified and cannot be overlooked. These hurdles significantly contribute to shaping consumer experience and trust. Resolution of these challenges is essential in order to maintain and increase digital payment uptake. Strong consciousness, positive influence, and frequent usage indicate that the groundwork is already in place, but ongoing training, dependable infrastructure, and open fee structures are needed to provide long-term success and broader use. The report highlights that while digital payments are well-adopted, concentration on surmounting operational challenges will unleash their full potential for enterprises.

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Confirmatory Factor Analysis (CFA)

Latent Variables:

	Estimate	Std.Err	z-value	P(>|z|)	Std.lv	Std.all
AW =~						
UPI_awareness	1.000			0.510	0.538	
Card_ndrstndng	0.998	0.171	5.832	0.000	0.509	0.534
Wallet_famlrty	1.060	0.179	5.929	0.000	0.541	0.590
PB =~						
Increased_sals	1.000			0.306	0.312	
Improved_reven	0.870	0.203	4.286	0.000	0.266	0.285
Incrsd_Cstmr_s	2.995	0.487	6.154	0.000	0.916	0.765
PC =~						
Techncl_gltchs	1.000			0.993	0.847	
Transaction_fs	0.955	0.048	19.759	0.000	0.948	0.817
Poor_connctvty	1.029	0.047	21.726	0.000	1.022	0.864
AD =~						
Intent_AdoptMr	1.000			0.981	0.855	
Recommend	1.008	0.047	21.596	0.000	0.989	0.852
Willing_tranng	1.009	0.049	20.714	0.000	0.990	0.832

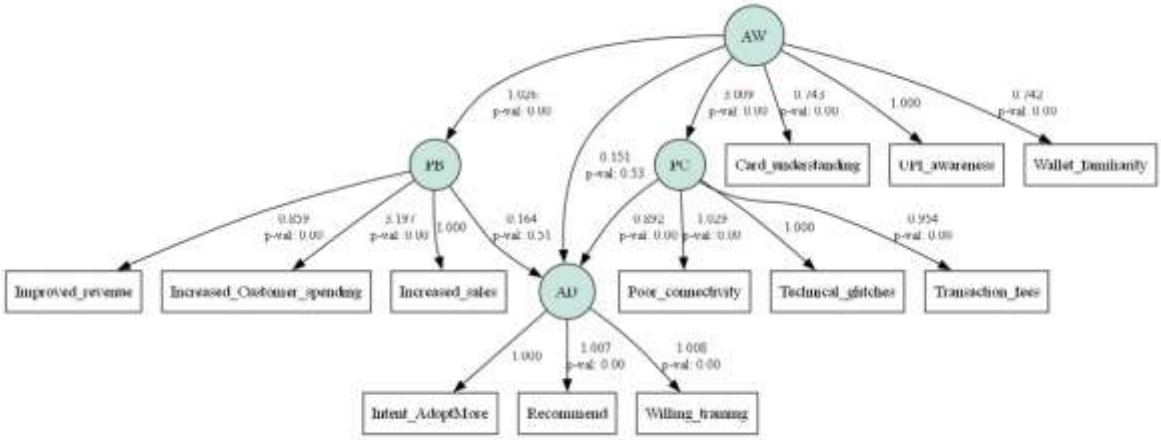
The findings from the Confirmatory Factor Analysis (CFA) suggest that the four-factor model Awareness (AW), Perceived Benefits (PB), Perceived Challenges (PC), and Adoption (AD) is a good fit with the data. The main fit indices attest to this: Comparative Fit Index (CFI) = 0.951 and Tucker-Lewis Index (TLI) = 0.932, both greater than the suggested threshold of 0.90, confirming good model fit. The Standardized Root Mean Square Residual (SRMR) measure of 0.069 falls below the cutoff of 0.08 and Root Mean Square Error of Approximation (RMSEA) is 0.081, just above the optimal range but within an acceptable range. Factor loadings for all are significant ($p < 0.001$), and standardized values between 0.53 and 0.86 reflect strong association between observed indicators and their underlying constructs. The latent variables are strongly correlated, particularly Perceived Challenges and Adoption ($r = 0.99$), emphasizing the high impact of perceived challenges on vendors' adoption of digital payments. These results confirm the measurement model and justify the structural equation modeling (SEM) approach to test direct and indirect effects.

Structural Equation Modeling (SEM)

From	To	Path Coefficient	p-value
PB	Improved_revenue	0.859	0
PB	Increased_Customer_spending	3.197	0
PB	Increased_sales	0.164	0.51
PB	AD	1.026	0
AW	PB	1	0
AW	PC	3.009	0
AW	Card_understanding	0.743	0
AW	UPI_awareness	1	0
AW	Wallet_familiarity	0.742	0
PC	AD	0.151	0.53
PC	Poor_connectivity	0.892	0
PC	Technical_glitches	1.029	0
PC	Transaction_fees	0.954	0
AD	Intent_AdoptMore	1	0
AD	Recommend	1.007	0
AD	Willing_training	1.008	0

To examine the direct and indirect effects of digital payment awareness, perceived benefits, and perceived challenges on the adoption of digital payments among street vendors in Bengaluru.

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 11| Issue: 7| July 2025|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2025: 8.691 || ISI Value: 1.188



The Structural Equation Modeling (SEM) analysis provided valuable insights into the interdependencies between awareness (AW), perceived benefits (PB), perceived challenges (PC), and digital payments adoption (AD). The model has an acceptable fit at the aggregate level, with Comparative Fit Index (CFI) set at 0.925 and Tucker-Lewis Index (TLI) at 0.900, both of which are above the widely accepted 0.90 threshold. The Standardized Root Mean Square Residual (SRMR) is 0.079, which shows a good fit (< 0.08), although the Root Mean Square Error of Approximation (RMSEA) is 0.098, just over the optimal range (< 0.08), indicating a marginal model fit that can still be acceptable in exploratory research. With regard to regression lines, awareness strongly predicts both perceived benefits ($\beta = 1.22$, $p < 0.001$) and perceived challenges ($\beta = 0.84$, $p < 0.001$), suggesting that increased awareness comes with more recognition of the pros and cons of digital payments. But awareness ($\beta = 0.044$, $p = 0.546$) and perceived benefits ($\beta = -0.001$, $p = 0.995$) do not directly affect adoption, with statistically non-significant paths. Perceived challenges, on the other hand, have a significant and strong positive effect on adoption ($\beta = 0.96$, $p < 0.001$), which is an interesting and somewhat counterintuitive result. This can imply that street vendors who are more cognizant of practical issues are also more inclined to prepare and adjust, resulting in greater adoption intention. All measurement model factor loadings are significant statistically ($p < 0.001$), with standardized values typically greater than 0.70 for adoption and perceived issues indicators, indicating strong correlations between the observed items and their respective latent constructs. These results affirm that although awareness is a fundamental force behind shaping perceptions, vendors' responses to and how they cope with difficulties are what most powerfully influence their true digital adoption behavior.

The study findings present a dynamic and changing tale of digital payment uptake by Bengaluru's street vendors. The vast majority of vendors were highly aware of digital payment platforms like UPI, cards, and wallets. They are cognizant of the increasing need for cashless modes in terms of meeting customers' expectations and the safety and convenience of transactions. Surprisingly, awareness not only created avenues for business expansion but also increased vendors' knowledge of the real issues associated with digital platforms.

The research revealed that the implementation of digital payments has positively contributed to sales, revenue, and customer satisfaction. Vendors indicated that customers, particularly young ones, liked stalls that had digital options, which resulted in increased foot traffic and quicker transaction times. In addition, vendors welcomed the convenience of keeping digital records of transactions, which allowed them to handle finances more effectively and even apply for small business loans. Yet, the change has not been seamless. Technical problems, excessive transaction costs, and erratic internet connectivity presented themselves as genuine issues. Several vendors, particularly the elderly ones, experienced trouble completely trusting or comprehending the new technology. Others were worried about cyber theft and grappled with how to deal with both cash and electronic systems alongside each other, increasing operational complexity. Interestingly, the Structural Equation Modeling (SEM) analysis revealed that although awareness and perceived benefits matter, it is how vendors understand and address challenges that have a strong influence on actual adoption. Another surprising result was that despite these challenges, the intention to continue using and increasing digital payment means remains highly strong among most. Sellers are adaptable and will change if they perceive good business benefits and if they are backed by stable infrastructure and user-friendly digital technologies. The findings reiterate that raising awareness is not sufficient; hands-on, experiential training, lowering transaction costs, enhancing network reliability, and providing prompt technical support are essential for facilitating greater and smoother adoption.

The conversation indicates that Bengaluru street vendors are already entering the digital economy with optimism and resolve. However, the eventual success of the movement will rest on a unified approach from the government, the technology industry, and financial institutions to break down the barriers and make digital payments accessible, secure, and worthwhile for all vendors, regardless of the size of their enterprise.

RESULTS AND DISCUSSION

The research demonstrates that the large majority of street vendors in Bengaluru have some knowledge about digital payment channels such as UPI, mobile wallets, and card-based systems. Customer demand, safety perceptions, and increased government initiative-led pushes are mainly what is creating such awareness. Direct impact of awareness and perceived

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benefit on adoption may be statistically weak, according to SEM analysis, as seen. Surprisingly, perceived challenges have a strong and positive influence on digital adoption behavior. This seemingly counterintuitive result indicates that vendors who are better aware of challenges are also more likely to be proactive in overcoming them. Sellers recognized gains in terms of higher sales, better record-keeping, and access to financial services. Younger, more technology-literate sellers demonstrated a greater level of adoption, suggesting a generational factor in electronic uptake. Sellers claimed regular use of electronic payment instruments and had a strong intent to maintain and increase their usage. Yet technical problems, weak internet connectivity, transaction charges, and digital competency pose significant barriers.

Confirmatory Factor Analysis (CFA) legitimized the measurement model with an appropriate model fit index (CFI = 0.951, TLI = 0.932, SRMR = 0.069).
SEM also provided a confirmation of mediation impact of perceived challenges in decisions for adoption. Even though awareness improves the cognition of benefits as well as challenges, response towards challenges actually catalyzes the adoption behaviour.

The results highlight the need for ongoing support for digital infrastructure, vendor-focused training, and user-centric platforms. Street vendors, particularly those driven by business enhancement, are ready to learn and expand through digital means. Trust-building and hands-on support are key to realizing the full potential of digital payments in the unorganized sector.

CONCLUSION

This research brings to the fore the incredible transformation of Bengaluru street vendors as they transition from conventional cash-based payments to new digital payment platforms like UPI, mobile wallets, and card payments. The research indicates that awareness of these digital platforms is fairly high among vendors. This has been fueled primarily by increasing customer demand, the perceived convenience and safety of cashless payments, and the Indian government's continued push for a digital economy. Vendors who have incorporated electronic payment channels into their business operations report various positive impacts on their businesses. These are higher sales, customer satisfaction, better financial management, and improved financial security. Most vendors also reported that electronic payments have made them access banking services and financial products, e.g., microloans, easier, and so became more integrated into the formal financial system.

The rate of use of digital payments by vendors is reassuring, showing increased comfort and familiarity with digital technology. Nevertheless, this digital shift is not without problems. Vendors still experience technical issues during transactions, internet connectivity issues, high fees for transactions, and gaps in digital literacy especially among older vendors who can be challenged by the use of smartphones or navigating apps. These challenges are important because they directly affect a vendor's trust of digital platforms and ability to use them alone. Notably, the research discovered that those vendors who do know about these issues and take steps to resolve them often exhibit a higher degree of dedication toward adopting digital. This resilience and adaptability are particularly clear among youthful, technology-oriented vendors that see digital payments as part of remaining competitive and responsive to customers' demands. In spite of the challenges, the willingness to persist and increase the practice of digital payments is considerable. The transition to a cashless street economy for Bengaluru is already well on its way, but its sustained success hinges greatly upon continued support systems. These comprise increasing digital infrastructure, cost-effective availability of smartphones and internet services, experiential and user-friendly training initiatives, and effective cybersecurity standards. Ultimately, establishing trust in digital systems, reducing transactional complexities, and enabling vendors with practical education are key to ensuring that digital adoption is inclusive. The shift is not merely about adopting new technologies—it is about allowing street vendors to succeed in a changing economic environment with confidence, stability, and new possibilities for growth.

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