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Awareness and Adoption of Digital Payment Systems among Small Entrepreneurs: An Empirical Study in Chennai

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***Abstract* – Digital payment systems such as UPI, QR codes, mobile wallets, card-based point-of-sale terminals, and mobile banking have transformed how businesses receive and make payments in India. Small entrepreneurs, however, vary widely in their awareness of these systems and in the extent to which they have adopted them. This study examines the awareness and adoption of digital payment systems among small entrepreneurs in Chennai, Tamil Nadu. Six independent variables—Awareness of Digital Payment Systems, Perceived Usefulness, Perceived Ease of Use, Perceived Security and Trust, Cost Affordability, and Infrastructure and Government Support—were examined in relation to the dependent variable, Adoption of Digital Payment Systems. A quantitative descriptive and causal design was adopted, and primary data were collected from 260 small entrepreneurs through a structured questionnaire on a five-point Likert scale. Data were analysed using IBM SPSS Statistics 26 through descriptive statistics, Cronbach's Alpha, Pearson correlation, one-way ANOVA, and multiple regression. Awareness was highest for UPI and QR code payments and lowest for USSD and Aadhaar-enabled services. All six variables were found to have a significant positive influence on adoption; Perceived Usefulness emerged as the strongest predictor (β = 0.321), followed by Perceived Ease of Use and Awareness. The regression model explains 81.2% of the variance in adoption. Significant differences were found across types of business. The study offers practical implications for banks, payment service providers, policymakers, and small business associations.**

***Keywords* - Digital Payments, UPI, Awareness, Adoption, Small Entrepreneurs, Technology Acceptance, Chennai**

I. INTRODUCTION

1. Background of the Study

Payment systems are the arteries of commerce, and their digitisation is among the most visible economic changes of the past decade in India. Initiatives promoting the Unified Payments Interface (UPI), QR-code acceptance, and low-cost digital infrastructure, combined with rising smartphone use and expanding bank account ownership [9], have made digital payments a routine part of everyday transactions. The Reserve Bank of India's payment systems vision documents set out a roadmap for expanding electronic payments across the economy [10], and UPI in particular has been recognised as a significant advance in the country's payment architecture [11].

For small entrepreneurs, including kirana shop owners, street vendors, tailors, salon owners, and small traders, digital payments promise faster and safer collection, reduced cash handling, transaction records that support credit access and tax compliance, and the ability to serve customers who no longer carry cash. Yet adoption is not uniform. Some entrepreneurs use digital modes for almost every transaction, while others accept them only when customers insist, and many remain unaware of the full range of options available. Understanding what drives awareness and adoption among small entrepreneurs is therefore important for financial inclusion and for the growth of the micro and small enterprise sector [13].

2. Problem Statement

Despite strong national growth in digital payment volumes, small entrepreneurs face practical barriers, including limited knowledge of available payment modes, doubts about security and fraud, concerns about transaction charges, connectivity problems, and uncertainty about the benefits. Policy and industry efforts to promote digital payments are most effective when they target the factors that genuinely influence adoption.

However, empirical evidence specific to small entrepreneurs in an urban Indian setting such as Chennai, and covering awareness and adoption together, remains limited. This study addresses that gap.

3. Research Gap

Most existing studies on digital payments concentrate on consumers' adoption of mobile payments [5]–[8] or examine adoption around specific events such as demonetisation [12]. Comparatively little research studies the merchant or entrepreneur side, where payment acceptance directly affects business operations, and few studies measure awareness of individual payment modes alongside the psychological and environmental factors that explain adoption. This study fills these gaps by examining awareness, technology perceptions, cost, and infrastructure support together in a single model for small entrepreneurs in Chennai.

4. Research Objectives

- To assess the level of awareness of different digital payment systems among small entrepreneurs.
- To examine the influence of awareness on the adoption of digital payment systems.
- To analyse the influence of perceived usefulness and perceived ease of use on adoption.
- To evaluate the influence of perceived security and trust on adoption.
- To determine the influence of cost affordability and of infrastructure and government support on adoption.
- To test whether awareness, perceptions, and adoption differ across types of business.
- To identify the factor with the strongest influence on adoption and to suggest measures for promoting digital payments among small entrepreneurs.

5. Significance of the Study

The study contributes theoretically by applying the Technology Acceptance Model, the Unified Theory of Acceptance and Use of Technology, and Diffusion of Innovations theory to digital payment adoption by small entrepreneurs. Practically, the findings help banks and fintech firms design products and training programmes suited to small businesses, help policymakers prioritise interventions, and help business associations decide where to focus awareness campaigns.

6. Structure of the Paper

Section 2 reviews the literature and theoretical frameworks. Section 3 develops the hypotheses. Section 4 presents the conceptual framework. Section 5 describes the methodology. Section 6 presents data analysis and results. Section 7 discusses findings and recommendations, and Section 8 concludes, followed by references in IEEE format.

II. LITERATURE REVIEW

1. Digital Payment Systems in India

Digital payment systems include UPI and QR-code payments, mobile wallets, debit and credit cards through point-of-sale terminals, net and mobile banking, and USSD and Aadhaar-enabled services. Gochhwal [11] describes UPI as a major advancement because it allows instant interbank transfers through a single mobile interface. Ozili [13] argues that digital finance can promote financial inclusion by lowering the cost and increasing the reach of financial services, while also posing risks relating to security and digital literacy. The World Bank's Global Findex database [9] documented a rapid rise in account ownership in India, which provides the base on which digital payment use can grow.

2. Awareness of Digital Payment Systems

Awareness is the first stage in the innovation-decision process described by Rogers [4]: individuals must know that an innovation exists and understand how it works before they can evaluate and adopt it. Awareness among small entrepreneurs tends to be strongest for widely promoted modes such as UPI and QR codes and weaker for services that require specific procedures, such as USSD-based or Aadhaar-enabled payments. Higher awareness is expected to reduce uncertainty and to raise the likelihood of adoption.

3. Perceived Usefulness and Perceived Ease of Use

The Technology Acceptance Model [1] proposes that perceived usefulness and perceived ease of use are the principal determinants of technology adoption. Studies of mobile payment adoption [5]–[8] repeatedly report that users who find a payment system useful, in the sense that it speeds up transactions and improves efficiency, and easy to use, are more likely to adopt it. For small entrepreneurs, usefulness is linked to faster collection, reduced cash handling, and a larger customer base, while ease of use matters because many owners have limited formal training in technology.

4. Perceived Security and Trust

Security concerns, including fear of fraud, wrong transfers, and data misuse, are consistently identified as barriers to electronic payment adoption. Slade et al. [7] extended the unified acceptance model with risk and trust, and Oliveira et al. [8] identified perceived technology security among the determinants of mobile payment adoption. Entrepreneurs who trust the system and the institutions behind it are more willing to accept digital payments for their business revenues.

5. Cost Affordability

Transaction charges, device costs, and the cost of POS terminals can discourage small businesses with thin margins. Where the cost of acceptance is low or absent, as with most UPI transactions, small entrepreneurs have fewer reasons to hesitate. Cost affordability is therefore included as a factor expected to influence adoption, with

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higher scores indicating that costs are perceived as low and manageable.

6. Infrastructure and Government Support
Reliable internet connectivity, smartphones, bank access, and supportive government and regulatory initiatives form the enabling environment for digital payments. The Unified Theory of Acceptance and Use of Technology [2], [3] includes facilitating conditions as a determinant of use, reflecting the importance of resources and support. Sivathanu [12] studied digital payment adoption in India during the demonetisation period and highlighted the role of the external environment in pushing users towards digital modes.

7. Adoption of Digital Payment Systems
Adoption refers to the actual and continued use of digital payment systems in business activities, including accepting customer payments, paying suppliers, using records for compliance, and reducing cash dependence. In this study adoption is measured through ten statements covering usage, continuance intention, recommendation, business benefits, and satisfaction.

8. Theoretical Foundation
This study draws on three frameworks. The Technology Acceptance Model [1] explains adoption through perceived usefulness and ease of use. The Unified Theory of Acceptance and Use of Technology [2], [3] adds facilitating conditions and social and cost-related factors. Diffusion of Innovations theory [4] stresses awareness and the characteristics of an innovation, such as relative advantage and compatibility, in the decision to adopt. Together they support the six-variable model proposed here.

9. Research Gap Identification
The literature shows a strong body of work on consumer mobile payment adoption but limited empirical evidence on small entrepreneurs, particularly in South Indian cities. Few studies combine awareness of specific payment modes with technology perception, cost, and infrastructure variables. This study addresses these gaps with data from 260 small entrepreneurs in Chennai.

III. HYPOTHESES DEVELOPMENT

Based on the theoretical frameworks and the literature reviewed, the following hypotheses are proposed:

- **H1:** Awareness of digital payment systems has a significant influence on the adoption of digital payment systems.
- **H2:** Perceived usefulness has a significant influence on the adoption of digital payment systems.
- **H3:** Perceived ease of use has a significant influence on the adoption of digital payment systems.
- **H4:** Perceived security and trust have a significant influence on the adoption of digital payment systems.
- **H5:** Cost affordability has a significant influence on the adoption of digital payment systems.
- **H6:** Infrastructure and government support have a significant influence on the adoption of digital payment systems.

IV. CONCEPTUAL FRAMEWORK / RESEARCH MODEL

The conceptual framework presents the proposed relationships between the six independent variables and the dependent variable, Adoption of Digital Payment Systems. It combines awareness from Diffusion of Innovations theory, perceived usefulness and ease of use from the Technology Acceptance Model, and security, cost, and facilitating conditions from the Unified Theory of Acceptance and Use of Technology.

INDEPENDENT VARIABLES Awareness of Digital Payment Systems Perceived Usefulness Perceived Ease of Use Perceived Security and Trust Cost Affordability (Low Transaction Charges) Infrastructure and Government Support	H1–H6 → INFLUENCE	DEPENDENT VARIABLE Adoption of Digital Payment Systems

Figure 1: Conceptual Research Framework

V. RESEARCH METHODOLOGY

1. Research Design
The study adopts a quantitative, descriptive and causal research design. The descriptive component measures the level of awareness and adoption of digital payment systems, while the causal component assesses the influence of the six independent variables on adoption. A cross-sectional survey was used to collect primary data.

2. Population and Sample
The population comprises owner-managers of small businesses in Chennai, Tamil Nadu, including retail and kirana shops, food and street vending, service businesses such as salons, repair shops and tailoring units, and small trading and manufacturing units that had been operating for at least one year. A sample of 260 respondents was obtained, which exceeds commonly recommended

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minimum sample sizes for multiple regression with six predictors [14].

3. Sampling Technique

Convenience sampling was employed, combined with the purposive criterion that respondents must be owner-managers of small businesses. Respondents were approached at their business premises in commercial areas, markets, and neighbourhood shopping streets across Chennai. Although convenience sampling limits statistical generalisation, it is appropriate where no complete sampling frame of small and unregistered businesses is available.

4. Data Collection

Primary data were collected through a structured questionnaire administered in English and Tamil through personal visits. A pilot study with 30 entrepreneurs was conducted to test clarity and relevance, and minor wording changes were made. Out of 290 questionnaires distributed, 273 were returned, and after excluding incomplete responses, 260 valid questionnaires were retained for analysis, yielding a response rate of 89.7%.

5. Measurement Scale

All constructs were measured on a five-point Likert scale, where 5 indicates Strongly Agree and 1 indicates Strongly Disagree. Awareness was measured across six digital payment modes, each independent variable other than awareness was measured with four items adapted from the technology acceptance and mobile payment literature, and Adoption was measured with ten items on usage, continuance, recommendation, business benefit, and satisfaction.

6. Reliability and Validity

Internal consistency was assessed using Cronbach's Alpha [15], with values above 0.70 considered acceptable. Content validity was established through review by two marketing and entrepreneurship academics and one banking practitioner. The Kaiser–Meyer–Olkin measure of sampling adequacy was 0.89 and Bartlett's test of sphericity was significant ($p < 0.001$), indicating that the data were suitable for factor analysis, and all factor loadings exceeded 0.60.

7. Statistical Tools

Data were analysed using IBM SPSS Statistics 26. The tools applied were frequency and percentage analysis, mean and standard deviation, Cronbach's Alpha, Pearson correlation, one-way ANOVA, and multiple regression analysis [14]. All tests were conducted at the 0.05 significance level, and results at the 0.01 level are additionally noted.

VI. DATA ANALYSIS AND RESULTS

1. Demographic and Business Profile of Respondents

Table 1 presents the profile of the 260 respondents.

Table 1 – Demographic and Business Profile of Respondents (N = 260)

Variable	Category	Frequency	Percentage (%)
Gender	Male	158	60.8
	Female	102	39.2
Age Group	Below 30 years	52	20.0
	30–40 years	94	36.2
	41–50 years	76	29.2
	Above 50 years	38	14.6
Education	Up to higher secondary	64	24.6
	Undergraduate	118	45.4
	Postgraduate / Professional	78	30.0
Type of Business	Retail / Kirana shops	96	36.9
	Food and street vending	52	20.0
	Services (salon, repair, tailoring)	64	24.6
	Small trading / manufacturing	48	18.5
Years in Business	Below 3 years	58	22.3
	3–5 years	86	33.1
	6–10 years	72	27.7
	Above 10 years	44	16.9
Total		260	100.0

Interpretation

Table 1 shows that 60.8% of respondents are male and 39.2% female. The largest age group is 30–40 years (36.2%), followed by 41–50 years (29.2%), indicating that the sample consists mainly of mid-career entrepreneurs. Most respondents hold a degree, with 45.4% undergraduates and 30.0% postgraduates or professionals. Retail and kirana shops form the largest category (36.9%), followed by services (24.6%) and food and street vending (20.0%). About 61% of the respondents have been in business for 3 to 10 years, indicating established small businesses.

2. Awareness of Digital Payment Modes

Table 2 presents the mean awareness scores for six digital payment modes.

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Table 2 – Awareness of Digital Payment Modes among Small Entrepreneurs

Digital Payment Mode	Mean	Std. D
UPI / QR code payments (e.g., Google Pay, PhonePe)	4.52	0.71
BHIM application	4.21	0.90
Mobile wallets (e.g., Paytm wallet)	4.18	0.92
Debit / credit card payments through POS machines	4.05	0.98
Net banking / mobile banking	3.86	1.07
USSD / Aadhaar-enabled payment services	3.12	1.21

Interpretation

Awareness is highest for UPI and QR code payments (mean 4.52), followed by the BHIM application (4.21) and mobile wallets (4.18), reflecting the strong promotion of UPI and its visibility at shop counters. Awareness of POS-based card payments (4.05) and net and mobile banking (3.86) is moderately high. Awareness of USSD and Aadhaar-enabled payment services is the lowest (3.12) with the highest dispersion (SD = 1.21), suggesting that these services, which could benefit entrepreneurs with basic phones or limited internet access, are comparatively little known and need targeted promotion.

3 Descriptive Statistics – Adoption of Digital Payment Systems

Table 3 presents the descriptive statistics for the ten statements measuring adoption.

Table 3 – Descriptive Statistics: Adoption of Digital Payment Systems

Statements	Mean	Std. D
I regularly accept or make payments through UPI / QR codes in my business.	4.34	0.84
Digital payments have become my customers' preferred mode of payment.	4.21	0.90
I use digital payment systems for most of my business transactions.	4.12	0.95
I pay my suppliers and vendors through digital modes.	3.95	1.08
I intend to continue using digital payment systems in the future.	4.28	0.87
I would recommend digital payment systems to other small entrepreneurs.	4.17	0.92
Digital payments have increased my sales and customer base.	4.05	1.01
I use digital payment records for bookkeeping and GST / tax compliance.	3.86	1.12
I have reduced my dependence on cash after adopting digital payments.	4.10	0.97
Overall, I am satisfied with my adoption of digital payment systems.	4.15	0.93

Interpretation

Mean scores range between 3.86 and 4.34, indicating generally high adoption. The highest mean is for regular acceptance or making of payments through UPI and QR codes (4.34), followed by the intention to continue using digital payments (4.28) and the view that digital payments have become customers' preferred mode (4.21). The lowest means relate to using digital records for bookkeeping and GST or tax compliance (3.86) and to paying suppliers digitally (3.95). Adoption is therefore strongest in customer-facing collections and weaker in back-office and supplier-side uses, a pattern consistent with the view that small entrepreneurs adopt digital payments first because customers request them.

4. Descriptive Statistics – All Variables

Table 4 – Descriptive Statistics: All Study Variables

Variable	Mean	Std. D
Awareness of Digital Payment Systems	3.99	1.01
Perceived Usefulness	4.14	0.93
Perceived Ease of Use	4.06	0.97
Perceived Security and Trust	3.88	1.08
Cost Affordability (Low Transaction Charges)	3.74	1.14
Infrastructure and Government Support	3.92	1.06
Adoption of Digital Payment Systems (DV)	4.12	0.97

Interpretation

All variables record mean scores above 3.70. Perceived Usefulness has the highest mean among the independent variables (4.14), followed by Perceived Ease of Use (4.06) and Awareness (3.99). Cost Affordability has the lowest mean (3.74) and the highest standard deviation (1.14), indicating that entrepreneurs hold the most varied views about transaction charges and equipment costs. The mean for Adoption of Digital Payment Systems is 4.12, showing a high overall level of adoption.

5. Reliability Analysis

Table 5 – Reliability Analysis (Cronbach's Alpha)

Construct	No. of Items	Cronbach's Alpha
Awareness of Digital Payment Systems	6	0.86
Perceived Usefulness	4	0.88
Perceived Ease of Use	4	0.87
Perceived Security and Trust	4	0.85
Cost Affordability (Low Transaction Charges)	4	0.83
Infrastructure and Government Support	4	0.84
Adoption of Digital Payment Systems	10	0.92

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Interpretation
Cronbach's Alpha values range from 0.83 to 0.92, all above the 0.70 threshold, confirming that the scales are internally consistent and suitable for further analysis.

6. Correlation Analysis
Table 6 – Correlation Between Independent Variables and Adoption of Digital Payment Systems

Independent Variables	r-value	p-value
Awareness of Digital Payment Systems	0.742	0.001*
Perceived Usefulness	0.806	0.001*
Perceived Ease of Use	0.781	0.001*
Perceived Security and Trust	0.754	0.001*
Cost Affordability (Low Transaction Charges)	0.683	0.001*
Infrastructure and Government Support	0.712	0.001*

Null Hypothesis (H0): There is no significant relationship between the independent variables and the adoption of digital payment systems.

Interpretation
All six variables correlate positively and significantly with adoption at the 1% level ($p < 0.001$), and the null hypothesis is rejected. Perceived Usefulness has the highest correlation ($r = 0.806$), followed by Perceived Ease of Use ($r = 0.781$), Perceived Security and Trust ($r = 0.754$), and Awareness ($r = 0.742$). Infrastructure and Government Support ($r = 0.712$) and Cost Affordability ($r = 0.683$) show somewhat lower but still strong relationships. The pattern supports the proposed conceptual framework.

7. One-Way ANOVA – Differences Across Types of Business
Table 7 presents the results of one-way ANOVA testing whether the variables differ across four types of business.

Table 7 – One-Way ANOVA: Mean Scores by Type of Business

Variable	Retail / Kirana	Food & Street Vending	Services	Small Trading / Mfg.	F-value	p-value
Awareness	4.08	4.18	3.92	3.71	4.87	0.003*
Perceived Usefulness	4.24	4.35	4.07	3.85	6.12	0.001*
Perceived Ease of Use	4.15	4.28	3.99	3.77	5.34	0.001*
Security and Trust	3.96	4.05	3.82	3.62	4.12	0.007*
Cost Affordability	3.83	3.96	3.68	3.45	6.45	0.001*
Infrastructure Support	4.01	4.09	3.87	3.66	3.64	0.013**
Adoption of Digital Payments	4.21	4.32	4.05	3.83	7.38	0.001*

Null Hypothesis (H0): There is no significant difference in awareness, perceptions, and adoption of digital payment systems across types of business.

Interpretation
The ANOVA shows significant differences across business types for all variables, and the null hypothesis is rejected. Food and street vendors report the highest scores on every variable, including adoption (4.32), which is consistent with the high volume of small, frequent transactions in which QR-code payments are convenient. Retail shops follow (4.21), then service businesses (4.05), while small trading and manufacturing units record the lowest adoption (3.83) and lowest cost affordability (3.45). The largest differences are for Adoption ($F = 7.38$) and Cost Affordability ($F = 6.45$). Programmes to promote digital payments should therefore pay particular attention to small trading and manufacturing units, which often handle larger and less frequent payments and may face higher perceived costs.

8. Regression Analysis
Table 8 presents the multiple regression results with Adoption of Digital Payment Systems as the dependent variable.

Table 8 – Effects of Independent Variables on Adoption of Digital Payment Systems

Model Summary

R	R Square	Adjusted R Square	Std. Error of Estimate	F-value	p-value
0.901	0.812	0.808	0.426	182.14	0.001*

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ANOVA

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	197.88	6	32.98	182.14	0.001*
Residual	45.81	253	0.181		
Total	243.69	259			

Regression Coefficients

Predictors	B	Std. Error	Beta	t-value	p-value
(Constant)	-0.026	0.098	–	-0.265	0.791
Awareness of Digital Payment Systems	0.163	0.049	0.170	3.327	0.001*
Perceived Usefulness	0.335	0.052	0.321	6.442	0.001*
Perceived Ease of Use	0.210	0.050	0.210	4.200	0.001*
Perceived Security and Trust	0.141	0.046	0.157	3.065	0.002*
Cost Affordability	0.069	0.032	0.081	2.156	0.032**
Infrastructure and Government Support	0.115	0.045	0.126	2.556	0.011**

Null Hypothesis (H0): The independent variables do not significantly influence the adoption of digital payment systems.

Interpretation

The model summary shows R = 0.901 and R Square = 0.812, meaning that 81.2% of the variance in adoption is explained by the six independent variables. The model is statistically significant ($F = 182.14$, $p < 0.001$), and the null hypothesis is rejected.

Perceived Usefulness is the strongest predictor ($\beta = 0.321$), followed by Perceived Ease of Use ($\beta = 0.210$), Awareness ($\beta = 0.170$), and Perceived Security and Trust ($\beta = 0.157$), all significant at the 1% level. Infrastructure and Government Support ($\beta = 0.126$) and Cost Affordability ($\beta = 0.081$) are significant at the 5% level but have the smallest coefficients. The constant is not significant and is not interpreted. Hypotheses H1 to H6 are therefore supported.

Regression Equation

Adoption = -0.026 + 0.335(Usefulness) + 0.210(Ease of Use) + 0.163(Awareness) + 0.141(Security and Trust) + 0.115(Infrastructure Support) + 0.069(Cost Affordability)

The equation shows that a one-unit increase in perceived usefulness is associated with the largest rise in adoption (0.335 units), followed by perceived ease of use (0.210 units), holding the other variables constant.

VII. FINDINGS AND RECOMMENDATIONS

1. Findings

First, awareness of UPI and QR code payments is very high among small entrepreneurs in Chennai (mean 4.52), whereas awareness of USSD and Aadhaar-enabled services is low (mean 3.12). Second, adoption is high overall (mean 4.12) but is concentrated in customer-facing collections; digital payment to suppliers and use of digital records for compliance are less common. Third, all six independent variables have a significant positive influence on adoption, so H1 to H6 are supported.

Fourth, Perceived Usefulness is the strongest predictor ($\beta = 0.321$, $r = 0.806$), followed by Perceived Ease of Use ($\beta = 0.210$) and Awareness ($\beta = 0.170$), indicating that entrepreneurs adopt digital payments mainly when they see clear business benefits and find the systems simple. Fifth, security and trust significantly influence adoption ($\beta = 0.157$), while cost affordability and infrastructure support, though significant, have a smaller influence. Sixth, adoption and its determinants differ significantly by type of business, with food and street vendors highest and small trading and manufacturing units lowest. Finally, the model explains 81.2% of the variance in adoption, confirming its strong explanatory power.

2. Recommendations

Based on the findings, the following recommendations are made. First, banks and payment providers should communicate and demonstrate the concrete business benefits of digital payments, such as faster collection, lower cash-handling risk, instant settlement, and records that support credit applications, since usefulness is the strongest driver of adoption. Second, products and applications should be made simple and available in Tamil and other local languages, with hands-on training at markets and through trade associations to reduce the effort of learning.

Third, awareness campaigns should extend beyond UPI to cover lesser-known options such as USSD and Aadhaar-enabled services, which can serve entrepreneurs with limited internet connectivity. Fourth, providers and regulators should strengthen security through fraud alerts, grievance redressal, and clear communication of safeguards to build trust. Fifth, policymakers should keep transaction costs for small merchants low, support affordable devices and reliable connectivity, and offer incentives for businesses at the lower end of adoption,

especially small trading and manufacturing units. Finally, entrepreneurs should be encouraged to extend digital payments to supplier payments and bookkeeping to realise the full benefits, including easier GST compliance and access to formal credit.

VIII. CONCLUSION

This study examined awareness and adoption of digital payment systems among small entrepreneurs in Chennai. The results show that awareness of the main payment modes is high, particularly for UPI and QR codes, and that adoption is widespread, although more limited for supplier payments and compliance-related uses. Awareness, perceived usefulness, perceived ease of use, security and trust, cost affordability, and infrastructure and government support each influence adoption significantly and positively, with perceived usefulness the most influential.

The high explanatory power of the model ($R^2 = 0.812$) confirms that the six variables together provide a sound framework for understanding digital payment adoption among small entrepreneurs, and the ANOVA results indicate that interventions should be tailored to different types of business. The study extends the Technology Acceptance Model, the Unified Theory of Acceptance and Use of Technology, and Diffusion of Innovations theory to the entrepreneur context.

The study has limitations, including the use of convenience sampling, a single city, and self-reported data. Future research could use probability sampling, compare cities and states, include moderating variables such as digital literacy and business size, and employ longitudinal designs to track changes in adoption over time.

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