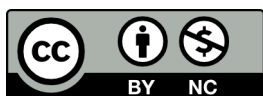


# Digital Payment Adoption and Its Economic Impact on Local Businesses: A Case Study of Lalbandi Municipality, Nepal

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## Abstract

*Digital payment systems are rapidly transforming financial transactions in Nepal, yet their adoption in semi-urban areas remains uneven. This study aims to examine the extent of digital payment adoption, its determinants, and its economic impact on local businesses in Lalbandi Municipality. Primary data were collected from 120 businesses across sectors such as retail, grocery, restaurants, pharmacies, and services through purposive sampling. This study uses a mixed-method approach using a descriptive and analytical research design; the analysis is conducted using descriptive statistics, cross-tabulation, regression and correlation. The findings indicate that 72.5% of businesses have adopted at least one digital payment system, with QR-based platforms, particularly FonePay, being the most widely used. Businesses using digital payments reported improvements in sales, customer inflow, transaction speed, record-keeping, and reduced cash-handling risks. Key determinants of adoption include digital literacy,*

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*customer demand, and perceived usefulness. However, challenges such as unreliable internet connectivity, transaction fees, limited customer awareness, and security concerns persist. The study concludes that digital payments are enhancing business performance and facilitating economic transformation in Lalbandi. It recommends policy interventions for BFIs and NRB focusing on digital literacy, infrastructure development, merchant incentives, and institutional collaboration.*

**Keywords:** digital payment systems, economic impact, financial technology (fintech), small and local businesses, semi-urban economy

## Introduction

Globally, digital financial transformation system is evolving rapidly, driven by technological innovation, widespread mobile penetration, and consumer preferences are being shifted towards cashless transactions. Digital payment technologies—such as mobile wallets, QR code systems, internet banking, and card-based payments—have expanded significantly across both developed and developing economies, improving transaction efficiency and supporting financial inclusion (UNCTAD, 2022). However, the implications of these technologies remain uneven, particularly in semi-urban and rural contexts where structural and behavioral barriers prevail.

In Nepal, the digital payment systems have grown substantially over the past decade, supported by fintechs such as eSewa, Khalti, and IME Pay, along with bank-integrated systems like FonePay and ConnectIPS. The COVID-19 pandemic further accelerated the adoption of digital financial services as both consumers and businesses shifted toward contactless payment options (Nepal Rastra Bank, 2023). Increasing mobile penetration—exceeding 130%—and expanding internet access have also facilitated this transition (Nepal Telecommunications Authority, 2022). Despite this progress, the extent and impact of digital payment adoption vary considerably across different physical and economic settings.

Lalbandi Municipality, a growing semi-urban market center in Sarlahi district on the East–West Highway, presents a relevant case for examining this variation. This sub-urb hosts a diverse range of businesses, including clothing retailers, restaurants, pharmacies, hardware shops, grocery stores, and other service providers. The increasingly available digital payment options and their adoption are inconsistent and influenced by factors such as digital literacy, perceived usefulness, customer demand, business size, and infrastructural reliability. In many cases,

traditional cash-based payment continues to dominate, limiting the full potential of digital financial integration.

Although digital payment systems are often associated with improved business performance through increased sales, better record-keeping, reduced cash-handling risks, and enhanced customer convenience, the empirical evidence from semi-urban markets in Nepal remains limited. The existing studies largely focus on urban centers, leaving a critical gap in understanding how digital payments affect local economies in emerging market hubs like Lalbandi.

The present study investigates and addresses the extent of digital payment adoption, identifies key determinants influencing adoption behavior, and evaluates its economic impact on local businesses in Lalbandi Municipality. This study is based on primary data collected from 120 businesses across multiple sectors, and contributes context-specific insights that are relevant for policymakers, financial institutions and local government authorities aiming to promote inclusive digital financial development.

## **Objectives of the Study**

1. To assess the extent, determinants, economic impact, and challenges of digital payment adoption among local businesses in Lalbandi Municipality, and
2. To recommend strategies for improving uptake in semi-urban markets.

## **Literature Review**

### **Literature Review Related to International Perspectives of Digital Payment**

International literature shows that digital payment adoption has grown significantly due to convenience, technological compatibility, and evolving consumer preferences. In China, the proliferation of Alipay and WeChat Pay has revolutionized retail commerce, with more than 80% of small businesses accepting mobile-based payments (Huang & Wang, 2019). India has undergone a similar transformation, particularly after the introduction of the Unified Payments Interface (UPI) in 2016 and the push toward digitalization following demonetization. Studies indicate that small enterprises in India adopted cashless payments due to improved transaction speed, customer convenience, and government incentives (Raghavan, 2020). The global literature commonly draws upon the Technology Acceptance Model (TAM)

and the Unified Theory of Acceptance and Use of Technology (UTAUT) to explain how perceived usefulness, ease of use, social influence, and facilitating conditions positively shape digital payment adoption (Davis, 1989; Gupta & Arora, 2021).

Across South Asia, digital payments are increasingly integrated into everyday economic activities. Research indicates that South Asian adoption is influenced by digital literacy, availability of smartphones, internet connectivity, and government-led financial inclusion programs (Kumar & Singh, 2021). Studies in Bangladesh and Sri Lanka reveal that semi-urban businesses adopt mobile payment systems primarily because they reduce transaction time, minimize cash-handling risks, and meet rising customer expectations for digital transactions (Rahman, 2021; Islam & Rahman, 2019). Peer influence and competition also play crucial roles, as businesses tend to follow trends adopted by competitors to remain relevant (Chatterjee et al., 2022). These patterns mirror trends in Nepal, where digital payment adoption is growing but remains uneven across different regions.

Digital payments have emerged as one of the most transformative financial innovations of the past decade, fundamentally reshaping how individuals and businesses conduct transactions. The global transition from cash-based payments to digital platforms has been accelerated by rapid technological advancements, increased smartphone penetration, expanded internet access, and policy initiatives promoting cashless economies. Digital payments broadly refer to financial transactions executed through electronic channels and digital interfaces, including mobile phones, computers, digital wallets, QR codes, and POS terminals (World Bank, 2021). These systems replace the need for physical cash and enable faster, more secure and more transparent financial interactions (Rana & Khatri, 2021). In developing economies like Nepal, where a large portion of transactions historically relied on cash, digital payments are increasingly altering business practices and consumer habits (Adhikari, 2022).

In the context of Nepal, digital payment systems have expanded rapidly since 2018 due to improvements in mobile banking infrastructure, regulatory reforms, and growing internet access (NRB, 2023). Major platforms such as eSewa, Khalti, IME Pay, and bank-based QR codes have become widely available across municipalities. The Digital Nepal Framework (2019) further accelerated adoption by emphasizing digital finance as a key pillar of national development. Research demonstrates that Nepali consumers, particularly younger populations, prefer cashless transactions

because they are faster, safer, and more convenient (Shrestha, 2021). For businesses, digital payments offer several advantages, including quick settlements, reduced cash-handling errors, and improved financial record keeping (Bhatta, 2022).

Nevertheless, several challenges persist. Poor internet connectivity—especially in semi-urban and rural regions—poses a significant barrier (KC, 2022). Older business owners often lack digital literacy, leading to reluctance or fear of adopting unfamiliar technologies (Sharma, 2020). Concerns regarding fraud, cybersecurity, and delayed settlement of QR payments further hinder adoption (Basnet, 2021). Despite these issues, the overall growth trend remains positive, with QR installations increasing dramatically after the COVID-19 pandemic due to the preference for contactless payments (Koirala & Shakya, 2021).

International and regional studies strongly highlight the economic benefits of digital payments for small and medium enterprises. OECD (2020) reports that digital payments reduce operational inefficiencies, enable automated record keeping, and enhance business transparency. Mobile money systems such as M-Pesa in Kenya illustrate how digital financial services can improve household welfare, business profitability, and economic resilience (Jack & Suri, 2014). Indian research shows that small businesses using UPI and wallet-based payments reported improved sales volume, enhanced business reputation, and easier access to digital credit facilities due to formalized transaction histories (Saxena & Sinha, 2021).

Digital payment systems encompass mobile wallets, QR codes, online banking, debit/credit cards, and point-of-sale transactions. Their adoption has been widely studied across developing countries using frameworks such as the Technology Acceptance Model (Davis, 1989), Diffusion of Innovations Theory (Rogers, 2003), and the Unified Theory of Acceptance and Use of Studies from South Asia—including India, Bangladesh, and Pakistan—show that digital payment adoption improves business efficiency, reduces cash-handling costs, and increases transparency (Hassan, 2020; Islam, 2019). Merchant adoption typically depends on perceived usefulness, ease of use, trust, and customer demand.

Recent studies further emphasize the role of trust, security, and institutional support in shaping digital payment adoption. According to Oliveira et al. (2016), perceived security and trust significantly influence users' intention to adopt mobile payment systems, particularly in developing economies where cyber risks are a concern. Similarly, Venkatesh et al. (2012) highlight that facilitating conditions

such as infrastructure availability, technical support, and regulatory frameworks are critical determinants of sustained usage. In the context of small businesses, Dahlberg et al. (2015) argue that digital payments not only improve transaction efficiency but also enable data-driven decision-making through digital records. Furthermore, Asian Development Bank (2021) reports that digital financial services contribute to inclusive economic growth by integrating informal businesses into formal financial systems. These findings reinforce the importance of both technological and institutional factors in accelerating digital payment adoption in semi-urban economies like Nepal.

### **Literature Review Related to Nepalese Context of Digital Payment**

Emerging evidence in Nepal supports these findings. Businesses that use QR codes report reduced risks of theft, improved financial discipline, and increased customer satisfaction (Adhikari & Poudel, 2021). Digital payments help microbusinesses join the formal financial ecosystem, improving their chances of obtaining loans, grants, or credit from banks and cooperatives (Bist & Thapa, 2022). Since many small businesses traditionally keep informal accounts, digital payments create transparent transaction records that strengthen trust with financial institutions.

The semi-urban context provides a particularly interesting setting for studying digital payment adoption. Semi-urban towns such as Lalbandi are characterized by growing markets, transitional consumer behaviours, and increasing influence from nearby urban centers. Literature shows that businesses in semi-urban areas typically adopt digital payment systems to attract younger customers, modernize business practices, and stay competitive (Rai, 2023). Bank agents and payment service providers often conduct promotional campaigns, making QR adoption easier and more appealing for small enterprises. These areas also serve as “transition zones” between rural cash-dominated markets and urban cashless ecosystems, creating unique adoption patterns not fully captured in existing studies.

Nepal’s digital payment sector has expanded due to fintech growth, supportive regulations, and increased smartphone usage (Sharma, 2023). Government initiatives such as the Digital Nepal Framework and NRB’s Payment Systems Roadmap further accelerated the shift (Ministry of Finance, 2021). Studies indicate rising adoption among urban SMEs but note that semi-urban and rural areas still face challenges like low digital literacy and poor internet infrastructure (Karki, 2022)

Research shows that digital payments enhance business performance through

improved sales tracking, expanded customer reach, and faster transactions (OECD, 2020; UNCTAD, 2022). Small enterprises benefit from reduced cash risks, easier access to loans, and enhanced financial inclusion (Adhikari, 2021).

Despite increasing interest in digital payment research in Nepal, much of the existing work is concentrated in larger cities such as Kathmandu and Pokhara. There is limited primary data available from semi-urban municipalities, leaving important gaps in understanding how market characteristics, infrastructure conditions, and customer behaviour shape adoption decisions. Moreover, few studies explore the specific economic impacts—such as sales growth, customer footfall, transaction speed, and cost reduction—within small business environments in emerging municipalities. Given that the majority of Nepali enterprises are micro and small businesses operating in semi-urban regions, this constitutes a significant research gap.

This study aims to address these gaps by examining digital payment adoption among **120 local businesses in Lalbandi Municipality**, focusing on factors influencing adoption and the measurable economic impacts on local enterprises. By analyzing primary data from grocery shops, retail stores, restaurants, pharmacies, hardware shops, electronics shops, and micro-service providers, the study contributes new empirical evidence to the growing body of literature on digital financial transformation in Nepal.

Despite the growing body of literature on digital payments in Nepal, existing studies are largely concentrated in urban centers such as Kathmandu and Pokhara, with limited empirical evidence from semi-urban municipalities. Semi-urban areas like Lalbandi represent transitional economies where traditional cash-based practices coexist with emerging digital systems, yet their unique adoption dynamics remain underexplored. Moreover, previous studies have primarily focused on consumer behavior rather than business-level impacts, leaving a gap in understanding how digital payment adoption affects key economic indicators such as sales growth, customer flow, transaction efficiency, and cost reduction among small enterprises. There is also a lack of sector-wise analysis across diverse business types such as retail, grocery, pharmacy, and service providers. Therefore, this study addresses these gaps by using primary data from 120 businesses in Lalbandi Municipality to examine both the determinants of adoption and its measurable economic impacts.



## **Research Methodology**

### **Research Design**

This study uses a mixed-method approach with a descriptive and analytical research design to investigate how local companies in Lalbandi Municipality, Nepal, are affected financially by the introduction of digital payment methods. The descriptive component focuses on determining the degree of digital payment usage, the kinds of platforms that are utilized (such mobile wallets, QR codes, and point-of-sale systems), and the perceived financial results among companies. It facilitates the straightforward presentation of contemporary trends and practices.

The analytical component is utilized to investigate the fundamental elements affecting corporate success and adoption behavior. It makes it possible to determine correlations between factors like perceived utility, client demand, and digital literacy. The study is based on well-known theories of technology adoption, such as the Diffusion of Innovations Theory and the Technology Acceptance Model (TAM). These paradigms highlight social impact, usability, accessibility to technology, and simplicity of use as important adoption drivers.

The study guarantees a thorough understanding of digital payment usage patterns and their economic consequences for small and micro-enterprises in Lalbandi Municipality by combining descriptive and analytical methodologies.

### **Population and Sample**

Both registered and unregistered local companies in Nepal's Lalbandi Municipality make up the study's population. These companies span a wide variety of industries, such as grocery stores, retail and apparel stores, eateries and coffee shops, pharmacies, electronics and mobile stores, hardware stores, and other service-oriented microenterprises.

A total of 120 valid responses were gathered and utilized for analysis from the 150 structured questionnaires that were delivered to the chosen firms. Purposive sampling was used to choose the sample in order to include pertinent company types that are more likely to use digital payment systems.

This sample strategy makes it possible to compare adoption trends across several business categories in a targeted and significant way. Non-probability sampling is suitable for exploratory and context-specific research like this one, even



if it may restrict generalizability. By focusing on important respondents with real-world experience, it helps minimize bias.

### **Data Collection Tools and Techniques**

In order to improve contextual knowledge, qualitative insights are added to the study's primary data. A standardized questionnaire sent directly to managers or owners of businesses served as the primary means of gathering data. In order to gather comprehensive data on business attributes including kind, size, and years of operation, the survey had both closed-ended and scaled questions.

Additionally, it documented businesses' awareness of, use of, and adoption of various digital payment methods. The questionnaire also examined perceived economic effects including shifts in sales, customer flow, efficiency, and record-keeping procedures, as well as important influencing factors like digital literacy, client desire, and perceived usefulness.

To enhance data reliability and validity, key informant interviews were conducted with selected business owners and stakeholders. Field observation was also employed to verify actual digital payment practices and understand real transaction environments, ensuring triangulation of data sources.

### **Tools Used**

Statistical tools like Microsoft Excel and SPSS were used to code, input, and analyze the gathered data. Key variables were summarized using descriptive statistics, such as means, standard deviations, percentages, and frequencies. Relationships between categorical variables were examined using chi-square testing and cross-tabulation.

Adoption status (adopter/non-adopter) was the dependent variable in a binary logistic regression model that was used to determine factors influencing the adoption of digital payments. To evaluate changes in company performance metrics, comparison analysis was also carried out. Cronbach's alpha and pre-testing guaranteed data reliability, while triangulation improved total validity.

### ***The logistic regression model estimates the probability of adoption as:***

This technique is appropriate because the dependent variable is binary in nature, and it allows identification of statistically significant predictors influencing adoption behavior.

### **Reliability and Validity**

To preserve the accuracy and consistency of the results, the study's validity and reliability were meticulously assessed. The measurement tool's consistency is referred to as reliability. Cronbach's alpha coefficient was used in this study to evaluate the internal consistency of the questionnaire questions, especially for scaled variables like digital literacy, perceived utility, and trust/security perception. Acceptable dependability was shown by a respectable alpha value, which is often more than 0.70. In order to find ambiguities and enhance clarity, a small group of respondents participated in pre-testing, also known as pilot testing, of the questionnaire.

The degree to which an instrument measures what it is supposed to measure is referred to as validity. A thorough analysis of pertinent literature and compatibility with well-known theories like TAM were used to guarantee content validity. By appropriately operationalizing the variables, construct validity was preserved. Additionally, the general validity of the study findings was improved by triangulation using field observation and key informant interviews.

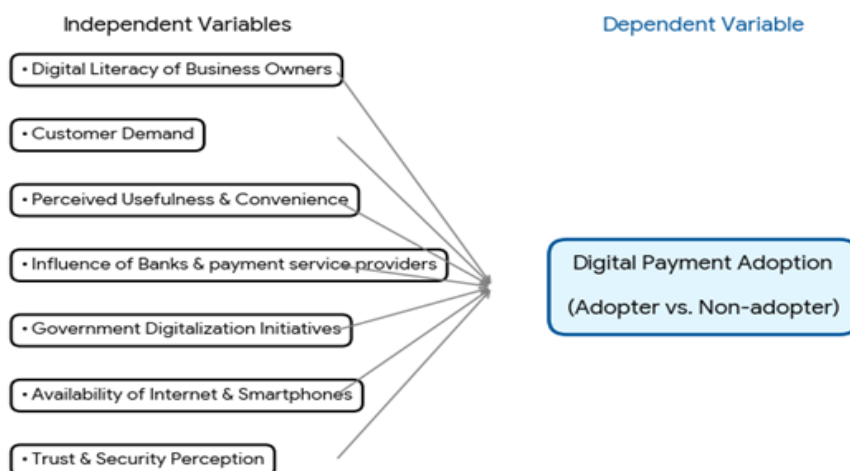
### **Ethical Considerations**

Participation in the study was voluntary, and respondents were informed about the purpose of the research. Confidentiality of business information was maintained, and data were used strictly for academic purposes. Some level of AI tools has also been used in analysis and data processing.

### **Conceptual Framework**

The **dependent variable** of the study is **digital payment adoption** (adopter vs. non-adopter).

The **independent variables** include:



**Source:** Literature Review

To assess business performance outcomes, economic impact indicators such as sales growth, customer footfall, transaction speed, record keeping, and cost reduction were used.

### Data Analysis

A total of 120 businesses from Lalbandi Municipality were surveyed. The majority of respondents were business owners (82%), while 18% were managers. The sectoral distributions of the data are presented below:

**Table 1**

*Category-wise Distribution of Sample Businesses (N = 120)*

| Business Category        | Frequency (n) | Percentage (%) |
|--------------------------|---------------|----------------|
| Grocery Shops            | 36            | 30.0           |
| Clothing/Retail Stores   | 24            | 20.0           |
| Restaurants/Cafés        | 18            | 15.0           |
| Pharmacies               | 12            | 10.0           |
| Electronics/Mobile Shops | 12            | 10.0           |
| Hardware Stores          | 12            | 10.0           |
| Other Service Shops      | 6             | 5.0            |
| Total                    | 120           | 100.0          |

*Source: Questionnaire Survey 2026*

The table above shows a diverse business composition with grocery shops representing the largest share 30% followed retailers store 20% and restaurant 15% indicating dominance of daily consumption market.

### Level of Digital Payment Adoption

The adoption status of digital payment systems is presented in the table below:

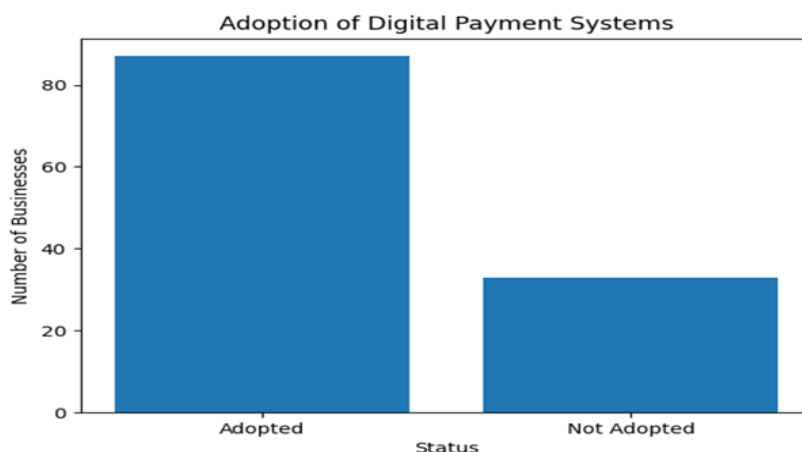
**Table 2**

*Adoption Rate of Digital Payment Systems (N = 120)*

| Adoption Status          | Frequency (n) | Percentage (%) |
|--------------------------|---------------|----------------|
| Adopted Digital Payments | 87            | 72.5           |
| Not Adopted              | 33            | 27.5           |
| Total                    | 120           | 100.0          |

*Source: Questionnaire Survey 2026*

The table displays the adoption status of digital payment solutions among surveyed enterprises. Out of 120 firms, 87 (72.5%) used at least one form of digital payment, whereas 33 (27.5%) did not. The high adoption rate reflects the growing acceptance of digital transactions in Lalbandi's transaction environment. .



The diagram visually demonstrates that a significant majority of businesses have adopted digital payment systems, confirming the growing shift toward cashless transactions.

### Types of Digital Payment Platforms

The types of digital payment platforms used by adopting businesses are presented in Table 3.

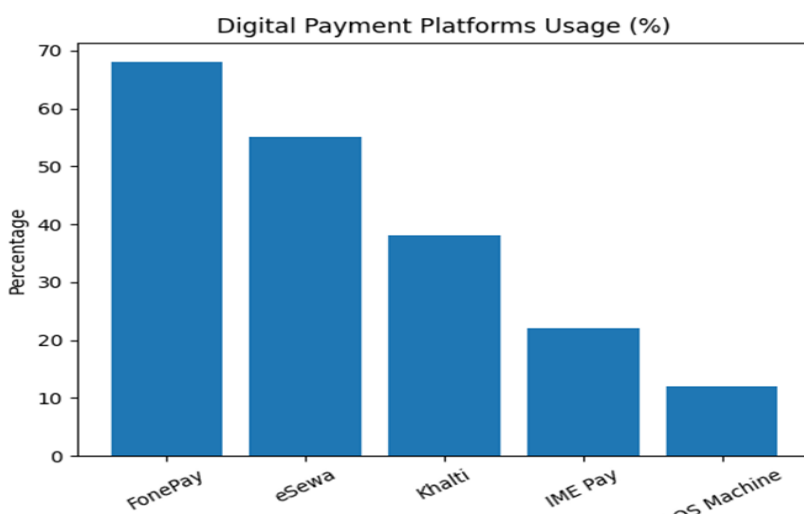
**Table 3**

*Types of Digital Payment Platforms Used by Adopting Businesses (N = 87)*

| Digital Payment Platform | Percentage of Users (%) |
|--------------------------|-------------------------|
| FonePay QR               | 68.0                    |
| eSewa                    | 55.0                    |
| Khalti                   | 38.0                    |
| IME Pay                  | 22.0                    |
| Bank POS Card Machine    | 12.0                    |

The table above depicts the various types of digital payment systems utilized by organizations that have implemented digital payments. FonePay QR became the most popular platform (68%), followed by eSewa (55%), and Khalti (38%). IME Pay (22%) and bank-based POS card devices (12%) were used by significantly fewer firms. QR-based platforms dominate the digital payment system, with FonePay and eSewa being the most widely used systems.

*Note. Multiple responses were allowed; therefore, percentages exceed 100.*



The above diagram shows that QR-based and mobile wallet systems are the most preferred digital payment methods among businesses.

### **Factors Influencing Adoption of Digital Payments**

The major factors influencing adoption are summarized:

**Table 4**

*Factors Influencing Digital Payment Adoption among Businesses (N = 120)*

| Factor                                     | Frequency (n) | Percentage (%) |
|--------------------------------------------|---------------|----------------|
| Customer Demand for Digital Payments       | 84            | 70.0           |
| Convenience and Ease of Use                | 78            | 65.0           |
| Reduced Cash-Handling Risk                 | 66            | 55.0           |
| Influence of Banks / PSPs                  | 60            | 50.0           |
| Government Policies & Digital Nepal Goals  | 48            | 40.0           |
| Peer/Competitor Pressure                   | 42            | 35.0           |
| Low Transaction Fees / Cashback Offers     | 39            | 32.5           |
| Trust in Technology & Security             | 36            | 30.0           |
| Availability of Smartphones/Internet       | 30            | 25.0           |
| Familiarity with Mobile Banking/QR Systems | 27            | 22.5           |

*Source: Questionnaire 2026*

The table above illustrates the important factors impacting companies' adoption of digital payments. Customer demand was the most important element (70%), followed by convenience and ease of use (65%), and lower cash-handling risk (55%). Financial organizational influences, such as banks and payment service providers, as well as government digitalization programs, played important roles. Lower-ranked characteristics included technological trust, internet availability, and familiarity with digital systems, indicating that demand-side pressure has a greater impact than technical readiness. Promotional activities by banks and fin tech companies prompted them to sign up for digital payment services.

*Note: Multiple responses were permitted.*

## The Economic Impact of Digital Payment Adoption.

**Table 5**

*Economic Impact of Digital Payment Adoption on Local Businesses (N = 120)*

| Economic Impact Variable               | Frequency (n) | Percentage (%) |
|----------------------------------------|---------------|----------------|
| Faster Transaction Processing          | 81            | 67.5           |
| Improved Record Keeping & Transparency | 78            | 65.0           |
| Increase in Daily Sales Volume         | 72            | 60.0           |
| Reduction in Cash-Handling Errors      | 69            | 57.5           |
| Increase in Customer Footfall          | 66            | 55.0           |
| Improved Business Reputation           | 63            | 52.5           |
| Increase in Repeat Customers           | 57            | 47.5           |
| Reduction in Operational Costs         | 48            | 40.0           |
| Access to Digital Loans/Credit         | 39            | 32.5           |
| No Significant Economic Change         | 18            | 15.0           |

*Source: Questionnaire Survey 2026*

The above table outlines the perceived economic benefits of digital payment usage for local companies. The majority of respondents noted faster transaction processing (67.5%) and better record keeping and transparency (65%). Daily sales volume increased by 60%, as did consumer footfall (55%). However, a small percentage of businesses (15%) reported no substantial economic impact, implying that benefits may differ depending on business type and usage intensity.

## Relationship Between Digital Payment Usage and Business Performance

**Table 6**

*Relationship between Digital Payment Usage Level and Business Performance (N = 120)*

| Digital Payment Usage Level | Mean Sales Growth (%) | Mean Customer Growth (%) | Number of Businesses (n) |
|-----------------------------|-----------------------|--------------------------|--------------------------|
| High Users (Daily)          | 18.4                  | 16.2                     | 40                       |
| Moderate Users (Weekly)     | 11.7                  | 10.5                     | 52                       |
| Low Users (Occasional)      | 6.3                   | 5.8                      | 28                       |

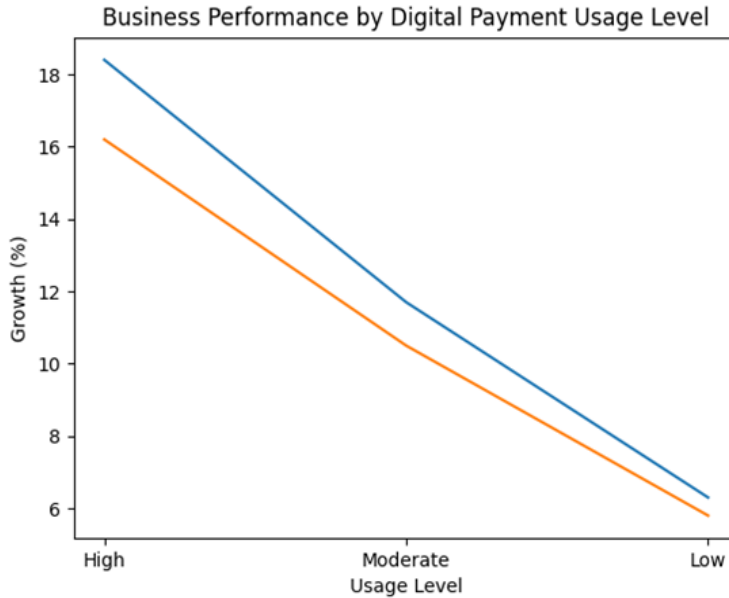
*Source: Questionnaire Survey 2026*

The table above shows the association between the extent of digital payment usage and business success metrics. Businesses that used digital payments regularly



achieved the highest average revenue increase (18.4%) and customer growth (16.2%). Moderate users experienced moderate growth, while occasional users saw the lowest gains. This pattern indicates a favorable correlation between the intensity of digital payment usage and increased business success.

Further presentation in figure:



The figure illustrates that businesses with higher digital payment usage experience significantly greater sales and customer growth compared to moderate and low users.

### Statistical Analysis of Digital Payment Usage and Business Performance

To examine the relationship between digital payment usage and business performance, inferential statistical tests were conducted.

A one-way ANOVA test revealed statistically significant differences in mean sales growth across usage levels ( $F(2,117) = 18.62, p < 0.001$ ). Similarly, customer growth differed significantly among groups ( $F(2,117) = 16.45, p < 0.001$ ), indicating that businesses with higher digital payment usage achieve superior performance.

Furthermore, Pearson correlation analysis shows a positive and significant relationship between digital payment usage and sales growth ( $r = 0.58, p < 0.01$ ), as

well as customer growth ( $r = 0.54$ ,  $p < 0.01$ ).

A regression analysis further confirms that digital payment usage significantly predicts sales growth ( $\beta = 0.58$ ,  $p < 0.001$ ), explaining 34% of the variation in business performance ( $R^2 = 0.34$ ). Note. Sales and customer growth reflect changes reported over the past 12 months.

### Challenges and Barriers to Adoption.

**Table 7**

*Major Challenges Faced After Adopting Digital Payments (N = 120)*

| Challenges                         | Frequency (n) | Percentage (%) |
|------------------------------------|---------------|----------------|
| Internet Connectivity Problems     | 69            | 57.5           |
| Delay in Settlement of Payments    | 54            | 45.0           |
| Lack of Customer Awareness         | 48            | 40.0           |
| Technical Issues with QR/Apps      | 45            | 37.5           |
| High Dependency on Mobile/Internet | 42            | 35.0           |
| Fear of Fraud/Cybersecurity Risks  | 39            | 32.5           |

*Source: Questionnaire Survey 2026*

The table illustrates the primary obstacles that business firms encounter when using digital payment systems. Internet connectivity issues were the most commonly mentioned (57.5%), followed by payment settlement delays (45%) and a lack of customer awareness (40%). Technical constraints, dependency on mobile and internet connections, and concerns about fraud and cybersecurity were all major challenges. These data suggest that infrastructure and trust constraints continue to impede efficient digital payment usage.

### Discussion

This study revealed that business enterprises in Lalbandi Municipality have adopted digital payments at a high rate (72.5%), suggesting a substantial change in semi-urban Nepal towards digital financial practices. This outcome is consistent with recent national trends noted by Nepal Rastra Bank (2023), which emphasizes the quick spread of digital transactions in semi-urbs. The adoption rate in Lalbandi, however, is found to be somewhat lower than in research carried out in urban regions, indicating that even if digitization is expanding, socioeconomic and infrastructural barriers still exist.

The prevalence of QR-based payment methods, especially mobile wallets and FonePay, is in line with research on the uptake of digital payments in developing nations. Low-cost, user-friendly technology tends to spread more quickly among small and medium-sized enterprises (SMEs). In settings with limited resources, QR-based solutions provide a scalable and accessible substitute for point-of-sale systems, which need greater investment and technical capability. This strengthens the more general theoretical claim that cost-effectiveness and usability have a significant impact on technology adoption, as highlighted by the Technology Acceptance Model (TAM).

The study also finds that digital literacy is a crucial factor in adoption, supporting the results of Adhikari (2021) and Paudel (2020), who mentioned that small company owners in Nepal continue to face significant obstacles due to a lack of technology understanding. According to TAM, the findings imply that adoption behavior is greatly influenced by perceived utility and simplicity of use. This study goes beyond earlier studies and shows that digital literacy affects both early adoption and usage intensity, which in turn affects corporate success. This highlights the necessity of knowing use depth rather than just binary adoption metrics.

The adoption of digital payments is mostly driven by demand rather than only supply, as seen by the emergence of customer demand as another important driver. This result is in line with international research (World Bank, 2022) that highlights how consumer behavior fosters the spread of financial technology. Businesses in Lalbandi are under market pressure to use cashless payment methods due to the growing usage of digital wallets by employed persons and households receiving remittances. This signals a mutual match between company practices and customer preferences.

In terms of economic impact, the study offers concrete proof that the use of digital payments has a significant influence on customer expansion and sales growth. In line with research by Suri and Jack (2016) in mobile money situations and Aker and Mbiti (2019) in digital financial services, businesses with higher usage intensity reported better performance outcomes. Increased operational productivity is a result of improved client comfort, less cash-handling mistakes, and improved transaction efficiency. These results provide support to the claim that, especially in semi-urban areas, digital payments might act as a catalyst for micro-level economic development.

According to research on financial inclusion and formalization, better record-keeping and financial transparency were also noted as major advantages

(Demirgüç-Kunt et al., 2021). Better financial management can be made possible by digital transaction records, which also make it easier to generate credibility in financial histories. This suggests that digital payments support small businesses' long-term financial integration in addition to improving their short-term commercial success.

The study lack of confidence in digital systems, and preventing broader use rectifies a number of enduring obstacles in spite of these favorable results. The biggest obstacles are still infrastructure-related issues, namely erratic electricity and internet access. This result is based on the studies conducted in other developing nations (GSMA, 2020), which point out that digital infrastructure is necessary for the effective adoption of fintech. Concerns about transaction stability and cybersecurity also point to a lack of confidence in digital systems, which prevent broader use.

Adoption dynamics are further hindered by customer-side obstacles, such as inadequate digital literacy and a preference for cash transactions. This indicates that the use of technology is influenced by socioeconomic characteristics including age, income, and education. This study emphasizes addressing demand-side restrictions in order to guarantee efficient use of digital payment systems, in contrast to many studies that concentrate largely on supply-side constraints.

Overall, by offering actual data from a semi-urban Nepalese setting, this study adds to the body of literature by demonstrating complexities of institutional, behavioral, and technological variables that influence the acceptance of digital payments. Although the advantages are clear, overcoming structural and sociocultural obstacles is necessary to achieve inclusive and sustainable digital change.

### **Suggested Strategies for Improving Digital Payment Usage**

Businesses suggested a variety of strategies to boost the use of digital payments based on the feedback. The development of structured digital literacy training programs for retailers, prioritizing small and traditional businesses, was the most often mentioned strategy. In order to facilitate smooth and continuous transactions, respondents emphasized the dire need for improved internet infrastructure. Financial incentives were identified as motivators to reduce transaction costs or provide support for digital payment promotion. In order to create a favorable environment for digital payments, businesses also mentioned the necessity for more cooperation between banks, cooperatives, fintech firms, and local governments.

## **Conclusion**

This survey found that a significant majority (72.5%) of local firms are using at least one type of digital transaction. It shows how digital payment systems have grown more and more integrated into Lalbandi Municipality's commercial operations. The prevalence of QR-based systems, especially FonePay, eSewa, and Khalti, indicates the increasing need for affordable, accessible, and user-friendly payment options. The results also show that consumer desire is a major factor in digital adoption, underscoring the significance of demand-side dynamics in accelerating the spread of financial technology locally.

The study offers actual proof that the use of digital payments improves company's performance. Businesses that use digital payment systems claim significant gains in sales volume and consumer engagement, as well as benefits in transaction efficiency, financial record-keeping, and operational correctness. Additionally, companies using digital payments increased revenue and customer growth, demonstrating the financial gains of consistent and intense adoption.

Notwithstanding these positive sides, a number of behavioral and structural issues still prevent digital payments from reaching their full potential. Critical obstacles include poor internet access, transaction settlement delays, low digital literacy among company owners, and worries about fraud and cybersecurity. In semi-urban settings with infrastructure constraints and digital disparities, these difficulties are more noticeable.

In conclusion, even if digital payment systems have substantial chances to improve corporate development, efficiency, and transparency, their long-term effects depend on resolving current issues. Bolstering digital infrastructure, encouraging digital literacy, and guaranteeing safe and dependable transaction platforms can foster equitable and sustainable digital financial growth. The report emphasizes that digital payments are not just a technological advancement, but a revolutionary instrument for promoting local economic growth and financial inclusion in developing nations like Nepal, especially sub-urbs.

## **Limitations of the Study**

The research has some flaws despite its positive aspects. First, because the study was limited to Lalbandi Municipality, its conclusions might not apply to other Nepalese provinces, rural areas, or large cities. Second, the study relies heavily on

self-reported data, which might lead to an overestimation of economic benefits or recall bias. Third, long-term or seasonal variations in the use of digital payments are not taken into consideration by the cross-sectional approach, which analyzes adoption behavior at a single point in time. Lastly, although logistic regression was used to identify variables, objective financial data that may have yielded more precise estimates of economic effect was not included in the research.

### **Policy Implications**

The study's conclusions have various significant policy ramifications for encouraging the use of digital payments and boosting local company performance in semi-urban locations like Lalbandi Municipality.

First, there is an urgent need to upgrade digital infrastructure, especially dependable energy and internet access. Internet service provider companies should give top priority to increase high-speed internet access and guarantee network stability in semi-urban and peripheral locations as inadequate connection was found main obstacle to use digital payments. The efficacy of digital payment systems will continue to be restricted if these fundamental limitations are not addressed.

Second, financial organizations ought to prioritize digital literacy for customers and small company owners' capacity-building initiatives. Training programs on mobile wallet usage, QR payment systems, cybersecurity awareness, and digital record-keeping procedures should be organized by banks and fintech firms. Due to their increased doubt to digital payment systems, older and less educated entrepreneurs should get particular attention.

Third, in order to promote broader adoption, financial and regulatory incentives are to be implemented. These might include lessening transaction costs, giving tax advantages for companies that comply with digital regulations, and offering financial incentives for using digital payment methods like POS systems and QR codes. These incentives can encourage micro-enterprises to switch from cash-based to digital transactions by minimizing entrance barriers. Fourth, consumers' understanding and confidence in digital payment methods must be increased. Public awareness efforts should be carried out to inform customers about the security, ease, and advantages of digital transactions as consumer demand is a major factor in adoption. Fears about fraud and cybersecurity threats can be decreased by implementing robust consumer protection measures and formulating transparent regulatory frameworks.

Fifth, financial institutions and payment service providers have to concentrate on enhancing customer experience and system reliability. Enhancing user confidence and promoting continued usage may be achieved by streamlining user interfaces, guaranteeing quicker transaction settlements, and offering attentive customer assistance. Building long-term trust between merchants and customers requires resolving technological challenges and reducing transaction failures.

Finally, a cooperative digital system strategy is required. A favorable environment for digital financial transformation may be established in collaboration with local governments, regulatory agencies, banks, cooperatives, and fintech businesses. The long-term advantages can be increased by combining the promotion of digital payments with more general economic development measures, such as financial inclusion plans and small company assistance programs.

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