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Influence of Cashless Payment System on Customer Convenience in Micro Enterprises

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ABSTRACT

This study determined the influence of cashless payment systems on customer convenience in microenterprises in a highly urbanized city in the Western Visayas Region during Academic Year 2025-2026. A descriptive research design was employed involving 200 customers of selected microenterprises who had experience using cashless payment systems. Respondents were selected through convenience sampling with a fixed sample size. Data were gathered using a researcher-made questionnaire that obtained an excellent validity index of 4.88 and an acceptable Cronbach's alpha reliability coefficient of .751. Frequency, percentage, mean, Mann-Whitney U test, and Kruskal-Wallis test were used for data analysis. Findings revealed that most respondents were 30 years old and above (60.00%), female (53.50%), GCash users (74.00%), and moderate users of cashless payments (60.00%). Cashless payment systems had a high-level influence on customer convenience across all dimensions: Time and Convenience (M = 4.11), Security and Trust (M = 4.04), Availability and Acceptance (M = 4.03), and Accessibility and Ease of Use (M = 4.02). Significant differences were found in Accessibility and Ease of Use when grouped by type of cashless payment platform, and in Availability and Acceptance when grouped by age and type of platform. No significant differences were found by sex and frequency of use. The study concludes that cashless payment systems enhance customer convenience by enabling faster, easier, and more reliable transactions, although connectivity, system availability, and security assurance remain important areas for improvement.

Keywords: *cashless payment systems, customer convenience, digital payments, financial technology, microenterprises, mobile wallets*

INTRODUCTION

Cashless payment systems have increasingly shaped how customers and business owners complete transactions in the Philippines. Platforms such as GCash, Maya, QR PH, BDO-linked digital services, and other e-payment options allow customers to pay without relying on physical cash. In microenterprises, these systems are particularly relevant because customers expect quick, accessible, and convenient transactions, while business owners seek more efficient service delivery and recordkeeping.

In a highly urbanized city in the Western Visayas Region, microenterprise owners have gradually adopted cashless payment systems to respond to changing customer preferences. Digital payments can reduce waiting time, simplify checkout, minimize the need to carry cash, support contactless transactions, and improve the buying experience. However, the convenience of these systems may still be affected by internet connectivity, system reliability, user familiarity, transaction security, and acceptance across businesses.

This study is anchored on the Technology Acceptance Model and Innovation Diffusion Theory. The Technology Acceptance Model explains that technology adoption is shaped by perceived usefulness and perceived

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ease of use. Innovation Diffusion Theory explains how new technologies spread through social systems over time and how users' adoption decisions are influenced by perceived advantage, compatibility, complexity, and trust. These perspectives are useful in examining why customers consider cashless payment systems convenient and how different platforms shape their experiences.

The study supports Sustainable Development Goal 8 on decent work and economic growth by examining how digital payment systems may improve business processes, customer satisfaction, and microenterprise growth. When customers find payment systems accessible, fast, trustworthy, and widely accepted, microenterprises may improve service efficiency and encourage repeat transactions.

This study determined the influence of cashless payment systems on customer convenience in microenterprises. Specifically, it described the respondents' profile in terms of age, sex, type of cashless payment platform used, and frequency of use; assessed the level of influence of cashless payment systems in terms of Accessibility and Ease of Use, Time and Convenience, Security and Trust, and Availability and Acceptance; and tested whether significant differences existed across respondent groups.

Literature Review

Technology Acceptance and Cashless Payment Adoption

The Technology Acceptance Model explains that users are more likely to adopt a technology when they perceive it as useful and easy to use. In cashless payment systems, usefulness may refer to faster transactions, reduced need for cash, immediate confirmations, and greater transaction flexibility. Ease of use refers to the simplicity of navigating payment applications, completing steps, scanning QR codes, and receiving confirmations.

Innovation Diffusion Theory complements this perspective by explaining that adoption depends on relative advantage, compatibility with user routines, complexity, trialability, and observability. Customers are more likely to adopt a cashless payment platform when it is familiar, reliable, accepted by merchants, and perceived as better than cash in terms of convenience and speed.

The source study identifies perceived convenience, security, trust, social influence, and facilitating conditions as relevant adoption factors. These constructs are important for microenterprises because customers may choose payment methods based not only on availability but also on platform reputation, ease of transaction, and the reliability of internet-based systems.

Customer Convenience in Digital Payment Transactions

Customer convenience is a multidimensional construct. In this study, it was examined through Accessibility and Ease of Use, Time and Convenience, Security and Trust, and Availability and Acceptance. Accessibility and Ease of Use refer to how easily customers can open, navigate, and complete transactions through their chosen platform. Time and Convenience refer to the ability of cashless payments to reduce waiting time and make purchases more efficient.

Security and Trust are important because customers must believe that their personal information, transaction details, and payment confirmations are protected. Even when users find digital payments convenient, fear of fraud, unauthorized charges, privacy risks, or transaction failure may reduce their confidence. Availability and Acceptance refer to the extent to which cashless payment options are consistently offered, accepted for different transaction sizes, and functional during peak hours or busy periods.

The reviewed literature suggests that cashless payment systems can improve transaction speed, reduce physical effort, support recordkeeping, and enhance customer satisfaction. However, unstable internet, system downtime, platform errors, and limited merchant acceptance may reduce the overall convenience experienced by users.

Cashless Payments in Microenterprises

Microenterprises operate with limited resources, smaller workforces, and close customer interaction. In this setting, payment convenience can influence the overall buying experience. A fast and smooth payment process

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can help microenterprises serve more customers, reduce queue time, and build customer loyalty. Cashless payments may also support easier tracking of transactions and greater participation in the digital economy.

In the Philippine context, mobile wallets and QR-based systems have become increasingly common. The Bangko Sentral ng Pilipinas has promoted digital payment transformation, while private platforms have expanded customer and merchant access. For microenterprises, adopting such platforms can improve competitiveness when customers prefer digital options.

Nonetheless, microenterprises may face challenges in implementing cashless systems. Limited internet stability, service interruptions, staff unfamiliarity, customer security concerns, and inconsistent acceptance across transaction types can affect the perceived quality of service. These challenges make it important to examine customer convenience from the perspective of actual users.

METHODS

Research Design

The study employed a descriptive research design. This design was appropriate because the study described the profile of customers, assessed the level of influence of cashless payment systems on customer convenience, and compared customer convenience across respondent groups without manipulating any variables.

Research Locale

The study was conducted in selected microenterprises within a highly urbanized city in the Western Visayas Region, Central Philippines. The source manuscript identifies the city as Bacolod City, which is known as the City of Smiles and is recognized as a major urban center in Negros Occidental. The locale was appropriate because cashless payment platforms are increasingly used in local microenterprise transactions.

Respondents and Sampling Technique

The respondents were 200 customers from selected microenterprises who had experience using cashless payment systems. Convenience sampling with a fixed sample size was used. Respondents were included based on accessibility and their experience using digital payment platforms such as GCash, Maya, QR PH, and E-card.

Table 1. *Distribution of Respondents by Microenterprise*

Microenterprise	Number of respondents	Percentage
Microenterprise 1	50	25.00%
Microenterprise 2	50	25.00%
Microenterprise 3	50	25.00%
Microenterprise 4	50	25.00%
Total	200	100.00%

Research Instrument

Data were gathered using a researcher-made survey questionnaire. The first part collected respondent profile information, including age, sex, type of cashless payment platform used, and frequency of cashless payment use. The second part measured customer convenience across four dimensions: Accessibility and Ease of Use, Time and Convenience, Security and Trust, and Availability and Acceptance. Each dimension contained eight items, for a total of 32 items, rated using a five-point Likert scale.

Validity and Reliability

The questionnaire underwent face validation by three experts from education, hospitality management, business operations, and local government-related fields. The instrument obtained a validity index of 4.88, interpreted as Excellent. After validation and revision, reliability testing was conducted with 30 customers who were not included in the actual study. The instrument obtained a Cronbach's alpha coefficient of .751, interpreted as acceptable.

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Data Gathering Procedure

The researchers prepared a request letter and administered the validated questionnaires to customers of selected microenterprises. The purpose of the study was explained to the respondents, and key terms were clarified to promote accurate responses. Face-to-face data gathering was prioritized to reach the target number of respondents and ensure completion of the survey.

Data Analysis

Frequency and percentage were used to describe the respondents' profile. Mean was used to determine the level of influence of cashless payment systems on customer convenience. Mann-Whitney U test was used for two-group comparisons, while Kruskal-Wallis test was used for comparisons involving more than two groups. The level of significance was set at .05.

Ethical Consideration

The study observed informed consent, anonymity, confidentiality, and responsible data handling. Respondents had the option to withhold identifying information. Only those who agreed to participate were given the questionnaire. Completed response sheets were securely stored and were scheduled for disposal after completion of the study to protect participants' information.

RESULTS AND DISCUSSION

Profile of the Respondents

The study included 200 respondents. Most were aged 30 years old and above (60.00%), while 40.00% were below 30 years old. Female respondents slightly outnumbered male respondents, with 53.50% female and 46.50% male. In terms of platform use, GCash was the dominant cashless payment platform (74.00%), followed by Maya (10.50%), E-card (8.50%), and QR PH (7.00%). Most respondents used cashless payment systems moderately or a few times a week (60.00%).

Table 2. *Profile of the Respondents*

Variable	Category	Frequency	Percentage
Age	Younger (below 30 years old)	80	40.00%
Age	Older (30 years old and above)	120	60.00%
Sex	Male	93	46.50%
Sex	Female	107	53.50%
Type of platform	GCash	148	74.00%
Type of platform	Maya	21	10.50%
Type of platform	QR PH	14	7.00%
Type of platform	E-card	17	8.50%
Frequency of use	Rare (once a month or less)	45	22.50%
Frequency of use	Moderate (a few times a week)	120	60.00%
Frequency of use	Frequent (daily)	35	17.50%

Level of Influence of Cashless Payment Systems on Customer Convenience

The overall results showed that cashless payment systems had a high-level influence on customer convenience across all four dimensions. Time and Convenience obtained the highest mean (M = 4.11), followed by Security and Trust (M = 4.04), Availability and Acceptance (M = 4.03), and Accessibility and Ease of Use (M = 4.02). These results indicate that customers generally perceived cashless payments as convenient, fast, accessible, and acceptable in microenterprise transactions.

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Table 3. *Summary of Customer Convenience Dimensions*

Dimension	Overall mean	SD	Interpretation	Highest-rated indicator	Lowest-rated indicator
Accessibility and Ease of Use	4.02	0.646	High Level	The payment process is simple and user-friendly (M = 4.49)	Available even with low internet connectivity (M = 3.14)
Time and Convenience	4.11	0.678	High Level	Using cashless payment speeds up the checkout process (M = 4.35)	Always available whenever I need to make a purchase (M = 3.86)
Security and Trust	4.04	0.686	High Level	I receive accurate receipts or confirmations after payment (M = 4.48)	I feel safe when sharing payment information (M = 3.62)
Availability and Acceptance	4.03	0.634	High Level	I can use cashless payment for both small and large transactions (M = 4.22)	The system rarely goes offline or becomes unavailable (M = 3.71)

The highest dimension mean for Time and Convenience suggests that customers value the speed and ease of digital payment. Cashless systems reduce the need to carry cash, shorten checkout time, and help customers avoid long queues. However, the lowest item across the dimensions concerned low internet connectivity, indicating that unstable network access remains a practical barrier to continuous and seamless payment service.

Comparative Analysis by Respondent Variables

The comparative analysis showed mixed results. For Accessibility and Ease of Use, a significant difference was found only by type of cashless payment platform used ($p = .013$). For Time and Convenience and Security and Trust, no significant differences were found across age, sex, platform type, or frequency of use. For Availability and Acceptance, significant differences were found by age ($p = .026$) and type of platform used ($p = .046$). Sex and frequency of use were not significant across the assessed dimensions.

Table 4. *Summary of Comparative Analysis of Customer Convenience*

Dimension	Age	Sex	Type of platform	Frequency of use	Main interpretation
Accessibility and Ease of Use	Not significant ($p = .390$)	Not significant ($p = .179$)	Significant ($p = .013$)	Not significant ($p = .670$)	Convenience varied according to platform usability and accessibility.
Time and Convenience	Not significant ($p = .065$)	Not significant ($p = .652$)	Not significant ($p = .227$)	Not significant ($p = .068$)	Time-related convenience was consistent across groups.
Security and Trust	Not significant ($p = .136$)	Not significant ($p = .211$)	Not significant ($p = .738$)	Not significant ($p = .840$)	Security and trust perceptions were generally similar across groups.
Availability and Acceptance	Significant ($p = .026$)	Not significant ($p = .831$)	Significant ($p = .046$)	Not significant ($p = .151$)	Older users and platform groups differed in availability and acceptance perceptions.

The results suggest that demographic differences were limited. Customers generally experienced similar convenience regardless of sex and frequency of use. However, platform type mattered in selected dimensions, which implies that user interface, reliability, familiarity, transaction speed, and merchant acceptance may differ across platforms. Age differences in Availability and Acceptance suggest that older and younger customers may evaluate payment availability and platform acceptance differently.

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Key Operational Issues Identified

Although the overall influence of cashless payment systems was high, the lowest-rated items revealed areas that require improvement. These included low-connectivity access, service availability, security confidence, and system uptime. These concerns indicate that customer convenience depends not only on the presence of cashless payment options but also on reliable infrastructure, strong security assurance, and consistent merchant readiness.

Table 5. *Key Issues and Recommended Improvement Areas*

Lowest-rated concern	Reported mean	Interpretation	Recommended improvement
Cashless option is available even with low internet connectivity	3.14	Moderate Level	Optimize platforms for low-bandwidth conditions and improve network support.
Cashless payment is always available whenever needed	3.86	High Level	Reduce app maintenance interruptions and strengthen alternative payment backup options.
Customers feel safe when sharing payment information	3.62	High Level	Strengthen security communication, authentication, fraud alerts, and privacy assurance.
System rarely goes offline or becomes unavailable	3.71	High Level	Improve system uptime, monitoring, and technical support for merchants.

Proposed Action Plan for Microenterprises and Payment Providers

Based on the findings, the following action plan is proposed to improve customer convenience in microenterprises using cashless payment systems. The plan focuses on accessibility, security, reliability, staff readiness, and customer guidance.

Table 6. *Proposed Action Plan to Enhance Customer Convenience*

Program area	Objective	Suggested actions	Expected outcome
Connectivity and accessibility	Improve payment access during weak network conditions	Coordinate with payment providers; maintain backup internet options; post guidance for retrying failed transactions	Fewer transaction delays and improved accessibility
Security and trust	Increase customer confidence in sharing payment information	Use verified QR codes; promote two-factor authentication; display security reminders; provide receipts or confirmations	Higher trust and reduced fear of fraud
System reliability	Reduce payment interruptions and downtime	Monitor app status; prepare alternative cashless platforms; train staff to handle failed transactions	More consistent payment availability
Staff capability	Ensure smooth processing of cashless transactions	Conduct short staff orientations on GCash, Maya, QR PH, and E-card processing	Faster service and fewer customer-assistance issues
Customer awareness	Encourage responsible and confident digital payment use	Provide simple payment instructions, signage, and reminders on checking confirmations	Improved customer confidence and transaction accuracy

CONCLUSION

The study concludes that cashless payment systems positively influence customer convenience in microenterprises. Respondents rated all dimensions at a high level, with Time and Convenience receiving the highest mean. This indicates that customers value the faster checkout process, reduced need to carry cash, easier transactions, and overall efficiency provided by digital payment systems.

Despite the high overall ratings, Accessibility and Ease of Use obtained the lowest dimension mean, mainly due to challenges related to low internet connectivity. Security and Trust also remained an important concern, as the lowest security-related item showed that some customers were still cautious about sharing payment information. Availability and Acceptance findings further showed that occasional system downtime or unavailability may affect customer convenience.

Significant differences were limited to selected variables. Platform type influenced Accessibility and Ease of Use and Availability and Acceptance, while age influenced Availability and Acceptance. Sex and frequency of use did not significantly affect customer convenience. These findings show that customer convenience is shaped more by platform performance and availability than by most user-profile characteristics.

Recommendation

Microenterprise owners should continue offering cashless payment options while improving the reliability and visibility of these services. They should provide verified QR codes, maintain alternative payment options, and train staff to assist customers during failed or delayed transactions. Payment providers should improve platform stability, optimize applications for low-bandwidth conditions, strengthen data-security features, and communicate security measures clearly to users. Customers should be encouraged to verify transaction confirmations, protect account credentials, and use trusted platforms. Local government offices and financial-inclusion agencies may support microenterprises through digital-payment orientation, connectivity improvement, and financial technology literacy campaigns. Future researchers may expand the study to other cities, compare different business sectors, use probability sampling, and examine the long-term effects of cashless payment adoption on customer loyalty, sales performance, and microenterprise growth.

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