

Factors Influencing Sari-Sari Stores in Adopting Electronic Payments at Barangay Bucana, Davao City: A Descriptive Analysis

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ABSTRACT

The global shift toward electronic payments presents significant challenges for sari-sari store owners in Barangay Bucana, Davao City. This study examines the factors influencing sari-sari store owners in adopting electronic payments. Using a descriptive-quantitative approach, 30 sari-sari store owners were selected through simple random sampling. The findings reveal that factors such as operational efficiency, technological integration, and transaction speed influence the adoption of electronic payments. Based on these findings, the following recommendations are made: (1) conduct financial literacy training for store owners, focusing on budgeting, digital transactions, and reinvestment strategies; (2) implement hands-on training on digital payment platforms, ensuring store owners can efficiently navigate e-payment systems; and (3) set standardized transaction limits to ensure security while maintaining accessibility for customers. Additionally, future research should adopt a mixed-method approach to explore store owners' perceptions and challenges in adopting electronic payments. A longitudinal study is also recommended to assess changes in adoption rates and the long-term impact of e-payments on sari-sari store operations.

Keywords: Operational Efficiency, Technological integration, Transaction Speed, Influence, Demographic Profile, Sari-Sari Stores.

THE PROBLEM AND ITS SCOPE

Digital payments have seen exponential growth in recent years, driven by advancements in technology, increased internet insight, and the proliferation of smartphones. This rise is fundamentally changing the way businesses conduct transactions, moving away from cash and checks to electronic and mobile payment methods (World Economic Magazine, 2024). Transaction speed and reliability, especially in regions with poor internet infrastructure, create apprehensions about the efficiency of the electronic payments that could lead to customer frustration (Ashok, 2022).

Globally, the adaption of electronic payments in several countries, such as China, Nigeria, and India face different challenges and opportunities within different socio-economic landscapes. In China, two electric payment platforms are rapidly dominating WeChat and Alipay (Torre & Xu, 2020). However, China's electronic payment systems face significant transaction speed issues during peak period, passing delays, and frustration for users (Zhou, 2024). Similarly in India, it also faces transaction speed issues. India electronic payment systems, while rapidly expanding, frequently encounter transaction speed issues, particularly during high-traffic like festivals or sales events, leading to delays and user dissatisfaction (Sujith & Julio, 2017). Additionally in Nigeria, the major issue is the lack of reliable internet infrastructure, particularly in rural areas, which delays the effective use of electronic payment platforms (Okifo, 2024).

In the Philippines, the adoption of electronic payments remains a challenge in sari-sari stores, particularly those in rural areas struggle with poor internet connectivity and limited access to the necessary technological infrastructure to integrate digital payment system (Ariel, 2024). According to Joshua and Timoteo (2023), sari-sari store owners often perceive electronic payments as complex and costly to set up, which discourages them from adopting these new technologies.

This study aims to describe the factors influencing sari-sari stores in adopting electronic payments at Barangay Bucana, Davao City, based on the study of Rouheng Hu (2022) operational efficiency, technological integration (Khado et al., 2022), transaction speed (Polasik et al., 2013) in terms of transactions in payments.

Significance of the Study

The result of this study aims at describing the factors of influencing sari-sari stores in adopting electronic payments at Barangay Bucana, Davao City. This will seek future to understand the specific challenges and opportunities faced by sari-sari stores in community as they navigate this transition towards electronic payments. This will benefit the following:

Financial Institutions. Financial institutions might assist by implementing the research findings into their online payment systems and services. By doing so, they might be able to better meet the requirements and preferences of their clients.

School Administrations. This study helps student`s financial needs and expediting administrative procedures. School administrators may apply the findings to enhance e-payment systems and policies.

Customers. This study will help the customers by being more capable to make decisions, promote for better services, and have more quick and simple payment transaction.

Future Researchers. This will help future researchers to have a basis for future research in e-payment adoption, thus filling in more pieces in the mosaic of knowledge in this field. It will give a groundwork for proving further other initiatives aimed at improving electronic payments.

Statement of the Problem

This study aims to determine the descriptive level of influencing sari-sari stores in adopting electronic payments at Barangay Bucana, Davao City. Specifically, it seeks to answer the following questions:

1. What is the demographic profile of sari-sari store in Barangay Bucana, Davao City in terms of:
 1. gender;
 2. age;
 3. educational attainment;
 4. monthly income;
 5. electronic payment application?

2. What is the level payments of sari-sari stores in Barangay Bucana, Davao City in terms of:
 1. operational efficiency;
 2. technological integration; and
 3. transaction speed?

REVIEW OF RELATED LITERATURE

In this section, the research reviews literature relevant to the study, the empirical studies and literature are selected for their relevance and significance to the topic investigation. The discussion follows the following topics about electronic payment, the implications of operational efficiency, technological integration, and transaction speed in relation to electronic payment adoption, and sari-sari stores.

Sari-Sari Stores

A sari-sari store is a small, local retail shop that is essential to daily life in Filipino culture. These stores, which are usually family-run, sell a variety of essentials like beverages, snacks and household items. They are

conveniently accessible for quick purchases because they are frequently found within walking distance from homes, which defines their convenience (Sari-Sari Stores, 2024).

A study states that sari-sari stores in the Philippines had a sale of Php 8 billion in 2023. This is a large sum considering that sari-sari stores thrive all over the country (Lu, 2024). Adopting electronic payment methods like G-Cash in sari-sari stores offers numerous benefits. First, it enhances convenience and time savings for customers, as seen in the widespread adoption of digital payments in daily life (Gayathri & Shanmugam, 2023). Next, it provides technical convenience, operational efficiency, technological integration, transaction speed and strengthens the relationship between perceived value and adoption intention, ultimately benefitting both consumers and retailers (Veronica et al., 2022). Additionally, electronic payments reduce handling costs, offer remote payment capabilities, and are suitable for various transactions, aligning with the trend towards financial services digitalization (Aisha'Rat, 2022). Overall, the adoption of electronic payments in sari-sari stores can streamline transactions, increase efficiency, and cater to the evolving preferences of modern consumers, making it a valuable addition to the retail landscape (Gayathri & Shanmugam, 2023). Sari-sari stores adopting electronic payment systems experienced a 10-15% average income increase within the first few months, as more consumers shifted to cashless methods, indicating that modernizing payment systems can positively impact their monthly earnings (Technews, 2021). According to Jaysone, Ildefe, and Benjamin (2023), sari-sari store owners earn PHP 10,000 or less per month, with some reports indicating that a significant portion of owners have monthly sales ranging from PHP 3,000 to PHP 9,000.

Electronic Payment

Electronic payment systems in the Philippines mostly do not require a bank account and can be easily accessible using mobile phones (Zoleta, 2021). Systems such as GCash and PayMaya, make it easier for Filipinos to use digital payment platforms. Eliminated the requirement of bank accounts, electronic payment systems have a strong potential in a low bank country like the Philippines.

The underlying key to adopting e-payments or Electronic Payment System is to apply conventional commercial strategies to the business's whole extended social network, which is a dynamic and evolving organism that includes its suppliers and consumers (Jocovski et al., 2020; Madzimure, 2020; Mkansi, 2021; Mukherjee & Roy, 2017). Electronic payment is considered as the backbone of electronic commerce and one of its most crucial aspects (Bezhovski, 2016). Business begins with the common model of payment methods where they initially offer a distinct experience in transacting for the clients' patronage by making it easy to add their shopping cart features with different online payment methods in an official commercial website.

As a result, electronic payment has been identified as an alternative payment method. This indicates that an e-payment strategy is derived on a strong foundation of existing financial strategy that is integrated with social media platforms to keep track of events and monitor sales and marketing processes (Swiecka, 2018). Therefore, related technology, systems, procedures, and tools must support electronic payment strategies. An effective electronic payment strategy will provide mutually beneficial outcomes with the cooperation and support of these components, characteristics by a significant change in the terms of payment between the business and its owners (Mondego & Gide, 2020).

Operational Efficiency.

Individual factors, such as the owner's or manager's attitude towards technology, their level of education, and their awareness of electronic systems, play a crucial role in engaging e payments (Kadjie et al., 2023). In the study of Oluwaseun and Grace (2017), sari-sari stores with higher levels of technological readiness exhibit a greater propensity to adopt electronic payment solutions, leading to enhanced operational efficiency. Another study by Kumar and Bhardwaj (2019), businesses that perceive e-payments as secure are more likely to adopt them, resulting in greater operational efficiency due to faster and more secure transactions. The alignment of business practices with customer preferences not only boosts customer satisfaction but also enhances operational efficiency by reducing cash handling and streamlining payment processes (Sedigheh et al., 2021). Sari-sari stores that perceive electronic payment systems as easy to use are more likely to experience enhanced operational

efficiency due to faster transaction processing and reduced errors (Omar et al., 2018).

Technological Integration.

The availability of financial and human resources is a critical determinant of electronic payment adoption among sari-sari stores, with studies showing that firms with greater access to these resources are more likely to invest in electronic payment technologies as a strategic asset (AlSharji et al., 2018). A supportive management team and an organizational culture that fosters innovation significantly enhance technology integration, study by (Junadi & Steferianto, 2015). The perceived ease of use, perceived usefulness, and trust affect the adoption of electronic payment systems. Their research underscores the importance of these factors in shaping consumers' and businesses' willingness to embrace new payment technologies (Lai et al., 2023). According to Sila (2015), for sari-sari stores, the perception that e-payment systems will improve operational efficiency and be easy to use is a significant driver of adoption. Security technologies have advanced, including encryption and tokenization, these concerns are being mitigated, leading to greater adoption (Paulin & Radin, 2019)

Transaction Speed.

The modern concept of the payment system is gradually changing from coins and paper-based money to electronic forms that provide an easier, faster, and more secure process of making payments among individual and organizations (Premchand & Choudry, 2015). In this study, dealing with technical and transaction procedures, access to security guidelines and usability are essential, the implication that increased transaction speed could improve perceived security, which may in turn have an affirmative impact on consumer trust in facilitating the adoption of electronic payment systems (Barkhordari et al., 2017). The most influential factors that determine the adoption of electronic payment systems are perceived effort expectancy and social influence. Improving transaction speed can further optimize both factors in such a way that perceived efforts can be reduced while overall user satisfaction is increased; hence, electronic payment system adoption rates can be boosted, study by (Intan Syafinaz et al., 2020). Another study by Slozko and Pelo (2015), discuss broader impacts of technologies on operational cost minimization and the improvement of organizational performance, it is important to note that transaction speed in itself is an important element that has helped in improving these elements by enhancing the efficiency and reducing the cost of processing. Antwi et al. (2015), explains it as a general electronic transmission of a monetary claim from one party to another, where there is an obligation on the receiver's side-the beneficiary-who should find the transfer acceptable. A very important attribute of any electronic payment system is that it allows for speed against conventional systems of effecting payments. This can definitely make a huge difference in the general efficiency of financial activities at both levels: individual users and businesses.

Conceptual Framework

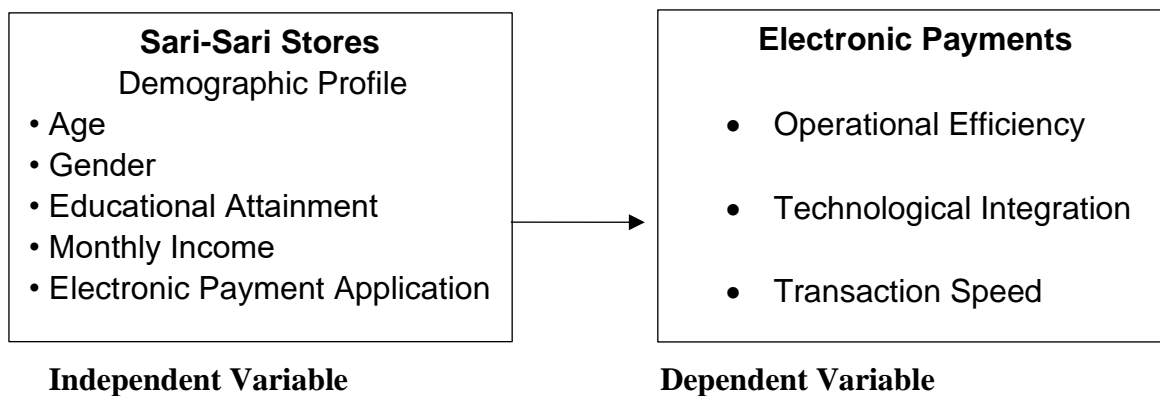


Figure 1: Conceptual Framework of the Study

The independent variable is sari-sari stores which will be measured in terms of Gender, Age, Educational Attainment, Monthly Income, Electronic Payment Application. Sari-Sari stores refer to small, local retail shop that is essential to daily life in Filipino culture. They are conveniently accessible for quick purchases because

they are frequently found within walking distance from homes, which defines their convenience (Sari-Sari Stores, 2024, p. 3). Annual Income is the total amount of money you get paid annually; monthly income total amount of money received in a given month (Garcial et al., 2024).

The dependent variable is electronic payments, which will be measured in terms of operational efficiency, technological integration, and transaction speed. Operational efficiency is adapted from the study of Ruoheng Hu (2022), while technological integration is adapted from the study of Khado, Islam, and Gao (2022), and lastly, transaction speed is adapted from the study of Polasik et al. (2013). Electronic payments are a way of making transaction, paying bills online, without the use of physical checks or cash. Operational efficiency refers to the optimization of business processes and resources for the purpose of reducing operating costs while maintaining or improving productivity (Gomstyn & Jonker, 2024); technological integration refers to the interplay between finance and technology with the use of the internet triggering the emergence of digital payment technologies (Khando et al., 2022); transactional speed refers to the time it takes for a financial transaction to complete, from initiation to finalization. It's the duration between initiating a payment and the recipient confirming its receipt (Sancheti, 2024).

In this research, it primarily focuses on describing the nature of a demographic segment without focusing on the “why” of the research subject. It aims to identify the factors influencing in adopting electronic payments in sari-sari stores at Barangay Bucana, Davao City. This research will uncover details on “what are the factors influencing Bucana, Davao City sari-sari stores in adopting electronic payments”, but not cover any investigative details on “why” the factors exists. Conducting thorough descriptive research helps sari-sari store owners understand the specific challenges and opportunities faced as they navigate this transition toward electronic payment system.

METHODS

This chapter presents the methodology of the study, including the research design, research locale, respondents of the study, sampling design, research instrument, ethical considerations, data gathering procedure, and data analysis.

Research Design

The research design was defined as the overall plan or structure that guided the process of conducting research. It was a critical component of the research process and served as a blueprint for how the study was carried out, including the methods and techniques used to gather and analyze data. The researchers utilized a non-experimental quantitative research method to collect relevant data and information (Jain, 2023). According to Statistics Solutions (n.d.), non-experimental research describes a situation or phenomenon as it stands or examines relationships between two or more variables without any interference from the researcher. This means that no variables were manipulated, and participants were not randomly assigned to control or treatment groups. Without this level of control, causal effects could not be determined. While validity was still a concern in non-experimental research, the focus was more on the validity of the measurements than on the validity of the effects.

This study used a descriptive quantitative research design. According to Vixco (n.d.), this research design allows researchers to gather data through various methodologies, with surveys and observations being the most commonly used methods. Additionally, descriptive research involved the collection of quantifiable and systematic data, which was then used for the statistical analysis of the research problem. One of the key characteristics of descriptive research is that, unlike experimental research, the variables are not controlled or manipulated; instead, they were identified, observed, and measured as they naturally occurred.

Research Locale

This study focused on sari-sari stores in Barangay Bucana, Davao City, Philippines. Barangay Bucana was selected as the research locale because it is the largest barangay in Region XI in terms of population size. According to the Philippine Statistics Authority (2020), Bucana was the most populous barangay in Region XI,

with 80,538 residents out of the 1,162 barangays in the region. The researchers selected respondents based on population size to ensure a representative sample. Additionally, Davao City is the largest city in the Philippines and is known as the "Fruit Basket of the Philippines."

Sampling Design

This study employed simple random sampling. According to Horton et al. (2024), simple random sampling is a technique in which a researcher selects a random subset of individuals from a larger population. Furthermore, in simple random sampling, each member of the population had an equal chance of being selected, making it a widely used method in statistics for obtaining a representative sample of the target population.

Research Instrument

This study employed a structured questionnaire as the primary data collection instrument to investigate the factors influencing the adoption of electronic payments among sari-sari store owners in Barangay Bucana, Davao City.

For validation, the survey questionnaire was reviewed by experts. A validation sheet was used by them to assess the questionnaire's reliability and appropriateness. All experts' recommendations were incorporated to enhance the instrument's validity. Following the validity test, the survey questionnaire was piloted to sari-sari store owners who were already using electronic payments. This process ensured that the questions were clearly understood, the response scale was appropriate, and the data collection process proceeded smoothly. A higher value indicated a higher level of agreement with each item.

Operational Efficiency.

The items measuring Operational Efficiency were developed by the researchers using a 4-point Likert scale, which focused on a detailed evaluation of operational efficiency. The following rating scale was used:

Range of Mean	Description	Interpretation
3.26 – 4.00	Always	This means that electronic payments transaction speed on sari- sari store owners are always demonstrated.
2.51 – 3.25	Mostly	This means that electronic payments transaction speed on sari- sari store owners are mostly demonstrated.
1.26 – 2.50	Sometimes	This means that electronic payments transaction speed on sari-sari store owners are sometimes demonstrated.
1.00 – 1.25	Never	This means that electronic payments transaction speed on sari-sari store owners are never demonstrated.

Data Gathering Procedure

The following steps were strictly followed in conducting the study:

Permission to Conduct the Study.

To begin the process, the researcher addressed a letter of approval to the Barangay Chairman of Barangay Bucana, Davao City, informing them about the study, the respondents, and its objectives. Afterward, the researcher informed the Barangay Chairman about the conduct of the study in their area.

Distribution and Retrieval of Survey Questionnaire.

Once the letter of request was approved and disseminated, the researchers administered the questionnaire to the respondents. During the initial meeting, the researchers provided a detailed summary of the study and explained

the significance of the respondents' participation. To ensure that the questionnaires were properly completed, the researchers monitored the respondents as they answered. The respondents were informed that their participation was voluntary and that their identities would remain anonymous throughout the study. Furthermore, the respondents answered the survey questionnaire using a yes or no format to indicate the influence of adopting e-payments in their sari-sari stores for each question.

Collation and Statistical Treatment of the Study.

After collecting the completed questionnaires, the researchers organized the data for analysis. The responses were encoded into a spreadsheet to facilitate statistical computation. Each survey item was categorized based on the factors influencing electronic payment adoption among sari-sari store owners.

Data Analysis

The researchers used descriptive statistical tools to analyze the collected data. Frequencies and percentages were computed to summarize the distribution of responses, while mean and standard deviation were used to determine the central tendency and variability of the factors influencing the adoption of electronic payments. These statistical tools helped identify patterns and trends in the respondents' perceptions and experiences.

Ethical Considerations

Ethical considerations played a crucial role in ensuring the integrity and validity of the research, especially when dealing with sensitive topics among sari-sari store owners. This study adhered to the following ethical guidelines:

Informed Consent.

Informed consent was obtained from all respondents. They were provided with concise information to ensure that they fully understood the study's nature, purpose, risks, and benefits before agreeing to participate. This process ensured that individuals made voluntary decisions without undue influence. The researchers presented the information in a clear and accessible manner, taking into account the respondents' literacy levels and cognitive abilities.

Data Privacy

Since sari-sari stores operate on trust-based relationships within local communities, transitioning to electronic payments required the collection of personal and financial data. The researchers ensured that store owners and customers were informed about data protection measures and the potential risks involved, thereby maintaining their trust.

Transparency.

Transparency and fairness in fees associated with electronic payment platforms were considered. High transaction fees or hidden costs could significantly affect small-scale businesses, potentially reducing their already slim profit margins. These ethical considerations were addressed to ensure that the adoption of electronic payments was equitable, secure, and beneficial for sari-sari store owners and their customers.

RESULTS AND DISCUSSION

This chapter presents the findings and discussion based on the data gathered. The presentation is organized based on the sequence of the problem statement in the first chapter.

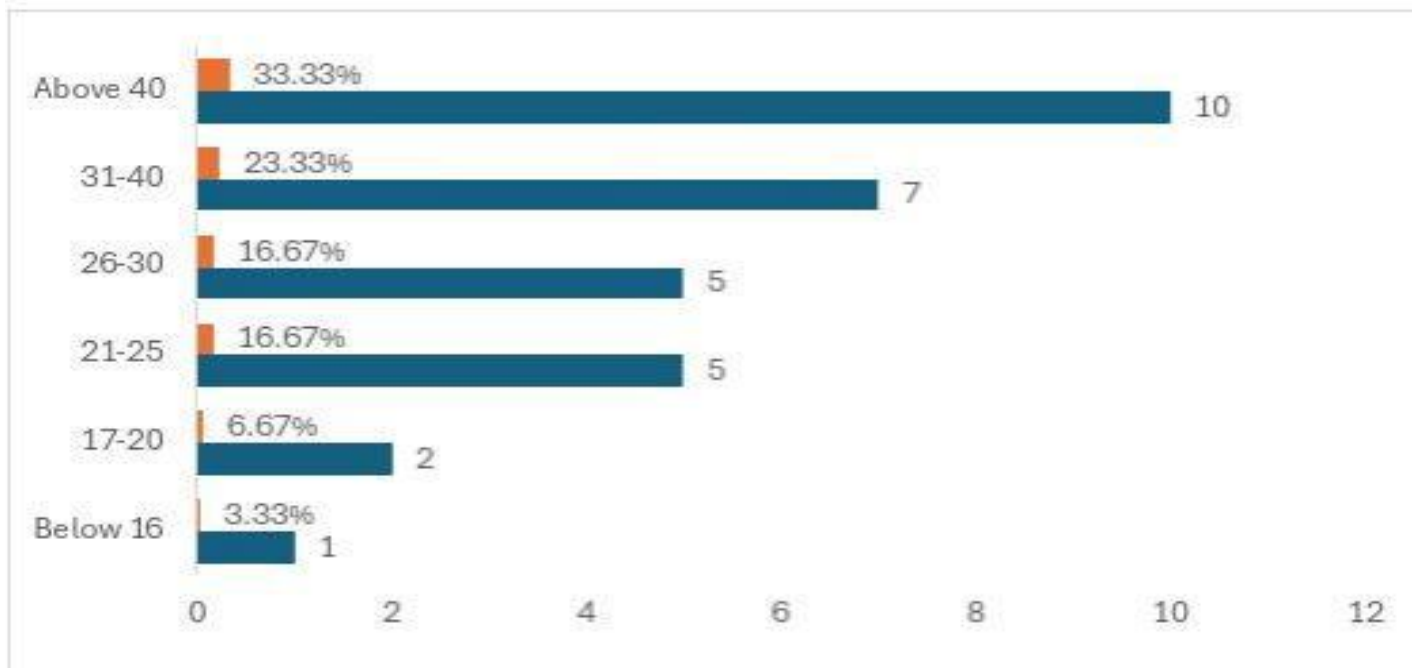
Level of Demographic Profile

Presented below are the graph for the demographic profile in terms of age, gender, educational attainment,

monthly income, and electronic payment mostly used.

Demographic Profile

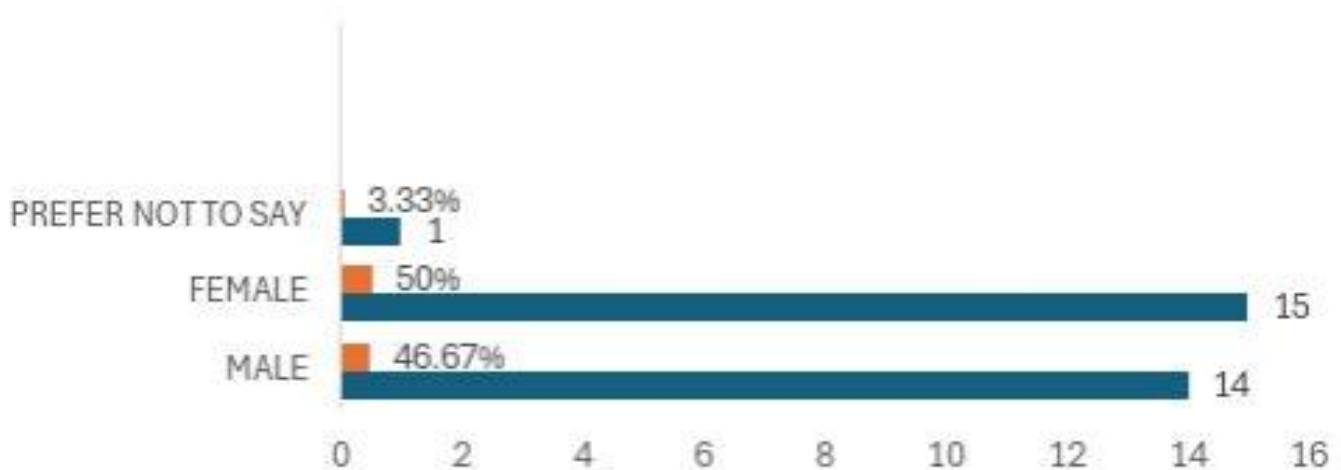
Graph 1. Age of Respondents



The graph shows the demographic data of the respondents. Among the respondents, 10 (33.33%) were over 40 years old, 7 (23.33%) were between 31 and 40 years old, 5 (16.67%) were between 25 and 30 years old, 5 (16.67%) were between 21 and 24 years old, 2 (6.67%) were between 17 and 20 years old, and 1 (3.33%) was under 16 years old. So, the majority of respondents are over 40 years old. This means that the majority of respondents are over 40 years old and the minority of respondents are under 16 years old, so therefore, older individuals are more likely to own sari-sari stores. Older owners may bring different experiences and perspectives to their businesses compared to younger owners. Understanding the unique challenges faced by older sari-sari store owners could help create better support programs for them.

This study was supported by Nicholaisen (2024), older entrepreneurs tend to have higher success rates due to their accumulated experience and resources. Similarly, Sundin and Holmquist (2022) suggest that for older individuals, becoming an entrepreneur is often a means of staying engaged in the labor market, rather than an inherent goal.

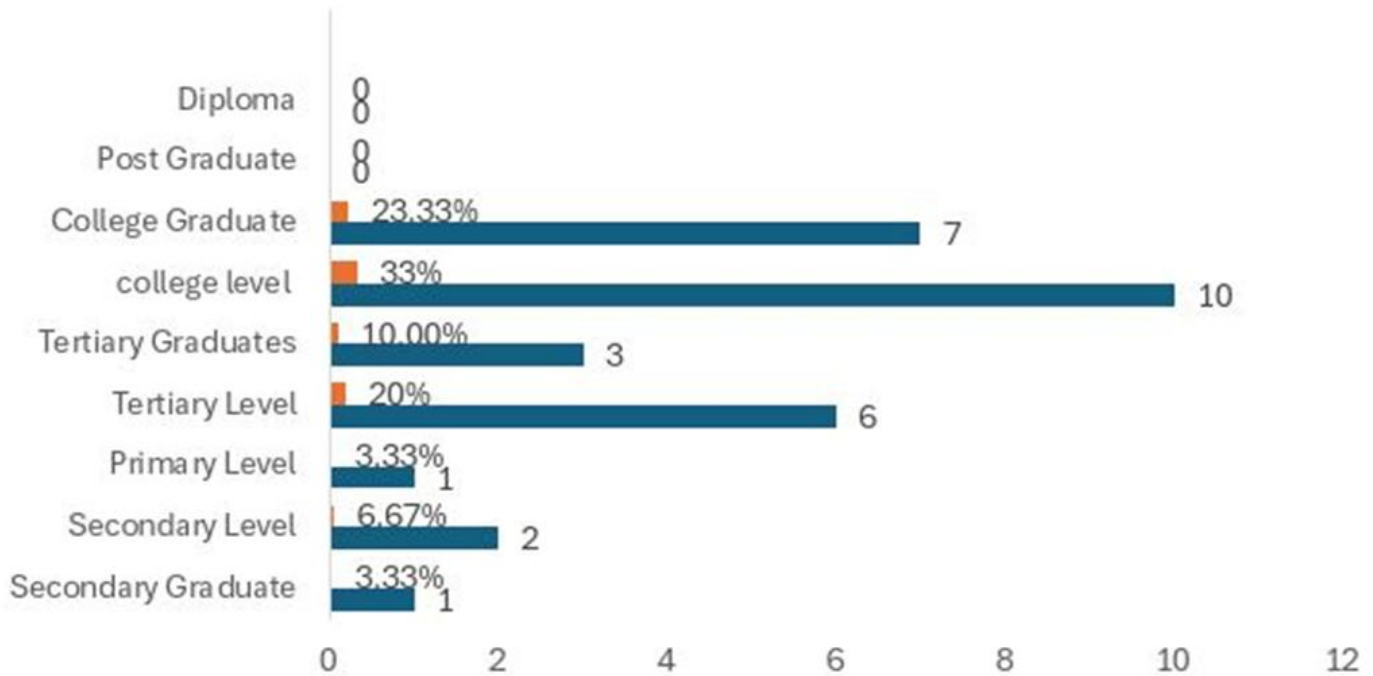
Graph 1.1. Gender



Additionally, in terms of gender, 1 (3.33%) respondent preferred not to say, 15 (50%) were female, and 14 (46.67%) were male. This shows that most respondents are female, indicating that women are actively involved in owning businesses. This suggests that women are actively involved in entrepreneurship within this sector, reflecting a broader trend of increasing female participation in business. The significant presence of female owners also indicates that future research and support programs should address the unique challenges and opportunities women face in business. But then, since the number of respondents is between female and male, it also suggests that support programs should cater to both genders, providing the resources and help needed for all entrepreneurs to succeed.

Zhou (2024) finds that female ownership accounts for one in four businesses in low-income countries, while participation in entrepreneurship is higher in middle- and high-income countries, where female entrepreneurs represent 36% and 37% of businesses, respectively. Moreover, Romero et. Al. (2023), report that in recent years, there has been a notable rise in women-led startups in the Philippines, with approximately 62% of new businesses registered in 2020 being owned by women, as reported by the Department of Trade and Industries.

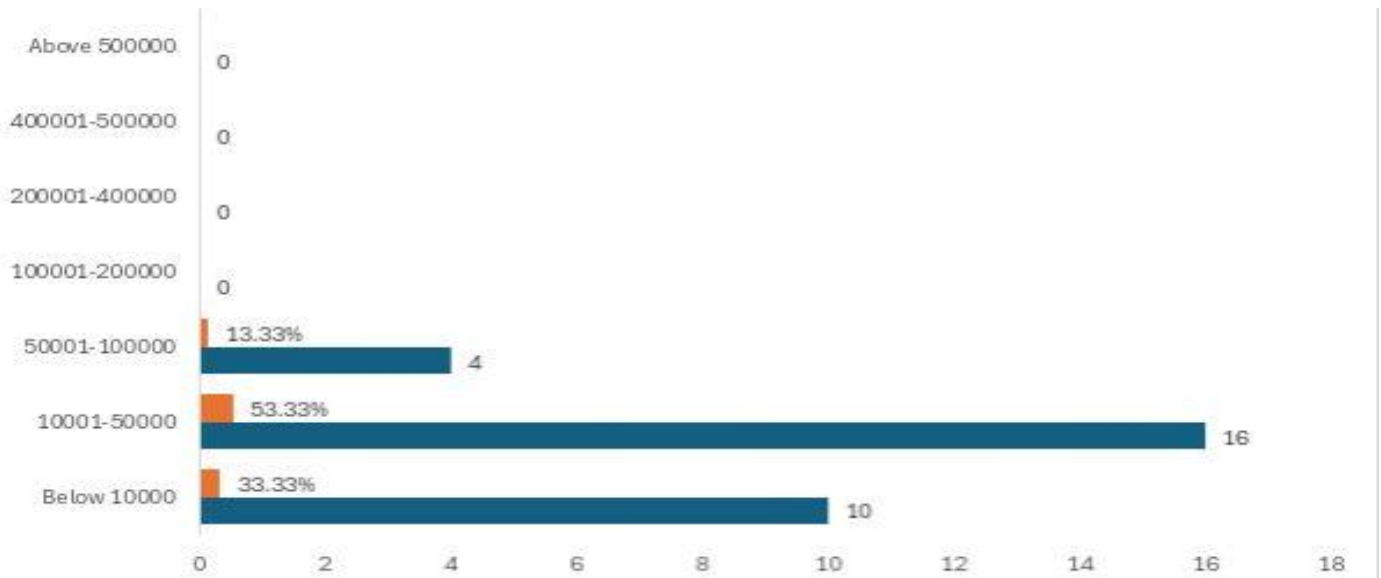
Graph 1.2. Educational Attainment



Furthermore, regarding to educational attainment, 7 (23.33%) respondents were college graduates, 10 (33.33%) were in college, 3 (10%) were tertiary graduates, 6 (20%) were at the tertiary level, 2 (6.67%) had secondary-level education, 1 (3.33%) had primary-level education, and 1 (3.33%) was a secondary graduate. No respondents had a diploma or postgraduate education. The majority of respondents have a college-level education. This means that most sari-sari store owners have at least a college-level education, with many currently attending college. This suggests that they are generally well-educated, which could help them manage their businesses more effectively. It also points to the potential benefit of offering educational programs focused on improving business skills, which could lead to better business results.

The supported studies on educational attainment highlight the critical role of different factors in influencing academic success. For instance, one study explores how electronic payment systems adoption can enhance educational access and efficiency, thereby impacting students' overall learning experiences and outcomes (Salloum & Al-Emran, 2023). Another research study emphasizes the importance of socio-economic factors and their correlation with educational success, illustrating how these variables shape students' opportunities and achievements (Vurayai & Manjoro, 2022). Overall, these studies highlight the complexity of educational attainment and imply that socioeconomic factors and technology developments are essential for creating productive learning environments.

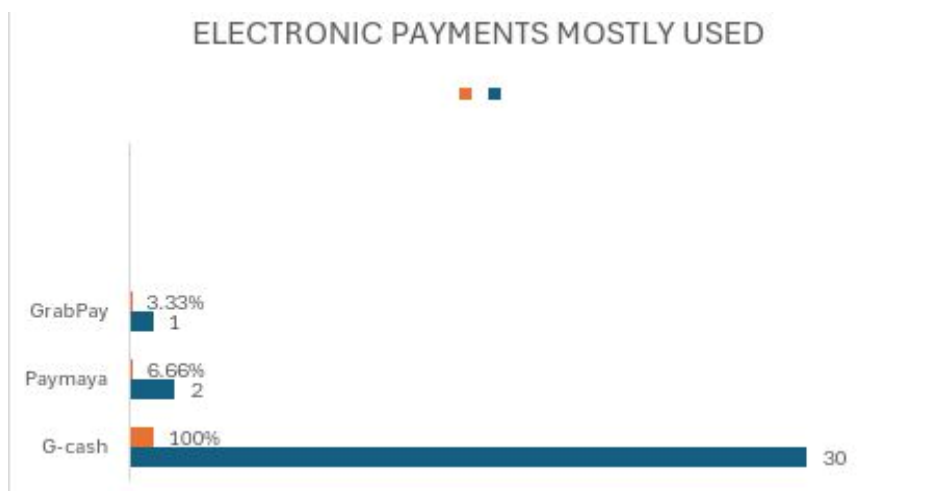
Graph 1.3. Monthly Income



Moreover, for monthly income, 4 (13.33%) respondents earned between 50,001 and 100,000, 16 (53.33%) earned between 10,001 and 50,000, and 10 (33.33%) earned below 10,000. No respondents earned between 400,000 and 500,000, 201,000 and 400,000, 101,000 and 200,000, or above 500,000. Therefore, this means that most sari-sari store owners earned between 10,001 and 50,000 per month, suggesting that while the businesses provide a steady income, they may not be very profitable. This could reflect the challenges small retailers face in competitive markets. Understanding these income levels is important for creating financial support or training programs that can help increase their earnings and business success.

The Philippines saw a 42.7% year-over-year increase in digital payment volume from 2018 to 2022, indicating a growing trend that enhances business revenue opportunities through easier customer transactions (BSP, 2022). A World Bank study showed that firms in Uruguay experienced a lasting increase in electronic transactions following reforms, which improved transactions (World Bank Organization, 2022).

Graph 1.4. Electronic Payments Mostly Used



Finally, for electronic payments, 1 (3.33%) respondent used GrabPay, 2 (6.67%) used PayMaya, and 30 (100%) used G-Cash. Therefore, most sari-sari store owners use G-Cash. The strong preference for G-Cash in sari-sari store owners shows a clear operational efficiency toward using electronic payments. This shift reflects the growing use of technology in daily transactions, indicating that sari-sari store owners are technologically

integrating the modern payment methods. This adoption can make transactions easier and faster for both store owners and customers, potentially boosting sales and improving customer satisfaction.

This is supported by Castillo (2024), who highlights GCash’s transformative role in the Philippines’ digital payment landscape. The platform has gained importance traction, particularly during the COVID-19 pandemic, because of its user-friendly features and regulatory backing from the Bangko Sentral ng Pilipinas. This study indicates that GCash not only facilitates various transactions; such as bill payments and money transfers—but also enhances financial inclusion for millions of Filipinos (Raon et al., 2024). Furthermore, a study on customer satisfaction emphasizes the importance of user experience and service quality in maintaining GCash’s leading position among mobile money services in the country (Diaz, 2023).

Level of Electronic Payments

Presented in Table 1 are the level of Electronic Payments in terms of Operational Efficiency, Technological Integration and Transaction speed.

Table 1. Level of Factors Influencing Sari-Sari Stores in Adopting Electronic Payments at Barangay Bucana, Davao City.

Factors Influencing Sari-Sari Stores in Adapting Electronic Payments	SD	Mean	Descriptive Level
Operational Efficiency	0.439	3.38	Very High
Technological Integration	0.338	3.40	Very High
Transaction Speed	0.409	3.47	Very High
OVERALL	0.359	3.42	Very High

The table presents the level of electronic payments in terms of operational efficiency, technological integration, and transaction speed. The overall mean level is 3.42, with a standard deviation of 0.359, which is considered very high. This means that electronic payments are efficient and technologically advanced. Furthermore, small enterprises that use electronic payments have faster transaction times, reduced cash handling, and increased security. Electronic payments also allow sari-sari store owners to accept payments from a wider range of customers, including those who prefer to pay digitally. This increased convenience for customers can lead to increased sales and profits for sari-sari store owners. It indicates that more sari-sari stores as well as individuals are moving towards electronic payments for conducting their transactions, and this trend is likely to continue in the future.

Overall, many factors can explain why electronic payment means have been embraced across the sari-sari stores, mainly because of enhanced operational efficiency, integration of technology, and increase in transaction speed. According to PWC (2020), in a research study, small retail enterprises that utilized digital payment solutions underwent an enhanced overall efficiency in operations, which was perceived in transaction speeds and cash flow management. The results emphasize the role of streamlined, efficient payment structures for small businesses. A similar study conducted by the Asian Development Bank (2021) also developed a related finding wherein technology, specifically through electronic payment systems integrated into retail practices, resulted in significant improvement in organizational performance. This paper observed that the small enterprises of the Philippines that embraced technological innovation have improved their relation with a customer and reduced operational expenditures, which at the same time falls under the considerably high descriptive levels identified in the deep integration of electronic payment systems of sari-sari stores.

Moreover, it shows that the transaction speed obtained the highest mean value among the three indicators, with a mean of 3.47, which is described as very high with a standard deviation of 0.409. This is seen particularly in the item where sari-sari store owners become more advantageous in their business. Sari-sari store owners who

accept electronic payments can process transactions quickly, reducing customer wait times and improving overall efficiency. The results imply that adapting electronic payments improves customer satisfaction and increases the profitability of sari-sari stores.

According to Scott and Joanna (2015), ECB study found that 69% of consumers prefer faster payment deductions, indicating a strong demand for speed in electronic transactions. The Bank for International Settlements reported that modern systems enable funds to be available to payees in under 15 seconds for mobile payments, reflecting the rapid evolution of payment technologies (Morten et al., 2017).

This is followed by technological integration with a mean value of 3.40 and standard deviation of 0.338, descriptively interpreted as very high. This means that electronic payments technological integration on sari-sari store owners are always demonstrated. This is observed mainly in the items where sari-sari store owners are effectively integrating technology into their operations. This likely includes the adoption of digital payment systems, which are essential for streamlining transactions and enhancing customer interactions. The results imply that these stores are not only adopting electronic payments but are also leveraging various digital tools to improve their overall business processes.

This is supported by Mochi's study (2024), indicates that digital payments are projected to comprise 67% of total retail transactions in the Philippines by 2024. The study emphasizes that small businesses are becoming champions of digitization, which aligns with the high technological integration score observed among sari-sari store owners. Additionally, an article discussing the role of technology in transforming Philippine SMEs outlines how technological integration enhances operational efficiency and customer engagement by Evangelista (2023), highlights that SMEs adopting technology report significant improvements in productivity and cost reduction, which are critical for small businesses like sari-sari stores looking to thrive in a competitive environment.

However, the level of electronic payments in terms of operational efficiency had the lowest mean value among the three indicators, at 3.38 and standard deviation of 0.439, which is still described as very high. This means that electronic payments operational efficiency on sari-sari store owners are always demonstrated. This implies that while sari-sari store owners are experiencing significant improvements in their operational processes, the lower mean value might indicate that they may not have fully optimized all aspects of their operations to utilize these technologies effectively. With this, the slightly lower mean for operational efficiency suggests there are still opportunities for improvement in fully leveraging technology to enhance overall business performance.

Studies have discussed how digital payment systems enhance operational efficiency among small and medium enterprises (SMEs) in developing countries. It highlights that businesses using electronic payments experience faster transaction times and improved cash flow management, which directly contributes to their operational efficiency (Asian Development Bank, 2020). Electronic payment systems lead to increased operational efficiency in retail settings based on the research published in the Journal of Retailing and Consumer Services. The findings indicate that retailers implementing these technologies report significant improvements in service delivery and cost management, underscoring the positive impact on overall business performance. (Kumar et al., 2019).

CONCLUSION AND RECOMMENDATIONS

This chapter presents the conclusions drawn from the study's findings and provides recommendations to improve the adoption of electronic payments among sari-sari store owners.

This study aimed to determine the factors influencing sari-sari store owners in adopting electronic payments at Barangay Bucana, Davao City. Specifically, it examined the extent of electronic payment adoption and its relationship with operational efficiency, transaction speed, technological integration, and demographic profiles. The study employed a descriptive quantitative research design, involving 30 sari-sari store owners selected through simple random sampling. A researcher-made survey questionnaire was used to collect data, ensuring strict compliance with ethical considerations. The data were analyzed using mean and Pearson's correlation.

The findings revealed that most respondents were over 40 years old, indicating that older sari-sari store owners

are more likely to adopt electronic payments. The majority were female, suggesting that electronic payment adoption in the area may align with common practices among female store owners. In terms of educational attainment, most respondents had reached the college level, implying that higher education may facilitate their ability to adopt and use electronic payment systems. The majority of respondents reported a monthly income between ₱10,000 and ₱50,000, indicating a moderate level of financial stability among sari-sari store owners in Barangay Bucana. Additionally, GCash emerged as the most widely used electronic payment platform, followed by PayMaya and GrabPay, suggesting that accessibility and convenience play significant roles in platform preference.

The study also found that operational efficiency, transaction speed, and technological integration were highly manifested among sari-sari store owners, indicating that they have effectively streamlined business operations and incorporated digital tools. Moreover, the results showed a strong influence of these factors on the adoption of electronic payments. This suggests that when store owners consistently demonstrate efficiency, speed, and technological integration, their likelihood of adopting electronic payment systems significantly increases.

CONCLUSION

The study explored the factors influencing sari-sari store owners in adopting electronic payments at Barangay Bucana, Davao City, focusing on operational efficiency, transaction speed, technological integration, and demographic profiles. The findings revealed that most store owners were over 40 years old, female, and college-educated, with moderate monthly incomes ranging from ₱10,000 to ₱50,000. GCash was identified as the most preferred electronic payment platform, followed by PayMaya and GrabPay. The study also found that operational efficiency, transaction speed, and technological integration were highly manifested among store owners, significantly enhancing the adoption of electronic payments. These findings emphasize the importance of streamlined business operations and digital tools in increasing the adoption of electronic payments among small businesses.

RECOMMENDATIONS

To enhance the adoption of electronic payments, it is recommended that financial literacy programs be implemented specifically for sari-sari store owners, equipping them with the knowledge to manage their earnings effectively and reinvest in technology that supports digital transactions. Training programs on advanced digital tools and electronic payment systems should be provided to improve operational efficiency, transaction speed, and seamless technological integration. While small transactions using platforms like GCash are suitable for sari-sari stores, transaction limits should be established for cross-platform payments to manage fees effectively. Encouraging customers to use electronic payments for convenience is also essential, while store owners should be aware of transaction limits to ensure smooth operations.

Future studies should adopt a mixed-method approach to provide both quantitative data on the extent of electronic payment adoption and qualitative insights into the challenges and motivations of store owners. Additionally, a longitudinal research design is recommended to track changes in electronic payment adoption over time, allowing for a deeper understanding of its long-term effects on business operations and profitability.

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