

Factors Influencing Cashless Payment Adoption of Microenterprises in Baguio City

Jeanette Y. Bal-iyang¹

¹Master in Business Administration University of the Cordilleras Baguio City, Philippines, 2600

Publication Date: 2025/03/11

Abstract: This study was conducted to investigate the factors influencing the cashless payment adoption among microenterprises in Baguio City to understand the current status of microenterprises, the level of influence of factors such as Perceived Ease of Use, Perceived Usefulness, and Perceived Trust on adoption decisions, and identifying the challenges faced by these microenterprises. A mixed method approach was used, with quantitative data gathered through surveys while qualitative was applied to thematic analysis. The data analysis included descriptive statistics and the Kruskal-Wallis H Test with Dunn's Test. The findings reveal that PEOU and PU greatly influence the decision to adopt cashless payments while PT is important for ensuring successful implementation. Microenterprises show a significant level of awareness and willingness to adopt cashless payments, despite this they face challenges such as technical errors and trust issues. The study concludes that the capital of microenterprises ranges from PHP 100,000 to PHP 500,000, with mobile payments and debit/credit cards being the most convenient and widely used methods. To overcome these challenges, the study recommends providing training and support to microenterprises, improving cashless payment security, and working with local government agencies and policymakers to create policies promoting cashless payments.

Keywords: Microenterprises, Cashless Payment, Perceived Ease of use, Perceived Usefulness, Perceived Trust

How to Cite: Jeanette Y. Bal-iyang. (2025). Factors Influencing Cashless Payment Adoption of Microenterprises in Baguio City. *International Journal of Innovative Science and Research Technology*, 10(2), 1905-1913.
<https://doi.org/10.5281/zenodo.14979629>

I. INTRODUCTION

Microenterprises are small businesses with less than 10 employees and with limited assets. In the Philippines, these small businesses are really important because they help the local economy by providing jobs and supporting other local businesses (Yabut, H., n.d.). Think about how people pay for things they bought in your store. Traditionally, most payments are made with cash. But with technology advancing there is a push towards using digital methods like paying with a mobile phone or a card and this is what we call "Cashless Payments" that make transactions quicker, safer, and easier to track (Dotong, E., 2019). However, not everyone is using these cashless methods yet, and there are a few reasons for this like not everyone has good internet connections (World Bank, 2020) or some people don't trust digital payments (Özkan, Bindusara and Hackney, 2010). But during the Covid-19 pandemic it became clear that cashless payments are really useful because it reduced the need for physical contact which is safer for everyone (Regalado, F., 2020).

In Baguio City, the Government and other organizations are trying to encourage more businesses to adopt cashless payments. They even have programs like "Paleng-QR PH" program that make it easier for market vendors to accept payments through QR code which you can scan with your phone to pay (Domingo, R., 2022). Despite governmental initiatives the microenterprises in Baguio City face significant challenges in adopting cashless payments.

This study looks at why some businesses are hesitant to adopt cashless payment and what can be done to encourage them. By understanding these reasons we can help small business grow and make the economy stronger, especially as the world moves more towards digital solutions (Ozkan et al., 2010).

The researcher used the Technology Acceptance Model (TAM) as the basis for conducting the research. This includes understanding the extent to which these microenterprises have integrated cashless payment into their transactions. TAM is a theoretical framework that explains how users come to accept and use technology (Davis, F. D., 1989).

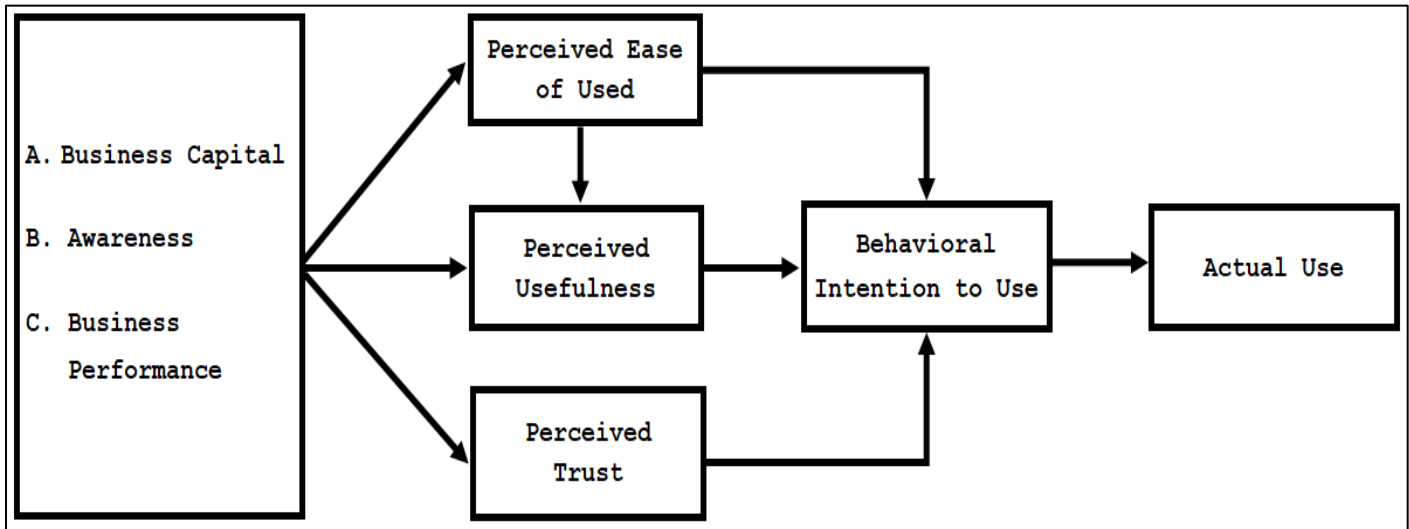


Fig 1 The Technology Acceptance Model (TAM)

➤ Statement of the Problems/Objectives

This study aims to investigate the cashless payment adoption of microenterprises in Baguio City. Specifically, it sought to answer the following Questions:

- What is the current status of microenterprises in Baguio City according to:
 - ✓ Business Capital;
 - ✓ Awareness; and
 - ✓ Business Performance?
- What is the level of influence of the following factors to owners of microenterprises in Baguio City decision to adopt cashless payment transaction in terms of:
 - ✓ Perceived Ease of Use;
 - ✓ Perceived Usefulness; and
 - ✓ Perceived Trust?
- Is there a significant difference on the level of influence of the factors to owners of microenterprises in Baguio City decision to adopt cashless payment transactions if grouped according to:
 - ✓ Business Capital;
 - ✓ Awareness; and
 - ✓ Business Performance?

Ha = There is a significant difference on the level of influence of the factors on owners of microenterprises of Baguio City decision to adopt cashless payment transactions between Business Capital, Awareness, Business Performance, and PEOU, PU, and PT

- What are the problems/challenges the owners of microenterprises in Baguio City faces that hinder them to implement cashless payment?

II. DESIGN AND METHODOLOGY

The methodology presents the design that will be used in the study, the population and locale of the study, the data

gathering tool, the data gathering procedure, and the treatment of data.

➤ Research Design and Methodology

The researcher used mixed method combining quantitative and qualitative approach to explore the relationship between cashless payments and various factors, and to understand how these factors influence payment options. By this, for example, interviews tend to be more qualitative and surveys tend to be more quantitative (Creswell & Plano Clark, 2007).

➤ Population and Locale of the Study

The researcher used purposive sampling a non-probability sample in which the participants are chosen based on specific characteristics of the population and the objectives of the study (Crossman, A., 2022) to select participants based on their willingness to partake in the study. The participants are the microenterprises owners or the assistants/associates who oversee the day-to-day operations of the business within Baguio Public Market and Mines View Park involving those who are using cashless payment methods like Debit/Credit card, Mobile Payment, Online Banking, and other payments that don't use paper money and coins. They were chosen by the researcher since they are the ones who fit the study in a relatively small sample with a high concentration of microenterprises and wide range of goods and services, giving a comprehensive understanding of the adoption of cashless payment in these specific marketplaces.

➤ Data Gathering Tools

To gather data for the study survey questionnaire was used based on the research objectives and conceptual framework. A survey questionnaire consists of a structured set of questions carefully designed to be answered by a group of people designed to collect relevant facts and information (Preston V., 2009). The research instrument was divided into three parts. The first part focused on the current status of microenterprises in Baguio City, specifically in the Baguio Public Market and Mines View Park. The second part focused on the respondents' level of acceptance of the

Technology Acceptance Model's factors (TAM), and the third part highlighted problems and challenges faced by owners of microenterprises in Baguio City that hinder them from implementing cashless payment.

➤ *Data Gathering Procedure*

Prior to conducting the study, the questionnaire went through pilot testing with a small group of respondents to identify any issues with the questions. Afterwards, the researcher wrote a request letter addressed to the Permits and Licensing Division of Baguio City together with the attached approved questionnaire to obtain the lists of registered microenterprises in the Baguio Public Market and Mines View Park for the year 2023. Moreover, a reliability analysis using Cronbach's Alpha of internal consistency was conducted to a total of 15 items in the survey to determine the strength of the questionnaire for the sample, and the result shows a high level of internal consistency with a value of 0.908 which means the survey is very reliable.

The data collected for this study were analyzed using a combination of quantitative and qualitative methods. Descriptive statistics were calculated for Likert scale items to understand the distribution of responses, from 1 to 4, with 1 indicating "Strongly Disagree" and 4 indicating "Strongly Agree", including the mean, median, and standard deviation.

Qualitative data, such as an interview response can be gathered through exploratory or descriptive survey questions, then transcribed and coded using thematic analysis. This analysis identified common themes and patterns related to the factors influencing the adoption of cashless payment among microenterprises in Baguio City.

The findings from both the quantitative and qualitative analysis were integrated to provide a comprehensive understanding of the factors influencing adoption of cashless payment. The quantitative findings highlighted specific perceptions and attitudes of microenterprises towards cashless payment adoption, while the qualitative findings provided deeper insights into the underlying reasons and motivations behind these perceptions. This integrated approach allowed for a nuanced understanding of the factors influencing cashless payment adoption by microenterprises in Baguio City, providing valuable insights for policymakers and stakeholders.

➤ *Treatment of Data*

To answer the first question, the researcher utilized descriptive statistical methods to categorize the data. The techniques employed included mean, median, and mode to illustrate the distribution for each component to analyze current status of microenterprises in Baguio City.

To answer the second question in measuring the level of influence of factors on the adoption of cashless payment transactions among microenterprise owners in Baguio City, a detailed questionnaire was created. The researcher conducted a descriptive statistical method to assess the level of influence of Perceived Ease of Use, Perceived Usefulness, and Perceived Trust by calculating the mean and standard deviation for each item on the Likert scale. To ensure that the

items are actually measuring the constructs they are supposed to measure we used exploratory factor analysis.

To answer the third question, the data was grouped into categories based on predetermined criteria like business capital, awareness and business performance. To check for differences in mean scores of perceived ease of use, usefulness and trust between groups, we employed statistical tests such as Kruskal-Wallis H Test. This was supported by the test of normality that resulted in $P > 0.001$ showing that the data is not normally distributed. The Kruskal-Wallis H Test, a statistical test used to determine whether there are significant differences between the medians of three or more independent groups. It is a non-parametric test (McClengon, E., 2023). The researcher also used Dunn's Test to conduct a post hoc comparison of the significant results from the Kruskal-Wallis H Test to identify which groups differ (Dinno, A., 2015).

To answer the fourth question, thematic analysis was used in an essay written by participants to identify challenges that hinders the implementation of cashless payment. Then, the researcher discussed these challenges again and looked for potential solutions or responses.

III. PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

This confers the results and discussion, particularly on the analysis of the factors influencing the adoption of cashless payment by microenterprises in Baguio City. It examines their current status with respect to business capital, awareness, and business performance. Thereafter, it explores the level of influence of perceived ease of use, perceived usefulness, and perceived trust on the decision to adopt cashless payment. Additionally, this chapter investigates whether there are significant differences that exist in these levels of influences when microenterprise owners are grouped according to business capital, awareness, and business performance. Moreover, it identifies the challenges and problems faced by microenterprise owners that hinder them from implementing cashless payment. Furthermore, it comprises the discussion, interpretations, and corroborations of the findings. This also provides comprehensions and recommendations for improving the adoption of cashless payments in the context of microenterprises.

➤ *Current Status of Microenterprises in Baguio City*

- **Business Capital:** In terms of business capital, it shows that most microenterprise owners have a capital ranging from PHP 100,000.00 to PHP 500,000.00 ($M = 2.0255$).
- **Awareness:** Based on the results there is a high level of Familiarity with cashless payment methods with (Mean: 1.3758), and this suggests that most business and consumers are familiar with and frequently use cashless payments. Similarly, based on the results there is a high level of Satisfaction with cashless payment methods they are currently offering with (Mean: 1.3503), and this suggests that respondents are generally satisfied with the cashless payment methods they currently use and have a positive attitude towards them. Meanwhile, based on the

results the respondents are Very Likely to adopt more cashless payment options in the next year with (MEAN: 1.0382).

- **Business Performance:** Based on the results on the Cash Flow respondents generally view their cash flow positively with (Mean: 1.3758). Also, Based on the results on the Debt respondents have an even more positive view of their debt management with (Mean: 2.5732). Overall, respondents maintain a positive outlook on both their cash flow and debt situations.

➤ *Level of Influence of the Following Factors on Owners of Microenterprises in Baguio City's Decision to Adopt Cashless Payment Transaction*

- **Perceived Ease of Use:** Based on the total in PEOU the respondents STRONGLY AGREE with Using cashless payments in my business would provide flexibility in interacting with customers as the Highest Score: Flexibility (Mean: 3.6115), and this suggests that microenterprises value how easy and adaptable these systems are for selling products. The strong agreement is also reflected in Carter and Belanger's (2005) findings from e-government services and also Pavlou's (2003) findings on online shopping flexibility and convenience in user adoption.

While Cashless payment would be easy to use in selling products as the Lowest Score: Ease of use in selling products (Mean: 3.4650), and this suggests that cashless payments are generally seen as easy to use, but there's room for improvement. This is reflected in the studies of Riquelme and Rios (2010), where ease of use is a critical factor for the adoption of mobile services, Park (2009), where users are more likely to adopt cashless payments and if they find it easy to use on e-learning platforms, and Weijters et. al. (2007) where customer-facing technology needs to be user friendly to encourage adoption. Overall, respondents have a strong and positive view of cashless payments.

- **Perceived Usefulness:** Based on the total in PU the respondents STRONGLY AGREE with Cashless payment would improve my business performance when customers purchase goods as the Highest Score: Improvement in business performance (Mean: 3.6624), and this suggests that microenterprises see cashless payments as very useful and beneficial for their businesses. This is supported by the study of Riquelme & Rios (2010) on mobile banking services, and also Gangwar et al. (2015) study on cloud computing services. In addition, Pavlou (2003) showed that the ease of completing online transactions is considerably due to the increase in customer satisfaction and repeat purchases.

While Cashless payment enhances my effectiveness in selling goods as the Lowest Score: Effectiveness in selling goods (Mean: 3.5350), and this suggests that cashless payments help improve sales processes, making transactions smoother and more efficient. This was highlighted by Weijters et al. (2007) on self-service checkout systems often featuring cashless payments enabling customers to complete transactions quickly and effectively. Similarly, Taneja &

Toombs (2014) also noted that social media marketing when incorporated with cashless payments will substantially improve sales efficiency and customer interaction. Overall, respondents think cashless payments are really useful and beneficial.

- **Perceived Trust:** Based on the total in PT the respondents AGREE with I trust in the cashless payment system's ability to facilitate timely and reliable transactions for my business needs as the Highest Score: Confidence in timely and reliable transactions (Mean: 2.9172), and this suggests that microenterprises have a positive but cautious approach to trusting cashless payments. It's more of a moderate level of trust than a very strong one. This is reflected in the studies of Özkan et al. (2010) highlighting the importance of perceived trust and security in the adoption of e-payment systems.

While I have trust in the reliability of the cashless payment service provider to ensure the security and integrity of my business transactions as the Lowest Score: Confidence in security measures and confidentiality (Mean: 2.8408). This was emphasized by the findings of Riquelme & Rios (2010) on the importance of trust in mobile banking services where the service provider's security and reliability measures are pivotal for adoption, and also on the study of Shinozaki & Rao (2021), highlighting the importance of security and reliability of cashless payment systems during the pandemic. A similar study by Nair (2016) discusses the challenges of cashless transactions in the Philippines particularly, the reliability of service providers. The lowest score suggests that there are still some concerns about the reliability of cashless payment service providers, especially when it comes to security and confidentiality. Overall, respondents have a positive view of cashless payments, but they don't trust them completely. They are cautious rather than fully confident. This means they see some benefits, but they're still careful about it.

➤ *Key Drivers of Cashless Payment Adoption*

- **According to Business Capital:** In summary, based on the statistical tests conducted, we don't find substantial differences in perceived ease of use, usefulness, or trust across various business capital categories, and this suggests that Business Capital has no effect on the factors mentioned. Dotong (2019), in the analysis of consumer satisfaction in the supermarkets of the Philippines, indicates a positive perception of a cashless payment system regardless of the business's financial capacity. Similar study of Shinozaki and Rao (2021), on the impact of COVID-19 on MSME show that there is a similar perception of cashless payment irrespective of business size.
- **According to Awareness:** In summary, the results suggest that perceived ease of use and perceived usefulness significantly impact acceptance of cashless payments, while perceived trust does not. According to Zoleta (2021), user familiarity with mobile wallet apps can significantly increase adoption. Nair (2016) and Shinozaki and Rao (2021) emphasized the need to

increase awareness and knowledge to improve the user experience.

For PEOU, familiarity with cashless payment options significantly impacts acceptance. This result is also similar to a study on mobile banking services (Riquelme & Rios, 2010), E-government services adoption (Carter & Bélanger, 2005), E-learning platform adoption (Park, S. Y., 2009), and online shopping adoption (Pavlou, P. A., 2003). It all leads to the fact that being familiar with a specific technology or service is an important factor in influencing PEOU, with higher levels of familiarity correlating to a positive PEOU.

In terms of familiarity and PU with cashless payment options significantly impacts acceptance. Dotong (2019) also highlighted the importance of awareness in encouraging acceptance rates. Similar situations in Online Learning systems where a significant difference between users who are not familiar and those very familiar, they found that those who are familiar with online learning systems are more likely to find them more useful (Lee et al., 2009). Similar studies are observed as well in E-Health Services (Or et al., 2009),

Cloud Computing Services (Gangwar et al., 2015), and Social Media Marketing (Taneja & Toombs, 2014). Therefore, Familiarity with Cashless Payments correlates with a higher PU.

Meanwhile, for PU and Likelihood of increased acceptance of cashless payments significantly impacts acceptance. Some studies explore the likelihood of adopting cashless payment through its usefulness, Khando et al. (2023) in their Swedish study that convenience, cost, trust, risks, norms, and customer preference highlight that PU is a significant factor in adoption decisions. Raj et al. (2024) examined variables that affect the adoption of cashless payment transactions during COVID-19 showing that PU is an important predictor of consumer's intention to use cashless payments. This shows that once microenterprises are somewhat likely to adopt cashless payment, it must be maintained to make sure that they are constantly using it. Awareness also does not impact PT. Still, it must not be ignored because cashless payment services' reliability and security can improve trust over time.

Table 1 Influence of Awareness on PEOU, PU, and PT in Cashless Payments

TAM	Awareness	Sig.	Decision
PEOU	Familiarity with cashless payment options	.000	Reject the null hypothesis
	Satisfaction with cashless payment options currently offer	.176	Retain the null hypothesis
	Likeliness to increased acceptance of cashless payments	.054	Retain the null hypothesis
PU	Familiarity with cashless payment options	.003	Reject the null Hypothesis
	Satisfaction with cashless payment options currently offer	.174	Retain the null hypothesis
	Likeliness to increased acceptance of cashless payments	.028	Reject the null Hypothesis
PT	Familiarity with cashless payment options	.519	Retain the null Hypothesis
	Satisfaction with cashless payment options currently offer	.901	Retain the null hypothesis
	Likeliness to increased acceptance of cashless payments	.488	Retain the null hypothesis

- According to Business Performance: Cash Flow- The result indicates that microenterprises with different levels of cash flow PEOU and PU differently. Cash flow may influence adoption of cashless payment systems such that microenterprises with better cash flow may see cashless payment easier to use and more useful given that they have better access to money and less concerns about any constraints it may give. This makes it easier to use cashless payment systems. This finding also with Khando et. al (2023) saw that PU is important in adoption decisions.

Post hoc comparisons using Dunn's method with a Bonferroni Correction for multiple tests indicate that there is a significant difference between Good and Excellent for Business Performance in terms of Cash Flow in Perceived

Ease of Use ($p = 0.006$, adjusted $p=0.018$). However, there was no significant difference between Poor and Good ($p=0.917$, adjusted $p=1$) and Poor and Excellent ($p=0.432$, adjusted $p=1$). The comparison further strengthens our finding that usually those who have access to financial resources can easily adapt to cashless payment systems.

Debt- The lack of significance in PEOU, PU, and PT shows that while cash flow is important, the level of debt-related concerns don't directly affect PEOU, PU, and PT. For example, research on mobile payments (Kim et al., 2010) shows that benefits and ease of use are crucial, while financial constraints do not always impact trust in technology. This highlights the consideration of financial stability when checking the adoption of cashless payment systems.

Table 2 Influence of Business Performance on PEOU, PU, and PT in Cashless Payments

TAM	Business Performance	Sig.	Decision
PEOU	The distribution of PEOU is the same across categories of Cash Flow	.022	Reject the null hypothesis
	The distribution of PEOU is the same across categories of Debt	.151	Retain the null hypothesis
PU	The distribution of PU is the same across categories of Cash Flow	.043	Reject the null Hypothesis
	The distribution of PU is the same across categories of Debt	.297	Retain the null hypothesis
PT	The distribution of PT is the same across categories of Cash Flow	.125	Retain the null Hypothesis
	The distribution of PT is the same across categories of Debt	.517	Retain the null hypothesis

➤ *Problems/challenges the owners of microenterprises in Baguio City faces that hinder them to implement cashless payment*

- In Baguio City, microenterprises have highlighted three main issues: Poor Connectivity and Network Problems

Most of the respondents have highlighted problems with internet connectivity, whether it's slow data signals, no signal or poor network connections. These setbacks have considerably hindered their ability to complete cashless payment transactions without interruptions resulting in lack of trust in cashless payment platforms. When transactions fail or customers experience delays, it not only affects the businesses but also their ability to meet customer expectations leading to lost sales and customer dissatisfaction, which influence the general acceptance of cashless payment methods (Tay et al., 2022). Resolving these problems is important in building trust and encouraging wider adoption of cashless payment among microenterprises in Baguio City. In the Philippines, microenterprises view cashless payment systems as less trustworthy than the traditional cash transactions, making it more difficult to encourage people to use cashless transactions (ADB, 2017). According to the report of International Telecommunication Union (ITU) on the issues related to internet connectivity being a significant barrier to the adoption of cashless payments indicating that nearly half of the world's population doesn't have access on reliable internet, which is the most essential factor for trouble-free online transactions (ITU, 2021).

➤ *System Maintenance and Downtime*

Another major issue is system maintenance and downtime, many respondents mentioned both scheduled and unscheduled maintenance that made cashless payment services unavailable and offline, causing transaction errors especially when customers depends solely on cashless payments. Interruptions caused by system maintenance are seen as one of the important aspects that influence the reliability of the cashless payment systems (GSMA, 2021). A report from the Deloitte Center for Financial Services highlights the importance of well-built infrastructure that helps lessen service interruptions. These interruptions extend waiting times for transactions, resulting in downtime and disrupting the ability of businesses to process payments, especially when customers have no cash on hand (Deloitte, n.d.). This issue is heightened by poor communication between microenterprises and service providers that causes customer dissatisfaction and distrust of cashless payments (ASEAN, 2020).

➤ *Transaction Issues and Delays*

Many respondents highlighted issues with delayed transaction processing and confirmation, and inconsistencies in transaction records, wherein transactions are not promptly updated in the system of point-of-sale (POS) or online payment apps such as GCash and Maya. There were also instances where cash was deducted from the customer's account but did not immediately reflect in the system. The

failure to receive confirmation compelled the need to confirm transaction details to avoid mistakes and potential errors. Some expressed concerns with regard to receiving fake proof of payment because they failed to receive confirmation. These issues are attributed to system errors, technical glitches, and processing delays that is causing inconvenience and reducing user confidence. Similarly, some studies across Asia have observed problems and challenges regarding the adoption of cashless payment. According to Susanto et al. (2022), they emphasize the importance of addressing these challenges as system errors and processing delays have been major problems to the adoption of digital payments. Doing so is important for increasing the reliability and trust of customer in mobile payment platforms.

IV. CONCLUSIONS AND RECCOMENDATIONS

➤ *Conclusions*

Based on the findings, the following are the conclusions of this research study:

- Majority of the microenterprises owners have a capital ranging from PHP 100,000 to PHP 500,000.
- The most commonly used cashless payment system are Mobile payments (such as Gcash or PayMaya) and debit/credit card and the main reason for its widespread use is the convenience it offers which highlights the importance of ease of use.
- The current status of cashless payment adoption among microenterprises in Baguio City is influenced by factors such as PEOU, PU, and PT in the cashless payment systems. With this regard, business owners are more likely to adopt these systems if they find them helpful and easy to use for their business operations while there is a notable increase, there are still disadvantages.
- The microenterprises face several issues in the adoption of cashless payments, such as poor internet/data connections, down systems, technical errors, and delays. Addressing these problems may increase the acceptance of cashless payments.

➤ *Recommendations*

Based on the findings, the following are recommended:

- Provide training and programs like seminars, workshops, tutorials, and also offer accessible customer support to immediately resolve any issues or concerns. These will help businesses learn and improve their cashless payment systems.
- Help service providers resolve issues/problems such as poor internet/data connections, system maintenance and other potential issues with cashless payment by supporting them in creating solutions to improve cashless payment systems by reporting issues, recommending solutions or giving feedback.
- Strengthen the security of cashless payment systems and keep businesses updated when there are upgrades on the security measures to ensure their transactions are safe.

- Work together with the local government agencies and policymakers to create policies and regulations that promote cashless payments among businesses and consumers by providing incentives such as faster transactions, tax deductions or discounts for businesses using cashless payments in their transactions.

ACKNOWLEDGMENT

➤ *The Researcher Would Like to Express Her Sincerest Gratitude to the Following:*

Her adviser, for his invaluable time and effort in guiding the researcher through the entire research process by imparting his wisdom and discernment to keep the researcher on track with the research goals and objectives. This study would not have been possible without his kind support, insightful guidance, immediate feedback, and structured directions throughout the research process.

Her panel members, for sparing their time and effort, for sharing their invaluable knowledge, comments, and recommendations for the improvement of the study.

For her parents and siblings, and friends for their steadfast presence and unwavering support in any journey she would take.

Her participants, for agreeing to partake in this study that helped her accomplish the necessary data needed to complete the research. Without their invaluable contribution this study would have been unattainable.

Permits and Licensing Division of Baguio City, who provides the assistance and information needed for the study.

For those whom the researcher was not able to mention, their kindness and encouragement will always be appreciated.

Above all, the Heavenly Creator, for His amazing love and guidance that He so graciously lavished upon her throughout the preparation of this work. He grants her mercy that despite of downturns he never let her give up on this thesis study.

REFERENCES

- [1]. ASEAN. (2020). Adopted Policy Guideline on Digitalisation of ASEAN Micro-Enterprises. Retrieved from <https://asean.org/wp-content/uploads/2020/12/Adopted-Policy-Guideline-on-Digitalisation-of-ASEAN-Micro-Enterprises.pdf>
- [2]. Asian Development Bank (ADB). (2017). Accelerating Financial Inclusion in Southeast Asia with Digital Finance. Retrieved from <https://www.adb.org/publications/financial-inclusion-south-east-asia-digital-finance>
- [3]. Bailey, A. A., Pentina, I., Mishra, A. S., & Ben Mimoun, M. S. (2020). Exploring factors influencing US millennial consumers' use of tap-and-go payment technology. *The International Review of Retail, Distribution and Consumer Research*, 30(2), 143-163.
- [4]. Burnaz, S. & Aydin, G. (2016). Adoption of mobile payment systems: a study on mobile wallets. *Pressacademia*. 5. 73-73. 10.17261/Pressacademia.2016116555.
- [5]. Cameron, A. (2021). What Is Capital in Business, and How Does it Work? Retrieved from <https://www.patriotsoftware.com/blog/accounting/what-is-capital-your-small-business-accounting-guide/>.
- [6]. Carter, L., & Bélanger, F. (2005). The utilization of e-government services: Citizen trust, innovation and acceptance factors. *Information Systems Journal*, 15(1), 5-25.
- [7]. Chandra, S., Srivastava, S. C., & Theng, Y.-L. (2010). Evaluating the role of trust in consumer adoption of mobile payment systems: An empirical analysis. *Communications of the Association for Information Systems*, 27(1), 561-588.
- [8]. City Government of Baguio. (n.d.). Baguio Legislators take online, cashless transactions up a notch. <https://new.baguio.gov.ph/news/baguio-legislators-take-online-cashless-transactions-up-a-notch>.
- [9]. Creswell, J. W. & Plano Clark, V. L. (2007). Designing and conducting mixed methods research. Retrieved from https://www.ucg.ac.me/skladiste/blog_609332/objava_105202/ajlovi/Creswell.pdf.
- [10]. Crossman, A. (2020). Understanding Purposive Sampling. Retrieved from <https://www.thoughtco.com/purposive-sampling-3026727>.
- [11]. Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly* 13(3):319—339. 10.2307/249008.
- [12]. Deloitte. (n.d.). Digital transformation in financial services. Retrieved from <https://www2.deloitte.com/global/en/pages/financial-services/articles/accelerating-digital-transformation-financial-services.html>
- [13]. Dinno, A. (2015). Nonparametric Pairwise Multiple Comparisons in Independent Groups using Dunn's Test. <https://doi.org/10.1177/1536867X15015001>
- [14]. Domingo, R. W. (2022). Baguio market vendors going cashless. <https://business.inquirer.net/357732/baguio-vendors-puv-drivers-going-cashless>.
- [15]. Dotong, E. (2019). Cashing in on Cashless Commerce: Analyzing the Cashless Transaction in the Philippine Supermarket Through Consumer Satisfaction. *International Journal of Business Research and Development*. 1. 19-31.
- [16]. Gafoor, K. (2012). Considerations in measurement of awareness. 10.13140/2.1.2109.2643.
- [17]. Gangwar, H., Date, H., & Ramaswamy, R. (2015). Understanding determinants of cloud computing adoption using an integrated TAM-TOE model. *Journal of Enterprise Information Management*, 28(1), 107-130.

- [18]. Gao, L., Waechter, K. A., & Bai, X. (2015). Understanding consumers' continuance intention towards mobile purchase: A theoretical framework and empirical study – A case of China. *Computers in Human Behavior*, 53, 249-262.
- [19]. Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping: An integrated model. *MIS Quarterly*, 27(1), 51-90.
- [20]. Groupe Speciale Mobile Association (GSMA). (2021). Global Mobile Economy Report. Retrieved from https://www.gsma.com/solutions-and-impact/connectivity-for-good/mobile-economy/wp-content/uploads/2021/07/GSMA_MobileEconomy2021_3.pdf
- [21]. Hayashi, F. & Klee, E. (2003). Technology Adoption and Consumer Payments: Evidence from Survey Data. Review of Network Economics, 2(2). <https://doi.org/10.2202/1446-9022.1025>
- [22]. International Telecommunication Union (ITU). (2021). Measuring Digital Development: Facts and Figures 2021. Retrieved from <https://www.itu.int/en/ITU-D/Statistics/Documents/facts/FactsFigures2021.pdf>
- [23]. Kanji, G. K. (2012). *Measuring Business Excellence*. Taylor & Francis. p.2.
- [24]. Khando, K., Islam, M.S., Gao, S. (2023). Factors Influencing Merchants' Adoption of Cashless Payment Systems in Sweden.
- [25]. Koo, C., & Wati, Y. (2010). Toward an Understanding of the Mediating Role of "Trust" in Mobile Banking Service: An Empirical Test of Indonesia Case. *J. Univers. Comput. Sci.*, 16(13), 1801-1824.
- [26]. Lai, P. C. (2017). The Literature Review of Technology Adoption Models and Theories for the Novelty Technology. *Journal of Information Systems and Technology Management*. 14. 21-38. 10.4301/s1807-17752017000100002.
- [27]. Lee, B. C., Yoon, J. O., & Lee, I. (2009). Learners' acceptance of e-learning in South Korea: Theories and results. *Computers & Education*, 53(4), 1320-1329.
- [28]. Lee, Y. H. (2009). A study on the influence of trust in the adoption of mobile banking. *Service Business*, 3(2), 187-204.
- [29]. Liao, Z., & Cheung, M. T. (2002). Internet-based e-banking and consumer attitudes: An empirical study. *Information & Management*, 39(4), 283-295.
- [30]. Janssen, M., et al. New Sustainable Horizons in Artificial Intelligence and Digital Solutions. *I3E 2023. Lecture Notes in Computer Science*, vol 14316. Springer, Cham. https://doi.org/10.1007/978-3-031-50040-4_27
- [31]. Kim, C., Mirusmonov, M., & Lee, I. (2010). An empirical examination of factors influencing the intention to use mobile payment. *Computers in Human Behavior*, 26(3), 310-322.
- [32]. Kaur, P., Dhir, A., Bodhi, R., Singh, T., & Almotairi, M. (2020). Why do people use and recommend m-wallets?. *Journal of Retailing and Consumer Services*, 56, 102091.
- [33]. Liébana-Cabanillas, F., Muñoz-Leiva, F., & Sánchez-Fernández, J. (2015). Behavioral Model of Younger Users in M-Payment Systems. *Journal of Organizational Computing and Electronic Commerce*. 25. 150423132058001. 10.1080/10919392.2015.1033947.
- [34]. Liao, S. and Yang, L. (2020). Mobile payment and online to offline retail business models. <https://www.sciencedirect.com/science/article/abs/pii/S0969698920307220>.
- [35]. Lopez, M. L. (2018). BSP check shows most Filipinos unbanked. *Business World Online*. <https://www.bworldonline.com/bspccheck-shows-most-filipinos-unbanked/>.
- [36]. Macharia, PhD, J. & Nyakwende, E. (2010). The Influence of E-mail on Students' Learning in Higher Education: An Extension to the Technology Acceptance Model (TAM). *Asian Journal of Information Technology*. 9. 123-132. 10.3923/ajit.2010.123.132.
- [37]. Mallat, N. (2007). Exploring consumer adoption of mobile payments—A qualitative study. *The Journal of Strategic Information Systems*, 16(4), 413-432.
- [38]. McClengan, E. (2023). The Kruskal-Wallis Test <https://www.technologynetworks.com/informatics/articles/mann-whitney-u-test-assumptions-and-example-363425>
- [39]. Moore, G. & Benbasat, I. (1991). Development of an Instrument to Measure the Perceptions of Adopting an Information Technology Innovation," *Information Systems Research*, 2,3, pp. 192-222. <https://doi.org/10.1287/isre.2.3.192>.
- [40]. Molla, A. & Licker, P. (2001). E-Commerce Systems Success: An Attempt to Extend and Respecify the Delone and McClean Model of IS Success. *Journal Electronic Commerce Research* 2. 131-141.
- [41]. Nachar, N. (2008). The Mann-Whitney U: A Test for Assessing Whether Two Independent Samples Come from the Same Distribution. *Tutorials in Quantitative Methods for Psychology*, 4(1), 13-20.
- [42]. Nair, V. P. (2016). Eschewing Cash: The Challenges of Cashless Transactions in the Philippines. *Journal of Southeast Asian Economies*, 33(3), 387–398. <https://doi.org/10.1355/ae33-3>.
- [43]. Nguyen, Xuan & Nguyen, Hoang & Le, Bui. (2023). Factors Affecting Mobile Payment Adoption: A Systematic Literature Review and Some Future Research Directions. *International Journal of Research and Review*. 10. 385-398. 10.52403/ijrr.20230447.
- [44]. Or, C. K., & Karsh, B. T. (2009). A systematic review of patient acceptance of consumer health information technology. *Journal of the American Medical Informatics Association*, 16(4), 550-560.
- [45]. Özkan, S., Bindusara, G. and Hackney, R. (2010). "Facilitating the adoption of e-payment systems: theoretical constructs and empirical analysis", *Journal of Enterprise Information Management*, Vol. 23 No.

- 3, pp. 305-325. <https://doi.org/10.1108/17410391011036085>
- [46]. Park, S. Y. (2009). An analysis of the technology acceptance model in understanding university students' behavioral intention to use e-learning. *Educational Technology & Society*, 12(3), 150-162.
- [47]. Pavlou, P. A. (2003). Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model. *International Journal of Electronic Commerce*, 7(3), 101-134.
- [48]. Philippine Commission on Women. (n.d.). Micro, Small and Medium Enterprises Development Sector. <https://pcw.gov.ph/microsmall-and-medium-enterprises-development/>. Accessed on February 17, 2024.
- [49]. Phonthanukitithaworn, C., Sellito, C. & Fong, M. (2015). User Intentions to Adopt Mobile Payment Services: A Study of Early Adopters in Thailand. *The Journal of Internet Banking and Commerce*. 20.
- [50]. Preston, V. (2009). Questionnaire Survey. *International Encyclopedia of Human Geography*, Amsterdam. <https://doi.org/10.1016/b978-008044910-4.00504-6>
- [51]. Regalado, F. (2020). Asia risks missing 'green' economic reset after coronavirus. <https://asia.nikkei.com/Spotlight/Asia-Insight/Asia-risks-missing-green-economic-reset-after-coronavirus>.
- [52]. Raj L, Vimal & Shanmugam, Amilan & Aparna, K. & Swaminathan, Karthick. (2023). Factors influencing the adoption of cashless transactions during COVID-19: an extension of enhanced UTAUT with pandemic precautionary measures. *Journal of Financial Services Marketing*. 29. 1-20. 10.1057/s41264-023-00218-8.
- [53]. Rahman M, Ismail I, Bahri S, Rahman MK. An Empirical Analysis of Cashless Payment Systems for Business Transactions. *Journal of Open Innovation: Technology, Market, and Complexity*. 2022; 8(4):213. <https://doi.org/10.3390/joitmc8040213>
- [54]. Riquelme, H. E., & Rios, R. E. (2010). The moderating effect of gender in the adoption of mobile banking. *International Journal of Bank Marketing*, 28(5), 328-341.
- [55]. Susanto, E., Solikin, I., & Purnomo, B. S. (2022). A Review Of
- [56]. Digital Payment Adoption In Asia. *Advanced International Journal of Business, Entrepreneurship and SMEs*, 4(11), 01-15.
- [57]. Shatskikh, A. (2013) Consumer acceptance of Mobile Payments in Restaurants. USF Tampa Graduate Theses and Dissertations. <https://digitalcommons.usf.edu/etd/4580>.
- [58]. Shinozaki, S. and Rao, L. N. (2021). COVID-19 Impact on Micro, Small, and Medium-Sized Enterprises under the Lockdown: Evidence from a Rapid Survey in the Philippines. <https://www.adb.org/publications/covid-19-impact-msme-under-lockdown-evidence-rapid-survey-philippines>.
- [59]. Surmanidze, Megi & Beridze, Rostom. (2023). The Role and Importance of Education in Business. 10. 2456-1304.
- [60]. Taneja, S., & Toombs, L. A. (2014). Putting a face on small businesses: Visibility, viability, and sustainability the impact of social media on small business marketing. *Academy of Marketing Studies Journal*, 18(1), 249-260.
- [61]. Tay, L.-Y., Tai, H.-T., Tan, G.-S. (2022). Digital financial inclusion: A gateway to sustainable development. <https://doi.org/10.1016/j.heliyon.2022.e09766>.
- [62]. Trinh, N. H., Tran, H. H., & Vuong, Q. D. H. (2021). Perceived Risk and Intention to Use Credit Cards: A Case Study in Vietnam. *The Journal of Asian Finance, Economics and Business*, 8(4), 949-958. <https://doi.org/10.13106/JAFEB.2021.VOL8.NO4.0949>
- [63]. Weijters, B., Rangarajan, D., Falk, T., & Schillewaert, N. (2007). Determinants and outcomes of customers' use of self-service technology in a retail setting. *Journal of Service Research*, 10(1), 3-21.
- [64]. World Bank. (2020). A Better Normal Under Covid-19: Digitalizing the Philippine Economy Now. <https://reliefweb.int/report/philippines/better-normal-under-covid-19-digitalizing-philippine-economy-now>.
- [65]. Yabut, H. J. (n.d.). Micro, Small, and, Medium Enterprises. https://serp-p.pids.gov.ph/feature/public/index-view?featuredtype_id=1&slug=micro-small-and-medium-enterprises. Accessed on February 17, 2024.
- [66]. Zoleta, V. (2021). [Battle of the Brands] PayMaya vs GCash: Which Mobile Wallet App is Right for You? Moneymax. <https://www.moneymax.ph/personal-finance/articles/paymaya-vs-gcash>.