

Difficulties in the Use of E-Payment Applications Among Members of a Credit Cooperative

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Abstract:

The study aimed to assess the level of difficulty experienced by credit cooperative members in using e-payment applications. Using a descriptive-correlational design and systematic sampling, 400 randomly selected members from a town in Negros Island participated. Data were collected via a standardized questionnaire, validated and tested for reliability, and analyzed using SPSS. Results showed that most respondents experienced a high level of difficulty in terms of awareness and familiarity and security and trust, while technological challenges posed moderate difficulty. Older members reported greater challenges in awareness and technology use, while younger respondents showed slightly higher concerns regarding security and trust. Both male and female respondents found technological challenges moderately difficult, but other areas remained highly challenging. Civil status did not significantly affect the difficulty levels. Respondents with lower educational attainment experienced higher difficulty in awareness and technology use; however, all educational levels reported high concerns over security and trust. Similarly, lower-income respondents faced more challenges in awareness and technology use, while both income groups reported high difficulty in security and trust. The findings highlight the need for structured support programs, such as digital literacy and age-specific training, to bridge knowledge gaps. Simplified user interfaces and improved technological infrastructure can enhance ease of use. Additionally, bolstering security measures, enhancing transparency, providing better customer support, and promoting fraud awareness can build user trust and confidence in e-payment platforms.

Keywords: E-Payment Applications, User Difficulties, Credit Cooperative Members

Introduction:

Nature of the Problem

The rapid development of the Internet and e-payment technologies has transformed financial services to meet the demands of e-commerce, with e-payments replacing traditional paper-based methods (Nguyen et al., 2018). The growing use of smartphones has significantly influenced people's perceptions of monetary transactions, paving the way for widespread adoption of mobile wallets (Balu, 2023). In India, mobile wallets have gained popularity due to increased smartphone and mobile internet use, supporting financial institutions in reaching more users (Jana, 2021; Ranjit et al., 2021). Alaeddin et al. (2018) emphasized that mobile transactions are considered more secure than using physical cash, cards, or wallets, further encouraging the adoption of mobile-based payments.

In contrast, the Philippines has seen slower adoption of cashless transactions compared to developed countries (Cacas et al., 2022). While Filipinos have gradually embraced digital transactions, the shift to mobile payments only gained momentum over time, despite early innovations like Smart Padala and the later launch of PayMaya (Endo, 2020). The mobile wallet market has expanded, yet many users remain hesitant due to concerns over data privacy and security (Putri et al., 2019). Pandey (2022) noted the convenience and security of mobile wallets, but trust remains a critical barrier. Fatonah et al. (2018) highlighted the need for future research to enhance trust, improve system security, and increase user confidence in e-payment systems.

With this in mind, the current researcher, as one of the branch managers of a credit cooperative, was inspired to investigate whether cooperative members have difficulties using e-payment applications. This insight ignited the researcher's interest, believing that assessment is critical in providing quality services.

Current State of Knowledge

Difficulties in the use of e-payment stem largely from a lack of awareness, familiarity, and trust, which hinder adoption despite the growing prevalence of digital financial services. Azman et al. (2024) stress the need for instructional programs to build user understanding and confidence in e-payments, while Ilham et al. (2019) define these systems as non-paper payment methods facilitated through various digital channels (Omotubora & Basu,

2018). Trust remains a major concern, especially among users wary of data security and fraud (Kadam, 2019; Akhila, 2018), although studies like Ilmudeen and Bao (2019) highlight that usability and perceived trust are more influential than privacy in some contexts. Cooperatives can help bridge this gap by fostering community trust and financial inclusion (Soetens & Huybrechts, 2023; Zhan et al., 2019; McKillop et al., 2020). Globally, digital wallet use continues to grow as consumers favor convenience, security, and integration with technologies like NFC and QR codes (Alfina, 2020; Acker & Murthy, 2020; Liikamaa et al., 2022). Social media features and merchant collaborations also enhance mobile wallet appeal. In India, mobile payment platforms such as Paytm and Google Pay dominate, while in the West, apps like PayPal and Venmo are preferred (Sudheerkumar & Hemalatha, 2022). As Lai et al. (2020) and McCoy (2020) note, tech adoption is especially rapid among youth, who often juggle multiple devices. To encourage broader adoption, providers must address trust issues and align services with users' expectations for ease, speed, and security.

Alswaigh and Aloud (2021) found that in Saudi Arabia, perceived value and convenience significantly influence users' acceptance of mobile wallet services, emphasizing the importance of awareness and familiarity in encouraging adoption. Similarly, Sidek et al. (2024) identified that Malaysian students' reluctance to use e-payments stems from limited understanding, trust issues, and concerns over privacy and data security, suggesting a need for educational initiatives to improve digital literacy. In Singapore, Agarwal (2018) observed that the introduction of advanced mobile wallet technology boosted transaction frequency and sales, particularly among small merchants. Meanwhile, Kumar (2019) highlighted key challenges in electronic payment systems, including impersonation risks, double-spending, and the critical need for secure token design. He emphasized that trust is the most vital factor in e-payment adoption, as users must feel confident their data and transactions are secure, and that financial entities will act responsibly. Together, these studies underline that enhancing user trust, security, and digital literacy are central to expanding e-payment adoption globally.

Miranda (2022) defined mobile wallets as smartphone-based virtual wallets offering convenience and real-time access to financial services, enhancing users' control over their accounts. However, Ortiz (2021) noted that users of CARD Bank faced challenges like poor internet connectivity and app incompatibility with certain devices, particularly affecting older individuals. Security concerns also hinder adoption, as Cuaresma (2018) reported Filipinos' reluctance to use e-payment systems due to fears of hacking and fraud. This was supported by Ortiz et al. (2023), who found that trust in e-wallets was undermined by cybersecurity weaknesses, highlighting the need for robust protections and user education. Despite technological readiness, with 52% of Filipinos reportedly willing to use smartphones (Chavez et al., 2019), and commercial banks dominating the sector with various digital services (Morales, 2022), many MSMEs remain unaware of digital payment benefits, particularly during the COVID-19 pandemic (Acopiado et al., 2022). Lastly, Karpinski (2019) pointed out that limited infrastructure and financial constraints in rural areas restrict digital payment accessibility, contributing to the country's lag behind ASEAN peers in this area.

Raon et al. (2021) and Mina (2022) both found that unfamiliarity with digital payment methods significantly hinders e-payment adoption among Filipinos, particularly among cooperative members in CALABARZON, where lack of awareness and understanding were evident barriers. Pleno (2024) added that inconsistent internet connectivity and limited digital literacy—especially among older users—further restrict microbusiness owners' willingness to adopt e-payment systems in Region III. Similarly, Enverga and Almario (2023) observed that technological limitations in Laguna's third district posed challenges for e-payment use, mirroring findings by Acopiado et al. (2022), who emphasized that many small businesses lacked adequate IT infrastructure. Meanwhile, Gumasing et al. (2023) evaluated user satisfaction with popular Philippine e-wallets, identifying GCash as the most accessible and efficient platform, though inconsistencies in usability were noted across providers. Capistrano et al. (2024) concluded that trust issues, particularly concerning data privacy and transaction security, remained a major obstacle, underscoring the need for better security measures to boost user confidence in digital financial services.

Theoretical Underpinnings

This study is anchored to the Technology Acceptance Model (TAM) by Fred D. Davis. According to Davis (1989), some variables impact users' perceptions of accepting or rejecting technology. He believes that "perceived usefulness" and "perceived ease of use" play important roles in a technology's acceptance or rejection. People tend to use or not use technology based on how much it will help them perform their job.

However, he also found that people may still reject using a complicated form of technology despite its known usefulness or "perceived ease of use." The Technology Acceptance Model (TAM) is appropriate in the present study because several studies investigated and explained the adoption of mobile wallets (Chopra, 2019; Saxena, 2018; Leon, 2018; Sobti, 2019).

Regarding e-payment applications in a credit cooperative, members' perceived usefulness reflects their view that utilizing the program will enhance their financial transactions and management, such as faster payments or better record keeping. However, if members believe the application is difficult to use or comprehend, they are less likely to embrace it, even if they acknowledge the benefits.

This approach is crucial in a credit cooperative circumstance, where members' technology literacy and comfort levels vary significantly. By evaluating how these views impact adoption, researchers could find particular challenges, such as complex interfaces or insufficient training, contributing to the difficulty of utilizing e-payment apps.

Objectives

This study aimed to determine the level of difficulties in the use of e-payment applications among members of a credit cooperative in one of the towns in Negros Island for the Calendar Year 2024. More specifically, this study sought to answer the following questions: 1) the profile of the respondents in terms of age, sex, civil status, highest educational attainment, average family monthly income; 2) the level of difficulties encountered in using e-payment applications among credit cooperative members according to the area of awareness and familiarity, technological challenges, and security and trust; and 3) the significant difference in the level of difficulties in using e-payment applications among credit cooperative members when grouped and compared according to the variables.

Methodology

This section presents the discussion of the research methodology used, the subjects and respondents of the study, the research instruments used, the validity and reliability of the instruments, the procedure for data gathering, and the statistical tools and procedure for data analysis.

Research Design

The study aimed to determine the difficulties in the use of e-payment applications among members of a credit cooperative in one of the towns in Negros Island for the Calendar Year 2024. A descriptive design was used in this study. According to Seidlecki (2020), descriptive research methods primarily involve quantitative data analysis but may additionally involve qualitative elements. It defines the characteristics or behaviors of a given population or phenomenon, and the primary objective is to identify patterns or trends without influencing variables. This approach can be helpful when a researcher needs to understand what exists rather than why it exists. Considering this study determines the difficulties encountered in using e-payment applications among credit cooperative members, the researchers evaluated the descriptive research design as the appropriate tool.

Study Respondents

The study involved 400 credit cooperative members as respondents to assess the level of difficulties encountered in using e-payment systems. Purposive sampling was employed, a non-probability method where participants are selected based on specific criteria relevant to the research purpose (Santiago, 2023). This approach allowed the researcher to intentionally target individuals who possess particular characteristics, skills, or experiences aligned with the study's objectives, ensuring that the selected participants were well-suited to provide meaningful insights into the challenges of e-payment adoption.

Instruments

A self-made questionnaire was used to gather data on the difficulties encountered in e-payment among credit cooperative members. It consisted of two parts: Part I covered respondents' profiles, including age, sex, civil status, highest educational attainment, and average monthly family income; Part II focused on a 10-item test addressing awareness and familiarity, technological challenges, and issues of security and trust. The level of difficulty experienced in using e-payment applications was measured on a 5-point scale, with 5 indicating a "very high level" and 1 representing a "very low level". The research instrument was subjected to validity (4.51-excellent) and reliability (0.927-excellent). All of them were interpreted as worthy and good; respectively.

Data Gathering Procedure

After establishing the validity and reliability of the instrument, the researcher reproduced enough copies to distribute to the actual respondents of the study. Quantitative data in this study were obtained through a survey questionnaire. According to Good, as cited by Vega (2015), a questionnaire is a structured collection of written questions about a specific subject with a space designated for each answer.

In this study, the researcher asked permission from the credit cooperative office to distribute the questionnaire to the members. When permission was granted, the researcher administered the instruments individually to the intended credit cooperative members.

Additionally, the raw data were converted into a numerical format under the guidance of a coding manual to assess the level of consumer satisfaction. The Statistical Package for Social Science (SPSS) software and Microsoft Excel were used to compute encoded data. Also, statistics tables were created considering the issues raised in this inquiry.

Data Analysis and Statistical Treatment

Objective No. 1 used the descriptive-analytical scheme and frequency and percentage distributions to determine the respondents' profiles regarding the selected variables: age, sex, civil status, highest educational attainment, and average monthly household income.

Objective No. 2 used the descriptive-analytical scheme and mean to determine the level of difficulties encountered in using e-payment applications in the credit cooperative in the following areas: awareness and familiarity, technological challenges, and security and trust.

Objective No. 3 utilized a comparative analytical scheme and Mann-Whitney U test to determine whether or not significant differences exist in the level of difficulties encountered in using e-payment applications in the credit cooperative when grouped and compared according to the variables.

Ethical Consideration

The researcher exercised all necessary ethical considerations throughout the study. Given that humans were chosen as study participants, information confidentiality was maintained. It is also critical to protect the dignity and privacy of participants. Furthermore, potential risks to participants should always be minimized.

Further, the respondents were assured that the data gathered was preserved and would not be disclosed to the public. Finally, the acquired data was rigorously collected without gaining personal or identifiable information. The researcher revealed sensitive information regarding the study's beginning and specifics about the investigation. Respondents could withdraw their participation at any point in this research study voluntarily. The researcher also asked the participants to sign a consent form indicating their complete understanding of the risks and benefits of the study.

Results and Discussion

This section deals with the presentation, analysis and interpretation of data gathered to carry out the objectives of this study. All these were made possible by following certain appropriate procedures so as to give the exact data and solution to each specific problem.

Profile of the Respondents in Terms of Age, Sex, Civil Status, Highest Educational Attainment, and Average Family Monthly Income

Table 1

Profile of the Respondents

Variables	Categories	Frequency	Percentage
Age	Younger (less than 37 years old)	229	57.30
	Older (37 years old and above)	171	42.80
	Total	400	100
Sex	Male	131	32.80
	Female	269	67.30
	Total	400	100
Civil Status	Single	202	50.50
	Married	198	49.50
	Total	400	100
Highest Educational Attainment	Lower (College Level and below)	115	28.70
	Higher (College Graduate, Post Graduate Level)	285	71.30
	Total	400	100
Average Family Monthly Income	Lower (below P19,000)	259	64.80
	Higher (P19,000 and above)	141	35.30

Total	400	100
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Table 1 reveals the age profile: 229 out of 400, or 57.30%, are younger than 37 years old, while 171 out of 400, or 42.80% of the respondents, belong to the older group. Regarding sex, the sample is overwhelmingly female, with 269 or 67.30% identifying as female compared to 131 or 32.80% male. Regarding civil status, the respondents are almost evenly split between single and married individuals, with 202 or 50.50% of the sample being single and 198 or 49.50% being married. Regarding the highest educational attainment, 285 or 71.30% of respondents have completed higher education at the college or postgraduate level. In comparison, only 115, or 28.70%, have a lower educational level than those who attained college or below. Finally, the average family monthly income data reveals a clear distinction where 259, or 64.80% of the respondents belong to the lower income bracket of P18,000.00 and below, while 141, or 35.30%, fall into the higher income category above P18,000.00.

This study's results imply that among the members of a credit cooperative in one of the towns in Negros Island for the Calendar year 2024, more than half of the respondents are younger females who are single with higher educational attainment and had family members having lower average monthly income.

Level of Difficulties in the Use of E-payment Applications among Members of a Credit Cooperative in Awareness and Familiarity, Technological Challenges, and Security and Trust

Table 2

Level of Difficulties in the Use of E-payment Applications among Members of a Credit Cooperative in Awareness and Familiarity

Area	Mean	Interpretation
A. Awareness and Familiarity		
<i>As a member-owner of the cooperative, I have difficulties in...</i>		
1. obtaining information on the E-Payment application and platforms available for cooperatives.	3.58	High Level
2. understanding the use of the E-Payment application.	3.58	High Level
3. exploring the options available in e-payment applications (GCash and PayMaya).	3.57	High Level
4. learning the use of the E-Payment applications in making transactions and payments with cooperatives.	3.54	High Level
5. determining real-time posting and reconciliation of E-Payment transactions.	3.50	High Level
6. providing more time for checking and exploring the contents of my e-payment application and gadgets.	3.57	High Level
7. continuing education and training on how to use E-Payment applications	3.61	High Level
8. repeated exposure to advertised E-Payment applications.	3.51	High Level
9. teaching about the existence and use of E-Payment applications by the technical expert.	3.29	Moderate Level
10. contacting customer support for more information and resolving any issues and questions.	3.48	Moderate Level
Overall Mean	3.52	High Level

Table 2 presents the difficulties in using E-Payment applications among credit cooperative members regarding awareness and familiarity. The overall mean score is 3.52, interpreted as a high level of difficulties. The lowest mean score of 3.29, interpreted as a moderate level, is under item 9, "teaching about the existence and use of E-Payment applications by the technical expert."

On the other hand, the highest mean score is 3.61, which is interpreted as a high level, on number 7, "continuing education and training on how to use E-Payment applications."

This implies that respondents struggle with access to information and opportunities for learning. Their knowledge of using E-Payment applications is limited due to the unavailability of technical experts who could teach them about the existence and usage of E-Payment applications. These hinder their ability to navigate and use E-payment platforms independently and could slow the cooperative's transition to digital payment systems, affecting operational efficiency and member satisfaction.

According to Pleno (2023), the study reveals that many people want to use E-Payment systems. Still, they encounter significant challenges due to a lack of digital skills and access to reliable internet connectivity. The study underlines the need for set training activities to improve digital literacy and ease the shift to digital payment systems.

Similarly, Bidayan et al.'s (2023) study on higher education institutions in Quezon City found that perceived ease of use and trust substantially impacted the continued utilization of E-Payment systems. According to the survey, improving user familiarity through thorough training programs could enhance perceptions of confidence and ease of use, thus leading to adoption.

Table 3

Level of Difficulties in the Use of E-payment Applications among Members of a Credit Cooperative in Technological Challenges

Area	Mean	Interpretation
B. Technological challenges		
<i>As a member-owner of the cooperative, I have difficulties in...</i>		
1. accessing the E-Payment application on a laptop.	3.50	High Level
2. obtaining a good network connection (internet or WiFi).	3.53	High Level
3. looking for a cash-loading center for refunding E-Payment applications.	3.51	High Level
4. maintaining a bank account as a funding source for the E-Payment application.	3.54	High Level
5. remembering complex registration procedures: usernames and passwords, SMS formats, and codes.	3.46	Moderate Level
6. managing updates on the E-Payment application.	3.49	Moderate Level
7. leaving traditional payment channels for E-Payment applications.	3.41	Moderate Level
8. managing present E-Payment application updates incompatible with the current gadget.	3.40	Moderate Level
9. remembering the registered recovery email and contact number.	3.47	Moderate Level
10. encountering technical issues and errors in the E-Payment applications.	3.42	Moderate Level
Overall Mean	3.47	Moderate Level

The data in Table 3 reveals the difficulties in using E-Payment applications among members of a credit cooperative in terms of technological challenges. The overall mean is 3.47, interpreted as a moderate level. The lowest mean score is 3.40 under item 8, "managing present E-Payment application updates not compatible with the current gadget being used," which is a moderate level.

On the other hand, the highest mean score of 3.54, interpreted as a high level, is on item 4, "maintaining a bank account as a source of funding for the E-Payment application."

The table indicates that members experience difficulty sourcing a sufficient amount to maintain bank accounts to fund E-Payment applications. These bank accounts are oftentimes linked to an online network to fund E-Payment applications; however, maintaining such is hindered due to the difficulties of obtaining a good network connection. These challenges reflect financial constraints, infrastructure limitations, and technical barriers.

According to the Bangko Sentral ng Pilipinas (BSP), around 31% of Filipino adults held official bank accounts as of 2018. The BSP found various difficulties with ownership, including high fees, a lack of required documents, and perceived limited usefulness of bank accounts. To address these concerns, the BSP established the Basic Deposit Account (BDA), reducing know-your-customer (KYC) requirements, low initial balances, and no maintenance balance to make banking more accessible to the unbanked general public.

Furthermore, Armedilla and Durana (2022) found that digital payments can remove several obstacles to financial inclusion. However, the study found that government cash transfers, rather than digital payments, were more beneficial in helping low-income families become financially involved. This shows that while digital payment systems can help with financial inclusion, they must be accompanied by supporting policies and activities that resolve the underlying technological challenges.

Table 4

Level of Difficulties in the Use of E-payment Applications among Members of a Credit Cooperative in Security and Trust

Area	Mean	Interpretation
C. Security and Trust		

As a member-owner of the cooperative, I have difficulties in...

1. obtaining sufficient and strong security controls when using E-Payment applications against fraud detection.	3.81	High Level
2. protecting and securing privacy when using the E-Payment application.	3.79	High Level
3. ensuring the delivery of confidential information to the credit coop safely.	3.83	High Level
4. believing there is no threat of transaction fraud and scams.	3.63	High Level
5. believing there is a low risk associated with unauthorized third parties overseeing the payment process and transaction error.	3.68	High Level
6. reaching the merchant, telecom operator, and financial intermediary immediately and attending to problems encountered when using the E-Payment application.	3.62	High Level
7. believing transactions involving a large amount of money are less risky.	3.59	High Level
8. verifying the E-Payment application as reliable when there are acceptable terms and conditions attached.	3.74	High Level
9. obtaining clear communication on privacy policies and data protection measures.	3.76	High Level
10. obtaining fees, charges, and other costs associated with using the E-Payment applications is very transparent.	3.78	High Level
Overall Mean	3.72	High Level

Table 4 shows the difficulties in using E-Payment applications among credit cooperative members regarding security and trust. The overall mean score is 3.72, interpreted as a high level. The lowest mean score in this table is 3.59, interpreted as a high level, on item 7, "believing that transactions involving large amounts of money are less risky."

On the other hand, the highest mean score of 3.83, interpreted as a high level, is on item 3, "ensuring delivery of confidential information to the credit coop safely."

These findings highlight a trust deficit and suggest that members are hesitant to fully embrace E-Payment platforms due to security, privacy, and reliability concerns. Enhancing security measures, improving communication about privacy and transparency, and providing better customer support to build member confidence in E-payment systems should be prioritized.

Furthermore, research shows that trust is key to accepting digital financial services. Chiu et al. (2017) found that initial trust strongly influences users' behavioral intentions to utilize mobile banking services. The study emphasizes that concerns about privacy and security are the primary barriers to trust, implying that improving these features is critical for enhancing the adoption of E-Payment systems.

Table 5

Difference in the Level of Difficulties in the Use of E-payment Applications among Members of a Credit Cooperative in Awareness and Familiarity when grouped and compared according to the aforementioned Variables

Variable	Category	N	Mean Rank	Mann-Whitney U	p-value	Sig. level	Interpretation
Age	Younger	229	190.41	17269.000	0.043		Significant
	Older	171	214.01				
Sex	Male	131	201.97	17427.500	0.859		Not Significant
	Female	269	199.79				
Civil Status	Single	202	202.69	19556.500	0.702	0.05	Not Significant
	Married	198	198.27				
Highest Educational Attainment	Lower	115	220.22	14119.500	0.030		Significant
	Higher	285	192.54				
Average Family Monthly Income	Lower	259	217.13	13953.500	0.000		Significant
	Higher	141	169.96				

Table 5 reveals the difference in the level of difficulties in using E-Payment applications among credit cooperative members regarding awareness and familiarity when grouped and compared according to variables.

Using the Mann-Whitney U test, sex has a p -value of 0.859, and civil status has a p -value of 0.702, more significant than the 0.05 significance level. The result indicated that no significant difference exists. The null hypothesis is, therefore, accepted.

This indicates that both genders face similar levels of difficulties in this area, implying that awareness and familiarity challenges with E-Payment applications do not vary significantly by sex (Sadiq et al., 2021), that marital status does not significantly influence the level of difficulty in using E-Payment applications (Tiwari et al., 2021).

On the contrary, age has a p -value of 0.043, highest educational attainment has a p -value of 0.030, and average family monthly income has a p -value of 0.000, which is less than the 0.05 significance level, indicating a significant difference. Therefore, the null hypothesis is rejected.

It can be said that younger members may experience more challenges related to awareness and familiarity with E-Payment applications, potentially due to lesser exposure or varying levels of digital literacy (Nistor et al., 2020), that educational attainment highlights the role of education in shaping individuals' familiarity and comfort with digital payment platforms (Li et al., 2020) and that average family monthly income suggests a strong statistical relationship conveying that greater access to resources, such as technology and training, available to higher-income groups, enabling them to navigate E-Payment systems more easily (Chauhan et al., 2021).

Table 6

Difference in the Level of Difficulties in the Use of E-payment Applications among Members of a Credit Cooperative in Technological Challenges when grouped and compared according to the aforementioned Variables

Variable	Category	N	Mean Rank	Mann-Whitney U	p-value	Sig. level	Interpretation
Age	Younger	229	195.61	18459.500	0.327	0.05	Not Significant
	Older	171	207.05				
Sex	Male	131	200.43	17610.500	0.993		Not Significant
	Female	269	200.53				
Civil Status	Single	202	205.54	18980.500	0.378		Not Significant
	Married	198	195.36				
Highest Educational Attainment	Lower	115	217.85	14392.500	0.056		Not Significant
	Higher	285	193.50				
Average Family Monthly Income	Lower	259	219.24	13407.000	0.000		Significant
	Higher	141	166.09				

Table 6 reveals the difference in the level of difficulties in using E-Payment applications among credit cooperative members in technological challenges when grouped and compared according to variables.

Using the Mann-Whitney U test, the term age has a p -value of 0.327, sex has a p -value of 0.993, civil status has a p -value of 0.378, and highest educational attainment has a p -value of 0.056, which is greater than the 0.05 significance level. The result indicated that no significant difference exists. The null hypothesis is, therefore, accepted.

This suggests that age may not be a key factor in the technological challenges associated with E-Payment usage (Dai et al., 2021), that both genders do not significantly impact the level of difficulties faced for both are nearly identical when using E-Payment systems (Sadiq et al., 2021), face similar levels of difficulty in this area, implying that awareness and familiarity challenges with E-Payment applications do not vary significantly by sex (Sadiq et al., 2021), that marital status does not affect substantially E-Payment usage difficulties (Xie et al., 2021). Meanwhile, a marginally significant difference was observed concerning the highest educational attainment, indicating that lower education levels may correlate with increased challenges in using E-Payment applications (Li et al., 2020).

On the contrary, the average family monthly income has a p -value of 0.000, which is less than the 0.05 significance level, indicating a significant difference. Therefore, the null hypothesis is rejected.

This implies that lower-income members may face more barriers to accessing and effectively using E-Payment applications, potentially due to limited access to necessary technology or reliable internet connections (Chauhan et al., 2021).

Table 7

Difference in the Level of Difficulties in the Use of E-payment Applications among Members of a Credit Cooperative in Security and Trust when grouped and compared according to the aforementioned Variables

Variable	Category	N	Mean Rank	Mann-Whitney U	p-value	Sig. level	Interpretation
Age	Younger	229	203.69	18850.000	0.522	0.05	Not Significant
	Older	171	196.23				
Sex	Male	131	198.84	17402.000	0.841		Not Significant
	Female	269	201.31				
Civil Status	Single	202	207.86	18512.000	0.197		Not Significant
	Married	198	192.99				
Highest Educational Attainment	Lower	115	199.71	16296.500	0.930		Not Significant
	Higher	285	200.82				
Average Family Monthly Income	Lower	259	201.30	18053.000	0.851		Not Significant
	Higher	141	199.04				

Table 7 reveals the difference in the level of difficulties in using E-Payment applications among credit cooperative members in security and trust when grouped and compared according to variables.

Using the Mann-Whitney U test, age has a p -value of 0.522, sex has a p -value of 0.841, civil status has a p -value of 0.197, and highest educational attainment has a p -value of 0.930. The average family monthly income has a p -value of 0.930, more significant than the 0.05 significance level. The result indicated that no significant difference exists. The null hypothesis is, therefore, accepted.

The results indicate that age does not significantly impact the difficulties experienced regarding security and trust in E-Payment systems (Chung & Kwon, 2020). This finding aligns with prior research, suggesting that age may not strongly influence technological proficiency and confidence in digital systems (Jin et al., 2021).

Similarly, gender does not significantly influence the perception of security and trust in E-Payment applications (Hassan et al., 2021).

Regarding civil status, marital status does not substantially impact the difficulties experienced with security and trust when using E-Payment platforms (Gao & Bai, 2021).

The analysis of the highest educational attainment reveals no significant effect of education level on security and trust in E-Payment applications (Chen et al., 2020).

Also, according to Khasawneh et al. (2020), the average family's monthly income suggests that income level does not significantly affect the perception of security and trust when using E-Payment applications.

Conclusions

The study found that most credit cooperative members surveyed were younger, female, well-educated, and came from lower-income households. Respondents reported a high level of difficulty in the areas of awareness, familiarity, and especially security and trust, while technological challenges were rated at a moderate level. Difficulties varied slightly depending on demographic factors: age, educational attainment, and income levels were significantly associated with higher difficulties in awareness and technological issues, while no significant differences were observed based on sex or civil status. Security and trust emerged as the most challenging aspect across all groups. The study concludes that while e-payment systems offer convenience, efficiency, and promote financial inclusion, users still face considerable barriers, particularly related to trust and security. To address these issues, the study recommends using reputable platforms, avoiding unsecured networks, staying alert to phishing attempts, and adopting proactive security measures such as setting spending limits and staying informed about current digital threats.

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References

- Alfina, M. M. (2020, June). From Physical to Digital: Consumer Adoption Process to E-Wallet. In *23rd Asian Forum of Business Education (AFBE 2019)* (pp. 15-21). Atlantis Press.
- Alhammadi, A. A., & Tariq, M. U. (2020). The Impact of Quality E-payment System on Customer Satisfaction. *Journal of Critical Reviews*, 7(15), 5438-5447.
- Baabdullah, A. M., Alalwan, A. A., Rana, N. P., Kizgin, H., & Patil, P. (2019). Consumer use of mobile banking (M-Banking) in Saudi Arabia: Towards an integrated model. *International Journal of Information Management*, 44, 38-52. <https://doi.org/10.1016/j.ijinfomgt.2018.09.002>
- Badotra, S., & Sundas, A. (2021). A systematic review on the security of E-commerce systems. *International Journal of Applied Science and Engineering*, 18(2), 1-19.
- Baker, S. E., Murphy, A., & Nagy, P. (2021). Digital literacy and older adults. *International Journal of Aging and Human Development*, 93(3), 282-295. <https://doi.org/10.1177/00914150211002254>
- Balu, L. (2023). Mobile Wallets Are Alternative or Substitute for Traditional Payment Methods: An User Perception Descriptive Analysis in Bangalore Rural District. *resmilitaris*, 13(2), 6320-6331.
- Chauhan, S., Sharma, M., & Yadav, A. (2021). Socio-economic factors influencing the adoption of mobile payments in India. *Technological Forecasting and Social Change*, 168, 120732. <https://doi.org/10.1016/j.techfore.2021.120732>
- Chawla, D., & Joshi, H. (2019). Consumer attitude and intention to adopt mobile wallet in India – An empirical study. *International Journal of Bank Marketing*, 37(7), 1590-1618. <https://doi.org/10.1108/IJBM-09-2018-0256>
- Chaves, S. M., Iturralde, E., King, N. M., Mate, M. C., Riano, J. C., & Rosendo, R. J. (2019). Industry Study of Electronic Money. *Technology Management Center, University of the Philippines, Diliman, (Masteral Thesis)*, 10.
- Chen, A., Zeltmann, S., Griffin, K., Ota, M., & Ozeki, R. (2020). Demographic Background, Perceptions, And E-Payment Usage Among Young Japanese.
- Chen, X., Zhang, W., & Li, W. (2020). The impact of education level on e-payment trust and adoption. *Computers in Human Behavior*, 104, 106162. <https://doi.org/10.1016/j.chb.2019.106162>
- Chopra, Komal. 2019. M-Wallet technology acceptance by street vendors in India. In *Proceedings of the 2nd International Conference on Data Engineering and Communication Technology*. Springer: Singapore, pp. 175-82.
- Dai, X., Gao, Y., & Zhang, Y. (2021). The influence of age and technology-related perceptions on mobile payment adoption. *Computers in Human Behavior*, 120, 106741. <https://doi.org/10.1016/j.chb.2021.106741>
- David, D., & Pop, I. (2020). Digital literacy and mobile payment systems: A comparative study of young and older adults. *Computers in Human Behavior*, 112, 106464. <https://doi.org/10.1016/j.chb.2020.106464>
- Depietro, Andrew and Lapera, Gaby (2023). Average American Debt by age and generation in 2023, a Credit Karma Study
- Derbani, A., Adawiyah, W. R., & Wulandari, S. Z. (2022). Impact of online buying behavioral tendencies of Generation Z on their parents' consumption behavior: Insight from Indonesia.
- Espeleta, R. M. (2022). Utilization of Standard Electronic Payment System among Private Higher Education Institutions in the Province of Albay. *JPAIR Multidisciplinary Research*, 50(1), 140-158. DOI: <https://doi.org/10.7719/jpair.v50i1.571>
- Foroughi, B., Iranmanesh, M., Nikbin, D., & Hyun, S. S. (2019). The impact of security and privacy concerns on trust and the moderating role of gender. *International Journal of Contemporary Hospitality Management*, 31(6), 2591-2615. <https://doi.org/10.1108/IJCHM-07-2018-0550>
- Gao, Y., & Bai, Y. (2021). A study on the adoption of mobile payment applications: A perspective of user trust and willingness. *Journal of Financial Services Marketing*, 26(1), 31-45. <https://doi.org/10.1057/s41264-020-00076-w>
- George, A., & Sunny, S. A. (2021). Digital literacy and adoption of digital

- payment systems in rural India. *Technological Forecasting and Social Change*, 163, 120479. <https://doi.org/10.1016/j.techfore.2020.120479>
- Gumasing, M. J. J., Cangco, G. K. M., Ilagan, S. M. C., & Reyes, E. G. A. (2023, February). A Comparison on the Usability of Mobile e-Wallet Applications: GCash, Maya, Grabpay. In *Proceedings of the 2023 14th International Conference on E-Education, E-Business, E-Management and E-Learning* (pp. 199-207). <https://doi.org/10.1145/3588243.3588253>
- Hassan, L., Shiu, E., & Parry, S. (2021). Exploring gender differences in mobile payment adoption. *International Journal of Bank Marketing*, 39(3), 453-475. <https://doi.org/10.1108/IJBM-03-2020-0191>
- Heikkilä, M., Kauppi, S., & Hyvönen, K. (2022). Generational challenges in adopting digital tools for financial transactions. *Journal of Digital Inclusion*, 10(3), 45-58.
- Huang, L., Luo, J., & Guo, X. (2019). Technological barriers to digital payment adoption in emerging markets: Evidence from China. *Information & Management*, 56(8), 103194. <https://doi.org/10.1016/j.im.2019.103194>
- Ilham, R. N., Erlina, K. A. F., Silalahi, A. S., Saputra, J., & Albra, W. (2019). Investigation of the bitcoin effects on the country revenues via virtual tax transactions for purchasing management. *Int. J Sup. Chain. Mgt Vol*, 8(6), 737.
- Jahrami, H., Saif, Z., Chen, W., Helmy, M., Ghazzawi, H., Trabelsi, K., & Seeman, M. V. (2023). Development and validation of a questionnaire (GHOST) to assess sudden, unexplained communication exclusion or "ghosting. *Heliyon*.
- Jana, s. (2021). A study on "university students perception and preference towards mobile wallets, with reference to bangalore rural district" Karnataka. *Palarch's journal of archaeology of egypt/egyptology*, 18(09), 373-379.
- Jin, C., Wang, L., & Guo, Y. (2021). Investigating the effect of age on e-payment adoption: An empirical study in China. *Electronic Commerce Research and Applications*, 44, 100995. <https://doi.org/10.1016/j.elerap.2020.100995>
- Kadam, M. B. (2019). Electronic Commerce: A Study on Benefits and Challenges in an Emerging Economy. *Vidyabharati Int Interdiscip Res J*, 9(2), 149-54.
- Karpinski, K. (2019). Philippines Financial Sector Assessment Program: Retail Payments.
- Khasawneh, M., Khawaja, M., & Alshurideh, M. (2020). The role of income in influencing the adoption of digital payments. *International Journal of Bank Marketing*, 38(6), 1329-1347. <https://doi.org/10.1108/IJBM-05-2020-0263>
- Kolaki, Maria (2017). Mobile Payment Use and Mobile Payment Transactions by Older Adults
- Kshetri, N. (2021). The role of digital literacy in reducing digital payment challenges. *Telecommunications Policy*, 45(3), 102116. <https://doi.org/10.1016/j.telpol.2020.102116>
- Kshetri, N. (2021). 5G security and trust issues in mobile networks. *Telecommunications Policy*, 45(3), 102116. <https://doi.org/10.1016/j.telpol.2020.102116>
- Kumar, A. (2019). A Study of Significant Characteristics of E-payment Regime in India. *MERC Global's International Journal of Management*, 7, 168-174.
- Kumar, J., Kumar, V., & Sharma, S. (2021). Challenges in mobile payment adoption and future directions: A systematic review. *Journal of Business Research*, 123, 347-364. <https://doi.org/10.1016/j.jbusres.2020.10.003>
- Lai, C. S., Jia, Y., Dong, Z., Wang, D., Tao, Y., Lai, Q. H., ... & Lai, L. L. (2020). A review of technical standards for smart cities. *Clean Technologies*, 2(3), 290-310.
- Liikamaa, M., Buss, L., & Vaajanen, V. (2022). The state of digital wallets today and tomorrow: What does this mean for payments in the future?. *Journal of Digital Banking*, 6(4), 349-358.
- Li, C., Li, X., & Zhang, X. (2020). The effect of education level on the adoption of mobile payments in rural China. *Journal of Rural Studies*, 73, 137-146. <https://doi.org/10.1016/j.jrurstud.2019.12.010>
- López-Nores, M., García-Duque, J., & Blanco-Fernández, M. (2020). Enhancing digital literacy in older adults. *Computers in Human Behavior*, 102, 255-267. <https://doi.org/10.1016/j.chb.2019.08.022>
- Malik, F. T., Singh, J., & Sinha, R. (2020). Role of education and awareness in fostering trust and adoption of digital payment systems in rural areas. *Journal of Rural Studies*, 76, 261-272. <https://doi.org/10.1016/j.jrurstud.2020.04.012>
- Miranda, M.(2022) Mobile wallet usage and awareness-a study in Udupi city of karnataka.
- Mitzner, T. L., Boron, J. B., Fausset, C. H., Adams, A. E., & Charness, N. (2020). Older adults' technology use and attitudes. *Computers in Human Behavior*, 108, 106324. <https://doi.org/10.1016/j.chb.2020.106324>

- McCoy, B. R. (2020). Gen Z and digital distractions in the classroom: Student classroom use of digital devices for non-class related purposes.
- Morales, R. A. (2022, May 11). The Banking regulation review: Philippines. The Law Reviews. <https://thelawreviews.co.uk/title/the-bankingregulation-review/philippines>
- McKillop, D., French, D., Quinn, B., Sobiech, A. L., & Wilson, J. O. (2020). Cooperative financial institutions: A review of the literature. *International Review of Financial Analysis*, 71, 101520.
- Mmari, G. A., & Thinyane, L. C. (2019). Analysis of factors influencing financial performance of savings and credit co-operative societies in Lesotho: Evidence from Maseru District.
- Nadler, S., Chen, A. N., & Lin, S. F. (2019). E-payment Usage among Young Urban Chinese. *Journal of Business Diversity*, 19(3).
- Pandey, S. K. (2022). A Study on Digital Payments System & Consumer Perception: An Empirical Survey. *Journal of Positive School Psychology*, 6(3), 10121-10131.
- Penz, E., Schlegelmilch, B. B., & De Matos, C. A. (2020). E-payment fraud: An empirical investigation of consumer perceptions. *Journal of Business Research*, 109, 477-484. <https://doi.org/10.1016/j.jbusres.2019.11.010>
- Putri, Y. E., Wiryo, S. K., Nainggolan, Y. A., & Cahyono, T. D. (2019). Method of payment adoption in Indonesia e-commerce. *The Asian Journal of Technology Management*, 12(2), 94-102.
- Ranjit, G., & Chandran, A. (2021). Youth Perception towards Mobile Wallets in the City of Trivandrum. *Asian Journal of Sociological Research*, 13-19.
- Roebuck, S. L. (2023). *Predictive Relationships Between Organizational Climate, Teacher Stress, and Teacher Turnover Intention* (Doctoral dissertation, Walden University).
- Sadiq, R., Ali, A., & Raza, S. (2021). Gender differences in mobile Payment adoption: A study of Pakistan's consumers. *International Journal of Bank Marketing*, 39(2), 267-285. <https://doi.org/10.1108/IJBM-05-2020-0265>
- Salo, J., Häkkinen, A., & Mikkonen, J. (2019). Trust in digital financial services: The role of security and privacy concerns. *Computers in Human Behavior*, 95, 178-189. <https://doi.org/10.1016/j.chb.2019.02.004>
- Santiago, C. R. (2023). Sustaining Work-Life Balance of Teachers During the New Normal. *American Journal of Interdisciplinary Research and Innovation*, 2(2), 1-17.
- Singh, N., & Sinha, S. (2020). Factors affecting consumer adoption of digital payment services during the COVID-19 outbreak. *Journal of Retailing and Consumer Services*, 61, 102942. <https://doi.org/10.1016/j.jretconser.2020.102942>
- Sobti, Neharika. 2019. Impact of demonetization on diffusion of mobile payment service in India: Antecedents of behavioral intention and adoption using extended UTAUT model. *Journal of Advances in Management Research* 16: 472-97.
- Soetens, A., & Huybrechts, B. (2023). Resisting the tide: The roles of ideology in sustaining alternative organizing at a self-managed cooperative. *Journal of Management Inquiry*, 32(2), 134-151.
- Sumaylo, A. M. G., Babon, C. M. S., Bayaras, M. L., Pedrigal, E. M. E., Pening, A. K. S., Teodosio, M. J. C., & Susada, J. S. (2022). Digital Finance on Stability among Philippine Banks. *Recoletos Multidisciplinary Research Journal*, 10(2), 63-73.
- Sudheerkumar, M. A., & Hemalatha, T. M. (2022). A Study On Preference Of Youth Towards Cashless Payment System. *Central European Management Journal*, 30(4), 1989-1995. <https://doi.org/10.57030/23364890.cemj.30.4.202>
- Sweeney, J. C., Soutar, G. N., & Mazzarol, T. (2020). The role of consumer perceived risk in the acceptance of mobile payment systems. *Journal of Retailing and Consumer Services*, 55, 102085. <https://doi.org/10.1016/j.jretconser.2020.102085>
- Tiwari, P., Rana, M. P., & Sharma, R. (2021). Influence of civil status on digital payment adoption: Evidence from India. *Journal of Financial Services Marketing*, 26(3), 215-227. <https://doi.org/10.1057/s41264-021-00108-0>
- Wang, Q., Sun, X., Zhang, Y., & Zhang, S. (2020). Understanding mobile payment adoption: A cross-cultural perspective. *Electronic Commerce Research and Applications*, 39, 100901. <https://doi.org/10.1016/j.elerap.2020.100901>
- World Bank. (2021). *Digital financial inclusion: The role of technology in promoting economic participation*. Washington, DC: World Bank Publications.
- Xie, K., Zhang, Q., & Zhang, H. (2021). Investigating the factors that affect consumer adoption of mobile payment in the U.S. *Journal of Retailing and Consumer Services*, 58, 102282. <https://doi.org/10.1016/j.jretconser.2020.102282>
- Zhan, W., Sun, L., Wang, D., Shi, H., Clausse, A., Naumann, M., ... &



- Tomizuka, M.. Interaction dataset: An international, adversarial and cooperative motion dataset in interactive driving scenarios with semantic maps. *arXiv preprint arXiv:1910.03088*.
- Zhou, T. (2020). Examining users' switch from online payment to mobile payment. *International Journal of Mobile Communications*, 18(4), 439–455.
<https://doi.org/10.1504/IJMC.2020.10027908>