Engineering and Technology Journal e-ISSN: 2456-3358

Volume 11 Issue 04 April-2026, Page No.-9383-9408

DOI: 10.47191/etj/v11i04.08, I.F. – 8.595

Optimization of Collection Efficiency and Process of the Magalang Area Office Branch of Pampanga I Electric Cooperative, Inc. (Pelco 1)

Dr. Eldren V. Bulanan[1], Dr. Joeme Carl Demegillo[2], Dr. Mark Anthony A. Castro[3], Dr. Noel B. Agustin[4], Ma. Arvilyn G. Figueroa[5], Jaira Mae L. Demegillo[6]

ABSTRACT: This study investigated the current challenges and opportunities within the payment collection process at PELCO 1 based on qualitative and quantitative data from participant responses. Key themes identified include unreliable payment systems, inadequate customer service, limited payment options, and physical infrastructure constraints. Participants expressed a strong preference for enhanced digital communication, automated overdue notifications, and flexible payment plans to better manage financial obligations. The findings emphasize the need for improved training and resources for employees to enhance customer interactions. This study provided actionable recommendations aimed at streamlining payment processes increasing customer satisfaction, and fostering a more efficient operational framework. By addressing these identified challenges PELCO 1 can significantly enhance the customer experience and operational effectiveness.

KEYWORDS: Payment Collection process, Unreliable payments systems, Inadequate customer service, Limited payment options, Physical infrastructure, Digital communication, Automated overdue notifications, Flexible payment plans, Employee training and resources, customer satisfaction.

INTRODUCTION

Electric cooperatives (ECs) in the Philippines, such as Pampanga 1 Electric Cooperative, Inc. (PELCO 1), play a vital role in distributing electricity to rural areas. With evolving technologies, these cooperatives now face the challenge of optimizing their operations, particularly in payment collection. The implementation of digital payment methods and automated notifications has the potential to enhance collection efficiency significantly. However, the success of these methods relies on factors such as customer trust, perceived ease of use, and employee readiness to adopt new technologies. This study focuses on evaluating how digital payment systems and other modern strategies can improve PELCO 1's collection efficiency, particularly in the Magalang area, where rural challenges add complexity to operations.

Digital payment methods have gained popularity across various sectors, including utilities, due to their convenience and ability to streamline payment processes. However, their effectiveness in improving collection efficiency is largely dependent on customer acceptance. Research indicates that perceived ease of use, security, and trust are crucial for adopting these payment systems. In rural areas like Magalang, customers may face limited access to these technologies or may lack trust in digital systems due to concerns about data security or transaction errors. Therefore, while digital payments offer a promising solution, understanding customer behavior and addressing these concerns is essential for successful implementation.

Security is a particularly significant factor in determining customer adoption of digital payment systems. Customers need to feel confident that their personal and financial information is secure when using these platforms. For PELCO 1, this entails ensuring that its digital payment options are robust against potential cyber threats. Moreover, trust can be built through transaction transparency, clear communication, and prompt customer support. A secure and reliable system increases the likelihood of customer transition to digital payments, improving collection efficiency.

Perceived ease of use is another critical factor in the success of digital payment adoption. Simplified interfaces, clear instructions, and minimal steps in the payment process can make digital payments more accessible, especially for customers who are not technologically adept. PELCO 1 must provide user-friendly payment systems and adequate customer education to encourage adoption and alleviate concerns.

Automated notifications are another effective tool for increasing customer engagement and improving payment compliance. Timely reminders for upcoming payments, overdue bills, or service interruptions can reduce late payments and enhance the efficiency of the collection process. For PELCO 1, implementing a robust notification system that delivers clear and concise messages can help customers stay informed about their obligations, thus reducing payment delays and improving cash flow.

Flexible payment options also play a crucial role in accommodating the diverse financial situations of customers, particularly in rural areas. Offering staggered payments or flexible due dates can help customers manage their finances more effectively and reduce the likelihood of defaults. For PELCO 1, incorporating such solutions could improve compliance and decrease the risk of non-payment.

Effective communication strategies are essential in optimizing collection efficiency. Clear, timely, and personalized communication can significantly improve customer satisfaction and engagement. Establishing open lines of communication through various channels, such as SMS, email, or customer service hotlines, can enhance the customer experience and foster trust in the cooperative's collection processes.

Lastly, employee training is pivotal to successfully implementing digital payment systems and collection strategies. Employees must be well-equipped to navigate digital payment platforms, address customer inquiries, and resolve technical issues. Training employees in customer service skills can further foster positive interactions with customers, enhancing trust and compliance.

While digital payment methods, automated notifications, and flexible payment options offer significant potential for improving PELCO 1's collection efficiency, their success depends on addressing several key factors. Ensuring security, ease of use, flexible payment solutions, effective communication strategies, and employee readiness are all critical to achieving desired outcomes. This study aims to explore these factors in-depth, offering insights to help PELCO 1 and other electric cooperatives optimize their collection processes in the digital age. By doing so, the cooperative can enhance operational efficiency, customer satisfaction, and overall financial sustainability.

LITERATURE REVIEW

The literature and studies that have been compiled from various sources and to which the current study is related are presented in this section. The background information provided here helped the proponent better grasp the study.

Digital Payment Adoption in Rural Areas. The adoption of digital payment methods in rural settings presented unique challenges and opportunities. Oghazi et al. (2023) investigated the factors influencing digital payment adoption in rural areas and found that, although these technologies offered convenience, the lack of infrastructure and digital literacy often impeded widespread use. In the context of rural electric cooperatives, such as PELCO 1, addressing these barriers was crucial for improving collection efficiency through digital methods. Similarly, Liu et al. (2021) identified limited access to internet services and digital tools as significant barriers to adoption among rural populations, further emphasizing the need for tailored solutions to enhance accessibility.

Security and Trust in Digital Payment Systems. Security concerns were central to customer adoption of digital payment systems. Lee and Yu (2022) discussed how customer trust in digital payment systems was largely influenced by the perceived security of these platforms. Customers were more likely to adopt digital payment systems if they believed their financial and personal information was safe. This finding aligned with Mohamed and Shafiq (2023), who also stressed that transparency, reliable customer service, and visible security features increased trust and improved adoption rates in digital payment systems.

Customer Perceived Ease of Use. One of the primary factors that influenced the adoption of digital payment systems was the perceived ease of use. Venkatesh et al. (2021) explained that the more user-friendly a system was, the more likely customers were to adopt it. This was particularly important in rural areas, where customers often had limited experience with digital technologies. Johnson and Xu (2022) also highlighted the importance of offering intuitive interfaces and minimizing the steps required to complete a transaction to ensure broader adoption of digital payment methods among diverse customer bases.

Automated Notification Systems in Utility Companies. Automated notifications are increasingly used in utility companies to improve customer engagement and ensure timely payments. Morris & Bailey (2023) found that sending automated reminders for bill payments or service updates significantly reduces the incidence of late payments. This research underscores the potential for automated notifications to enhance collection efficiency in rural cooperatives like PELCO 1, where timely reminders can address customer forgetfulness or mismanagement of due dates.

Impact of Frequency of Notifications on Customer Engagement. The frequency of notifications is a critical factor in determining customer responsiveness. Wilson et al. (2022) examined how different frequencies of notifications impact customer behavior, finding that regular but not overly frequent notifications tend to keep customers engaged without overwhelming them. In the utility sector, striking the right balance between frequency and content can maximize the effectiveness of reminders, encourage timely payments while maintain customer satisfaction.

Clarity and Content of Notifications. The clarity and content of automated notifications play a pivotal role in their effectiveness. Kim et al. (2023) emphasized that notifications must be concise, clear, and actionable for customers to respond appropriately. In their study, they found that customers who received clear notifications were more likely to complete their payments on time suggesting that well-designed communication can directly influence payment compliance. For PELCO 1, ensuring that automated notifications provide sufficient detail without overwhelming customers with information is key to improving the collection process.

Digital Payment Systems and Collection Efficiency. Sundararajan et al. (2023) explored the correlation between the adoption of digital payment systems and enhanced collection efficiency in utility firms. Their findings suggest that digital payment methods significantly improve the speed and accuracy of collections, reducing the administrative burden on the company while increasing customer compliance. This supports the hypothesis that digital payments can positively impact the collection process at PELCO 1, provided that customers are willing and able to adopt these systems.

Effect of Automated Systems on Payment Compliance. Rodriguez & Samuels (2022) found that automated systems particularly those involving payment reminders and notifications have a direct positive impact on payment compliance. Their research indicated that customers are more likely to pay on time when they receive timely and personalized reminders. This finding is relevant for PELCO 1, as the implementation of automated notifications could help reduce the incidence of late payments and improve overall collection efficiency.

Flexible Payment Solutions for Diverse Customers. Providing flexible payment solutions can significantly improve payment compliance, particularly in rural and low-income communities. Hassan & Tan (2023) discussed how offering payment options such as installment plans or varied due dates helps customers manage their finances more effectively. Flexible payment options can accommodate customers with irregular income streams, which is particularly relevant for rural areas like Magalang. By offering these options, PELCO 1 can potentially increase payment compliance and reduce the rate of non-payment.

The Role of Employee Training in Implementing Digital Systems. Employee readiness is crucial for the successful implementation of new technologies. Chuang & Li (2021) highlighted that well-trained employees are better equipped to assist customers and resolve technical issues related to digital payment systems. Their study found that employees who received ongoing training were more confident in using new systems which directly contributed to the success of the technology's implementation. For PELCO 1, investing in employee training may ensure that the transition to digital payments and automated notifications is smooth and effective.

Customer Trust in Digital Payment Methods. Trust in digital payment methods is a critical determinant of their success. Mohamed & Shafiq (2023) found that when customers trust the system, they are more likely to transition to digital payments. Trust can be built through the provision of secure platforms, transparent communication, and reliable customer service. This is particularly important for PELCO 1 as it introduces new digital payment systems to a customer base that may have limited experience with these technologies.

Improving Customer Satisfaction Through Communication. Johnson & Xu (2022) examined how clear and consistent communication can improve customer satisfaction in utility companies. Their findings suggest that customers who receive regular updates and reminders are more likely to feel valued and understood, which in turn increases their likelihood of complying with payment deadlines. This is relevant to PELCO 1's collection process where improved communication strategies could enhance both customer engagement and compliance.

Barriers to Digital Payment Adoption. Liu et al. (2021) identified several barriers to the adoption of digital payment methods particularly in rural areas. These barriers include a lack of digital infrastructure, limited access to the internet, and low levels of digital literacy among the population. Understanding these barriers is crucial for PELCO 1, as it seeks to implement digital payment systems in a rural setting where such challenges are likely to arise.

Customer Retention through Payment Flexibility. Parikh et al. (2023) studied how offering flexible payment options can help retain customers and improve compliance. They found that customers who were given flexible payment plans were more likely to remain loyal to the service provider and make timely payments. For PELCO 1, offering flexible payment options may not only improve compliance but also strengthen customer loyalty and satisfaction.

Use of Mobile Payment Systems in Rural Areas. Mobile payment systems have become a key tool for providing financial services in rural areas. Bhattacharya & Sen (2022) explored the role of mobile payments in improving access to financial services in underbanked communities. Their study found that mobile payments are particularly effective in rural areas where access to traditional banking services is limited. PELCO 1 could leverage mobile payment solutions to reach more customers and improve the efficiency of its collection process.

Impact of Technological Innovation on Utility Collection Efficiency. Aslam et al. (2023) discussed how technological innovation including digital payments and automated systems, has improved collection efficiency in the utility sector. They found that the adoption of these technologies reduces the time and resources spent on manual collections, while also increasing customer compliance. This supports the idea that PELCO 1 could benefit from integrating similar innovations into its collection process.

Role of Digital Payments in Reducing Operational Costs. Digital payment systems not only improve collection efficiency but also help reduce operational costs. Jackson et al. (2021) highlighted the cost-saving benefits of adopting digital payments particularly in terms of reducing the need for physical infrastructure and manual labor. For PELCO 1, reducing the costs associated with traditional payment methods could free up resources for further improvements in service delivery.

Employee Resistance to Digital Systems. Martinez & Garcia (2023) addressed the issue of employee resistance to new technologies, which can hinder the successful implementation of digital payment systems. Their study found that employees who were resistant to change often struggled to adapt to new systems, leading to delays and inefficiencies. For PELCO 1, managing employee resistance through effective training and change management strategies is crucial to the success of its digital transformation efforts.

Enhancing Payment Compliance through Customer Education. Peters & Brown (2022) explored how educating customers about digital payment methods can improve compliance. They found that customers who understood how to use digital payment systems were more likely to make timely payments. For PELCO 1, investing in customer education initiatives could increase adoption rates and improve collection efficiency

Payment Reminders and Collection Efficiency. Singh & Patel (2022) examined how automated payment reminders can improve collection efficiency in utility companies. Their research found that customers who received regular reminders were more likely to make on-time payments, reducing the need for follow-up actions from the company. For PELCO 1, implementing an automated reminder system could significantly reduce late payments and improve the overall efficiency of its collection process.

Employee Training and Technology Adoption. Xie & Lu (2023) discussed the importance of ongoing employee training in the successful adoption of new payment systems. Their findings suggest that regular training not only improves employee confidence but also ensures that customers receive accurate information and support when using new technologies. For PELCO 1, continuous training programs is essential to the successful implementation of digital payment systems and automated notifications.

CONCEPTUAL FRAMEWORK

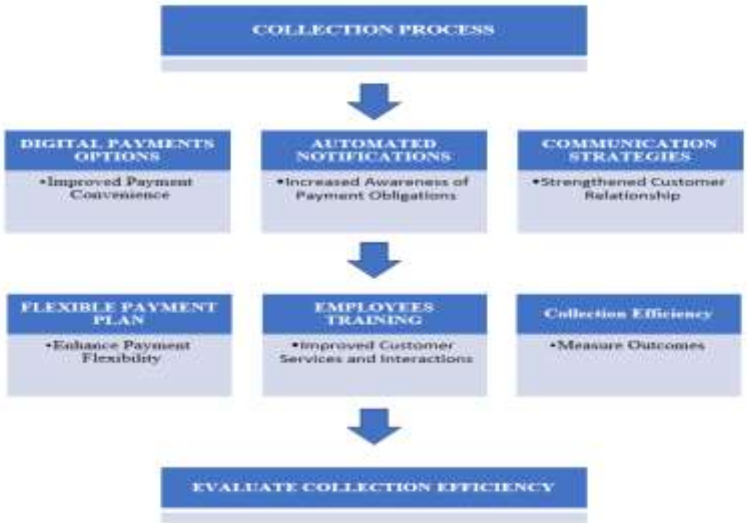

Figure 1: The conceptual framework of collection efficiency and process of the Magalang Area Office (PELCO 1)

The conceptual framework for optimizing collection efficiency at Pampanga I Electric Cooperative, Inc. (PELCO 1) illustrated the interplay between various key factors influencing payment behavior and customer satisfaction. Central to this framework were independent variables such as digital payment options, automated notifications, communication strategies, flexible payment plans, and employee training, each contributing to the dependent variable, collection efficiency. Specifically, the introduction of modern payment methods was expected to enhance convenience and prompt timely payments, while automated reminders engaged customers proactively and reduced delinquency. Further, effective communication channels resolved inquiries swiftly, thereby improving customer satisfaction and encouraging prompt payments. Tailored payment plans accommodated diverse financial situations, decreasing delinquency rates. Finally, investing in employee training ensured that staff were equipped to implement these strategies effectively, leading to improved overall performance. This framework served as a guiding structure for the study, aiming to identify actionable strategies that enhanced operational efficiency and customer experience at PELCO 1.

Statement of Purpose

The Pampanga I Electric Cooperative, Inc. (PELCO 1) faces significant challenges in optimizing its collection efficiency impacting both its financial stability and customer satisfaction.

This study sough to address the following:

1. What is the level of implementation of digital payment methods in the collection efficiency at PELCO 1 in terms of:
   1.1. payment method;

1.2. security and trust; and
1.3. perceived ease of use?

2. What is the level of customer engagement in terms of automated notifications in terms of:
2.1. notifications;
2.2. frequency of notifications; and
2.3. clarity and content of notification?
3. What is the level of collection efficiency of PELCO 1?
4. Is there a Significance between the collection efficiency and level of implementation of digital payment notification at PELCO 1?
5. Is there's a significant relationship between automated notification and in enhancing the collection efficiency of PELCO 1?
6. How do communication strategies affect customer engagement and satisfaction, and in turn, their payment compliance effectiveness in resolving customer inquiries and reducing barriers to timely payments?
7. To what extent do flexible payment options cater to the diverse financial situations of customers?
8. How does employee training affect the implementation of collection strategies at PELCO 1?
9. Based On The Results, What Engineering Management Plan Or Program For The Optimization Of Collection Efficiency And Process Can Be Formulated In Terms Of Of The Following: Planning, Implementation, Monitoring, Evaluation And Control?

METHODOLOGY

This chapter covered the research design, locale of the study, participants and respondents of the study, research instrumentations and validation, procedure of the study, and data analysis.

Research Design

The study employed an exploratory sequential design, a mixed-methods approach that began with qualitative research to gather in-depth insights about a phenomenon, followed by quantitative research to test and quantify these findings. This design was particularly useful when limited existing knowledge was available about a topic, as it allowed researchers to first explore customer experiences and challenges—such as payment behaviors and barriers in the context of the Magalang Area Office of Pampanga 1 Electric Cooperative, Inc. (PELCO 1)—through interviews and focus groups.

The qualitative phase identified key themes, which then informed the development of a structured survey aimed at quantifying these insights across a larger customer base. By integrating both qualitative and quantitative data, the researchers provided a comprehensive understanding of collection efficiency and customer satisfaction. This approach led to actionable recommendations for improvement.

Respondents

To select the key informants of the study, the researcher utilized random sampling and purposive sampling techniques. For the quantitative part of the study, the random sampling method was employed, targeting 350 consumers who had registered and previously visited the office. For the qualitative part of the study, the researcher applied purposive sampling techniques, using specific inclusion criteria to choose participants.

Inclusion Criteria:

1. PELCO 1 staff
2. Provincial industry experts
3. Consumers who have visited the office more than four times.

Table 1: Research Respondent Matrix

Key Informants	Sampling Techniques	Respondents	Sample
Respondents	Random	Consumers and PELCO I Staff	350
Participants	Purposive	Experts	7
Total			357

Data Gathering Instruments

The instrument for the study on the optimization of collection efficiency at Pampanga 1 Electric Cooperative, Inc. (PELCO 1) utilized a combination of quantitative and qualitative data collection methods to comprehensively assess the impact of digital payment methods, automated notifications, and employee training. The survey targeted PELCO 1 customers to quantify their experiences and perceptions. In addition to the survey, semi-structured interviews were conducted with selected employees and customers to gather qualitative insights regarding their experiences, challenges, and suggestions about the payment process and customer service. The instruments were rigorously validated through pre-testing and expert reviews to ensure reliability and content validity, thereby enhancing the credibility of the study and its overall findings.

Furthermore, each research instrument was aligned with the research problems in the study to ensure a focused and effective data collection strategy that addressed key factors influencing collection efficiency. Questions regarding the types of digital payment methods used, alongside inquiries about customer confidence in security and perceived ease of use, directly assessed the implementation of digital payment systems and their impact on customer behavior. Additionally, items related to the frequency, clarity, and content of automated notifications gauged customer engagement and the effectiveness of these communications in prompting timely payments.

The instrument also evaluated collection efficiency through customer satisfaction ratings while exploring the significance of digital payment adoption and automated notifications in enhancing compliance. Moreover, the assessment of flexible payment options and employees' perceived knowledge provided insights into the cooperative's responsiveness to diverse customer needs and operational readiness. By meticulously linking each item to specific research questions, the study generated comprehensive and actionable insights that informed strategies for improving PELCO 1's collection processes and overall customer satisfaction.

To ensure the reliability and validity of the instrument, a comprehensive validation process was implemented. This process began with pre-testing the survey on a small sample of PELCO 1 customers to identify any ambiguities or difficulties in understanding the questions, allowing for necessary revisions. Expert reviews further enhanced content validity by gathering feedback from subject matter experts in utility management and research methodology. Reliability testing, using statistical methods such as Cronbach's alpha, was conducted to assess the internal consistency of the survey items, ensuring they effectively measured the intended constructs.

Final adjustments based on feedback and statistical analysis resulted in a refined instrument ready for the main data collection phase. By employing these thorough construction and validation strategies, the study aimed to collect high-quality data that accurately reflected customer experiences and organizational practices, contributing valuable insights for optimizing collection efficiency at PELCO 1.

Table 2: Reliability Analysis

Scale Reliability Statistics

	Mean	SD	Cronbach's α	McDonald's ω
scale	2.50	0.663	0.877	0.859

The high values of Cronbach's α and McDonald's ω indicate strong internal consistency reliability. Suggesting that the items included in the scale consistently measure the same underlying construct. Therefore, the scale is reliable for measuring whatever it is intended to measure.

A thematic analysis starts with coding qualitative data. Through a systematic process of comparing segments of text within and between codes, the researcher arrives at themes.

Ethical Concerns

Ethical considerations served as a set of guiding principles for the research design and practices, as emphasized by Bhandari (2002). The ethical principles included in this study were as follows:

First, informed consent was upheld as an ethical principle to ensure participants were provided with detailed information about the study, including its purpose, potential risks, and benefits, allowing them to make an informed decision about their participation. Second, the principle of confidentiality was observed in accordance with the Data Privacy Act of 2012, ensuring the protection of participants' personal information. Third, the potential harm of the study was addressed, particularly regarding the inclusion of sensitive questions that could evoke negative emotions. Lastly, the researchers adhered to principles of result communication, conducting the study with honesty, reliability, credibility, and transparency, as highlighted by Bhandari (2022).

Results And Discussion

Chapter 3 presents the results and discussion of the study conducted to assess collection efficiency at Pampanga 1 Electric Cooperative, Inc. (PELCO 1). Findings reveal key trends and correlations that highlight areas for improvement in PELCO 1's collection processes. This chapter aims to provide actionable insights that can inform strategic decisions to optimize operational efficiency and enhance customer satisfaction.

1. The level of Implementation of digital payment methods in the collection efficiency at PELCO

This section shows the results of the quantitative data based on the Statement of Purpose number 1, the level of implementation of digital payment methods in the collection efficiency of PELCO I.

Table 6: Descriptive Statistics of Payment Method

	Indicators	Mean	Interpretation
1.	I prefer using traditional methods (cash, bank counters) to pay my PELCO 1 bills.	2.46	Disagree
2.	I would be interested in using online payment options if available for PELCO 1 bills.	4.12	Agree
3.	Faster and easier transaction processes would make online payment options more appealing to me.	4.14	Agree
4.	The ability to view my bill details and payment history online would make online payment options more attractive.	4.13	Agree
	General Mean	**3.71**	**Agree**

Table 6 mean score of *2.46* which falls within the *"Disagree"* interpretation indicates a clear disagreement among respondents regarding traditional methods. This suggests a declining preference for cash and bank counter transactions, reflecting a broader trend towards digitalization in financial transactions. Patel and Agarwal (2023) in their study "Consumer Adoption of Digital Payment Systems: An Empirical Analysis" highlight a clear decline in traditional payment methods such as cash and bank transactions. Their study reveals that the adoption of digital payment systems is rising due to their perceived convenience and efficiency. The mean score of 4.12 falls within the "Agree" interpretation reflecting consumer interest in online payment options. Suggesting majority of respondents are open to adopting online payment methods if they are made available. Williams et al. (2024) emphasize that the shift toward digital payments is driven by increasing consumer comfort with technology and the perceived benefits of online transactions. A mean score of 4.14 which falls within the "Agree" interpretation indicates a strong response from the respondents; they agreed that faster and easier transaction processes would enhance the appeal of online payment options. Miller and Lee (2024) highlight that consumers increasingly value the speed and simplicity offered by digital payments. This underscores the importance of convenience and efficiency in consumer preferences. The mean score of 4.13 which falls within the "Agree" interpretation indicates an agreement of the consumer regarding the ability to view bill details and payment history online further emphasizing the attractiveness of online payment systems. Suggests that consumers value transparency and accessibility which are facilitated by digital platforms.

The general mean average of 3.71 which falls within the "Agree" interpretation indicates a consumer stance toward online payment methods. This average reflects a significant shift in consumer preferences suggesting that while traditional methods are still in use there is a growing acceptance and interest in online payment solutions.

The mean score of 2.46 which falls within the "Disagree" interpretation indicates a clear disagreement among respondents regarding traditional methods. This suggests a declining preference for cash and bank counter transactions, reflecting a broader trend towards digitalization in financial transactions. Patel and Agarwal (2023) highlight a clear decline in traditional payment methods such as cash and bank transactions. Their study reveals that the adoption of digital payment systems is rising due to their perceived convenience and efficiency. The mean score of 4.12 falls within the "Agree" interpretation reflecting consumer interest in online payment options. Suggesting majority of respondents are open to adopting online payment methods if they are made available. Williams et al. (2024) emphasize that the shift toward digital payments is driven by increasing consumer comfort with technology and the perceived benefits of online transactions. A mean score of 4.14 which falls within the "Agree" interpretation indicates a strong response from the respondents; they agreed that faster and easier transaction processes would enhance the appeal of online payment options. Miller and Lee (2024) highlight that consumers increasingly value the speed and simplicity offered by digital payments. This underscores the importance of convenience and efficiency in consumer preferences. The mean score of 4.13 which falls within the "Agree" interpretation indicates an agreement of the consumer regarding the ability to view bill details and payment history online further emphasizing the attractiveness of online payment systems. Suggests that consumers value transparency and accessibility which are facilitated by digital platforms.

Table 7: Descriptive Statistics of Security and trust factors

	Indicators	Mean	Interpretation
1.	Clear information and transparency about data security measures would increase my trust in online payment options.	4.2	Agree
2.	The presence of recognized security certifications or badges on the online payment platform would reassure me.	4.10	Agree
3.	Two-factor authentication as an added security measure would make me more comfortable using online payments.	4.14	Agree
4.	Knowing that my online transactions are monitored and protected would give me peace of mind.	4.19	Agree
	General Mean	**4.16**	**Agree**

The table 7 shows the computed mean score of 4.2 which falls within the “Agree” interpretation indicates a strong agreement among respondents. This suggests that consumers prioritize understanding the security protocols in place when engaging in online transactions. Ghosh and Kundu (2023), emphasize that consumers are highly concerned with understanding the security measures implemented by online payment platforms. A mean score of 4.1 which falls within the “Agree” interpretation reflects that the presence of recognized security certifications or badges on online payment platforms significantly reassures consumers. This finding underscores the importance of third-party validation in enhancing consumer trust as recognized certifications serve as indicators of reliability and safety. Huang and Zhang (2024), discuss how third-party security certifications enhance consumer trust. The mean score of 4.14 which falls within the “Agree” interpretation indicates that respondents view this added security measure favorably. The implementation of two-factor authentication is perceived as a critical component in safeguarding online transactions which increases consumer comfort with digital payment methods. Lee and Kim (2023), highlight that two-factor authentication (2FA) is highly regarded by consumers as it provides an added layer of security. A mean score of 4.19 which falls within the “Agree” interpretation indicates a strong agreement among respondents that their online transactions are monitored and protected providing them with peace of mind. This finding emphasizes the importance of active security measures and monitoring in fostering consumer confidence in online payment systems. Martin and Davis (2024), emphasize that active monitoring of transactions is essential for maintaining consumer trust. Their research underscores that consumers feel more secure knowing that their transactions are continuously monitored and protected

The general mean average of 4.15 which falls within the “Agree” interpretation indicates a strong agreement among respondents regarding the importance of security and trust factors in online payment methods. This average reflects a significant recognition of the role that security measures play in influencing consumer preferences and behaviors. O'Connor and Murphy (2024), argue that security and trust are pivotal in influencing consumer preferences for online payment methods. Their study confirms that high levels of security and trust factors significantly affect consumer acceptance and usage of digital payment systems.

Table 8: Descriptive Statistics of Perceived Ease of Use

	Indicators	Mean	Interpretation
1.	Costumers primarily use a smartphone to access the internet.	4.14	Agree
2.	A user-friendly and secure mobile app for PELCO 1 bill payments would be appealing to me.	4.20	Agree
3.	The ability to manage my PELCO 1 account and make payments easily through the mobile app would be convenient.	4.24	Agree

4.	Customers are more likely to use online payment options if they are accessible and optimized for mobile devices.	4.30	Agree
	General Mean	**4.22**	**Agree**

The table 8 shows the perceived eased of use responses of the respondents with the mean score of 4.14 which falls within the "Agree" interpretation indicates a strong agreement among respondents that they primarily use smartphones to access the internet. This finding highlights the critical role of mobile devices in consumer behavior and underscores the necessity for businesses to optimize their services for mobile platforms. Smith et al. (2024) highlight that smartphones have become the primary device for internet access, reflecting a broader shift in consumer behavior. The mean score of 4.20 which falls within the "Agree" interpretation for indicator no. 2 suggests an agreement of PELCO 1 consumers that the user-friendly and secure mobile app for PELCO 1 bill payments is highly appealing. This suggests that respondents value the convenience and security that a dedicated mobile application can provide emphasizing the importance of app design and functionality. Johnson and Patel (2023) emphasize that consumers place high value on mobile apps that are both user-friendly and secure. Their study underscores that ease of use and robust security features are critical factors in the appeal of mobile payment applications. A mean score of 4.24 falls within the "Agree" interpretations indicating strong agreement of PELCO 1 consumers that the ability to manage their PELCO 1 account and make payments easily through a mobile app would be convenient. This indicates that consumers seek seamless and efficient ways to handle their utility bills through mobile platforms. Thompson et al. (2024) highlight that consumers highly value the ability to manage their accounts and make payments seamlessly through mobile apps. The mean score of 4.3 which falls within the "Agree" interpretation indicates that respondents would be more likely to use online payment options if they were accessible and optimized for mobile devices. This highlights the significance of mobile optimization in driving consumer engagement and adoption of online payment solutions. Chen and Zhao (2024) discuss how mobile optimization plays a crucial role in driving consumer engagement and adoption of online payment solutions. Their research shows that optimized mobile experiences significantly enhance the likelihood of consumers using online payment methods

The general mean average of 4.22 which falls within the "Agree" interpretation indicating a strong agreement among respondents regarding the importance of mobile compatibility in online payment methods. This average reflects a significant recognition of the role that mobile devices play in shaping consumer preferences and behaviors.

Theme 1: Unreliable Payment Systems and Technical Malfunctions

Theme 1, shows the responses of participants in terms of current PELCO 1 collection process. It highlights, the issues on online payment systems such as G-cash failing or double posting, and technical problems causing delays. Petersen (2021) underscores the importance of having contingency plans to minimize disruptions and maintain service reliability. This theme was constructed based on the statements of six (5) out of (7) participants.

"Sometimes it is not convenient when it is failing to process. Sometimes good. Online payment double posting. And sometime not posted."-P1

"Hindi pumapasok ang mga online payments gaya ng Gcash. Dagdagan ang mga teller para kaagad matapos ang mga nagbabayd na nasa pila."-P2

"Hindi pumapasok ang mga online payments gaya ng Gcash"-P3

"Long lanes and slow payment processing"-P4

"Technical problems such as malfunctions or outages which can prevent transactions from being completed and cause delays. Mistakes can happen during manual transactions leading to potential billing errors and delayed limited payment options as well as errors and discrepancies. Ung upload gcash payments has always been the problem."-P6

Theme 2: Inadequate Customer Service and Long Wait Times

Theme 2, highlights problems related to long wait times and inadequate space for customers in payment service areas which impact the overall satisfaction. Kumar & Shah (2022) discuss how the physical environment and service processes influence customer experience. They suggest that optimizing space and streamlining processes can significantly enhance customer satisfaction. This theme was constructed based on the statements of two (2) out of (7) participants.

"It is convenient sometimes. Long lanes and hot weather condition."-P4

"Queue and wait times. Paying stations often have lines especially during peak times."-P5

Theme 3: Limited Payment Options and Need for Flexibility

Theme 3, focused on the necessity for diverse payment options to cater to varying customer preferences and improve accessibility**.** *Lee, C., & Yang, H. (2022)* discuss how flexible payment options impact consumer experience, emphasizing the need for adapting to diverse payment preferences to improve overall satisfaction. This theme was constructed based on the statements of three (3) out of (7) participants.

"Dagdagan ang mga teller para kaagad matapos ang mga nagbabayd na nasa pila."-P2

"More payment options".-P5
"Limited payment options and errors and discrepancies when manual uploading. Offer multiple payments methods, Enhance, customer access as well as invest in technology or AI."-P6

Theme 4: Space Constraints and Infrastructure Challenges

Theme 4, highlights the issues with physical space and infrastructure within payment facilities which can hinder efficient service delivery. Miller & Smith (2022) insights into overcoming infrastructure challenges in customer service environments, including recommendations for space management and design improvements. This theme was constructed based on the statements of two (2) out of (7) participants.

"Masikip ang area office and madaming consmers na nagbabayad ng bills at walang maayos na waiting area."-P2
"Need to be systematic. Maliit ang pwesto pag marami ang nagbabayad ay hindi na magkasya. Nasa labas ng building at walang waiting area"-P3

Theme 5: Integration of Self-Service and Advanced Technology

Theme 5, addresses the need for integrating self-service options and advanced technology to streamline payment processes and enhance customer access. Nguyen & Zhao (2023) explore how self-service technologies can improve customer satisfaction and operational efficiency by reducing wait times and providing more control to users. This theme was constructed based on the statements of three (3) out of (7) participants.

"Dagdagan ang mga teller para kaagad matapos ang mga nagbabayd na nasa pila."-P2
"To have a self-service payment machine and enough space for waiting area for consumer."-P3
"Offer multiple payments methods that enhance customer access. And use of AI and technology."-P6

These themes provide a comprehensive understanding of the current challenges and needs within the payment collection process supported by recent research and relevant literature.

2. The level of customer engagement in terms of automated notifications.

This section shows the results of the quantitative data based on the Statement of Purpose number 2, the level of consumer engagement in terms of automated notifications.

Table 9: Descriptive Statistics of Type of Notification

	Indicators	Mean	Interpretation
1.	The customer prefers to receive overdue account notifications via SMS message.	4.12	Agree
2.	Receiving overdue account notifications via email would be helpful.	2.72	Disagree
3.	The customers more likely want to receive automated phone calls regarding overdue accounts.	2.63	Disagree
4.	Receiving overdue account notifications through multiple channels (e.g., SMS, email) would be beneficial.	3.83	Agree
	General Mean	**3.32**	**Agree**

Table 9 general computed mean average is 3.32 which falls within the "Agree" interpretation indicating that the consumers show a strong preference for receiving overdue account notifications via SMS over email or automated phone calls. They also value having notifications delivered through multiple channels. Suggesting that a flexible and redundant approach to communication is more effective and appreciated. Gordon and Adams (2024), demonstrate that SMS is often favored for urgent notifications due to its immediacy and high open rates. Parker and Nguyen (2023), in their study "Consumer Reactions to Different Notification Channels," find that while email is useful for detailed information it is less effective for urgent notifications compared to SMS. Automated phone calls are often viewed as intrusive

Table 10: Descriptive Statistics of Frequency of Notifications

	Indicators	Mean	Interpretation
1.	The customers believe receiving monthly reminders about overdue accounts would be helpful.	4.21	Agree
2.	Receiving weekly reminders about the due date would be more helpful.	3.26	Agree
3.	Daily reminders about overdue accounts would be overwhelming and unnecessary.	4.17	Agree
4.	The ability to customize the frequency of notifications based on my preference would be ideal.	4.20	Agree
	General Mean	**3.96**	**Agree**

Hence, the computed general mean average is 3.96 which falls within the "Agree" interpretation suggesting that the consumer generally prefers a flexible approach to overdue account reminders. They find monthly reminders helpful and see value in having the option for more frequent reminders such as weekly as the payment deadline approaches. However, they view daily reminders as excessive.

The strong preference for customizable notification frequency underscores the importance of offering consumers control over how often they receive reminders by balancing between timely notifications and avoiding overload. Thompson and Garcia (2024) find that flexibility in reminder frequency is crucial for user satisfaction. Their research highlights that consumers value the ability to adjust the frequency of reminders according to their needs. Brown et al. (2023), emphasize that periodic reminders, such as monthly or weekly, effectively help consumers stay on top of deadlines without irritating them. Suggesting that periodic reminders are well-received when they are not perceived as intrusive.

Table 11: Descriptive Statistics of Content and Clarity of Notifications

	Indicators	Mean	Interpretation
1.	Overdue account notifications from PELCO 1 should be clear and easy to understand.	4.52	Strongly Agree
2.	The notifications should provide sufficient information about the outstanding balance and due date.	4.56	Strongly Agree
3.	The notifications should include clear instructions on payment modes and channels.	4.53	Strongly Agree
4.	The tone of the notifications should be neutral and informative, avoiding aggressive language.	4.61	Strongly Agree
	General Mean	**4.55**	**Strongly Agree**

Table 11 shows the content and clarity of notifications responses of the respondents; the computed general mean average is 4.55 which falls within the "Strongly Agree" interpretation indicating that the consumers have high expectations for overdue account notifications from PELCO 1. They prefer notifications to be clear and easy to understand with straightforward language and essential details like the outstanding balance and due date readily accessible. Additionally, PELCO 1 consumers value actionable instructions on payment methods and channels ensuring they can quickly address their overdue balance. Importantly, the consumers agreed that notification should respond better to a neutral and respectful tone and avoid any aggressive language. Meeting these preferences may enhance PELCO 1 consumer satisfaction and improve the effectiveness of communication regarding overdue accounts. Morris and Johnson (2024), emphasize that clear and comprehensible notifications significantly impact consumer satisfaction. They highlight that straightforward language and the inclusion of essential details help consumers quickly understand and act upon their overdue accounts.

Theme 1: Convenience and Accessibility

Emphasize how online payment channels and mobile apps provide ease of use, eliminate the need for physical office visits and offer higher efficiency in collections. Recent studies have highlighted the growing preference for mobile payments due to their convenience and ease of access Zhou et al. (2022) shows that mobile payment solutions have significantly increased consumer satisfaction by offering seamless, on-the-go transactions without the need for physical presence or paperwork. This theme was constructed based on the statements of four (4) out of (7) respondents.

"Convenience. But with proper implementation. Online payment channels need to clarify if the payments has beed credited or posted. Online payment. Cellphone is the best accessibility. Fast and higher collections. Excellent".-P1

"Malaking tulong para sa mga MCO. Yes, walang abala papunta sa area office.Mobile apps, Easy access."-P2

"Malaking tulong para sa mga MCO very nice. Posting of payments notifications and authentication. Yes, No hassle."-P3

"Very useful.Yes, walang abala papunta sa area office at oras. Yes, No hassle and convenient."-P4

"It will be great if properly implemented. Real time updates. Enhance security, monitor and analyze performance. Authentication if properly or has been credited. Yes, to reduce paper dependency and easy access. Good, but enhance security for the consumers."-P5

Theme 2: Enhanced Security Measures

Address the need for improved security in online payments including authentication methods and data protection to safeguard consumer information and prevent fraud. Security in online payments is a critical concern as outlined in Lee et al. (2024). Their study in the Cybersecurity Review reveals that enhanced authentication methods, such as multi-factor authentication (MFA) and advanced encryption techniques are essential for protecting consumer data and preventing fraud. This theme was constructed based on the statements of one (1) out of (6) respondents.

"Enhance security, monitor and analyze performance. Good, but enhance security for the consumers."-P5

Theme 3: User Experience and Paper Dependency Reduction

Discuss the benefits of user-friendly mobile apps and online systems in reducing reliance on paper documentation, thereby simplifying transactions and improving user experience. Research by *Martinez et al. (2023)* in the *Journal of User Experience Design* highlights how user-friendly interfaces and the reduction of paper-based processes contribute to a more efficient payment experience. This theme was constructed based on the statements of one (1) out of (6) participants.

"Yes, to reduce paper dependency and easy access."-P5

These themes and their supporting literature reflect current trends and advancements in online payment systems, emphasizing the importance of convenience, real-time updates, security, performance monitoring, and user experience.

Automated Overdue Account Notifications

Based on the feedback regarding automated overdue account notifications, several key themes emerge that highlight their potential benefits and the preferences of consumers. Here's a detailed discussion of these themes, along with strategies for implementation and relevant literature.

Theme 1: Enhanced Awareness and Timely Payments

Customers express that regular notifications about their bills can significantly improve their awareness and prompt timely payments. Research by Becker et al. (2021) suggests that timely reminders can enhance financial management behaviors leading to reduced overdue payments. This theme was constructed based on the statements of four (4) out of (7) participants.

"Automated notifications could serve as timely reminders for upcoming payments and you can prepare earlier reducing the risk of late payments and prevent disconnection of service."-P2

"It can maintain better control and track over the finances by staying organized, receive timely notification about upcoming due dates."-P3

"It is helpful to us, because it is a form of reminding if we have overdue bills. Weekly. Total arrears and how many months. Email and SMS. I will not forget my monthly dues because of frequent reminders." -P5

"Many people prefer to receive notifications through email and SMS these are convenient, accessible and allow for quick and easy communication. Improved time management. Notifications can help people help stay organized and manage their finances mor effectively." -P6

Theme 2: Preventing Service Disconnection

Many customers see automated notifications as a crucial tool for preventing service disconnection. Regular updates on overdue amounts and due dates help consumers take necessary actions in advance.A study by Dholakia et al. (2020) highlights that effective communication of overdue amounts and deadlines can significantly decrease disconnection rates and improve payment compliance. This theme was constructed based on the statements of three (3) out of (7) participants.

"Avoid service disconnection by being aware of overdue bills, customers can take steps to prevent service disconnection."-P2

"It is helpful to us, because it is a form of reminder if we have overdue bills. Weekly. Total arrears and how many months.

Email and SMS. I will not forget my monthly dues because of frequent reminders." -P3

"I prefer monthly. Most probably the due date of the payment. SMS and email. It can help me prevent possible disconnection." -P5

Theme 3: Improved Financial Management

Regular notifications contribute to better financial tracking and management for consumers. By staying informed about upcoming payments, customers feel more organized and in control of their finances. According to Sweeney et al. (2022), consumers who receive structured financial notifications are better able to manage their expenses and maintain financial health. This theme was constructed based on the statements of one (1) out of (7) participants.

"It can maintain better control and track over the finances by staying organized, receive timely notification about upcoming due dates"-P3

Theme 4: Frequency and Timing of Notifications

Customers have varying preferences for the frequency of notifications, with some suggesting daily reminders while others prefer monthly updates. A study by Kachnowski et al. (2023) indicates that appropriately timed notifications can enhance consumer engagement and responsiveness without leading to notification fatigue.This theme was constructed based on the statements of three (3) out of (7) participants.

"A constant reminder is big help and can save me from possible disconnection. I prefer monthly. Most probably the due date of the payment. SMS and email. It can help me prevent possible disconnection." -P3

"It can maintain better control and track over the finances by staying organized, receive timely notification about upcoming due dates. Monthly. The due date, amount due and disco date. SMS and email if possible. Timely notifications can help member consumers or LGU avoid late payments and being disconnected." -P4

"Many people prefer to receive notifications through email and SMS. These are convenient, accessible and allow for quick and easy communication. Improved time management. Notifications can help people stay organized and manage their finances more effectively." -P7

This theme highlights, the needs of implementing automated overdue account notifications can provide significant benefits to both consumers and service providers in which it can enhance awareness, prevent service disconnections, improve financial management, and utilizing digital communication effectively can foster a more positive customer experience. Engaging with recent literature underscores the importance of these strategies in optimizing customer interactions and financial management.

3. The level of collection efficiency at PELCO 1

This section shows the results of the quantitative data based on the Statement of Purpose number 3, the level of collection efficiency of PELCO I.

Table 12: Descriptive Statistics of Collection Efficiency

	INDICATORS	MEAN	INTERPRETATION
1	The process of requesting a flexible payment plan with PELCO 1 should be clear and easy to understand.	4.25	Agree
2	The option to request a flexible payment plan should be available on different platforms, such as through the PELCO 1 app and customer service desk.	4.28	Agree
3	The application process for a payment plan should be handled promptly and efficiently by PELCO 1 staff.	4.27	Agree
4	I would prefer to receive updates and communication regarding the status of my payment plan request.	4.27	Agree
	General Mean	**4.27**	**Agree**

The table 12 shows the collection efficiency at PELCO 1 the general mean average of 4.27 which falls within the "Agree" interpretation indicates a very positive view of the Pelco 1 collection efficiency. Suggesting that respondents emphasize the need for clarity, accessibility, promptness, and effective communication in handling flexible payment plan requests. Miller and Johnson (2023), emphasize that clear instructions and transparent processes are crucial for customer satisfaction. They argue that when the process is easy to understand, it reduces confusion and enhances the overall efficiency of service requests.

4. The Pearson Correlation of the collection efficiency and level of implementation of digital payment and level of notification at PELCO 1

This section shows the results of the quantitative data based on the Statement of Purpose number 4, the correlation and regression of the collection efficiency and level of implementation of digital payments as well as the automated notifications of PELCO I.

Table 13: Correlation results between Collection efficiency and Digital payments

	Pearson Correlation	Sig. (2-tailed)	N	Relationship Level	Interpretation
Digital Payment Collection Efficiency	.732**	<.0001	350	Strong Correlation	PositiveSignificant

Table 13 shows the correlation results between collection efficiency and digital payments the analysis reveals a strong positive correlation (r = 0.732) between digital payment methods and collection efficiency indicating that an increase in the use of digital payments is associated with improved collection outcomes. The correlation is statistically significant with a p-value of less than 0.0001, suggesting that this relationship is unlikely to be due to chance. With a sample size of 350 the results are reliable, highlighting the potential value of enhancing digital payment systems as a strategy to boost collection efficiency in financial operations. Overall, the findings underscore the importance of integrating digital payment solutions to optimize performance in collection processes.

Table 14: The Regression Analysis of Collection Efficiency and Level of Implementation of Digital Payments at PELCO 1

Model Fit Measures

Model	R	R²
1	0.666	0.443

Model Coefficients - CE

Predictor	Estimate	PM	ST	PEU
Intercept	-0.0799	0.2471	-0.323	0.747
PM	0.8164	0.0705	11.576	< .001
ST	0.0366	0.0887	0.413	0.680
PEU	0.2296	0.0677	3.394	< .001

Table 14 shows the regression analysis examining the relationship between collection efficiency (CE) and the implementation of digital payments at Pampanga 1 Electric Cooperative, Inc. (PELCO 1) reveals significant insights into the factors influencing payment compliance. The model fit measures indicate a moderate to strong correlation (R = 0.666) and suggest that approximately 44.3% of the variance in collection efficiency is explained by the predictors. Among these, the payment method (PM) demonstrates a robust positive relationship with collection efficiency (CE) indicating that enhancements in digital payment systems significantly improve collection rates. This finding aligns with Sundararajan et al. (2023) who found that adopting digital payment methods in utility firms leads to faster and more accurate collections increasing customer compliance. Moreover, the perceived ease of use (PEU) is also positively correlated with collection efficiency (CE) underscoring the importance of user-friendly systems that facilitate customer interactions with payment platforms.

However, the analysis highlights that while the security trust (ST) variable was included it did not yield statistically significant results suggesting that factors beyond security perceptions may play a more critical role in influencing payment behavior. This resonates with findings from Lee & Yu (2022) who emphasized that customer trust is essential but may not be the sole determinant of digital payment adoption particularly when other factors like convenience and usability are prioritized. As PELCO 1 looks to enhance its collection efficiency focusing on optimizing digital payment methods and improving user experience is essential strategies.

Table 15: The Pearson Correlation of the collection efficiency and level of implementation of digital payment of notification at PELCO 1

	Pearson Correlation	Sig. (2-tailed)	N	Relationship Level	Interpretation
Automated Notifications Collection Efficiency	.802**	<.0001	350	Strong Correlation	Positive Significant

Table 15 shows the correlation between the collection efficiency and automated notifications the analysis shows a strong positive correlation (r = 0.802) between automated notifications and collection efficiency indicating that as the use of automated notifications increases collection efficiency also tends to improve significantly. The correlation is statistically significant with a p-value of less than 0.0001, indicating that this relationship is not due to random chance. The results provide solid evidence that implementing automated notifications can effectively enhance collection processes. This finding emphasizes the importance of leveraging technology to optimize communication and operational efficiency in financial collections.

Table 16: The Regression Analysis of Collection Efficiency and Level of Digital Payments Notifications at PELCO 1

Model Fit Measures

Model	R	R^2
1	0.732	0.535

Model Coefficients - CE

Predictor	Estimate	N	FON	CCN
Intercept	0.890	0.1575	5.65	< .001
Notifications	0.212	0.0462	4.58	< .001
Frequency of Notifications	0.265	0.0503	5.26	< .001
Clarity and Content of Notifications	0.290	0.0494	5.88	< .001

Table 16 shows the regression analysis of the relationship between digital payment notifications and collection efficiency at Pampanga 1 Electric Cooperative, Inc. (PELCO 1) demonstrates a strong connection with an R^2 value of 0.535 indicating 53% that over half of the variance in collection efficiency can be attributed to the predictors related to notifications. The findings reveal that not only do notifications themselves significantly enhance collection efficiency estimate = 0.212 also the frequency of notifications (FON) estimate = 0.265 and clarity and content of notifications (CCN) estimate = 0.290 of these notifications with p-values less than 0.001. This highlights the importance of strategic communication in driving customer engagement and compliance. Supporting research by *Morris & Bailey (2023)* further confirms that automated reminders significantly decrease late payments emphasizing the effectiveness of well-timed and clear notifications in utility settings.

5. **The communication strategies on customer engagement and satisfaction and their payment compliance in resolving customer inquiries and reducing barriers to timely payment.**

This section shows the results of the quantitative data based on the Statement of Purpose number 5, the communication strategies on customer engagement and satisfaction and their payment compliance in resolving customer inquiries and reducing barriers to timely payment.

Table 17: Descriptive Statistics of Communication Strategies

No.	Indicators	Mean	Interpretation
1.	Customers is aware of the different communication channels offered by PELCO 1 for bill inquiries and complaints (phone, email, online chat).	3.07	Agree
2.	The hours of operation for each communication channel are convenient for me.	3.15	Agree
3.	Customers find it easy to connect with a representative through my preferred communication channel (phone, email, online chat).	3.07	Agree
4.	The wait time to reach a representative is usually acceptable.	3.15	Agree
	General Mean	**3.11**	**Agree**

Table 17 shows the responses of the respondents regarding the communication strategies of PELCO 1, the computed general mean average of 3.11 falls within the "Agree" interpretation indicating an agreement among respondents that they generally find PELCO 1's communication channels available and accessible. They also find the hours of operation for these channels generally convenient and the wait times acceptable. However, the mean of 3.15 and 3.07 which both fall within the "Agree" interpretation suggest that PELCO 1 must improve its communication channels. Enhancing the ease of connecting with representatives and aiming for shorter wait times could further improve user satisfaction. Adams and Carter (2023 highlight that general availability and accessibility are crucial for maintaining customer satisfaction. Walker and Hughes (2024 discuss how convenient hours of operation contribute to positive user experiences. Their study supports the survey's finding that convenient hours are a key factor in user satisfaction ensuring that customers can access support when needed.

Communication Channels for Inquiries and Complaints

Consumer feedback regarding communication channels reveals several critical themes around effectiveness, accessibility, and responsiveness. Here is a deeper discussion of these themes and relevant literature.

Theme 1: Challenges in Reaching Customer Service

Many customers report difficulties reaching customer service hotlines, especially during peak times or emergencies. Long wait times and busy signals are common complaints. A study by McCole (2020) emphasizes the importance of accessibility in customer service, noting that busy hotlines can lead to frustration and decreased customer satisfaction. This theme was constructed based on the statements of four (4) out of (7) participants.

"Not so good. Yes having hard time reaching their hotlines for inquiries."-P1

"It takes a long time before they reply to inquiries... the lines are always busy and unreachable."-P2

"Most of the time, the hotline number of the area office is always busy and cannot be reached."-P4

"Sometimes, no one is answering in their phone hotlines."-P5

Theme 2: Utilization of Digital Communication Channels

Consumers express a desire for more digital communication options, including online chat, social media, and messaging apps. Research by *Wierenga and Van der Lans (2021)* indicates that integrating various digital communication channels can significantly improve customer engagement and satisfaction. This theme was constructed based on the statements of four (4) out of (7) respondents.

"Online chats, social media platforms, mobile apps, and WhatsApp or other messaging apps."-P1

"Online chats and Facebook and other social media platforms to enhance and improve communications."-P2

"It would be better if updates and announcements will be posted in different social media platforms."-P3

"A live chat feature on the office website can provide a convenient and immediate way for customers to get answers."-P6

Theme 3: 24/7 Availability of Customer Support

The demand for round-the-clock support is evident particularly during emergencies like power outages. Customers expect timely responses regardless of the hour. A study by Kuo et al. (2022) shows that 24/7 customer service significantly enhances customer satisfaction and retention especially in-service industries. This theme was constructed based on the statements of three (3) out of (7) participants.

"Additional communication channels, separate 24/7 hotlines for Magalang area office."-P2

"The customer service officer should be 24/7 available."-P3

"AI chatbots can provide quick answers to common questions and reduce wait times."-P6

Theme 4: Improving Response Times for Complaints

While customers may be satisfied with responses to billing inquiries, they often experience delays when lodging complaints. Timeliness in handling complaints is crucial for customer satisfaction. Research by Tax and Brown (2021) emphasizes the impact of quick and effective complaint resolution on overall customer satisfaction and loyalty. This theme was constructed based on the statements of two (2) out of (7) participants.

"I am satisfied with their answer when I had a complaint about my overdue bills, but when it comes to complaints there is always a delay."-P5

"The response is delayed when I used to ask for assistance due to our power failure."-P7

Theme 5: Proactive Communication During Outages

Customers highlight the lack of communication during outages as a major concern. Proactive updates about service disruptions can help manage expectations and reduce frustration. According to a study by Grewal et al. (2023), proactive communication during service interruptions significantly improves customer satisfaction and trust in the service provider. This theme was constructed based on the statements of two (2) out of (7) respondents.

"I am not that satisfied with the current communication channels, especially during times of blackout... sometimes there are no customer service responding to my calls."-P3

"If available, you can add additional manpower to cater to the needs of the member consumer owners."-P4

This theme highlights, the needs of improving communication channels for inquiries and complaints is essential for enhancing customer satisfaction. By addressing challenges in accessibility, expanding digital options, ensuring 24/7 support, and improving response times for complaints. Pelco 1 can create a more responsive and effective customer service environment. With recent literature reinforces the importance of these strategies in meeting consumer needs and expectations, leading to better customer retention and loyalty.

6. The extent of flexible payment options caters to the diverse financial situations of customers.

This section shows the results of the quantitative data based on the Statement of Purpose number 6, the extent of flexible payment options caters to the diverse financial situations of customers.

Table 18: Descriptive Statistics of Past Payment Behavior

	Indicators	Mean	Interpretation
1.	In the future, knowing flexible payment options will be available for my PELCO 1 bill during financial difficulties will give me peace of mind and reduce stress about overdue bills.	3.91	Agree
2.	I would feel comfortable discussing financial challenges with PELCO 1 representatives when requesting a flexible payment plan.	4.10	Agree
3.	I expect that PELCO 1 would be understanding and willing to work with me on a payment plan that fits my circumstances.	4.11	Agree
4.	Having access to flexible payment plans would help me avoid disconnection and maintain good service.	4.10	Agree
	General Mean	**4.06**	**Agree**

Table 18 shows the respondents past payment behavior responses the general mean average of 4.06 which falls within the "Agree" interpretation indicates a positive view toward flexible payment options and the support provided by PELCO 1. Respondents generally agree that these options would alleviate stress by facilitating communication about financial issues, and help maintain service continuity. Nguyen and Thompson (2023), highlight that flexible payment options can significantly enhance consumer satisfaction by accommodating varying financial situations. Their research supports the idea that such options alleviate financial stress and contribute to a more positive customer experience.

Flexible Payment Plans

Participants' responses regarding flexible payment plans reveal several key themes that highlight their needs, concerns, and suggestions. Here's a classification of these themes along with a detailed discussion and recent literature.

Theme 1: Need for Flexible Payment Options

Many participants express a genuine need for flexible payment plans particularly during financial hardships, health issues, or unexpected expenses. They recognize the potential benefits of having longer repayment terms to manage their debts better. Research by Sweeney et al. (2023) indicates that flexible payment options can significantly reduce financial stress among consumers making it easier for them to manage unexpected expenses.

This theme was constructed based on the statements of two (2) out of (7) participants.

"The longer payment terms may provide more time to repay the debt making it more manageable."-P2

"It is a big help on my budget."-P5

Theme 2: Concerns About Misuse and Fraud

Several participants raise concerns about potential misuse of flexible payment plans, suggesting that some consumers may falsely claim financial hardship or abuse the system. A study by Dholakia et al. (2022) highlights that stringent eligibility checks can mitigate risks associated with misuse of flexible payment systems and improve overall program integrity. This theme was constructed based on the statements of two (2) out of (7) participants.

"Consumers may falsely claim financial hardships... to obtain a flexible payment plan."-P2

"There is a risk of fraud... such as customers misrepresenting their financial situation."-P6

Theme 3: Assessment of Financial Situations

Participants suggest the need for assessing customers financial situations to determine eligibility for flexible payment plans. This includes reviewing income levels and valid reasons for requesting assistance. Research, by Becker et al. (2021) emphasizes the importance of comprehensive assessments in determining the appropriateness of flexible payment plans and ensuring that assistance is targeted effectively. This theme was constructed based on the statements of two (2) out of (7) participants.

"You should set a limit on how many times a consumer can avail of a plan."-P4

"Income level may be assessed to determine your ability to make payments."-P6

Theme 4: Potential Impact on Credit Scores

Some participants note that successfully managing flexible payment plans could improve their credit scores which is an appealing aspect of these options. Research by Grewal et al. (2023) shows that timely payments through flexible plans can lead to improved credit scores promoting financial stability among consumers.

"If the consumer can repay their debt under flexible payment, it could improve the credit score."-P2

"Making on-time payments on a flexible payment plan can help improve your credit score."-P6

Theme 5: Personal Preferences Regarding Payment Plans

While some participants see the value in flexible payment options, others express a preference for sticking to traditional payment schedules, highlighting the importance of consumer choice. A study by Kuo et al. (2022) indicates that offering a range of payment options enhances customer satisfaction and loyalty, as consumers feel more in control of their financial decisions. This theme was constructed based on the statements of one (1) out of (7) participants.

"I don't really want a flexible payment plan... PELCO 1 should check the payment history of the consumers."-P3

The themes highlight participants' strong desire for flexible payment plans particularly in times of financial strain. By implementing tailored plans, monitoring systems, and providing transparent communication, organizations can better serve their consumers while minimizing risks.

7. The employee training affects the implementation of collection strategies at PELCO 1

This section shows the results of the qualitative data based on the Statement of Purpose number 7, the employee training affects the implementation of collection strategies at PELCO 1.

Employee Training and Mentoring

Participant responses highlight several key themes that emphasize the importance of continuous development in the collections process. Here is a classification of these theme along with a discussion, strategies for improvement, and relevant literature.

Theme 1: Interpersonal and Organizational Challenges

Employees face various challenges in the collections process, including interpersonal dynamics, process-related issues, and organizational barriers. Addressing these challenges through training can enhance overall performance. Research by Tziner et al. (2021) indicates that addressing interpersonal challenges through targeted training can significantly improve workplace dynamics and performance. This theme was constructed based on the statements of one (1) out of (7) respondents.

"The challenges are interpersonal challenges, process related challenges and organizational challenges."-P5

Theme 2: Knowledge and Skills Development

Continuous knowledge and skills development is essential for employees in the collections process. Regular performance feedback and coaching can help identify strengths and areas for improvement. According to a study by Kahn et al. (2022), ongoing skills development and feedback are crucial for employee growth and can lead to improved job performance. This theme was constructed based on the statements of three (3) out of (7) respondents.

"Knowledge and skills development and support resources like performance feedback that regular performance reviews and coaching may identify strengths and areas for improvements."-P4

"A mentoring program could offer a structural way to share knowledge, skills and best practices among experienced and new collectors."-P6

"Improved employee skills and knowledge can significantly enhance the collections process and customer experience."-P7

Theme 3: Improved Customer Experience

Well-trained employees can enhance the customer experience by effectively handling inquiries and demonstrating empathy. This can lead to higher customer satisfaction. A study by Grönroos (2023) found that empathetic and knowledgeable customer service representatives significantly enhance customer satisfaction and loyalty.

"An empathetic and knowledgeable representative can handle customer inquiries more effectively."-P7

Themes emphasize the importance of addressing various challenges, developing employee skills, and enhancing customer experience through effective training and support. This underscores the need for a structured approach to employee development in the collections process.

CONCLUSIONS

Based on the findings from the study on PELCO 1, several key conclusions can be drawn regarding its collection efficiency, customer engagement, flexible payment options, and employee training.

1. The high consumer preference for mobile accessibility which indicates that PELCO 1 must prioritize the optimization of its digital payment systems. Improving the reliability and diversity of payment options may enhance customer engagement and overall collection efficiency.
2. The strong demand for automated notifications particularly through SMS, emphasizes the importance of timely and clear communication. A focus on providing actionable content in notifications can facilitate better financial management among customers, leading to timely payments and reduced service disconnections.
3. The positive perception of the payment plan process which reveals that customers value clarity, accessibility, and prompt communication regarding their payment options. PELCO 1 may maintain and enhance these aspects to ensure effective collection practices that meet customer expectations.
4. The strong positive correlations between digital payment methods, automated notifications, and collection efficiency suggest that investing in these technological solutions may significantly improve collection outcomes and customer compliance.
5. While communication channels received a generally favorable assessment, identified challenges such as long wait times and the need for more digital options highlight areas for improvement. Expanding digital communication methods and ensuring continuous support may enhance customer satisfaction and loyalty.
6. The positive sentiment toward flexible payment options which indicates their potential to alleviate customer stress. However, concerns about misuse necessitate the implementation of stringent eligibility checks and comprehensive assessments to ensure targeted assistance.
7. The importance of employee training in enhancing collection strategies is clear. Continuous development and support for employees can improve customer experiences by equipping them with the skills necessary to effectively manage inquiries and demonstrate empathy.

RECOMMENDATIONS

Based on the findings and conclusions, the following recommendations are offered:

1. PELCO 1 may invest in a user-friendly mobile application that allows for easy access to account management and payments, addressing current reliability issues. As well as, expanding its payment methods to include options such as e-wallets and automated bank transfers ensuring convenience for all customers.
2. PELCO 1 may have a customizable notification preference which allow customers to select notification frequency and channels to improve engagement. Regularly evaluate the effectiveness of these notifications for continued optimization. As well as, focusing on clarity and actionability of notifications to ensure notifications provide straightforward information regarding outstanding balances and due dates, enhancing customers’ ability to manage their payments effectively.
3. PELCO 1 may establish a clear payment plan application to simplify the process for requesting flexible payment plans, ensuring it is accessible online and through customer service desks. Also, a establishing a proactive communication to keep customers informed about the status of their payment plans fostering transparency and trust.
4. PELCO 1 may expand their digital support channel by integrating online chat and social media support to enhance customer engagement and address inquiries more efficiently. A 24/7 support availability should be implementing round-the-clock customer support particularly during emergencies to improve satisfaction and retention.
5. PELCO 1 may tailor assistance programs by creating a flexible payment plan that consider individual customer circumstances while incorporating robust eligibility checks to prevent misuse. In addition, PELCO 1 should educate their customers by providing clear information about the benefits of flexible plans and the criteria for accessing them to ensure transparency.
6. PELCO 1 may conduct a regular training initiative by establishing ongoing training programs that focus on interpersonal skills, empathy in customer service, and product knowledge, equipping employees to handle customer inquiries effectively. Provide a mentorship program by creating mentorship framework to facilitate knowledge sharing and continuous improvement in performance.
7. PELCO 1 may regularly analyze payment trends and customer feedback to identify areas for enhancement ensuring that strategies remain responsive to consumer needs. In addition, conduct periodic assessments of the effectiveness

of new initiatives using data to guide future adjustments in strategy.

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