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Author : Chris Douglas Nababan, et al
DOI : 10.32734/lwsa.v9i2.2799
Electronic ISSN : 2654-7066
Print ISSN : 2654-7058

Volume 9 Issue 2 – 2026 TALENTA Conference Series: Local Wisdom, Social, and Arts (LWSA)



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Analysis of the Effectiveness of Accounts Receivable Management in Optimizing Income Increase at PT PLN Customer Service Implementation Unit (UP3) Pematang Siantar

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Abstrak

Permasalahan yang terjadi pada PT PLN Unit Pelaksana Pelayanan Pelanggan (UP3) Pematang Siantar adalah adanya penunggakan pembayaran listrik yang dilakukan oleh pelanggan. Sehingga penelitian ini bertujuan untuk menganalisis dan mengetahui pengelolaan dan strategi yang dilakukan dalam proses penagihan piutang yang diterapkan PT PLN Unit Pelaksanaan Pelayanan Pelanggan (UP3) Pematang Siantar. Sejauh mana pemanfaatan sumber daya manusia dan teknologi mendukung efektivitas proses pengelolaan dan penagihan piutang di PT PLN UP3 Pematang Siantar. Jenis penelitian ini menggunakan metode deskriptif dengan pendekatan kualitatif. Data yang digunakan dalam penelitian ini adalah data primer dan data sekunder. Teknik pengumpulan data yaitu wawancara, observasi, dan dokumentasi. Analisis data dilakukan dengan menganalisis kondisi internal dan eksternal, sumber daya manusia, pemanfaatan teknologi serta strategi yang dapat dilakukan PT PLN UP3 Pematang Siantar. Hasil penelitian ini memberikan gambaran dan masukan bagi perusahaan mengenai pengelolaan piutang yang efektif, strategi pengelolaan dan mekanisme penagihan piutang yang tepat untuk mengurangi piutang tak tertagih dari pelanggan yang nantinya akan meningkatkan pendapatan pada PT PLN UP3 Pematang Siantar.

Kata Kunci: Efektivitas; Manajemen; Piutang; Pendapatan; PT PLN Indonesia

Abstract

The problem faced by PT PLN Customer Service Implementation Unit (UP3) Pematang Siantar is the existence of electricity payment arrears among customers. Therefore, this study aims to analyze and examine the management practices and strategies applied in the accounts receivable collection process at PT PLN UP3 Pematang Siantar. In particular, the study investigates the extent to which human resources and technological utilization support the effectiveness of accounts receivable management and collection processes within the organization. This research employs a descriptive method with a qualitative approach. The data used in this study consist of primary and secondary data. Data collection techniques include interviews, observations, and documentation. Data analysis was conducted by examining internal and external conditions, human resource factors, technology utilization, and the collection strategies implemented by PT PLN UP3 Pematang Siantar. The findings of this study provide valuable insights and recommendations for the company regarding effective accounts receivable management, appropriate management strategies, and collection mechanisms to reduce uncollectible receivables from customers, which in turn can contribute to increased revenue at PT PLN UP3 Pematang Siantar.

Keywords: Effectiveness; Management; Receivables; Revenue; PT PLN Indonesia

1. Introduction

In the era of globalization, competition in the business environment has intensified significantly. Consequently, companies are required to conduct their operational activities effectively and efficiently to maintain sustainability and competitiveness. To support growth and adapt to an increasingly competitive business landscape, organizations must prepare themselves professionally and flexibly, enabling them not only to survive but also to grow and expand in the global market. In response to

these challenges, companies are expected to develop strong comparative and competitive advantages across various dimensions, including service quality, marketing capabilities, resource quality, operational reliability, sound management systems, and efficient financial management.

Financial stability refers to an organization's ability to maintain a balance between income and expenditures while effectively managing financial risks (1). In a business context, financial stability is reflected in a company's capacity to meet financial obligations on time, sustain liquidity, and maintain profitability (2). Key indicators of financial stability include cash flow performance, liquidity ratios, and debt levels. A high level of financial stability enables companies to operate more effectively and enhances overall organizational performance. Effective accounts receivable management plays a crucial role in supporting financial stability. By managing receivables efficiently, companies can ensure smoother cash flow and mitigate the risk of customer default (3). The implementation of strict credit policies and efficient collection procedures can significantly reduce delinquent accounts and strengthen financial stability.

Receivables are assets resulting from the sale of goods or services that have not been paid for by customers (4). In a business context, receivables can arise from various sources, such as deferred payments from guests, meeting space rentals, and collaborations with travel agents. Receivables are a crucial component of financial statements because they reflect potential future revenue (5). Receivables are a crucial element and require sound management policies. Because, in addition to being receivable, it can pose a risk to the company, namely, losses due to late electricity bill payments of more than one month, resulting in a large receivables turnover or revenue that does not match electricity sales transactions. For the company, this will impact business revenue, resulting in further decline in company performance (6).

Effective management of accounts receivable is needed to encourage the cash capacity needed for company financing because receipts that are not commensurate with funding needs will be burdensome in carrying out work programs that have been set as company activity targets, in addition to being an effort to reduce costs, especially those directly related to the management of accounts receivable such as allowances for bad debts, collection of (problematic) accounts receivable and write-off of accounts receivable (7).

PT PLN (Persero) is the only State-Owned Enterprise (BUMN) that manages all matters related to electricity in Indonesia (PLN Business Conduct and Ethics Guidelines, 2021). PT. PLN (Persero) has management that carries out company activities based on its philosophy of improving the welfare of society. However, in its operations, PT. PLN (Persero) faces several issues, such as customer arrears exceeding the established payment deadline. This leads to increased receivables. The problem at PT PLN's Pematang Siantar Customer Service Implementation Unit (UP3) is the arrears in electricity payments incurred by electricity customers such as households, hospitals, and other users. This results in a delay in receivables payments, leading to arrears. Under these circumstances, management must pay closer attention to aspects that can cause receivables management to not run as it should. One aspect that can hinder receivables management is a delay in receivables payments, or receivables that cannot be paid off when they are due.

At PT PLN Persero, electricity bill users are grouped into several classifications, including Group 0 General, Group 1 TNI/POLRI, Group 2 Vertical Agencies, Group 3 Regional Government, Group 4 BUMN/BUMD. The following will present data on electricity bill arrears that are under the authority and insight of PT. PLN UP3 Pematang Siantar, will be presented in table 1:

Table 1. Data on the Amount of Customer Bill Arrears for Electricity Accounts at PT. PLN UP3 Pematang Siantar

Month	Total Account Issued	Total Arrears (Rp)	Percentage of Arrears (Rp)
July (2024)	Rp108,863,092,673	Rp399,193,958	0.37
August (2024)	Rp113,759,918,342	Rp605,411,387	0.53
September (2024)	Rp111,338,899,115	Rp743,432,164	0.67
October (2024)	Rp109,771,869,457	Rp1,020,824,354	0.93
November (2024)	Rp112,223,759,504	Rp786,058,976	0.70
December (2024)	Rp104,779,412,646	Rp293,734,865	0.28
January (2025)	Rp106,760,340,025	Rp855,363,944	0.80

Source: PT PLN (UP3) Pematang Siantar Company Data, 2024-2025

Based on the data presented in table 1.1 above, it can be seen that since July-October 2024, postpaid electricity customers have continued to experience arrears. Based on data from PT PLN UP3 Pematang Siantar in 2024–2025, it is known that the level of arrears in customer electricity bills shows quite significant fluctuations from month to month. In July 2024, the amount of arrears was recorded at IDR 399,193,958 or equivalent to 0.37 % of the total accounts issued. This figure increased gradually in August 2024 to IDR 605,411,387 (0.53 %) and continued to increase again in September to IDR 743,432,164 (0.67%).

A sharp increase occurred in October 2024, when total arrears reached over one billion rupiah, specifically Rp1,020,824,354, the highest percentage in this data range, at 0.93%. Despite a decrease in the percentage of arrears in November to 0.70 %, the arrears figure remained above Rp700 million. A more drastic decrease was seen in December 2024, when the arrears were only Rp293,734,865, or 0.28 %, indicating the possibility of an effective intervention or collection program during that period. However, in January 2025, the arrears figure rose again to Rp855,363,944, or 0.80 %.

This fluctuation illustrates that the receivables problem has not been consistently controlled, even after interventions such as the addition of collection officers. The percentage of arrears approaching and even exceeding 0.8 % indicates a gap between the collection strategy implemented and its effectiveness in the field, which deserves further evaluation. This problem is an important indication that the receivables management system at PT PLN UP3 Pematang Siantar requires a more comprehensive overhaul, not only in terms of the number of workers, but also in terms of training, technology, and approach to customers.

Through the researcher's observations, there are several obstacles that hinder PT PLN UP3 Pematang Siantar in collecting arrears in electricity bills, including the lack of electricity bill collection officers, lack of public awareness in paying electricity bills, lack of access to pay electricity bills, lack of monitoring and supervision of the performance of electricity bill collection officers, and the suboptimal use of digital technology that can be a tool to assist in the work process carried out by officers.

The risk of losses from bad debts can be minimized through effective control, supervision, and collection strategies within the company. To ensure proper collection, effective management oversight and collection strategies are required to ensure timely collection, minimize bad debt losses, and maintain good customer relationships (8). Effective management of receivables is very important in corporate financial management because it directly affects liquidity and profitability (9). A company's liquidity, that is, its ability to meet short-term obligations, depends heavily on the speed of conversion of receivables into cash. If receivables are managed well, companies can maintain a stable cash flow, which is important for daily operations and strategic decision making (3).

The empirical trends and previous literature reviews in this study refer to research conducted by [2; 3; 6; 10-12] who examined the application of effective management and management of receivables to optimize and increase revenue. The results of the study, among others, revealed that the effectiveness and implementation of strategies carried out by companies in managing and collecting effectively and in accordance with company needs, will be able to increase company revenue.

2. Literature Review

2.1 Effectiveness

Effectiveness is one of the achievements that an organization wants to achieve. According to [13], effectiveness is how well the work is done to what extent people produce output according to expectations. This means that if a job can be completed according to planning both in terms of time, cost and quality, it can be said to be effective. Effectiveness is one of the achievements that an organization wants to achieve. According to [14], effectiveness is the utilization of resources, facilities and infrastructure in a certain amount that is consciously determined in advance to produce a number of goods for the services of the activities it carries out. So it can be concluded that effectiveness is the ability of a company to manage its receivables well and appropriately for the goals it wants to achieve, where the goal is to achieve the desired level of receivables turnover and average age of receivables [15].

2.2. Accounts receivable

According to [16] states that receivables *are* financial assets and also financial instruments, receivables are often referred to as loans and receivables submitted to customers and others, for money, goods, or services. According to [17] Receivables refer to a number of bills that will be received by the company (generally in the form of cash) from other parties, either as a result of the delivery of goods and services on credit (for customer receivables consisting of trade receivables), providing loans (for employee receivables, notes receivables, and interest receivables), and as a result of excess payments, cash to other parties for tax receivables.

Receivables are company assets or wealth that arise as a result of credit sales. This credit policy is a common practice for companies to stimulate customer interest [18]. According to [17], receivables are generally classified as follows:

1. *Accounts Receivable* is the amount that will be collected from customers as a result of selling goods or services on credit.
2. *Notes Receivable* are the company's debts to the issuer of a note. The issuer of a note is the party who owes the company either through borrowing goods or services on credit or borrowing a sum of money.
3. Other receivables include all bills that are not trade receivables.

2.3. Accounts Receivable Management

Accounts receivable management is an important aspect of a company's financial management. Effective accounts receivable management can have a positive impact on cash flow efficiency and company profitability [19]. Accounts receivable management involves activities such as monitoring payments, making collections, assessing customer credit risk, and taking necessary steps to avoid or address bad debts. In order to maintain the company's liquidity and financial health, it is important for the company to manage receivables effectively and proactively [10].

The empirical previous literature reviews in this study refer to research conducted by [2; 3; 6; 10-12] who examined the application of effective management and management of receivables to optimize and increase revenue. The results of the study, among others, revealed that the effectiveness and implementation of strategies carried out by companies in managing and collecting effectively and in accordance with company needs, will be able to increase company revenue

Accounts receivable management is a series of processes carried out to manage receivables so that they can run as they should. With good receivables management, a virtuous cycle will occur from the occurrence of receivables to the repayment process, thereby not disrupting the company's cash flow. Sartono [20] states that there are at least several steps that must be taken by a company in terms of receivables management policies, namely:

1. Credit standards,
Credit standards are the minimum qualities used to assess the creditworthiness of an applicant as determined by the company. Intended to determine the customer's willingness and ability to fulfill their obligations and to minimize the risk of bad debt.
2. Credit Terms
Credit terms are the conditions required for repayment of receivables from customers. The aim is to increase credit sales and encourage customers to make their credit payments immediately.
3. Determining Credit Policy
In providing credit policies, companies must determine several decisions that include the quality of the amount received, the credit period, cash discounts, special terms, and the level of expenditure for collecting receivables. The company must always make efforts to collect its receivables according to their due date. Before the due date, companies must remind customers. Collection policies can include reminding customers to make payments before the due date by letter or telephone, in-person visits, direct collection through third parties, and legal or civil action [2].

3. Research Methods

This study employs a descriptive research design with a qualitative approach using a case study method to analyze the effectiveness of accounts receivable management in enhancing company revenue. Qualitative research is intended to develop an in-depth understanding of specific phenomena. Such phenomena may include experiences of research subjects related to behavior, perceptions, motivations, actions, and other relevant aspects, which are examined holistically and described in narrative form to reflect actual conditions (21).

The data utilized in this study consist of primary and secondary data. Primary data were obtained through in-depth interviews, while secondary data were sourced from company documents, books, and academic journals relevant to the research topic. Data collection techniques included interviews, observations, and documentation. The data analysis method used was descriptive analysis. In this study, the analysis was carried out with internal and external conditions, human resources and technology utilization, accounts receivable management, preparation of management strategies to reduce electricity bill arrears. The data analysis steps in this study were carried out in the following stages:

1. Conducting interviews with parties or divisions that handle and manage customer receivables or electricity billing at PT PLN UP3 Pematang Siantar, the researcher targeted 5 people to be interviewed who were considered qualified to provide

an overview and explanation related to the research theme, namely the head of the receivables collection division, 2 field supervisors, and 2 direct customer collection teams.

2. Conduct observations and documentation related to the data needed to measure the level of effectiveness of accounts receivable management, customer list data, Electricity billing data, Electricity bill arrears data, and data related to income levels.
3. Calculate the accounts receivable turnover ratio to see the level of effectiveness of accounts receivable management and calculate the level of profitability in a certain period.
4. Carry out in-depth analysis of the data that has been collected
5. Compile conclusions and provide effective recommendations in managing receivables

4. Results and Analysis

4.1 Management of Uncollectible Receivables at PT PLN UP3 Pematang Siantar

Accounts receivable management is an important aspect of a company's financial management. Effective accounts receivable management can have a positive impact on cash flow efficiency and company profitability [19]. Accounts receivable management involves several main components, namely credit policy, accounts receivable control, and collection. Credit policy includes determining credit terms, customer selection, and setting payment deadlines. Determining the right credit terms, such as down payment amount, payment term, and interest, can help minimize the risk of bad debts. Strict customer selection is also important to ensure that credit sales are only made to customers with a good payment track record. Setting appropriate payment deadlines can help companies manage good cash flow [22].

Through electricity bill data at PT PLN UP3 Pematang Siantar, there was a decrease in customers using postpaid electricity services, the decrease occurred because customers switched from postpaid electricity services to prepaid electricity services (credit). Which is one of PT PLN's efforts to minimize arrears from postpaid electricity services. Based on the provisions of PT PLN, there are several provisions for postpaid electricity rates, namely household, business, social, government and industrial rates. Then based on the researcher's observations through customer account data, the researcher found that the majority of obstacles were found from household tariff customers.

4.2 Factors and Constraints in the Management and Collection of Receivables of PT PLN UP3 Pematang Siantar

1. Accounts Receivable Management and Technology. Based on interviews with management, the use of technology for customer bill payment reminders has been implemented, but the main obstacle occurs in areas with limited internet access. Automated systems via SMS or applications work well in urban areas, but in remote areas still rely on manual methods. This indicates the need for broader and more equitable use of technology throughout the service area of PT PLN UP3 Pematang Siantar to ensure more efficient accounts receivable management.
2. Delinquency Rate of Accounts Receivable. Data shows that there is an increase in the number of unpaid accounts receivable, with an average delinquency reaching 0.61 % of total outstanding accounts in the period from July to January 2025. This figure reflects challenges in the collection process that require special attention from management.
3. PT PLN UP3 Pematang Siantar's billing policy implements a phased billing process, starting with automated reminders, followed by warning letters, and finally direct billing. This policy has proven helpful in reducing bad debts, but challenges remain related to a shortage of billing officers and the ubiquity of technology in remote areas. Therefore, a more focused billing strategy for specific areas needs to be considered.
4. External Challenges: External factors such as economic instability and limited internet access in remote areas impact customers' ability to make timely payments. This needs to be taken into account when developing more flexible billing policies.

Based on interviews with management and collection officers, there are several factors that influence the management and collection of receivables at PT PLN UP3 Pematang Siantar:

1. Infrastructure Limitations: In some areas with limited internet access, automated systems for payment reminders do not work effectively.
2. Limited Human Resources: Insufficient number of collection officers to cover the entire service area.
3. External Factors: Unstable economic conditions and limited financial capabilities of customers which affect their ability to pay on time.

Key obstacles include low customer awareness of timely bill payments, limited technology in remote areas, and unstable customer economic conditions. This was also identified by Amir & Anzhari (2023), who stated that ineffective accounts receivable management can reduce profitability or revenue figures and extend receivables collection times.

4.3 Internal and External Environmental Conditions

Unstable economic conditions in the community, especially in areas with high unemployment rates, affect customers' ability to pay on time. This indicates the need for more flexible policies in collection in areas with difficult economic conditions. One of the major challenges faced by PT PLN UP3 Pematang Siantar is external factors, especially the unstable economic conditions of customers and high unemployment rates. Customers in areas with unstable incomes often struggle to pay their bills on time. Furthermore, limited infrastructure, such as a lack of access to online payments, increases the high rate of electricity bill arrears for customers in remote areas, and internet access is limited.

4.4 Utilization of Technology

The use of technology in accounts receivable management is very important to increase the effectiveness of payment reminders and accounts receivable tracking. In interviews with management and billing officers, it was discovered that the automatic reminder system via SMS and mobile applications had been implemented well in areas with stable internet connections. However, areas with limited access to technology such as remote areas still face difficulties. This indicates that technology utilization is not yet fully distributed across the service area of PT PLN UP3 Pematang Siantar. Technology has made a positive contribution to the billing process, as seen with the PLN Mobile app and automated reminder system. However, limited infrastructure in remote areas hinders the efficiency of this technology. Therefore, further development is needed to expand the reach of this technology system, especially for areas with limited internet access.

4.5 Accounts Receivable Management Methods

Interviews with management revealed that accounts receivable management at PT PLN UP3 Pematang Siantar is regulated by a phased policy, starting with automatic reminders via SMS or an app, and ending with in-person visits by collection officers. In general, this accounts receivable management has been implemented with the aim of reducing bad debts and accelerating the collection process. However, while the policy has proven effective in urban areas, its implementation still faces significant challenges in more remote areas, such as limited internet access and poor infrastructure. As a result, despite maximum efforts in billing through technology, many customers are prevented from making payments on time. The gradual billing method, which begins with automatic reminders via SMS and continues with direct visits by officers, has been implemented well. This policy is effective in urban areas, but in more remote areas it still faces many obstacles, especially in terms of access to communication and technology.

4.5.1 Credit standards

Credit standards are the minimum qualities used to assess the creditworthiness of an applicant as determined by the company. This standard is prepared by the company as a criterion in determining the granting of credit and the amount of credit that must be granted. These credit criteria generally concern the customer's habits in making payments. The credit standard determination at PT PLN (Persero) UP3 Pematang Siantar is different from other banks or goods companies that in the implementation of customer assessments use the 5C elements (*Character, Capacity, Capital, Collateral, and Condition*). Although in determining the credit standard, the credit standard used is an electricity bill that is issued every month to postpaid customers for electricity usage in the previous month. The electricity bill includes:

- 1) Electricity Consumption Rupiah (RPTL), which is purely obtained from the results of customers' electricity usage;
- 2) Street Lighting Tax (PPJ), which is a tax collected by the Regional Government from the community for Public Street Lighting (PJU)
- 3) Stamp duty is a tax imposed by the Central Government on finances.

4.5.2 Credit Requirements

Credit terms are the conditions required for the repayment of receivables from customers. Credit terms at PT PLN are determined based on the customer's ability to pay, which includes an analysis of their payment history and income. This procedure minimizes the risk of bad debts. Credit terms at PT PLN (Persero) UP3 Pematang Siantar are the requirements that must be met to become a PLN customer. The company determines these requirements and prints them in the form of a Power

Purchase Agreement (SPJBTL), which every credit applicant must sign before becoming a PLN customer. These credit terms include:

- 1) Subscription Deposit (UJL), the amount of UJL is adjusted to the tariff group or power size chosen by the customer, which means the greater the power, the greater the amount of UJL. The UJL is intended if the customer experiences default on their obligation to pay their electricity bill, so that PLN is forced to complete the demolition and change the customer's status to inactive.
- 2) Bill Payment . Customers are required to pay their electricity bills by the 20th of each month.
- 3) Sanctions or fines for late payments. The following are the sanctions if there is a delay in payment:
 - a) PLN has the right to issue a warning letter or carry out a temporary disconnection if the customer passes the payment deadline.
 - b) PLN has the right to carry out complete dismantling if within 60 days after the temporary disconnection the customer's bill has still not been paid.
 - c) If after the dismantling is complete, the customer wants the electricity connection back, the customer must first pay off his arrears and this will be considered as an application for a new connection.

4.5.3 Determining Credit Policy

In providing credit policies, companies must determine several decisions that include the quality of the amount received, the credit period, cash discounts, special terms, and the level of expenditure for collecting receivables. The company must always make efforts to collect its receivables according to their due date. Before the due date, the company must remind the customer or account holder regarding the outstanding bill. Credit policies are tightened based on an evaluation of the customer's payment history and financial capabilities. This aims to reduce the risk of granting credit to unworthy customers.

4.5.4 Billing policies and procedures

Billing plays a role in collecting payments from customers according to the agreed schedule. Collection activities can include sending invoices on time, sending reminder letters , and even taking legal action if necessary. Effective billing can help companies accelerate accounts receivable turnover and improve cash flow efficiency [22]. Management at PT PLN UP3 Pematang Siantar implements a phased billing policy, ranging from automatic reminders and reminder letters to in-person visits by billing officers. Billing officers are also provided with regular training in communication and negotiation to help them handle customers who have difficulty paying. While this policy works well, the main challenge lies in the difficulty of contacting customers, especially those in remote areas or those who avoid communication.

The gradual collection policy has been effective, but needs to be enhanced with a more personalized and intensive approach in areas with high arrears rates. Increasing the number of debt collection officers in areas with high levels of arrears could be one solution. In addition, flexible policies such as more affordable installment payment options can also be implemented for customers facing financial difficulties. At PT PLN UP3 Pematang Siantar, the following receivables collection policy is implemented:

- 1) Send reminders to customers with current billing categories to make payments. On the 20th, through PLN social media, the PLN Mobile app, and SMS blasting. In SMS blasting, customers' phone numbers are obtained from billers who collect bills or from collecting phone numbers when customers file complaints.
- 2) If there is a delay in payment, past the 20th, the Biller officer will issue a first warning letter.
- 3) If there is a delay in payment, more than 2 months, the Biller officer will collect directly from the customer's location, then make a temporary disconnection and the customer will not be allowed to enjoy the electricity supply until their obligations are paid off.
- 4) If there is a delay in payment, more than 3 months, PLN officers will carry out complete dismantling and the customer's status will be changed to non-customer.
- 5) If the customer wants the electricity reconnected after the demolition is complete, the customer must first pay off the arrears and this will be considered as a request for a new connection.

4.5.5 Management and Collection Strategies for Uncollectible Accounts Receivable at PT PLN UP3 Pematang Siantar

As a measure to enhance the effectiveness of accounts receivable management, PT PLN UP3 Pematang Siantar may implement several recommendations derived from interview findings and supported by previous studies, as outlined below:

1. **Enhancement of Billing Technology:** PT PLN UP3 Pematang Siantar has developed an application-based system that has been implemented across various service units and utilized by all field billing officers, namely AKAPELA (Customer Management Application). This application facilitates the monitoring of field activities and streamlines the billing and collection process. This strategy has been implemented in multiple work units, particularly within the Pematang Siantar UPT area.
2. **Increase in Human Resources for Billing Activities:** The strategy of increasing the number of billing officers has resulted in a more flexible workload and reduced the intensity of work during the collection process. With the addition of 50 billing officers, tasks and responsibilities are more evenly distributed, enabling better focus and broader coverage across multiple service areas. Melalui strategi penambahan petugas, berdampak terhadap
3. **Provision of Structured Training Programs for New Officers.** PT PLN UP3 Pematang Siantar should establish formal training programs for newly recruited billing officers, covering:
 - a. Persuasive communication techniques
 - b. Strategies for handling problematic customers
 - c. Utilization of work support tools (applications, digital forms, etc.)
 - d. Public service ethics and operational safety during field assignments
4. **Performance Monitoring and Evaluation:** The implementation of a data-driven, real-time performance monitoring and evaluation system should be strengthened to ensure that billing activities are conducted effectively and in accordance with predetermined targets.
5. **Customer Migration Program from Postpaid to Prepaid Systems.** Implementing a customer migration program from postpaid to prepaid electricity services serves as a preventive strategy to reduce outstanding receivables and minimize the risk of future arrears.

Based on research conducted by [11], which states that the strategy and implementation of digital adoption, strengthening human resources, and diversifying efficient accounts receivable management collection approaches can drive increased company profitability. Furthermore, a sound accounts receivable management strategy has helped companies navigate uncertain economic situations. By maintaining smooth cash flow and reducing the risk of default, companies can be more flexible in adjusting their business strategies and maintaining profitability. This flexibility is crucial in dynamic and volatile companies, where changes in demand and market conditions can occur rapidly [23].

4.5.6 The Impact of Uncollectible Accounts Receivable on Company Revenue and Operations

The relationship between effective receivables and profitability, namely effective receivables, describes each receivables turnover in a period where the higher it is, the better the receivables management is, starting from the method of collecting receivables from customers, so that the company has the opportunity to gain profit opportunities from the emergence of faster receivables turnover and ultimately affects the company's profitability [12]. The burden of bad debts that occurs due to uncollectible arrears at PT PLN UP3 Pematang Siantar reflects the potential for lost revenue due to uncollectible bills or receivables that are at risk of becoming uncollectible. This has led to a decrease in cash flow to the company and has the potential to suppress PT PLN's ability to expand or invest in future revenue increases. Therefore, although the company has maintained net profit, the high recorded bad debt expense indicates a problem in accounts receivable management that must be addressed immediately.

In the context of PT PLN UP3 Pematang Siantar, effective management of receivables is very important in increasing the company's profitability. In the case of PT PLN UP3 Pematang Siantar, despite the gradual billing policy, there are still challenges that hinder billing effectiveness, especially in areas with limited access to technology and human resources. Therefore, companies need to consider a more proactive collection strategy by adding collection resources.

Through the implementation of accounts receivable management strategies namely, the development of technology through the AKAPELA application (Customer Management Application) to facilitate field staff monitoring and the billing process, as well as the addition of 50 billing officers there has been a measurable impact on the amount of uncollectible receivables. The changes in outstanding receivables before and after the implementation of these strategies are presented in Table 2, as follows:

Table 2, Outstanding Electricity Bill Arrears of Customers at PT PLN UP3 Pematang Siantar Before and After the Implementation of the AKAPELA Application and the Addition of Billing Officers

Month	Total Pelanggan	Total Rekening Terbit	Total Pelanggan Tak Tertagih	Total Tunggakan (Rp)
Sebelum				
Juli (2024)	346.517	Rp 108.863.092.673	5.035	Rp 399.193.958
Agustus (2024)	345.833	Rp 113.759.918.342	7.809	Rp 605.411.387
September (2024)	345.232	Rp 111.338.899.115	7.834	Rp 743.432.164
Oktober (2024)	344.684	Rp 109.771.869.457	12.247	Rp 1.020.824.354
November (2024)	344.113	Rp 112.223.759.504	10.253	Rp 786.058.976
Desember (2024)	343.577	Rp 104.779.412.646	4.064	Rp 293.734.865
Januari (2025)	343.206	Rp 106.760.340.025	9.820	Rp 855.363.944
Februari (2025)	339.109	Rp 88.689.969.454	6.991	Rp 342.063.821
Sesudah				
Maret (2025)	336.157	Rp 87.269.244.467	8.398	Rp 337.573.502
April (2025)	334.208	Rp 106.627.192.887	10.406	Rp 813.046.266
Mei (2025)	335.347	Rp 105.117.537.671	9.601	Rp 796.135.147
Juni (2025)	334.157	Rp 87.269.244.467	8.398	Rp 737.573.502
Juli (2025)	334.108	Rp 106.627.192.887	7.806	Rp 703.046.266
Agustus (2025)	333.947	Rp 105.117.537.671	7.234	Rp 636.135.147

Based on Table 4.3, the outstanding electricity bill arrears of customers at PT PLN UP3 Pematang Siantar before and after the addition of billing officers exhibit changes in arrears patterns influenced by both internal and external factors. During the period prior to the addition of billing officers (July 2024–February 2025), the total outstanding arrears remained relatively high and fluctuated. However, in February 2025, a significant decline was observed, with total arrears decreasing to IDR 342,063,021 and the number of uncollectible customers dropping to 9,911. This reduction was largely attributable to the implementation of government electricity subsidies, which were in effect until March 2025.

Following the addition of billing officers in April 2025, an increase in outstanding arrears was recorded. This rise can be explained by the termination of government subsidies and the fact that newly recruited billing officers were still undergoing an adjustment and training period, resulting in suboptimal collection effectiveness. Nevertheless, after this adaptation phase, data from May to August 2025 indicate a consistent downward trend in both billed amounts and outstanding arrears. Specifically, total arrears declined from IDR 796,135,147 in May to IDR 636,135,147 in August, suggesting that the newly appointed billing officers gradually became more effective and that the billing system operated with greater efficiency. Overall, the findings demonstrate that the utilization of the AKAPELA application, combined with the addition of billing officers as part of an optimized accounts receivable management strategy, has had a positive impact on reducing electricity bill arrears at PT PLN UP3 Pematang Siantar.

Previous research has shown that poor accounts receivable management can reduce a company's profitability, as documented in [11] study at PT Biringkassi Raya, which recorded a decline in the accounts receivable turnover ratio from 2019 to 2021 due to inefficient policies. This finding aligns with the findings of [6] study at PT PLN Rayon Kota Ambon, which recorded a decline in accounts receivable turnover and an increase in the accounts receivable collection period, impacting financial performance.

5. Managerial Implications

Based on the research results and discussion, several managerial implications that can be taken are as follows:

1. Utilization and Application of Technology:

The use of technology through AKAPELA (Customer Management Application) serves as a tool for monitoring and evaluating officers, as well as managing customer accounts receivable. This strategy has been implemented across various work units, particularly in the UPT Pematang Siantar area, and has provided significant convenience in monitoring the performance of billing officers and facilitating the collection of outstanding customer payments.

2. Human Resource Improvement:

The company has increased the number of personnel specifically assigned to electricity bill collection by adding 50 billing officers distributed across various work units within the UP3 Pematang Siantar area. However, continuous monitoring and supervision are required to ensure that the addition of personnel effectively contributes to reducing arrears and outstanding electricity bills.

3. Socialization and Change Strategy:

The implementation of a customer migration program from postpaid to prepaid electricity accounts has been introduced as a preventive measure to reduce payment arrears. This program has been applied to customers in various regions; however, its implementation has not been entirely smooth, as several challenges remain in encouraging customers to transition to the prepaid system

6. Conclusion

Based on the results of the study and the discussion, it can be concluded that accounts receivable management at PT PLN UP3 Pematang Siantar has demonstrated improved effectiveness through the implementation of technology-based strategies, human resource strengthening, and preventive policies aimed at minimizing potential customer arrears. The utilization of the AKAPELA application as a monitoring and performance evaluation tool for collection officers has proven to enhance transparency, data accuracy, and efficiency in the accounts receivable collection process.

Furthermore, the addition of 50 billing officers has contributed positively to expanding collection coverage and enabling a more proportional distribution of workload. Nevertheless, during the initial stage of implementation, an adaptation period and continuous supervision were required to ensure optimal effectiveness. The customer migration program from postpaid to prepaid electricity systems also serves as an important preventive strategy to reduce the risk of uncollectible receivables. However, the implementation of this program still encounters challenges in practice, particularly related to customer readiness and acceptance.

Overall, the combination of technological strategies, enhanced human resource capacity, and payment system transformation policies has improved the effectiveness of accounts receivable management and contributed to increased revenue and financial stability at PT PLN UP3 Pematang Siantar. Therefore, strengthening monitoring systems, providing continuous training, and conducting periodic policy evaluations are recommended to ensure the sustainability of effective receivables management

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