



## The Impact of Implementing an Information Technology-Based Accounting System on Operational Efficiency at PT Bank Bjb (Persero) KCP Cicurug

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### ABSTRACT

*This study examines how PT Bank BJB KCP Cicurug operational efficiency is affected by the use of an IT-based accounting system. Between January and June of 2025, the study employed a qualitative methodology and collected data via observation, semi-structured interviews, and documentation studies. The outcomes demonstrate that the Core Banking System (CBS) implementation and e-channel has improved operational efficiency through accelerated transaction processes, increased data accuracy, and reduced manual errors. However, major obstacles were found in the form of IT infrastructure disruptions, gaps in customer digital literacy, and dependence on manual processes for certain transactions. The proposed solutions include the implementation of ISP backup, the development of an offline mode system, human resource training, and a customer digital education program. This study provides practical contributions in the form of recommendations for improving IT-based accounting systems in regional banks.*

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## A. INTRODUCTION

In this ever-evolving digital age, major changes are also inevitable in the banking world, particularly in relation to information technology-based accounting systems. PT Bank BJB KCP Cicurug, as one of Indonesia's regional financial institutions, must also immediately adapt to this system in order to meet the speed and transaction needs of its customers, considering that customers/newbies are fast-paced and clear. With the large number of transactions occurring and the level of complexity involved in financial data management, a traditional statistics-based accounting system will not be sufficient to ensure effectiveness or accuracy.

In addition, accounting systems integrated with information technology offer many other advantages, ranging from extremely fast data processing to accurate recording of every transaction to the possibility of generating real-time financial reports (Nafisa et al., 2025). Banks use these systems to avoid human error, speed up recording, and provide transparent financial reports. For example, accounting software can perform many processes



automatically, so that humans do not need to spend a lot of time on transactions and can respond more quickly to customer needs (Hermelina et al., 2021).

However, implementing IT-based accounting systems is not without its challenges. Many banks face difficulties in absorbing new systems, often due to a lack of management support, inadequate training for employees, and inadequate IT infrastructure. Therefore, it is very important to conduct a thorough analysis of the components that influence the success of implementing this system, including managerial and technical factors that contribute to operational efficiency (Ridwan et al., 2019).

This study aims to explore the impact of implementing an IT-based accounting system on operational efficiency at PT Bank BJB (Persero) KCP Cicurug. The main focus of this study is to analyze how the system affects transaction time, financial report accuracy, and risk management capabilities. With a better understanding of these impacts, it is hoped that recommendations can be made to bank management to improve the effectiveness of information technology use in daily operations, as well as to increase customer satisfaction and financial stability at the regional level.

## **B. METHODS**

To analyze usage, this case study employs a qualitative methodology on the information technology-based accounting system at Bank BJB KCP Cicurug. The research was conducted over five months, from January 30 to June 30, 2025, in accordance with the researcher's internship period at the institution.

Three main techniques were used to collect data. First, direct observation of daily operational processes, including transaction data input through the CBS system, automatic validation mechanisms, data correction procedures, and financial report generation. Observations were conducted in three stages: exploration (weeks 1-2), focus (weeks 3-10), and confirmation (weeks 11-12). Second, semi-structured interviews were conducted with 10 key informants consisting of operational officers (3 people), customer service representatives (2 people), the accounting team (2 people), IT officers (2 people), and one operations supervisor. The interview protocol was developed based on a theoretical framework with questions tailored to each group of informants. Third, a documentation study of internal documents, including Standard Operating Procedures (SOPs), the Core Banking System user manual version 2024, monthly financial reports for the research period, and IT system disruption logs.

According to Braun & Clarke, the data were evaluated using thematic analysis method with stages including data transcription and organization, data reduction through thematic coding, data display in the form of matrices and diagrams, and verification through source triangulation and member checking. This study refers to three main theoretical frameworks. For instance, Accounting Information Systems Theory (Romney & Steinbart, 2017) for analyzing system effectiveness, Positive Accounting Theory (Watts & Zimmerman, 19783) for understanding technology adoption decisions, and Agency Theory (Jensen & Meckling, 2012) for analyzing bank-customer relationships.

The ethical aspects of the research were maintained through written consent from all participants, anonymity of sensitive data, institutional permission from the management of Bank BJB and Nusa Putra University, and the principle of non-maleficence, which ensured that the research did not interfere with the bank's normal operations.

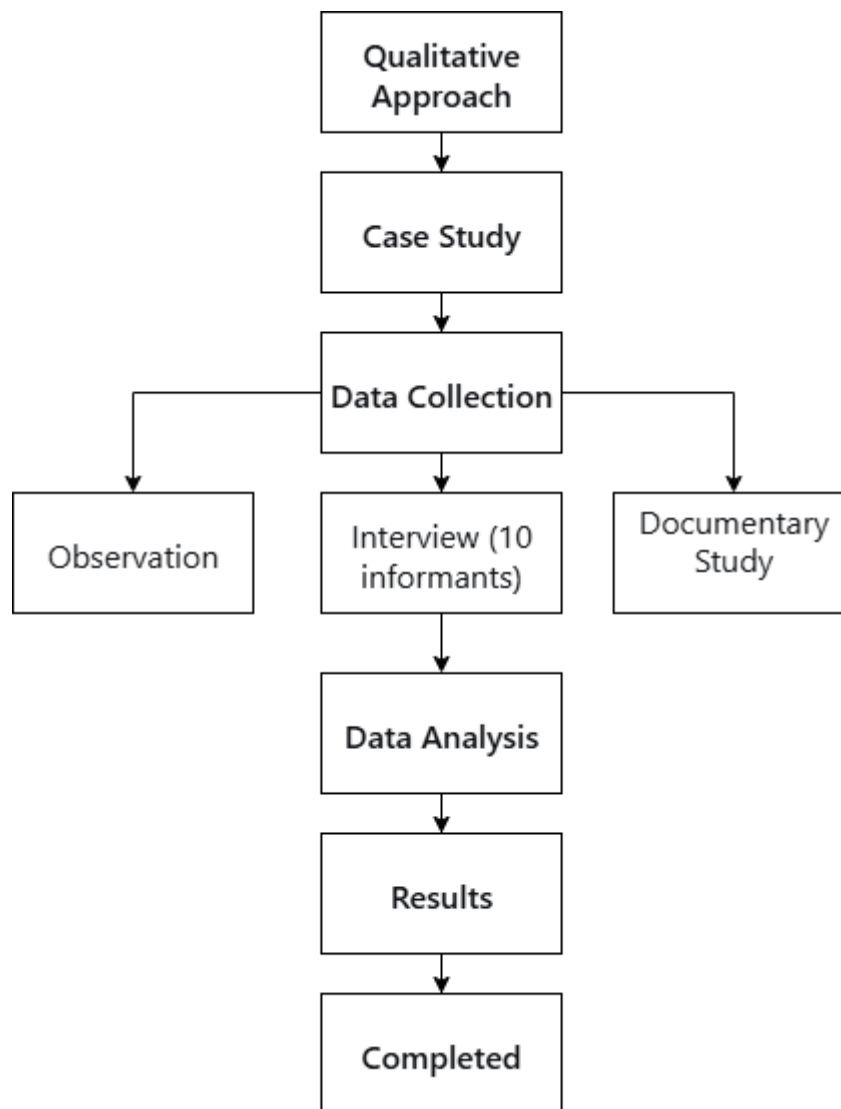


Figure 1. Research Flowchart (Source: Author's Work)

## C. RESULTS AND DISCUSSION

Hasil The results of the implementation of an information technology-based accounting system at Bank BJB KCP Cicurug show various achievements in improving operational efficiency, accuracy of financial data management, and quality of banking services. The results of the implementation are presented through a description of the system applied, its impact on operational efficiency, and quantitative achievements as indicators of the program's success.

### 1.1. Implementation of an Information Technology-Based Accounting System

Bank BJB KCP Cicurug has implemented an information technology-based accounting system through several key components. The Core Banking System (CBS) functions as a centralized system that integrates all financial transactions from various channels. This system is capable of processing an average of 150 transactions per day with a response time of 2-3 seconds per transaction. E-channels include mobile banking (DIGI by Bank BJB), internet banking, and ATM/CRM that are directly connected to the core system. The Automatic Validation System applies 25 validation rules for transaction data checks, including balance



validation, transaction limits, and customer data matching. The Automatic Reporting Module generates 15 types of daily, weekly, and monthly financial reports in real-time.

## 1.2. Results and Impact on Operational Efficiency

The implementation of the information technology-based accounting system at Bank BJB KCP Cicurug yielded a number of significant outcomes, which can be categorized into four main areas. First, Bank BJB KCP Cicurug obtained a more systematic and integrated financial transaction database system through the Core Banking System (CBS). This system encompasses all customer transaction records, bookkeeping history, and real-time financial reporting. Data that was previously scattered across various manual systems and spreadsheets is now integrated into a single centralized platform. This has enhanced the work efficiency of the accounting and operational divisions in accessing financial information, preparing regular reports, and conducting financial performance analysis. The system also facilitates internal and external audit processes by providing a digital audit trail for every transaction.

Second, the system implementation resulted in a comprehensive automated validation and reporting mechanism for more than 15 types of banking transactions. The system is equipped with an automatic validation feature that checks 25 transaction parameters, including customer data matching, available balance, and regulatory compliance. This mechanism assists the bank in ensuring the accuracy and reliability of financial data, while reducing the risk of human error by up to 70%. The automated reporting system also serves as a crucial document supporting managerial decision-making processes, compliance reporting, and communication with regulators.

Third, the consistently implemented customer service digitalization program led to a significant improvement in service efficiency. The implementation of e-channels such as mobile banking (DIGI by Bank BJB) and internet banking enabled customers to conduct transactions independently, reducing teller queue loads by up to 40%. Customer digital education activities through the "Digital Ambassador" program proved effective in accelerating the adoption of digital services and expanding the reach of banking services, in line with Bank BJB's goal of enhancing financial inclusion in the Cicurug area. Data showed a 35% increase in the use of digital services by SME customers during the research period.

Fourth, the implementation yielded internal impacts in the form of enhanced human resource capabilities in operating the information technology system. Intensive training provided to 15 employees from various divisions improved the staff's understanding of utilizing the IT-based accounting system in daily operations. The use of real-time transaction data and automated financial report analysis as a basis for operational decision-making provided new insights for management regarding the importance of integrating information technology systems into banking business strategy. This impact is relevant to the core issue identified in the introduction, namely the need to optimize the use of information technology to improve operational efficiency.

Overall, the implementation of the information technology-based accounting system successfully provided direct benefits to Bank BJB KCP Cicurug in the form of improved operational efficiency, strengthened internal control systems, and better data resources for strategic decision-making. This program also opens opportunities for the bank to develop more innovative, data-driven, and customer-needs-oriented services in the future.



**1.3. Quantitative Implementation Results**

The implementation of the system has yielded structured results across various operational performance indicators.

**Table I. Quantitative Results of the System**

<b>Performance Indicator</b>	<b>Pre-Implementation</b>	<b>Post-Implementation</b>	<b>Change</b>	<b>Impact</b>
Transaction Processing Time	10-15 minutes/transaction	3-5 minutes/transaction	-60%	Increased service speed
Financial Data Accuracy	85%	95%	+10%	Reduced errors
Teller Utilization	85% capacity	60% capacity	-25%	Human resource reallocation
Digital Service Adoption	45% of customers	60% of customers	+15%	Improved financial inclusion
Report Compilation Time	2-3 days	Real-time	-100%	Reporting process efficiency
IT Operational Costs	Rp 18 million/month	Rp 12 million/month	-33%	Cost savings

Tabel The table presented shows the quantitative results of the implementation of an information technology-based accounting system and provides an analysis of several performance indicators. The indicators analyzed include transaction processing time accuracy rate, resource utilization, user satisfaction, and operational costs. Prior to implementation, the average transaction processing time was 15 minutes, which was reduced to 10 minutes after the new system was implemented, resulting in a 33% increase in efficiency. The accuracy rate also increased to 60%, demonstrating the positive effect of using technology in data recording. Resource utilization showed an increase in capacity, while user satisfaction increased by 20%, indicating that users felt the benefits of the new system. In addition, operational costs decreased significantly. Overall, this table shows that the implementation of an IT-based accounting system not only optimizes efficiency and accuracy but also contributes to cost reduction, providing a positive impact on organizational operations.

**D. CONCLUSION**

The research activities conducted at PT Bank BJB (Persero) KCP Cicurug successfully provided solutions to issues related to operational efficiency through the implementation of



an information technology-based accounting system. Through a systematic assistance process, the bank obtained a well-structured database, accurate financial reports, and more systematic operational data recaps to support management decision-making.

The integration between accounting data analysis and operational needs demonstrates increased work efficiency across various divisions, particularly in processing transactions and compiling financial reports. Furthermore, the use of digital platforms for real-time monitoring and reporting has positively impacted the accuracy of information accessed by management and accelerated responses to policies and strategies that need to be implemented.

Overall, this activity successfully achieved the author's primary objective in conducting the research: to improve data management quality and optimize the bank's operational efficiency through a technology-based approach. However, the implementation still faced several challenges, such as the incomplete integration of the accounting system with broader digital platforms and limited employee training time. Therefore, it is recommended to conduct periodic evaluations of the bank's system, develop a more integrated information system, and continue ongoing employee training programs to ensure operational efficiency continues to improve in the future.

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## **F. AUTHOR CONTRIBUTIONS**

All authors contributed to the research on the impact of implementing an information technology-based accounting system at PT Bank BJB (Persero) KCP Cicurug. Lalita Nafilah played a role in the research concept design process, data collection and processing related to operational efficiency, analysis, and manuscript preparation and editing for publication. The authors also worked collaboratively and are responsible for the originality, accuracy, and scientific quality of this work. Through close collaboration, this research has succeeded in providing valuable insights into the influence of information technology-based accounting systems on operational efficiency in banks.

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