

ANALYSIS OF THE EFFECTIVENESS OF ACCOUNTING INFORMATION SYSTEMS OVER ACCOUNTS RECEIVABLE CONTROL AT PT INDOARSIP MEDAN

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Abstract. This The importance of accounting information systems in improving maximum control of receivables. Better results are achieved with the effective use of information systems as a tool for making decisions. The aim of this research is to analyze the level of effectiveness of the accounting information system for controlling receivables at PT Putraduta Buanasentosa Indoarsip Medan by analyzing using the method of measuring the level of effectiveness with the Dean J. Champion formula. Several aspects used in measuring effectiveness are indicators of accounting information systems according to DeLone and McLean, components of accounting information systems, and control of receivables according to (COSO). The research results show that the accounting information system indicators are less effective with a result of 42%, the accounting information system components are quite effective with a result of 56%, and control of receivables is less effective with a value of 50%. This shows that the accounting information system for controlling receivables at PT Putraduta Buanasentosa Indoarsip Medan needs to improve the quality of the system in providing services to customers, and there needs to be a separation of duties and good control management so that the company's targets can be achieved.

Keywords: SIA, COSO, Accounts receivable controller

I. INTRODUCTION

Rapid advances in information technology have enabled almost every field of business application to make excellent use of information systems, which drives companies forward. The evolution of information technology has a major impact on the level of competitiveness among companies operating in the sector. Better results are achieved with the effective use of information systems as a tool for decision-making. Whether a company is privately owned or controlled by the government, it almost entirely has information systems. The survival of a company depends on its ability to generate healthy profits. Robust systems are needed to ensure that a business achieves its maximum profit potential in relation to sales, including sales made on credit as well as cash. [1]. Accounting information system technology has many benefits that can help companies improve the efficiency, accuracy, and effectiveness of their financial data in this era of rapidly growing information technology. As a result, companies are expected to utilize this technology carefully [2]. In a business environment, the quality of the data displayed and the ease of use of the system are two indicators of how well the accounting information system works. Achieving performance in accordance with the objectives after implementing an accounting information system and user satisfaction are conditions for the system to be considered effective. [3].

It is very clear to see how accounting information systems and internal controls are closely interrelated. The term "internal control" refers to the system implemented by a

business to safeguard its financial and operational data and guarantee the efficient and successful completion of its objectives. Conversely, management can make informed decisions and oversee the financial performance of the company with the help of accurate and timely accounting information provided by the accounting information system, which in turn strengthens the implementation of internal controls. [4]. The purpose of internal control is to ensure the security of assets, the reliability of information provided, and the promotion of policy compliance through the implementation of organizational strategies and procedures. Consequently, all aspects of a company's operations that are subject to internal control must be properly organized by the company's management. [5]. Careful analysis is required in financial management, especially in terms of accounts receivable, to ensure that the policy of managing these accounts runs smoothly and efficiently, whether for credit sales, accounts receivable procedures, or other issues that may arise. In today's highly competitive business environment, organizations must find ways to stand out from the crowd. One way to do so is by using credit sales methods, which can increase sales volume. Bad debts, an increase in the amount of accounts receivable, and other costs that come along with an increase in the amount of accounts receivable are all possible outcomes of this approach.[6]. When it comes to handling receivables, accounting information systems are all about preventing errors and achieving company goals with excellent internal controls. One of the reasons for having internal controls is so that errors can be found and corrected quickly whenever they occur. The factors that make up

internal control include monitoring, control measures, and the control environment. [7].

Having a well-managed accounts receivable department is very important for the company's financial stability. If revenues do not match the funds needed, it will be difficult to implement work programs and activities that have been set as goals. Cost-cutting is also a priority, especially those directly related to accounts receivable management, such as accounts receivable allowances, problematic collections, and write-offs. Therefore, it is important for companies to implement accounts receivable procedures. The effectiveness of implementing a company's credit sales policy depends on the accounts receivable management system. The same applies to accounts receivable; many of them are uncollectible due to lax collection methods, which is a major cause of financial insolvency for many companies. [8]. Given the importance of sales activities for companies, it is important to have an efficient internal control system. Only then can sales activities be carried out optimally. Successful businesses have sufficient resources, solid licensing mechanisms, and clear recording methods for each functional responsibility. Preventing every possible error or anomaly from occurring is not the purpose of an internal control system. With a solid internal control system, businesses can limit the possibility of errors and irregularities. [9]. Enterprise Resource Planning (ERP) is the name of the accounting information system used by most modern businesses. ERP, or enterprise resource planning, is an information system with the primary objective to integrate activities across the enterprise and across locations in various functional domains. ERP, or enterprise resource planning, is a centralized database that provides detailed information for each business unit [10]. By combining data created by various systems into one system according to pre-existing format standards, data processing becomes more efficient as a result of this integration. Accounting information systems in Indonesia are increasingly relying on software such as Openbravo ERP. The integration of these systems allows businesses to achieve their goals of assisting, improving, and organizing their performance efficiency. (Damayanti, 2018).

Records and document management company PT Putraduta Buanasentosa Indoarsip specializes in a range of services, including paper document storage, document imaging (data processing), online document management (connected data management), computer equipment storage (e.g., tapes, discs, cartridges), document destruction, and IT and internet offerings. The Medan branch of the Bandung-based company was launched in 2018 and received an A or "Excellent" certification from the accounting information system of Arsip Nasional Republik Indonesia. As an additional service to its core company, PT Putraduta Buanasentosa Indoarsip Medan offers archive cleaning. The company's main activity is making sales on credit, which results in significant receivables. The purpose of developing and implementing procedures is to standardize the processing of recurring business transactions by coordinating the efforts of multiple employees in various departments. Standard Operating Procedure (SOP) is a document that outlines the

actions to be taken or the rules to be followed when performing work to meet business objectives consistently and efficiently. To ensure that the AR Billing Unit responsible for collecting receivables understands the processes involved, PT Putraduta Buanasentosa Indoarsip Medan has established a System Operating Procedure (SOP) as part of its receivables management efforts. Lastly, ensure that Management's annual accounts receivable position objectives are achieved by running accounts receivable collection operations in accordance with relevant laws.

This research does not fully answer the claim made by previous research that PT Samudera Teknik Abadi's Credit Sales Accounting Information System does not sufficiently improve the effectiveness of internal control over receivables. This happens every year due to the increasing risk of bad debts caused by the company's failure to verify credit limits before credit sales. The reliability of financial data is a problem at PT Samudera Teknik Abadi because the company has not fully digitized and still relies on manual methods. [12]. According to previous research, the research findings have established a good receivables internal control system; however, the lack of separation between sales and billing makes it less efficient. From the perspective of unpaid receivables, 361 is a significant amount, at 17% of the overall receivables. This makes it less effective and requires re-evaluation [13]. This contradicts the research results [14] shows that there are still discrepancies, especially in the credit sales ledger that has not used a warehouse card. On the other hand, there are several things that are synchronized, such as operations, documentation, and processes of the credit sales accounting information system. This is also in line with research conducted by the accounting information system. [15] states that there is strong internal supervision and control over the implementation of the accounting information system of PT Kerismas Witikco Makmur, which includes all relevant processes, documents and records. The presence or absence of aspects and objectives related to the accounting information system can be used to determine the effectiveness of the system. For PT Kerismas Witikco Makmur, the accounting information system is declared effective with a value of 83.33 based on the calculation of the Champion formula. Updating the system is needed to further optimize the recording process activities at PT Putraduta Buanasentosa Indoarsip Medan, considering that there are still deficiencies in the accounting information system for managing receivables. Based on the context of these problems, the researcher intends to find out whether PT Putraduta Buanasentosa Indoarsip Medan, which has been equipped with an accounting information system, has carried out the accounts receivable management method properly.

II. RESEARCH METHOD

The research method explains the design of the activity, all research techniques/procedures (location, population, sampling method & number of samples or respondents, distribution techniques using observation or interviews or questionnaires, definition and measurement of variables or

constructs and analysis methods). The research strategy used in this research is a case study approach with descriptive analysis. Whether one or more variables are considered independent, the descriptive approach allows researchers to measure their values without drawing any conclusions about their relationship with other variables (Sugiyono, 2020). In Medan, North Sumatra, researchers from PT Putraduta Buanasentosa Indoarsip collected their data. Primary data was the type of data used. Interview transcripts, company statements, and other primary data collected from within PT Putraduta Buanasentosa Indoarsip Medan are examples of the type of information that makes up the object of research. Data collected from the company in its final form, such as its organizational structure, brief history, and activity performance methods, are used as secondary data in this study. Data Collection Methods Observation Approach. In particular, the author hopes to gain a better understanding of the problem at hand by seeing first-hand how PT Putraduta Buanasentosa Indoarsip Medan handles it. Interview Method This data collection method ensures there are no inaccuracies or variations on the issues raised at PT Putraduta Buanasentosa Indoarsip Medan through a series of direct questions and answers. The accounting and finance department and the administration department will conduct interviews (Rahmani, 2016).

The data will be evaluated using the Accounting Information System Effectiveness Analysis on receivables management at PT Putraduta Buanasentosa Indoarsip Medan to provide a descriptive qualitative analysis of the research results. The next step is to verify the field data against the company's rules and procedures. A comparative technique is also employed in this investigation. Analyzing the data by comparing the total number of respondents' answers to the questions posed is known as the comparative approach. Additionally, the study's numerical findings are totaled, summarized, and analyzed to obtain percentages, followed by comparisons with the projected amounts. Respondents were given Yes or No as answer choices. Statistical analysis was then conducted using the Dean J. Champion method based on the responses collected from the participants. The Result of Responses is Obtained as follows: $(\sum \text{Number of YES Responses}) / (\sum \text{Total Responses to Questions}) \times 100\%$

III. RESULT AND DISCUSSION

The Quality of the Accounting Information System

To determine how well the accounting information system quality manages receivables control, the author relies on an interview checklist and the Dean J. Champion methodology. A score of yes = 1 and no = 0 is assigned for each possible response to the author's observational questions during data processing.

Table 1. The Results of the Accounting Information System Indicator Calculation

No	Accounting Information System Indicator	Questionnaire Responses		
		Total Questions	Total "Yes" Responses	Total "No" Responses
1.	Adaptation	3	3	0
2.	Availability	2	1	1
3.	System Reliability	2	0	2
4.	Response Time	3	0	3
5.	Usability	2	1	1
Total		12	5	7
Percentage		42%		

$$\text{Percentage} = \frac{\sum \text{Total Response YES}}{\sum \text{Total Question}} \times 100\%$$

$$\text{Percentage} = \frac{5}{12} \times 100\% = 42\%$$

The research findings indicate that the accounting information system at PT Putraduta Buanasentosa Indoarsip Medan is less effective, with a score of 42% based on the Champion calculation method.

Table2. Calculation Results of Accounting Information System Components

No	Accounting Information System Components	Questionnaire Responses		
		Total Question	Total "YES" Responses	Total "NO" Responses
1.	Person Operating the System	3	3	0
2.	Procedures	2	2	0
3.	Business Process Data	2	1	1
4.	Software Used	5	2	3
5.	Accounting Information Infrastructure	6	2	4
6.	Internal Control	7	4	3
Total		25	14	11
Percentage		56%		

$$\text{Percentage} = \frac{\sum \text{Total YES Responses}}{\sum \text{Total Questions}} \times 100\%$$

$$\text{Percentage} = \frac{14}{25} \times 100\% = 56\%$$

This is supported by the results of in-depth interviews with the Finance staff at PT Putraduta Buanasentosa who use the accounting information system. They stated:

In this regard, the company has provided an available accounting information system in the form of Openbravo ERP to enhance customer service. However, the system occasionally experiences bugs/errors, as I believe any accounting information system may have process errors. Furthermore, I find this system to be ineffective because it is not connected to other departments, such as the repository and sales departments. Additionally, this

system is not integrated with the Indoarsip mobile application available on Android.

The calculations using the Champion method indicate that the accounting information system at PT Putraduta Buanasentosa Indoarsip Medan is quite effective, with a score of 56%.

Table3. Calculation Results of Receivables Control Components

No	Receivables Control Components	Questionnaire Responses		
		Total Question	Total "Yes" Responses	Total "No" Responses
1.	Control Environment	3	2	1
2.	Risk Assessment	3	1	2
3.	Contro Activities	3	1	2
4.	Informations and Communicatio	3	1	2
5.	Monitoring	2	2	0
	Total	14	7	7
	Percentage		50%	

$$Percentage = \frac{\sum Total YES Response}{\sum Total Questions} \times 100\%$$

$$Percentage = \frac{7}{14} \times 100\% = 50\%$$

By using the calculated data, the Champion approach indicates that a score of 50% suggests that the accounting information system at PT Putraduta Buanasentosa Indoarsip Medan is inefficient. In-depth interviews with the Finance staff who use the receivables management system at PT Putraduta Buanasentosa also provided supporting evidence for this, as they indicated that:

Regarding receivables control, I believe it is less effective due to the overlapping responsibilities across several divisions, including administration, general accounting, taxation, receivables collection, and HR. Therefore, when the system experiences errors, the tasks I am working on become hindered in various aspects.

The accounting information system at PT Putraduta Buanasentosa Indoarsip Medan has implemented a computerized system. The system employed by the company utilizes the Enterprise Resource Planning (ERP) application, Openbravo ERP, to document monthly receivables journals, thereby assisting in sales control, particularly for credit sales. This program includes a Customer Relationship Management (CRM) component that enables the company to communicate with clients regarding the recording of incoming funds in the Bank Report. Misunderstandings frequently arise between customers and the collections unit during this process. If a customer claims they did not receive an invoice, the collections unit will request the invoicing unit to reprint the invoice through forwarded email. This situation occurs when customer checks or giro transfers cannot be cashed.

Consequently, customer perception of the company and its products is negatively affected due to these issues.

Quality of the Accounting Information System

Based on the research conducted, it can be seen that the quality of the accounting information system is less effective. This occurs because using the system is too time-consuming for its users. The availability and reliability of the system also affect users' ability to serve customers effectively. Similarly, research by [8] indicates that the Credit Sales Accounting Information System implemented by CV. Bintang Jaya has utilized a computerized system quite well; however, it still has deficiencies as the system often experiences errors. This contrasts with the research by [15] which states that the effectiveness of the accounting information system can be assessed by the presence or absence of elements and objectives related to the accounting information system.

Components of an Accounting Information System

The components of the accounting information system at PT Putraduta Buanasentosa Indoarsip Medan are considered sufficiently effective based on the research conducted. However, the software currently in use has not undergone any system updates. This is an important issue to address, as employees require a system that operates quickly and effectively. Similarly, research by (Nelwan, 2023) aims to assess the effectiveness of computer-based sales accounting using a qualitative descriptive approach. The study shows that Kafe Pondol has implemented the necessary criteria for the successful measurement of system effectiveness. This research also indicates that to determine the effectiveness of the information system in use, it must first be tested according to the effectiveness indicators. In contrast, the findings from the study conducted by [14] indicate that the sales accounting information system used by CV. Agung Mandiri Motor does not fully support the effectiveness of internal controls.

Components of Receivables Control

To date, PT Putraduta Buanasentosa Indoarsip Medan, a company still in the early stages of development, manages its receivables with only one person handling multiple roles, including FA-Admin, head of the finance department, and head of the billing and collections department. Similarly, research by [13] shows that the internal control system for receivables at PT SID Lamongan has been implemented fairly well but is less effective due to the lack of separation between sales and billing functions. This contrasts with the research by [4] which indicates that internal control over receivables at PT Saurindotex Mandiri is quite good, particularly because credit sales are conducted with only a few well-known customers. This is supported by the proper and organized filing of documents or records for each credit sale, stored in sequence according to the printed document number.

Many studies have discussed accounting information systems for receivables control to help growing companies sustain their businesses.[17] The speed and accuracy of information are becoming increasingly important, so companies need to invest in the right technology and train their employees to optimize the use of accounting information

systems. [12] Accounting Information Systems provide the financial information needed by management to facilitate company operations. The results of this study are in line with the findings of [1] and [18] which show that credit sales accounting information systems positively influence the effectiveness of receivables control.

IV. CONCLUSIONS

After analyzing and evaluating the accounting information system for receivables control at PT Putraduta Buanasentosa Indoarsip Medan, the researcher concludes that the sales accounting information system implemented by the company uses a computerized system through the Enterprise Resource Planning (ERP) software known as Openbravo ERP. While the accounting information system is in place, it is not entirely effective. This is evident from the calculation using the Dean J. Champion method, which the researcher conducted based on accounting information system indicators, system components, and receivables control according to COSO. Based on the Champion method calculation, the indicators for the company's accounting information system are less effective, with a percentage of 42%. The components of the accounting information system were found to be effectively implemented, with a percentage of 48%. However, the receivables control based on COSO was also found to be less effective, with a percentage of 50%. Deficiencies in the system include bugs/errors and the system's lack of speed and accuracy. Furthermore, receivables control is hindered by overlapping duties, indicating the need to recruit employees who specialize in certain required job roles.

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