Critical Analysis in Developing System Application And Product (SAP) and Internal Control

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ABSTRACT

This research is a critical analysis of the Accounting Information System (AIS) and its impact on internal control weaknesses. Although computer-based AIS offers significant advantages in speed, accuracy, and data processing efficiency, implementation can be complex and incur high costs for procurement of hardware, software, and ongoing maintenance. This research uses a case study from PT. BGA, where the subsidiary experienced inventory theft. During the centralized inventory process, significant discrepancies were discovered in the subsidiary's warehouse, resulting in huge losses for the parent company. Critical analysis reveals the weaknesses that exist in PT. BGA. The company uses a fragmented system, with SAP applications not yet fully implemented across all departments. Accounting data is still managed through additional applications such as MS Excel and transferred via email, creating potential gaps in data retrieval and consolidation in the SAP system. This fragmented approach increases the risk of incomplete or inaccurate data reaching headquarters for processing, ultimately contributing to undetected theft. This case study emphasizes the importance of comprehensive and integrated AIS. Implementing SAP across an organization will likely facilitate real-time data visibility and improve internal controls, thereby preventing inventory theft.

Keywords: Accounting Information System, Internal control, Implementing SAP, Inventory theft, Critical Analysis

1. INTRODUCTION

Technological developments require every company to adapt. Technology can be applied to all company activities and activities, especially in the economic sector which requires speed of transferring accounting and financial data simultaneously and in real-time. Therefore, the digitisation of the companies was the main reason for the implementation of ERP systems (Gessa, Jim´enez, & Sancha, 2023).

The reliable and trustworthy technology will provide great benefits to support the company's needs in obtaining data processing results optimally and on time. According to Indrayani (2018), in her research, the use of technology based on optimal information technology reliability will be able to provide great benefits, so that it will directly save energy, and time and produce more accurate reports.

Chen, Li, & Shahid (2024) revealed that businesses undergoing exhausting transformations have formed new strategies for a resilient future. In the last decades, adopting a digitalization strategy has gained fundamental importance concerning the firm's sustainability. Digitalization pushing companies to embrace new technologies has developed digitalized strategies operationalizing management activities. Applications of information technology in the fields of accounting and finance that are commonly used in companies include System Application and Product (SAP), Oracle, and Microsoft Dynamic. According to Putra & Prariadena (2019) in their research, of the various information systems that use accounting information technology, the one that is generally used by companies in managing data and financial transactions is the SAP program. The SAP program is an Enterprise Resource Planning (ERP) information system that can help companies in (1) managing various aspects of business, including finance, accounting, manufacturing, and supply chains; (2) High data accuracy; (3) Time Efficiency; (4) Easy to operate in various business activities; (5) More accurate and comprehensive financial reports. Therefore, ERP systems have become imperative when the organization's goal is to improve organizational performance and increase competitiveness in the economy (Silva, Marques, & Azevedo, 2023).

Previous research that uses and implements SAP includes:

Soleh & Vikaliana (2020) researched internal inventory control using SAP, this research explains the relationship between information systems and internal control and merchandise inventory, which are a mutually supporting unit so that merchandise inventory can be monitored regularly and reliable date information can be obtained. Wahyudi, Achmad, & Pamungkas (2022) define internal control mechanisms, such as policies, procedures, and systems, as designed to ensure effective and efficient operation. Patuan & Hermawan (2023) stated in their research that internal control can predict the nature and timing of external events, mitigate risks, safeguard assets, prevent fraud and corruption, ensure regulation compliance, and promote transparency and accountability.

However, in practice, problems often occur during SAP operations which make internal control over the processing of merchandise inventory hampered and inappropriate. The application of SAP and its relationship with internal control is only part of the company's business activities and not the entire accounting process up to the preparation of Financial Reports. Therefore, internal control processes and procedures can guide and monitor ethical

organizational behaviors and enable businesses to comply with ethical principles and rules (Nguyen & Hoai, 2023).

According to Wahyuddin & Afriani (2018) in their research, the main information system in companies is the Accounting Information System (AIS), and it is stated that the AIS is an information system designed to apply basic accounting principles. Accounting is a technique used to produce financial data outlining a company's earnings, liabilities, and organizational performance (Al-Okaily & Al-Okaily , 2022).

Kurnia (2022) in his research stated that the use of information technology that is not yet optimal, especially in application and product systems (SAP) which are still manual, can create a risk of errors in recording financial transactions, such as payments that exceed the limit and the amount that must be paid. Therefore, SAP implementation needs to be done thoroughly to avoid undesirable things.

This research was conducted at PT. BGA is an agribusiness company operating in the palm oil sector. PT. BGA has managed an oil palm plantation covering an area of 3,000 hectares. At PT. BGA, the task of managing and recording transactions occurs in the subsidiary, namely by the Accounting Department. This department records all transaction activities related to the purchase and sale of fresh fruit bunches (FFB), diesel, spare parts, etc. Control of the mechanism for recording accounting transactions is carried out by the Plantation Accounting Division which is a unit under the Accounting Department. The Plantation Accounting Division covers regions 1 & 3, region 2, regions 5 & 7, and regions 4 & 6. Specifically for regions 4 & 6, accounting activities and control of accounting records cover 8 companies, namely: PT. GKS, PT. GKG, PT. KBS, PT. ASM, PT. GHL, PT. AGP, PT. RSI, and PT. MCM. With so many subsidiaries owned, coordination and linkage of financial transactions is required which can take up time, energy, and the reliability of data reported from business units to head office. This condition can cause the process to be ineffective, requiring a more reliable accounting system.

Reporting can be ineffective because the Company has used the SAP accounting program, but the use of the SAP program with several modules chosen by the Company has not been implemented comprehensively. Reporting related to financial transactions in business units is not managed using the SAP program, but uses other reporting media such as the MS Excel program which is sent via email. Cahyaningrum, Gunawan, & Anis (2022) explain the existence of internal controls to ensure the company continues to function and be

profitable according to expectations and can provide information that reflects the actual state of the company. Without more intense control over accounting and finance functions, companies have the potential to experience losses (Li, Xia, & Wu, 2021).

2. LITERATURE REVIEW

2.1 Definition of Accounting Information System

Utama, Anis, & Gunawan (2022) state that an accounting information system is an information system designed and developed to achieve accounting, economic, and financial goals. (Wijayanti, Mohamed, & Daud, 2024) stated that AIS utilizes a computer software system to provide the functions of an accounting information system designed to facilitate decision-making. AIS consists of various components including people, technology, and procedures. In general, AIS has two main objectives, namely: (1) Producing financial information that is accurate and relevant for interested parties. This financial information can be used for various purposes, such as planning, controlling, and decision-making; (2) To support the company's daily operational activities. AIS can help companies track transactions, manage inventory, and create financial reports. Therefore, the complexity of AIS can adversely affect organizational performance (Nguyen et al., 2024).

Viewed from this aspect, the important role of AIS includes: Increasing the efficiency and effectiveness of company operations, Improve the quality of decision-making, and AIS provides accurate and relevant information to decision makers and improves regulatory compliance. AIS usage, when successful and effective, has an important role in improving the businesses goals and performance. Therefore, to achieve successful decision making, accounting information needs to be useful, high quality, and relevant in the decision-making process (Lutfi, 2022). To provide speed of data management of AIS capabilities to improve quality of decision-making in the midst of complex issues through its efficient use and thus, AIS role in enhancing performance and competitiveness among businesses has been validated (Saad, 2023).

Accounting information systems are divided into two types, namely: (1)**Financial accounting information system (FAIS)** used to produce financial reports that comply with applicable accounting standards (Tang, Yang, & Khishe, 2023). In the current digital era, computer-based accounting information systems (FAIS) are increasingly being used by companies. FAIS has various advantages compared to manual AIS, such as: (a) Higher accuracy and efficiency. (b) Ability to produce more complex reports. (c) Better security. FAIS can help protect accounting data from unauthorized access; (2)**Management accounting information system (MAIS)** used to produce accounting information used for internal company needs such as planning and control, but in general the role of MAIS will be relevant to support the implementation of FAIS (Sariwulan, 2020). With computer-based information technology because the ideas and concepts in MAIS will be input into MAIS based on computerized technology, so that the existence of the system Computer-based accounting information will be greatly influenced by the

existence of a Management Information System which provides relevant data and information related to changes in the company's organizational structure, policy changes, and corporate governance that changes along with the development of digitalization in the process of processing financial transactions in a company or entity.

The scope of the Accounting Information System aims to provide the following: (1) Accounting information system for Small and medium enterprises (SMEs). Accounting information systems for SMEs are usually simple and easy to use, these systems are usually paper-based or simple spreadsheets. These systems usually only cover basic accounting functions, such as recording transactions, preparing financial reports, and paying taxes (Adela, et al., 2023); (2) Accounting information systems in large companies are usually complex and integrated. These systems are usually computer-based and use sophisticated accounting software. This system usually covers all accounting functions, including recording transactions, creating financial reports, financial analysis, and decision-making; (3) A financial accounting information system is a system that produces financial information for external parties, such as investors, creditors, and regulators. The financial information produced by this system is usually in the form of financial reports, such as balance sheets, profit and loss statements, and cash flow reports; (4) A management accounting information system is a system that produces financial information for internal parties such as managers and employees. The financial information produced by this system usually takes the form of performance reports, budgets, and cost analysis; (5) a manual accounting information system that uses paper and stationery to record and process accounting data. These systems are usually simple and cheap, but they are also prone to errors and inefficiencies; (6) A computer-based accounting information system is a system that uses accounting software to record and process accounting data. These systems are usually more complex and expensive than manual systems but are also more accurate and efficient.

2.2 Accounting Information System Criteria

Kadir (2022) stated in his research that an accounting information system (AIS) is a system designed to collect, process, store, integrate, and communicate accounting data. This system includes information related to income, expenses, employee and customer data, and company taxes.

In the process of recording company transactions, PT. BGA uses an accounting recording system called SAP ERP. The SAP ERP accounting application itself is used by PT. BGA because it has many advantages, namely: (1) SAP ERP Business Process Integration allows the integration of various business processes in one centralized system, eliminating data silos and data duplication. This increases operational efficiency, reduces errors, and provides a holistic view of business performance; (2) Data Visibility and Tracking SAP ERP provides real-time visibility into critical business data, enabling more informed and faster decision-making. Comprehensive data tracking helps identify trends, analyze performance, and increase profitability; (3) Process Standardization and Automation SAP ERP standardizes business processes across the organization, ensuring consistency and reducing complexity.

Automating manual tasks increases efficiency, reduces costs, and frees employees to focus on more strategic tasks; (4) Improved Collaboration and Communication SAP ERP facilitates effective collaboration and communication between departments, improving coordination and reducing miscommunication. Collaboration features such as workflows and approvals speed up business processes and increase productivity related to Scalability and Flexibility, Cost and Risk Reduction, Regulatory Compliance, and Continuous Support.

2.3 Research Framework

The conceptual framewrok of this research is described at Figure 1:

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                    ┌─────────────────────────┐
          ┌────────►│    Palm Oil Business     │◄────────┐
          │         └─────────────┬───────────┘          │
          │                       │                       │
          │         ┌─────────────▼───────────┐          │
          │         │    Accounting System     │          │
          │         └──────┬────────────┬──────┘          │
          │                │            │                  │
          │     ┌──────────▼───┐   ┌────▼──────────┐      │
          │     │SAP Application│   │Internal Control│     │
          │     └──────┬───────┘   └───────┬───────┘      │
          │            │                    │              │
          │         ┌──▼────────────────────▼──┐          │
          └────────►│   Accounting System       │◄─────────┘
                    │   Development             │
                    └───────────────────────────┘
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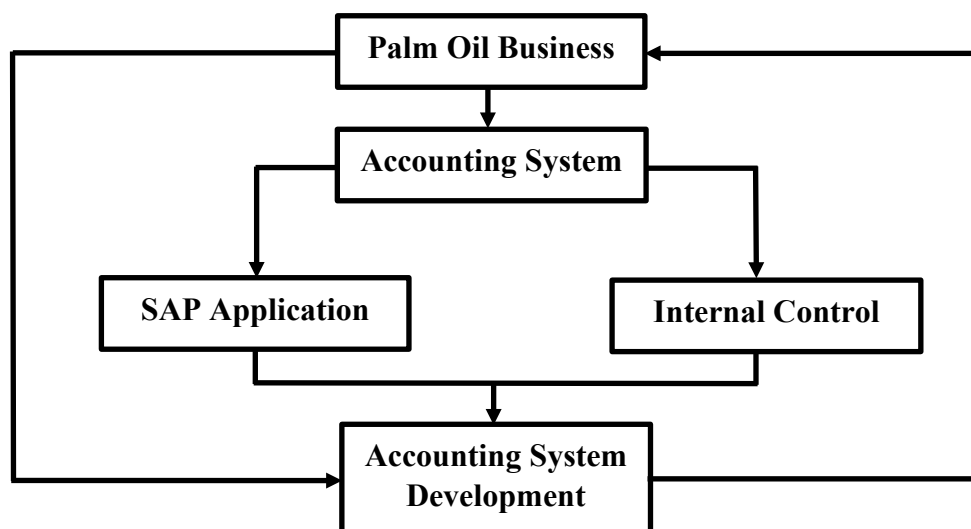
Figure 1: Conceptual Framework

Based on Figure 1, research on the palm oil business at PT. BGA is carried out by checking the accounting system. Accounting system application used by PT. BGA is SAP ERP. These applications are used because they provide various features and functions to support various business processes, including finance, accounting, human resources, supply chain, and manufacturing.

The process of recording transactions using the SAP application with accounting and finance modules is used as a tool to record accounting transactions until the company's financial reports are issued. Internal control is crucial in ensuring good governance, within an organization (Purnamasari, Hasanudin, Zulfikar, & Yazid, 2024). Good governance provides a conducive environment for integrating internal control and information technology systems, safeguarding assets, preventing fraud and corruption, ensuring compliance with regulations, and promoting transparency and accountability (Harasheh & Provasi, 2022). Thus, the selection of the SAP application has been supported by the company's internal control principles, starting from the procurement of the SAP accounting application program which is supervised by the internal control division.

However, in implementing the program, the implementation set by the company has not been fully implemented and implemented by several company work units with the discovery of irregularities and employee actions that lead to

fraud. Therefore, the critical analysis that needs to be carried out by company management is how the SAP application program used by the company has been adapted to the company's organizational needs, with a decision from Management to ensure that the SAP application program is applied consistently across all work units.

3. RESEARCH METHODS

3.1 Types of Research

This research uses a qualitative type method. Qualitative research methods are research methods used to understand a phenomenon in depth by observing and analyzing qualitative data, where the data collected is in the form of words, images, or videos. This method places more emphasis on understanding the meaning and interpretation of the phenomenon being studied, rather than generalizing to the population (Sugiyono, 2019).

3.2 Methodology

The data collection techniques used to obtain qualitative data are as follows:

1. Case study

The case study in this research was carried out at PT. BGA. The case that occurred was an act of theft that occurred at a subsidiary company, namely when the central company was recording stock, and finding missing goods in the subsidiary's warehouse. The result of this theft causes losses for the central company. This condition may occur in the management of recording company accounting transactions because the SAP application system has not been implemented in its entirety. As a result of using application programs other than SAP, namely using the MS Excel application and transferring accounting data via email, there is the potential that not all data will be conveyed to the head office for input and processing with the SAP application.

2. Field Research

Field research is research carried out in the field, namely outside a laboratory or library. Field research aims to obtain data directly from the source (Mulyana, 2022). Direct data collection through observation and interviews with employees in the accounting department of region 4&6 PT. BGA. There are several methods used to collect field data:

A. Observation (Research): carried out by visiting the accounting division of PT region 4&6 directly. BGA is implemented on:

(1) October 17, 2023

This research conducted observations by examining the method of recording transactions carried out by the PT Region 4&6 accounting division. BGA. In observations, the accounting division for regions 4&6 used 2 methods for recording transactions, namely using the SAP ERP application and MS Excel. Using MS Excel is considered to waste a lot of time because the results of processed data in MS Excel which are sent via email will be processed back into the SAP ERP application.

(2) October 18, 2023

This research conducted observations by examining payment request documents issued by subsidiaries. Requests for payment of documents are submitted to the accounting division of regions 4&6. When making observations by checking payment requests, I found many piles of payment requests that were not carried out because I had to scan the documents one by one into MS Excel. This process takes a lot of time resulting in a lot of piles of documents in the desk region 4&6 accounting division.

(3) November 21, 2023

This research carried out observations by checking the completeness of debt data from affiliated accounting divisions for regions 4&6. When making observations by checking the completeness of the data, it was discovered that some data did not have invoices. Starting by opening the SAP program, then opening the accounts payable and receivable data with code f.01 which aims to open all transaction data. The next stage is looking for the vendor code for debt and receivable data, and the vendor code is entered into the fbl3n menu which aims to open the data one by one in detail and accurately. If there is a difference in data between SAP and the data provided by the subsidiary, it will be followed up by the person in charge (PIC) who is responsible.

(4) November 22, 2023

This research makes observations by examining the loan budget estimates made by PT. BGA to banks to provide credit loans to develop oil palm plantations in subsidiaries.

B. Interview: The interview was conducted on November 22, 2023, by interviewing accounting department employees directly in areas 4&6 PT. BGA. Interviews are one of the methods used to collect information from PT employees. BGA is directly related to research.

3.3 Population and Sample

The population in this region which is the target group for this research is all employees of the accounting division in regions 4&6 of PT. BGA. This target group is the research population to understand the substantial characteristics and quality of audits.

This study applies purposive sampling method. The samples taken were people who played an important role and understood the use of SAP applications in region 4&6 accounting division PT. BGA. Three people understand this SAP application and all of them are used as samples. The samples taken were: (1) Mr. K as Head of Accounting; (2) Mr. H as Accounting Officer; and (3) Mr. D as Accounting Executive Assistant. The reason for using this sample is to collect data regarding problems studied in detail regarding SAP and internal control carried out by employees of the accounting division of Region 4&6 PT. BGA.

3.4 Questions Development

Based on the research objectives which consist of: (1) To obtain information regarding the implementation of the internal control system in SAP. To support research progress, several variables are needed that support research progress supported by expert opinions as follows: (a) System Applications and Products are for obtaining information discussed in terms of accounting information systems. There are three main indicators used to measure the level of success of SAP, that is:

Indicator	Question
Security: measures how well SAP protects data and systems from threats.	How well does SAP protect data and systems from threats?
Productivity: measures how efficiently application systems and products can help employees complete their tasks.	1. What is the impact of SAP on the effectiveness of employee performance in the accounting function? 2. How efficiently can application systems and products help employees complete their tasks?

	3. Will having the SAP application implemented in the company really help the company in completing financial reports on time?
Customer satisfaction: measuring how satisfied customers are with the application system and product.	1. How satisfied are customers with SAP? 2. What are the advantages and disadvantages of SAP?

(b) Internal control

Beasely (2023), explains that internal control is very important for organizations of all sizes and in all industries. It is an important component of good corporate governance and can help an organization achieve its strategic goals, protect its assets, and comply with laws and regulations. To obtain the information discussed in the definition of an accounting information system, three main indicators are used to measure Internal Control, namely:

Indicator	Question
Effectiveness of communication and coordination: measures how effective communication and coordination between work units is in implementing internal control.	How effective is communication and coordination between work units in implementing internal control?
The level of employee understanding of internal controls (employee understanding of internal controls): measures how well employees understand the applicable internal controls.	How well do employees understand applicable internal controls?

Level of management commitment to internal control (management commitment to internal controls): measures how committed management is to implementing and maintaining internal control.	1. How committed is management to implementing and maintaining internal control? 2. Has the SAP application in all company work units received a recommendation from the Internal Audit unit?

(2) To develop SAP programs to process Company transaction data. Thus questions arise regarding SAP implementation, namely:

a) Are accounting transactions in subsidiary companies verified and authorized before inputting data into SAP in real time?

b) Can data input by subsidiary companies into the SAP application be monitored and controlled by the head office?

c) Is the input data carried out by the subsidiary subject to further verification to ensure the reliability of the transaction data?

d) Will the SAP application be used comprehensively in all company work units?

3.5 Analysis Method

Data analysis was carried out using qualitative methods. Data collection was taken from primarily, by conducting observations in the company and interviews with accounting division employees region 4&6. The reasons for researchers to take the form of research using qualitative methods are due to the following conditions: (1) Qualitative research does not focus too much on numbers or values in measuring the object being studied; (2) Qualitative research does not carry out tests using statistical methods, but use opinions of experts to reinforce the consistency of the results; (3) Elaborative where the researcher is allowed to comprehensively explore information on the object under study; (4) The research object does not depend on measurements based on numbers; (5) The research structure is freer than quantitative research (Jahel, et al., 2023).

4. RESULTS

Accounting recording of sales and purchase transactions carried out by subsidiaries at PT. BGA is carried out independently using SAP tools, where all recording and inputting of transactions is carried out entirely by subsidiaries in compliance with financial accounting principles, and recording by subsidiaries is carried out using an online system so that accounting for inherited assets can be carried out. monitor, control, and verify financial transactions. carried out by subsidiaries. So that any discrepancies or deviations can be prevented and corrected in the system run by the Subsidiary Company.

The activities and activities carried out by the Accounting Division include, among others:

(a) Administration in recording Payables & Receivables (Affiliate PO)

Payables & Receivables from Affiliate POs that occur with Subsidiary Companies in the Operational Area are coordinated with the Head Office, accurate records are required so that they can be used as supporting documents as evidence to ensure transactions between the two companies occur. Meanwhile, the Head Office's accounting task is to carry out recaps and ensure that the contents of transactions can be accounted for as support in the company's financial reports.
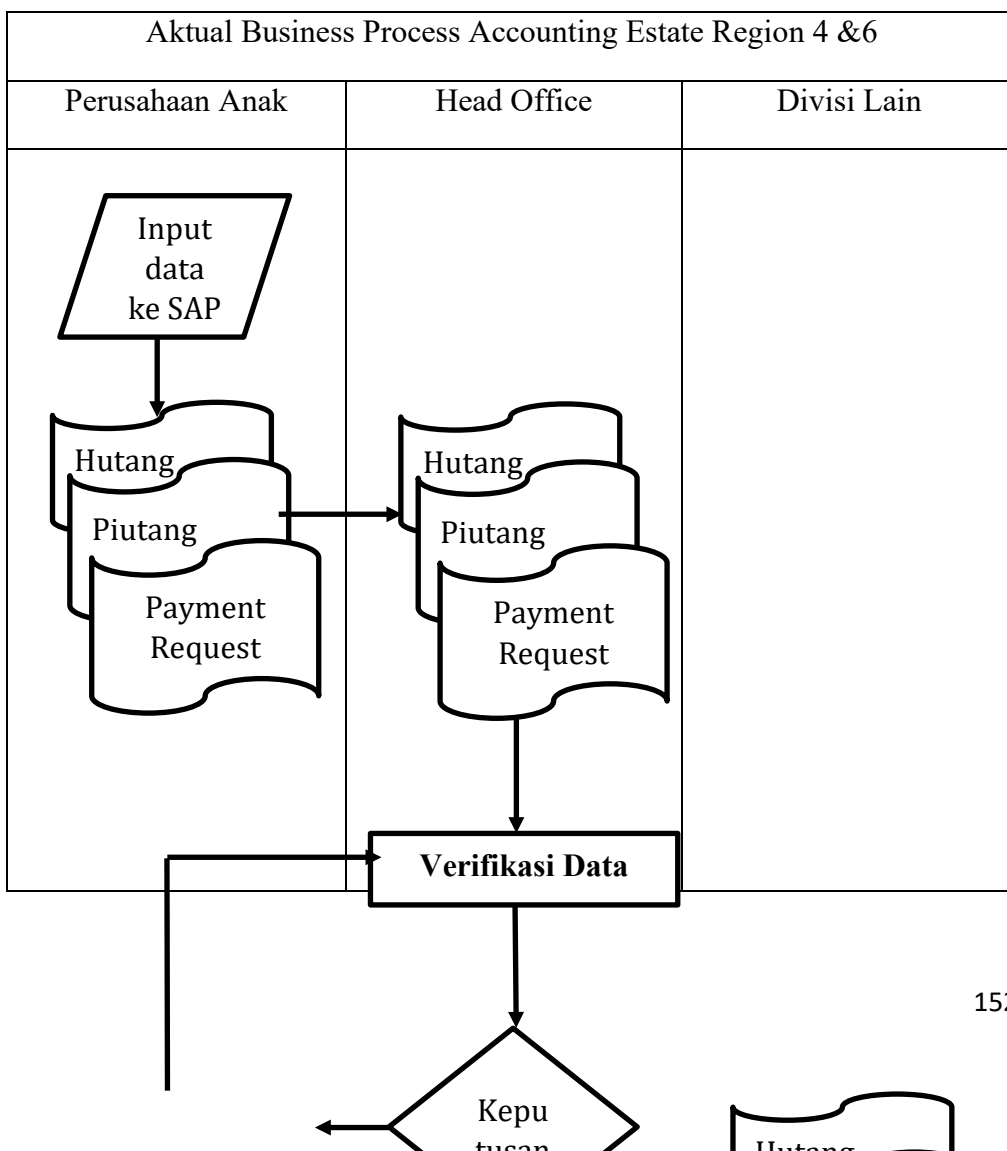
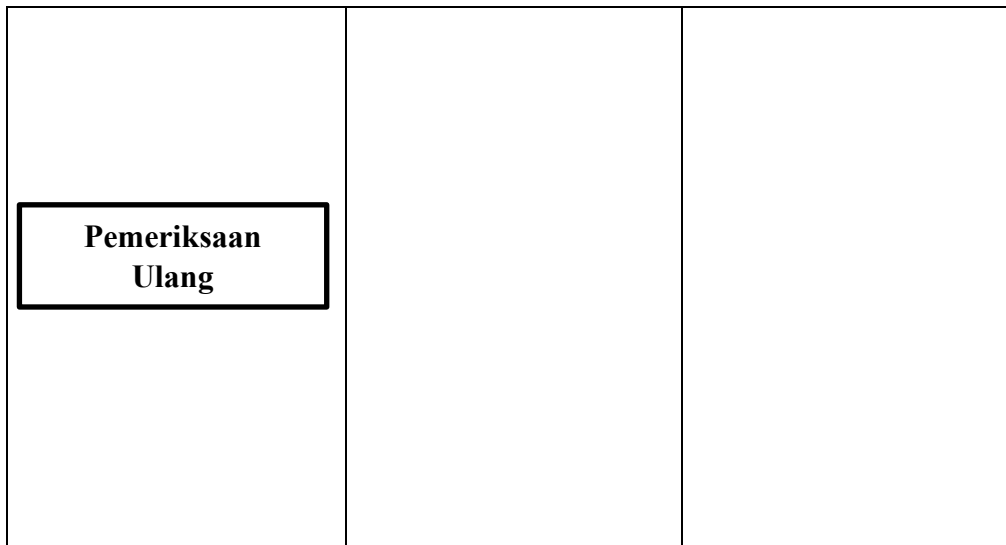(b) Perform general tasks in the Accounting function

In general, the duties of the Accounting Department generally include the following activities:

1. Prepare a file for recording/recording the tasks of the accounting staff in the form of an Excel file which is needed for data collection as proof of debts and receivables, then the document is forwarded to the Tax Division for preparing Tax Invoices and finally forwarded to the Treasury Division for payment by its main duties and functions.

2. The Payment Request Document sent by the Subsidiary Company in the operational area is addressed to the person in charge (PIC) at the Head Office who is tasked with coordinating the existing subsidiaries to the PIC, then scans the barcode in the Excel file, and then forwards it to the Treasury Division.

To provide an explanation of the flow of documents in the actual business process in the flow chart (flowchart) related to the coordination of Subsidiaries, Head Office and other Divisions as presented in the following picture:

Aktual Business Process Accounting Estate Region 4 &6		
Perusahaan Anak	Head Office	Divisi Lain

Input
data
ke SAP

Hutang

Piutang

Payment
Request

Hutang

Piutang

Payment
Request

Verifikasi Data

Kepu
tusan

Hutang

Figure 2: Flow Chart (flowchart) Actual Business process Accounting Estate Region 4 & 6

An explanation of the flowchart is as follows:

1. Transaction data is input into SAP by the Subsidiary Company in the form of debt and receivable transaction documents as well as Payment Requests, and these documents are sent to the Head Office.

2. The Head Office receives transaction documents for debts, receivables, and payment requests, and then verification research is carried out to ensure that the data sent to the Head Office is compared with the transaction data in SAP and whether there are any irregularities or differences. existing data, then the document is returned to the Subsidiary Company to be corrected by the directions given by the Head Office.

3. After the documents covering Payables, Receivables, and Payment Requests have been corrected, these documents are sent back to the Head Office for verification, and approval is given so that the transaction meets the requirements for further processing.

4. Documents that have been verified by the Head Office after fulfilling all the requirements set by the Company, the documents in question will then be sent to other Divisions for further processing.

(c) DISCUSSION

4.1 How the internal control system is implemented in the company's accounting system

An internal control system has been implemented before determining the use of the SAP application. Where the internal audit unit programmatically monitors the SAP application that will be used in processing company transactions until the company's financial reports are issued.

In addition, management routinely provides an understanding of the company's internal control system in the company's accounting system to all units that have responsibility in the fields of accounting and finance.

So that by understanding the aspects of internal control in the company's accounting system, it can be understood, understood, and implemented systematically and able to detect if conditions occur that could be detrimental to the company.

4.2 What is the impact of using the SAP program after it is developed in

the company's transaction data process in accordance with aspects of reliable and trustworthy reports?

The implementation of SAP has been implemented but has not been implemented consistently by all work units within PT. BGA. This shows that the payment transaction process still uses MS instruments/media. Excel is sent via email to the central company.

Next, verification is carried out at the head office and input into the SAP application. This allows theft of goods from subsidiaries, acts of corruption, and all actions that could be detrimental to the company.

The results of the interview stated that the impact of developing the SAP program had a positive influence on recording company transactions. Because this SAP program is implemented with a structured system, it will make it easier to use this SAP program, so that factors that allow deviations or actions to occur in the form of theft of goods from subsidiaries, acts of corruption, and so on. Actions that could be detrimental to the company can be anticipated by implementing the SAP application system as a whole.

4.3 SAP Analysis Results

Transaction recording at PT. BGA before and after complete SAP implementation:

1) Before implementation

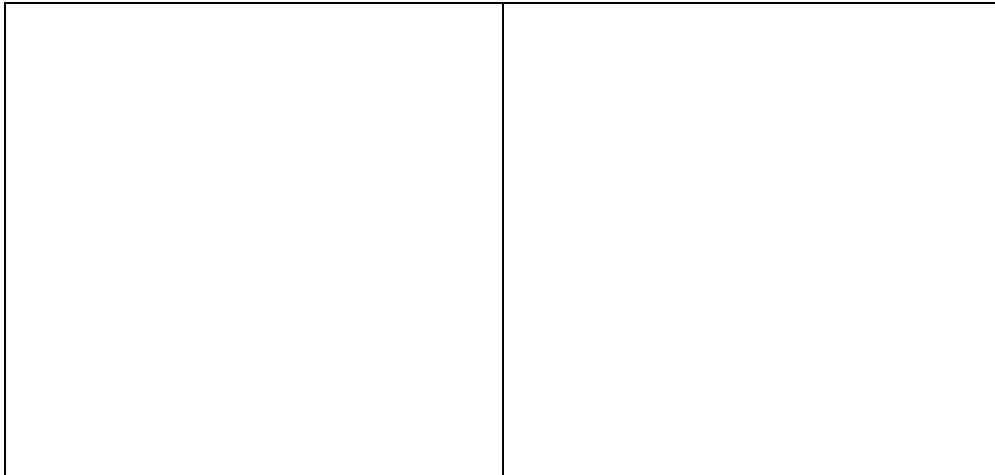| Flowchart Sebelum Penerapan SAP Secara Menyeluruh	
Perusahaan Anak	Head Office
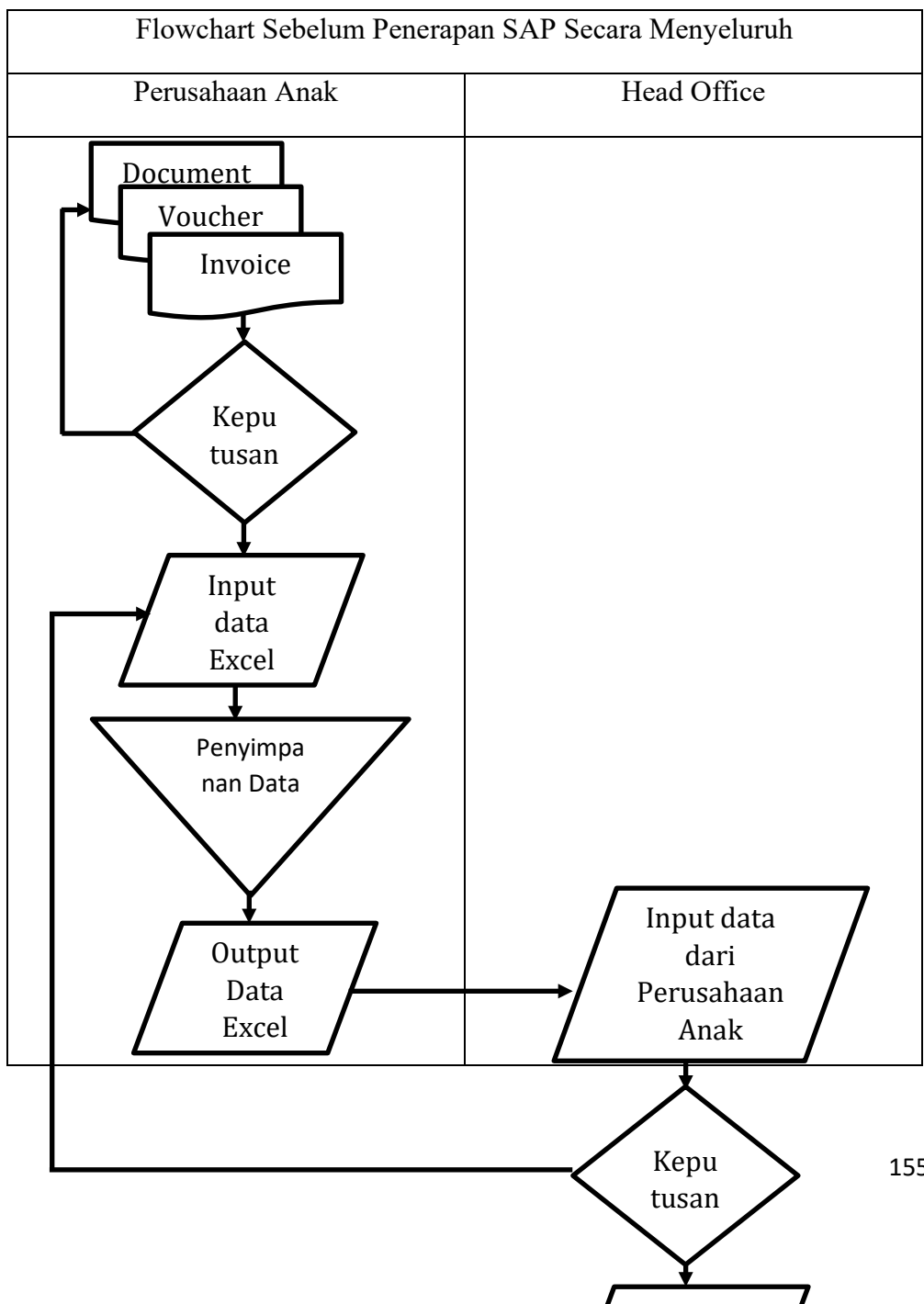
Figure 3: Flow Chart recording transactions before implementing SAP as a whole

As explained above regarding a flow diagram before implementing SAP as a whole, it can be explained as follows:

1. Recording of accounting transactions is prepared based on documents which include vouchers, invoices, and other accounting supporting documents. Therefore, a verification process is carried out to ensure all transactions are valid and the supporting documents are complete.

2. Furthermore, after document verification is complete, it continues with authorization by the head of the subsidiary and, if approved, continues to the data input recording stage. If it is not approved, it will return to the initial process to be corrected.

3. After authorization is carried out by the head of the subsidiary, it continues with data input into the MS Excel application program.

4. Data that has been input by the accounting function into MS Excel will first be stored on the computer's hard disk storage system (offline storage).

5. Thus the data is temporarily stored in offline storage and will be sent to the head office via the company's official email.

6. Furthermore, the data received from emails sent by subsidiaries is checked/verified for correctness by the head office. If approved, the transaction data will be input into the SAP program by the head office.

7. Therefore, after all subsidiary company data has been input, it continues with data processing in the SAP program by the head office.

Based from the results of the flowchart discussion above, several questions will arise that will become critical analyses related to the implementation of the SAP program into the company's accounting system:

a) Are accounting transactions in subsidiaries verified and authorized before entering data into SAP in real-time?

b) Can subsidiary data input into the SAP application be monitored and controlled by the head office?

c) Does the data input carried out by the subsidiary require further verification to ensure the reliability of the transaction data?

d) Will the SAP application be used comprehensively across all company work units?

The evaluation results have not implemented SAP comprehensively in subsidiaries, which raises questions regarding deficiencies in the implementation of company accounting records and can cause conditions:

1. Accounting documents created by subsidiaries have the possibility of being lost during the data input process. Irregular document numbers and payment transactions can result in random payment priorities that have been budgeted.

2. Transaction accounting payment monitoring and transaction recording cannot be controlled in real-time by the head office, so irregularities are only discovered after a long time.

3. The work becomes inefficient because transaction verification is carried out at various levels, requires a lot of resources, and takes a lot of time to input data that should only be done once by entering data at the subsidiary.

Deficiencies that occur because SAP has not been implemented comprehensively require comprehensive SAP development by processing data in real-time which will overcome negative conditions as explained above. Thus, after the development of SAP, it was implemented comprehensively in all company work units as presented in the following flowchart:
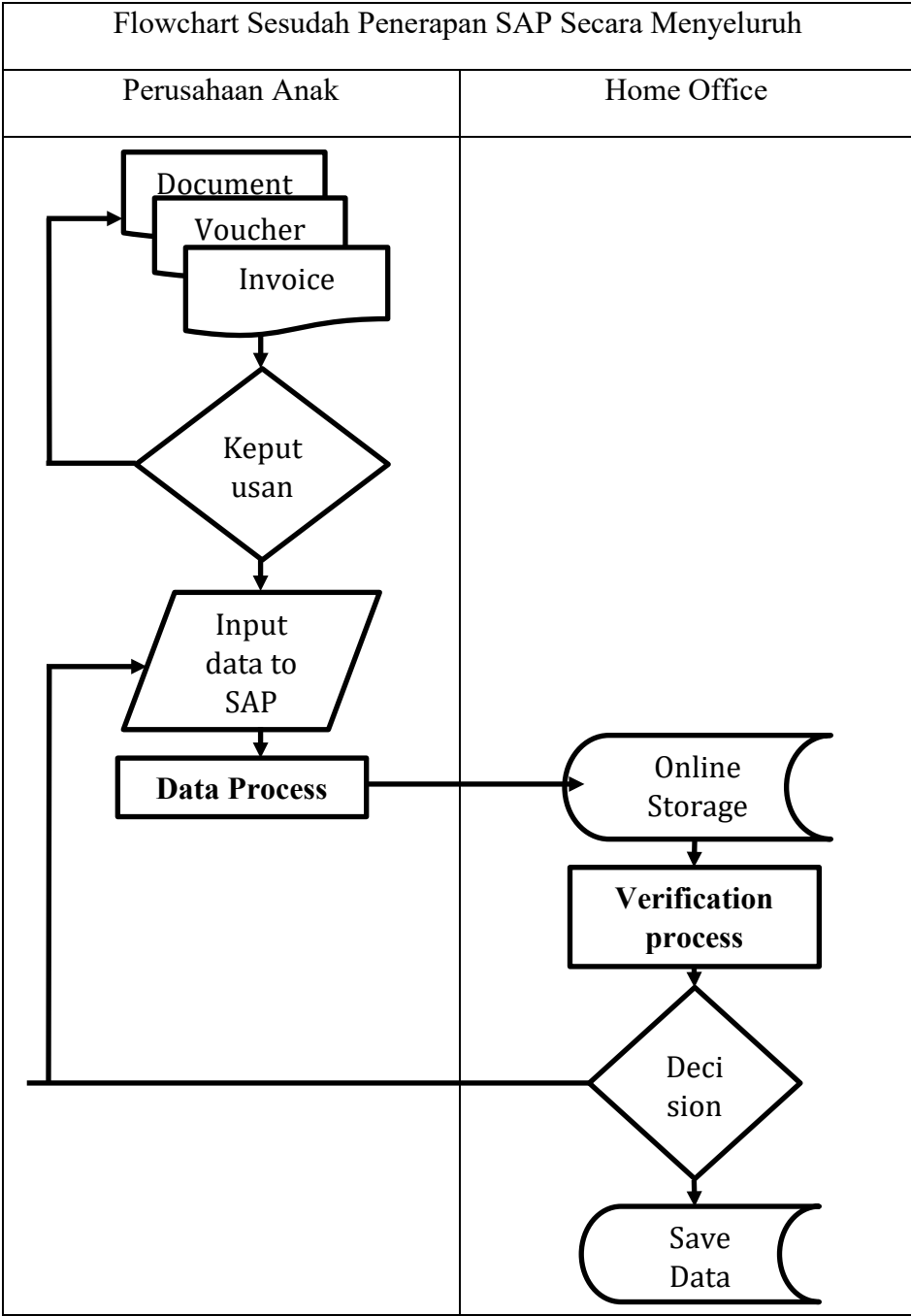
2) After implementation

Flowchart Sesudah Penerapan SAP Secara Menyeluruh	
Perusahaan Anak	Home Office

Figure 4: Flow Chart (flowchart) transaction recording after comprehensive SAP implementation

An explanation of the flowchart is as follows:

1. Recording of accounting transactions is prepared based on documents that have been given identification numbers, and standard documents from the head office, and complete document verification is carried out by subsidiaries.

2. Authorization by the head of the subsidiary, if approved, continues to the stage of recording data input to SAP. If it is not approved, it will return to the initial process to be corrected, before valid and correct data input is carried out by the subsidiary.

3. Input data into the SAP program which is processed automatically online.

4. Data that has been processed can be accessed directly by the head office.

5. The head office verifies data regarding the correctness of transactions.

6. If approved and meets the requirements, the transaction data will be stored in SAP. If it is not approved, it will be returned to the subsidiary to ask for data correction.

The results of the analysis above show that developing the SAP program as a whole and carried out using an online process and monitored in real-time will provide various benefits as follows:

1. The SAP program can guarantee the security of company data transaction data from threats from parties who have no interest in the company.

2. There will be an increase in productivity because the SAP program will speed up the work of employees in subsidiaries and head office divisions. In this way, the increase in customer satisfaction from implementing the SAP application can be measured, because the SAP application program will provide work comfort for employees (Doyle & Cosgrove, 2019).

3. There is time efficiency in the process and preparation of company financial reports (Gessa, Jim´enez, & Sancha, 2023).

4. There is effective communication between employees of the subsidiary's accounting department and the head office so that internal control can run optimally and minimize opportunities for irregularities.

5. CONCLUSION

In general, internal control and recording carried out by companies using the SAP program are carried out by the head office. However, in subsidiaries, the use of SAP applications has not been carried out as it should. Because subsidiaries still use MS to record accounting transactions. Excel reporting and data input is carried out using company email so that several conditions that have the potential for deviation cannot be controlled individually in real-time.

The conditions described above are a critical analysis faced by the company in ensuring that all transactions and processes for recording the company's financial transactions have not been implemented in a structured, comprehensive manner and become a guide in the company's accounting system.

Developing and implementing SAP in all company work units will provide benefits for effective and efficient coordination between Subsidiary Companies and the Head Office. Thus, the overall implementation of SAP will have direct implications by ensuring the security of company transaction data, increasing employee performance productivity, efficiency of transaction data processing time, effective communication between subsidiaries and head office, as well as improving the company's internal control, and sustainably by continuous development of the company's accounting system will provide benefits and increase the company's profitability.

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