

Analysis of the internal control system in gas stations

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Abstract

Purpose: This Study aims to analyze the internal control system in the expenditure cycle and revenue cycle at PT HM Batarai's gas stations and provide recommendations to improve the effectiveness of its internal control system.

Method: The method used is a descriptive qualitative with a case study approach at the PT HM Batarai's gas station. The qualitative descriptive analysis method is used to obtain an overview of the company's condition, which will then be evaluated using the COSO 2013 conceptual framework.

Results: PT HM Batarai's internal control is ineffective due to deficiencies in the control environment, risk assessment, control activities, and monitoring activities components.

Conclusions: It can be concluded that PT HM Batarai has not yet implemented effective internal control.

Limitations: This study is limited to evaluating the internal control system in the revenue and expenditure cycles implemented by PT HM Batarai using the COSO 2013 conceptual framework.

Contribution: This study can serve as an evaluation resource for the management of PT HM Batarai, enabling them to enhance the effectiveness of the company's internal control system.

Novelty: This study used a case study at a gas station, a critical business unit in the energy sector that relies heavily on cash, but this has yet to be discussed.

Keywords: *Internal Control, Gas Station, Revenue Cycle, Expenditure Cycle*

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1. Introduction

The trend of fuel oil consumption in Indonesia is increasing ([Safitri & Sukmana, 2023](#)). This is due to rapid economic growth and increased mobility, which boosts fuel oil consumption as an energy source for transportation. The trend of fuel oil consumption in Indonesia has been rising yearly, as shown in Figure 1. The increasing demand for fuel oil has made gas stations, referred to as SPBU, a central point in distributing and marketing fuel oil among the public. Therefore, the role of SPBU is vital and strategic in supporting Indonesia's economic progress ([ESDM, 2018](#)).

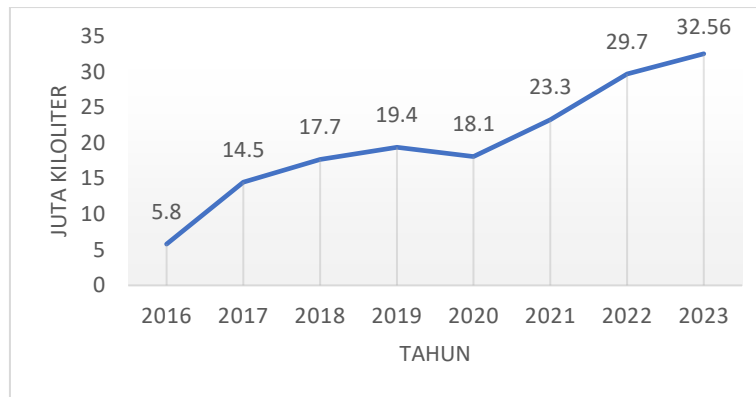


Figure 1. The trend of Fuel Oil Consumption in Indonesia

Source: Ministry of Energy and Mineral Resources of the Republic of Indonesia, processed data

Gas stations, known as SPBU, are public facilities that distribute fuel to meet the fuel needs of a widespread community. SPBU are commercial enterprises whose primary business is buying and selling fuel oil to the general public (Amijaya & Parwata, n.d.). The main activities of SPBU are divided into two cycles: purchasing fuel oil inventory, categorized as the expenditure cycle, and selling fuel oil, categorized as the revenue cycle.

The expenditure cycle is a series of business activities and information processing processes related to purchasing and payment transactions of goods and services (IAI, 2015). In addition to the expenditure cycle, another cycle that plays an essential role in the company's operations is the revenue cycle. The revenue cycle is a series of business activities and information processing processes related to providing customers goods and services and collecting cash as payment for these sales transactions (IAI, 2015). Effective control is essential in every expenditure and revenue cycle activity to enhance the company's operational effectiveness and efficiency.

The presence of internal control in a company holds significant importance and is a fundamental element in the operation of the company (Askhari, 2023). P. A. Y. Putri and Endiana (2020) state that an internal control system positively impacts company performance, assisting the company in achieving its goals. Wang (2024) also mentioned that internal control can enhance a company's financial performance. Therefore, to ensure operational integrity, gas stations (SPBU) need to implement an effective internal control system so that their operational activities can run according to the company's plans and objectives, thereby improving operational performance.

An effective internal control system within an organization reasonably assures stakeholders regarding achieving the entity's objectives (COSO, 2017). According to the internal control framework developed by COSO, five components form effective internal control. These five components are the control environment, risk assessment, control activities, information and communication, and monitoring activities. It is crucial to ensure that these components are present and functioning correctly for effective implementation of internal control. The need for effective internal control is increasing due to rapid economic development and the expansion of company activities (Al-Mashhadi, 2021).

Internal control aims to safeguard the company's assets to ensure they are secure and ready for operation, minimize the motivation for fraud and misconduct that could harm the company, and provide credible information for strategic decision-making (Ikaputri & Fatima, 2023). According to Askhari (2023), internal control can ensure that company errors and fraud risks are minimized to an acceptable level. Internal control is essential for a company, especially its central business processes. Research by Waromi, Kambuaya, and Wonar (2024) also found that internal control systems play a crucial role in safeguarding the integrity and reliability of financial information for financial sector companies. The weaknesses in internal controls will allow management to manipulate financial reporting to conceal their fraudulent actions (Rahman, Jamaluddin, Hamzah, & Aziz, 2019).

PT HM Batarai is a family-owned company engaged in fuel distribution, commonly known as gas stations. According to an initial interview with the owner, at the end of 2019, the owner detected fraud committed by the company's management, resulting in a loss of IDR 1.5 billion. This led the owner to inject additional capital into the company to support its operational activities, hoping to restore its operational condition. Consequently, an evaluation of the internal controls at PT HM Batarai is necessary.

Many studies have examined internal controls in various methods and various types of companies. Some of these studies have produced different results when evaluating internal control systems. For example, research by [A. Putri and Khudri \(2022\)](#) found that internal controls at PT X needed to be more effective in the expenditure cycle due to inventory management issues caused by incomplete documents. Research by [Malau and Malik \(2020\)](#) concluded that internal controls at Hotel ABC needed to be more effective due to weaknesses in the control environment component. Meanwhile, research by [Agung \(2021\)](#) found that internal controls in the PT XYZ procurement cycle could have been more effective due to weaknesses in control activities related to supplier selection, invoice receipt, and supplier recording and payment.

Research by [Ngurawan, Morasa, and Kapojos \(2021\)](#) assessed the effectiveness of the internal control system at PT Bank SulutGo by OJK Circular Letter No. 35 of 2017 and concluded that it was operating effectively. Research by [Ahmad, Idrus, and Nuraisyiah \(2024\)](#) found that internal control over the marine plate raw material supply at PT Industri Kapal Indonesia is already adequate but would be more effective if there were an internal control function within the company. Research by [Siahaan and Muhidin \(2020\)](#) found The internal control system for the Finished Goods Inventory at PT. Denso Manufacturing Indonesia is adequate but ineffective due to internal communication weaknesses and inefficient employee turnover. Research by [Click or tap here to enter text.](#) evaluated the internal control system for credit provision at BUMDes Bangun Bersama and found that although the credit provision control system at BUMDes Bangun Bersama was adequate, there were still areas for improvement.

Many deficiencies make internal control systems ineffective. [Rosalina, Setiawan, Anwar, and Lasmana \(2022\)](#) found overlapping duties and ineffective request flow at PT Dasan Pan Pacific. [Poluan, Morasa, and Afandi \(2021\)](#) discovered the absence of task separation between Account Payable and Account Receivable staff at PT Bumi Selaras Asri. [Kalendesang, Lambey, and Budiarsa \(2017\)](#) identified an incomplete organizational structure and ineffective task division at Paragon Mart Tahua. [Ikaputri and Fatima \(2023\)](#) found a lack of adjustments in work procedures and precise documentation at the container depot company. [Anggreini and Sulistyawati \(2023\)](#) found ineffective communication, improper storage processes, and lack of physical inspections at CV Top Album.

The results from previous studies, used as references for this research, indicate the lack of effective internal controls and weaknesses in the internal control components of the companies. This indicates that implementing an internal control system in the company is urgent and requires attention, considering the internal control system still has many deficiencies, and there is still much room for development. Thus, the company must continuously evaluate and develop its internal control system to mitigate fraud and maintain the integrity of its operations. Many studies have evaluated internal control systems, but few studies assess the internal control systems of gas stations. This research evaluates the internal control system at PT HM Batarai's gas station using the COSO 2013 conceptual framework. The evaluation results will form the basis for recommendations related to the internal control system, with the hope of contributing to PT HM Batarai in enhancing the effectiveness of the internal control system and improving operational performance.

2. Literature review

2.1 Internal Control

According to [Romney, Steinbart, L.Summers, and Wood \(2021\)](#), internal control is a set of procedures used to provide reasonable assurance that the company's control objectives—which include

safeguarding assets, maintaining complete records and presenting accurate and reliable information, preparing financial statements that meet established standards, enhancing operational effectiveness, and complying with applicable laws and regulations—are achieved. Internal control is supervised by the company's management, board of directors, and other employees. It aims to provide reasonable confidence regarding achieving the company's operational, reporting, and compliance objectives (COSO, 2013). Thus, internal control can be said to be a procedure performed by all company staff and aims to provide reasonable assurance regarding the achievement of the organization's control objectives, which include safeguarding company assets, presenting accurate information, preparing financial statements, enhancing operational effectiveness, and complying with applicable laws.

2.2 COSO Internal Control-Integrated Framework (2013)

Compliance, Reporting, and Operations Objectives are the three main objectives of the COSO 2013 conceptual framework for internal control. The Control Environment sets the groundwork for implementing internal control. Risk assessment is a continuous process of identifying and evaluating risks to achieve objectives. Control Activities are implemented to help mitigate risks through policies and procedures. Information and Communication are crucial for entities to have internal control and support in accomplishing objectives. Finally, Monitoring Activities ensure that internal control components are present. These are the five internal control components that form this conceptual framework. An effective internal control system will provide Adequate confidence in achieving an entity's objectives (COSO, 2013). An internal control system is considered effective when all five components and relevant principles are present, functioning, and working together. Figure 2 illustrates these components.



Figure 2. COSO Internal Control Conceptual Framework 2013

Source: COSO Internal Control-Integrated Framework 2013

2.3 Revenue cycle

Providing goods and services to customers and collecting cash as payment for those sales constitute the revenue cycle, a sequence of business operations and related information-processing activities that continually repeat (Romney et al., 2021). The primary objective of the revenue cycle is to provide the right products at the right time, place, and price. The four main revenue cycle activities are entering sales orders, shipping orders, billing, and cash receipts. Every activity in the revenue cycle may pose risks that require management through adequate internal controls.

2.4 Expenditure cycle

The expenditure cycle is described by Romney et al. (2021) as a sequence of repeating business processes and associated information processing procedures related to acquiring and paying for goods and services. The primary objective of the expenditure cycle is to maintain the overall cost of purchasing and maintaining inventory, supplies, and other services required by the business as low as possible. Ordering goods and services, receiving goods and services, approving supplier invoices, and

disbursing funds are the four main activities of the expenditure cycle. The expenditure cycle can have threats at every activity that must be managed with adequate internal controls.

2.5 Hypothesis

According to [Ross, Westerfield, Jaffe, and Jordan \(2022\)](#), the relationship between the company owner (the principal) and the management (the agent) is called an agency relationship, and the conflicts that arise between the interests of the company owner and the management are called agency problems. An agency relationship arises when the principal hires the agent to act for the owner's interests. There are two ways to mitigate agency problems: management compensation and corporate control ([Ross et al., 2022](#)). [Fajri and Setiany \(2024\)](#) found that an effective internal control system positively influences fraud detection. Companies can easily detect fraudulent activities by implementing an effective internal control system.

Internal control affects fraud prevention ([Handoyo & Bayunitri, 2021](#); [Kuncara, 2022](#); [Nugraha & Bayunitri, 2020](#)). The more effective internal control, the better fraud prevention. By implementing an effective internal control system, companies can avoid issues such as inefficient use of resources, lack of necessary information for making accurate decisions, errors in reports, and direct fraud committed by employees and managers ([Rayimovna & Kizi, 2024](#)). [Al-Hasnawi and Abdel \(2024\)](#) also mentioned that an effective internal control system can reduce intentional and unintentional errors. PT HM Batarai suffered losses due to fraud that occurred within the company. Therefore, internal controls must be evaluated to identify areas that need improvement and enhancement in the internal control system of PT HM Batarai. This research hypothesizes that PT HM Batarai's internal control is ineffective.

3. Research Methodology

This study used a case study methodology along with qualitative descriptive methods. Both primary and secondary data were utilized. Primary data were collected through field observations and conversations with the owner and managers, while secondary data were gathered by analyzing supporting company documents.

Observations are conducted to gather information and understand the company's business processes and internal control systems. Interviews were used to obtain information on the company's internal control based on the respondents' perspectives. Semi-structured interviews were conducted with the Head of Finance, Chief Administrative Officer, Administrative Officer 1, Administrative Officer 2, and Operational Supervisor. These individuals were selected as research respondents because of their active roles in the company's operations. Interview questions were structured based on the COSO 2013 conceptual framework. Document analysis is performed on company documents such as inventory records, SOPs, written company policies, and other relevant documents to gain an overview and assess the company's internal control and accounting information system.

Qualitative descriptive data analysis is the method used for this research. Qualitative descriptive data analysis aims to describe the conditions occurring in the company based on the collected data. A description of the internal control system in the company's revenue and expenditure cycle business processes will be obtained based on all the gathered data. This control system description will then be evaluated for compliance with the components and principles outlined in the COSO 2013 conceptual framework. The analysis findings will serve as the basis for recommendations proposed to enhance the effectiveness of internal control.

4. Results and discussions

4.1 Findings

PT HM Batarai is a family-owned company that distributes public fuel to the community. It partners with PT Pertamina and serves as one of Pertamina's agents who purchase and sell products under the Pertamina brand. PT HM Batarai was founded and began operations in 1983 by H. Muhammad

Batarai through a DODO (Dealer Owner Dealer Operate) agreement in Kendari. The organizational structure of PT HM Batarai can be seen in Figure 3.

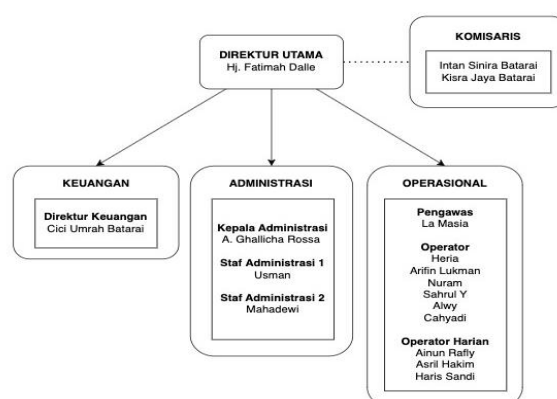


Figure 3. Company Organizational Structure
Source: processed by the author

PT. HM Batarai's revenue comes from cash sales of fuel and the sale of coupons, which customers can later redeem for fuel according to the amount specified on the coupon. The activities in PT. HM Batarai's revenue cycle includes sales and cash collection. In the sales activity, customers enter the fueling area based on the type of fuel they want. The attending operator will ask for the quantity of fuel desired. Customers will specify the amount they wish to purchase and may also present a coupon for redemption. The operator will verify the authenticity of the coupon based on the coupon number and expiration date. Next, the operator will input the ordered quantity into the dispenser machine and ensure the meter starts from zero. Fuel will then be dispensed into the customer's vehicle via the nozzle attached to the dispenser through a hose. Customers must adhere to operational safety rules at the gas station, such as no smoking, no use of mobile phones, and turning off the vehicle engine. The operator will charge the customer and receive the cash payment for the sale. Customers are allowed to request a receipt from the operator if desired.

In the cash collection activity, the money from sales held by the operator will be handed over to Administrative Staff 1 at the end of the shift. Administrative Staff 2 will observe and record the totalizer numbers at the start and end of the shift. The totalizer number records the amount of fuel dispensed through the dispenser. The end-of-shift totalizer number will be subtracted from the start-of-shift totalizer number to determine the amount of inventory sold. The inventory sold will then be multiplied by the price per liter to calculate the revenue for that shift. The collected money will be counted per dispenser by Administrative Staff 1. The amount of cash counted will be verified against the recorded revenue. All counted and verified money will be placed in a safe, and the next day, it will be deposited into the bank. Revenue and money the company receives will be recorded in the Sales Book.

PT HM Batarai's expenditures involve purchasing fuel inventory to be sold to the public. The company's expenditure cycle begins with ordering fuel from Depot Pertamina (the supplier) through a bank and receiving the ordered fuel. In the ordering activity, an officer will check the amount of fuel in the storage tank using an ATG (Automated Tank Gauge) system. The officer will then place an order with the supplier if the fuel level is approaching the predetermined minimum threshold. Orders are made to cover operational needs for three days, considering the company's fuel inventory flow. The company places orders through the bank using the BBM (Banking and Business Messaging) application, which the bank forwards to the supplier. When placing an order, the bank will deduct the payment amount from the company's account balance to pay the supplier. The supplier will deliver the fuel to the company at the agreed time and quantity.

In the fuel receipt activity, the company will shut down the dispensers according to the delivered fuel type. The officer will check the amount of fuel delivered by performing a Sounding measurement. Sounding is a method of measuring the volume of the truck's tank using a gauge stick to determine the height of the fuel in the tank and applying a formula to calculate the volume. The officer will also check the quality of the fuel by measuring its density. Fuel density, which indicates the fuel's specific gravity and density, is measured using a graduated cylinder and a thermometer. The officer will then verify the Sounding results and the density measurements against the delivery invoice. If the measured density significantly differs from the density recorded on the delivery invoice, it may indicate the presence of contaminants in the fuel that could reduce its quality. After verifying the sounding and density measurements with the delivery invoice, the officer will sign the invoice. The fuel will then be transferred into the storage tank according to the type of fuel delivered, and the invoice will be signed. The received inventory will be recorded in the Fuel Receipt Book.

4.2 Control Environment

Table 1 will provide an overview of PT HM Batarai's condition based on the principles of the control environment components of the COSO 2013 conceptual framework.

Table 1. Control Environment Components of PT HM Batarai

| Internal Control Principles | Company Condition | Best Practices |
|--|--|--|
| Demonstrating commitment to integrity and ethics. | The company has regulations that include values and ethics, but these regulations are not written, and there is no integrity pact. | The company should document its rules, including its values and code of ethics, so that all employees can easily access and understand these rules, values, and code of ethics. Additionally, the company should create an integrity pact that all employees sign. |
| Independent Supervision | The finance director and the president director carry out Independent supervision. | The company's board of directors conducts independent supervision over all company activities. |
| Establishing Structure, Authority, and Responsibilities | The company has a structure, but it is not depicted, and there are no written policies regarding duties and responsibilities. | The company should outline and present its organizational structure and create written policies regarding each employee's duties and responsibilities. |
| Commitment to Recruiting, Training, and Retaining Competent Personnel According to Company Goals | Prospective employees are trained regarding company activities, but there is no specialized training to improve employee skills and no specific procedures for recruiting employees. | The company should establish a recruitment policy that includes requirements for candidates, such as their background, experience, training, and more. |
| All Personnel are Responsible for Internal Controls in Achieving Company Goals | There are no performance measurement standards or adequate accountability for duties that cover the entire | The company should set performance measurement standards that can assess the company's performance and |

| | | |
|--|----------|---|
| | company. | formulate regulations regarding sanctions and bonuses that encompass all divisions and levels of the company. |
|--|----------|---|

Source: processed by the author

PT HM Batarai has no written regulations regarding its code of ethics and values. Supervision at PT HM Batarai is conducted by the company owner, who also serves as the finance director and president director. PT HM Batarai has no documented structure or written policies regarding employee duties and responsibilities. Additionally, PT HM Batarai lacks specific procedures for employee recruitment and does not have a recruitment policy in place. The company has a policy on sanctions for operators, but these sanctions only apply to operators and do not cover all company divisions. PT HM Batarai does not have performance measurement standards to assess the company's performance.

4.3 Risk Assessment

Table 2 will provide an overview of the conditions at PT HM Batarai based on the principles outlined in the risk assessment component of the COSO 2013 conceptual framework.

Table 2. Risk Assessment Components of PT HM Batarai

| Internal Control Principles | Company Condition | Best Practices |
|--|---|---|
| Establishing Clear Objectives | The company has not clearly defined the objectives it wants to achieve. | The company should determine and formulate its objectives. |
| Identifying and Analyzing Risks to Determine Risk Management Strategies | The company has not identified the risks that it may face as a whole | The company should perform a risk management function and create a risk register. |
| Considering the Potential for Fraud When Assessing Risks to Achieving Objectives | The company does not assess the risk of fraud when evaluating risks. | The company should assess the risk of fraud during the risk evaluation process. |
| Identifying and Evaluating Changes That Could Affect the Internal Control System | The company has identified and evaluated changes that could potentially affect the company. | The company should identify and assess changes that may impact the company's internal controls. |

Source: processed by the author

PT HM Batarai has not set objectives for the future and is currently focused on the company's day-to-day operations. The company has identified potential risks that it may face, but these risks have only been identified based on past incidents within the company. Additionally, PT HM Batarai does not document the identified risks and lacks the resources to manage them. While PT HM Batarai has identified and evaluated changes that could affect the company, it has concluded that these changes do not significantly impact its operations.

4.4 Control Activities

Table 3 will provide an overview of the conditions at PT HM Batarai based on the principles of the control activities component of the COSO 2013 conceptual framework.

Table 3. Implementation of Control Activities Component at PT HM Batarai

| Internal Control Principles | Company Condition | Best Practices |
|-----------------------------|-------------------|----------------|
|-----------------------------|-------------------|----------------|

| | | |
|--|---|--|
| Selecting and Developing Control Activities | The company has implemented internal controls for the revenue and expenditure cycles. However, these controls do not fully mitigate all risks associated with these cycles. | The company should select and develop control activities that can address all risks related to the revenue and expenditure cycles. |
| Selecting and Developing Control Activities for Information Technology | The company restricts access to the technology used by the company. | The company should develop control activities related to the use of technology to ensure comprehensive management and protection. |
| Implementing Control Activities Through Policies and Procedures | The company does not have written policies or procedures. | The company should create and document policies and procedures that cover all company activities. |

Source: processed by the author

In the revenue cycle, PT HM Batarai has implemented internal controls that can mitigate risks in every company activity. In sales activities, internal controls implemented by PT HM Batarai to mitigate the risk of money theft are to verify the amount of recorded income with the amount of money that has been calculated and to carry out the supervisory function by the supervisor. PT HM Batarai has implemented controls that can mitigate the risk of providing goods that do not match the customer's order by periodically checking the fuel flow in the dispenser using a measuring vessel. In cash collection activities, internal controls implemented by PT HM Batarai to mitigate the risk of money theft are to separate duties between the custodial and recording functions. PT HM Batarai also verifies the amount of income with the amount of money calculated and restricts access to the safe for storing money. PT HM Batarai also carries out controls that can mitigate the risk of miscalculation by calculating the money collected per dispenser and using a money-counting machine to mitigate the risk of miscalculation in the money-counting process.

In the expenditure cycle, PT HM Batarai has implemented internal controls that can mitigate risks in every company activity. In ordering activities, PT HM Batarai uses the BBM Application, which allows the company to order from the Depot through the bank directly, and the bank automatically deducts the company's balance for payment, thereby mitigating the risk of fictitious orders. PT HM Batarai also sets a minimum standard for inventory in the storage tank to mitigate the risk of running out of stock. In the inventory-receiving activity, PT HM Batarai divides tasks between the custodial function and the recording function and limits access to the storage tank, which can mitigate the risk of inventory theft. PT HM Batarai also checks the inventory received using the sonding method, which can check the amount of inventory received and calculate the fuel density to check the quality of the inventory received. PT HM Batarai also verifies the results of the Sounding and the results of the fuel density calculation with the delivery invoice to ensure that the type, quantity, and quality of the inventory received are appropriate.

Control over PT HM Batarai's technology is in the form of limiting access to the technology used. The technology used by PT HM Batarai is a dispenser machine, money counting machine, ATG machine, and computer. The daily recording is still done manually using the Sales book and the Fuel Receipt book, which will then be entered into the master data on the computer at the end of each month. All activities are carried out based on the company's daily habits.

4.5 Information and Communication

Table 4 will provide an overview of the conditions at PT HM Batarai based on the principles of the information and communication component of the COSO 2013 conceptual framework.

Table 4. Implementation of Information and Communication Component at PT HM Batarai

| Internal Control Principles | Company Condition | Best Practices |
|---|--|---|
| Obtaining, Generating, and Using Quality and Relevant information | The company obtains sales information from the totalizer numbers recorded by dispensers, verified against cash counts. Inventory information is gathered from the ATG machine, and delivery information is obtained from the depot through inspection results verified with delivery invoices. Payment amounts to the depot are obtained from bank statements. | The company should ensure it obtains, generates, and uses relevant, high-quality information. |
| Communicating Information Internally | Communication is carried out using mobile phones and documents. | The company should improve its internal communication processes. |
| Communicating with External Parties | The company communicates with suppliers, banks, and tax consultants. | The company should continue to engage in effective communication with external parties. |

Source: processed by the author

PT HM Batarai still uses a manual accounting information system using books and pens. In the revenue cycle, sales information comes from the totalizer number recorded on the dispenser machine and verified with money collected from the assigned operator. In the expenditure cycle, inventory level information is obtained through the ATG machine, which measures the fuel volume in the storage tank. Inventory information received from suppliers is obtained through the results of the inspection process, namely sonding and fuel density calculations verified with receipt invoices, and payment information comes from payment documents and bank balance reports. The information generated and obtained is then recorded in the Sales and Fuel Receipt books. Information within PT HM Batarai is communicated online every day, allowing for rapid dissemination without delay. Online communication facilitates direct communication between employees and management, ensuring real-time information sharing without delay or lengthy processes. PT HM Batarai also communicates with external parties such as customers, suppliers, banks, tax consultants, and local government offices via email or in person.

4.6 Monitoring Activities

Table 5 will provide an overview of the conditions at PT HM Batarai based on the principles of the monitoring activities component of the COSO 2013 conceptual framework.

Table 5. Implementation of Monitoring Activities Component at PT HM Batarai

| Internal Control Principles | Company Condition | Best Practices |
|---|--|--|
| Selecting, Developing, and Evaluating to Ensure Internal Control Components Operate | The company should periodically evaluate its internal control system to ensure the | The company should evaluate its internal control system regularly to ensure that the |

| | | |
|--|--|--|
| Effectively | controls effectively mitigate its risks. | internal controls effectively manage the company's risks. |
| Evaluating and Communicating Internal Control Deficiencies | The company communicates deficiencies and weaknesses to the owner. | The company should communicate deficiencies promptly to those responsible for taking corrective actions. |

Source: processed by the author

PT HM Batarai continuously monitors all operational activities within the company. However, it lacks the resources to evaluate its internal control system, so the company does not conduct evaluations of its internal controls. The company has established reporting channels for internal issues, with online reporting to allow direct and unimpeded communication. Meetings conducted by the owner are also held online, ensuring quick decision-making regarding internal issues. This setup enables the company to address problems or deficiencies promptly to maintain optimal operational performance.

4.7 Discussion

4.7.1 Analysis of Control Environment Components

PT HM Batarai has no written regulations regarding the code of ethics and values. PT HM Batarai also has not required all employees to sign an integrity pact to reinforce the company's commitment. According to [Romney et al. \(2021\)](#), companies should develop a written code of ethics that outlines the behaviors employees should and should not engage in. Additionally, the company should document that employees have read and understood the company's rules and code of ethics. PT HM Batarai should document company regulations, including values and codes of ethics, so all employees can easily access and understand these rules, values, and ethics. This can help employees remember, understand, and implement the company's rules, values, and code of ethics. PT HM Batarai should also require all employees to sign an integrity pact and document it to reinforce the company's commitment.

PT HM Batarai has implemented independent oversight. The company owner, who serves as the finance and main director, supervises PT HM Batarai. According to [Romney et al. \(2021\)](#), an involved board of directors represents shareholders and independently assesses management activities and decision-making.

PT HM Batarai has no documented structure or written policies regarding employee duties and responsibilities. According to [Romney et al. \(2021\)](#), authority and responsibility should be communicated through job descriptions, employee training, operational schedules, budgets, codes of ethics, and written or documented policies and procedures. PT HM Batarai should describe and illustrate the company's organizational structure so that employees can understand their positions and responsibilities. Additionally, PT HM Batarai should create written policies outlining the duties and responsibilities of each employee so they can easily access and understand their roles and responsibilities.

PT HM Batarai does not have specific procedures for employee recruitment and lacks recruitment policies. According to [Romney et al. \(2021\)](#), employees should be recruited based on educational background, experience, achievements, and alignment with the company's needs. Written recruitment policies should cover all company positions. Employee training can also be conducted through formal or informal meetings and by distributing written guidelines to employees. PT HM Batarai should establish recruitment policies that include candidate requirements such as educational background, experience, and other relevant qualifications.

PT HM Batarai has a policy regarding sanctions for operators, but this only applies to operators and does not cover all company divisions. PT HM Batarai lacks performance measurement to evaluate the company's performance. The company should carefully establish and provide performance

measurements, incentives, and rewards to encourage accountability. PT HM Batarai should set performance measurement standards to evaluate the company's performance and formulate regulations regarding sanctions and bonuses that cover all divisions and levels within the company. This can encourage accountability and improve the company's performance.

Based on the control environment components analysis, PT HM Batarai has not yet implemented effective internal control within the company's control environment. PT HM Batarai has independent supervision conducted by the company owner, who also serves as the finance director and main director. However, PT HM Batarai has not committed to values and ethics. PT HM Batarai should establish written values and a code of ethics and require all employees to sign an integrity pact to demonstrate a commitment to values and ethics. PT HM Batarai also lacks written policies regarding employee duties and responsibilities and does not outline the company's organizational structure. This could result in overlapping employee duties and responsibilities, making it difficult for employees to understand their roles. PT HM Batarai also does not have recruitment policies covering candidate requirements, recruitment processes, and employee training. With recruitment policies in place, the company will acquire and develop quality resources to enhance performance. PT HM Batarai also does not have company performance measurement standards, and its sanction policies do not cover the entire company. The company can encourage accountability and improve performance with performance measurement standards and comprehensive sanction and bonus policies.

4.7.2 Risk Assessment Component Analysis

PT HM Batarai has not yet set clear goals for the future and is currently focused on the company's operations. The company needs to establish clear objectives to identify and assess risks related to its goals. The company must have clearly defined objectives to identify and assess risks. PT HM Batarai should determine and formulate the company's desired goals.

PT HM Batarai has identified potential risks that the company might face, but these risks are based solely on past incidents within the company. Additionally, PT HM Batarai does not document the identified risks and lacks the resources to manage them, leading to ineffective risk identification and assessment. According to [Romney et al. \(2021\)](#), companies should identify and analyze risks and how those risks are managed. The company should also assess the likelihood and impact of the risks, as well as the costs and benefits of the responses taken. The risk assessment process begins with identifying risks and results in a documented list of risks. A documented risk list will make it easier for the company to manage and evaluate all the risks it faces. PT HM Batarai should implement a risk management function to identify and manage the company's risks. PT HM Batarai has identified and evaluated changes that could affect the company. The owner of PT HM Batarai concluded that these changes do not significantly impact the company's activities.

Based on the analysis of the risk assessment components, PT HM Batarai has not yet implemented effective internal controls regarding the company's risk assessment component. PT HM Batarai has identified and evaluated changes that could affect the company's activities. However, PT HM Batarai does not have clear future goals. PT HM Batarai has also not implemented a risk management function to identify and assess the company's risks. With clear company goals, management will more easily determine the direction and actions needed to achieve those goals. Clear objectives can also help management identify the company's risks and determine appropriate responses.

4.7.3 Control Activities Component Analysis

PT HM Batarai has implemented internal controls in the revenue cycle to mitigate risks in each company's activities. For sales activities, the internal controls implemented by PT HM Batarai to mitigate the risk of cash theft include verifying the recorded revenue amount against the counted cash and conducting oversight by supervisors. However, the controls in place to mitigate the risk of theft by operators are still insufficient. PT HM Batarai does not have an attendance record for operators to track their activities. It is recommended that PT HM Batarai create an operator attendance document that includes the operator's arrival time, the dispenser operated by the operator, and the operator's

departure time, signed by both the supervisor and the operator on duty. PT HM Batarai has implemented controls that can mitigate the risk of delivering goods that do not match customer orders by regularly inspecting the fuel flow at the dispenser using a certified measuring vessel.

For cash collection activities, PT HM Batarai's internal controls to mitigate the risk of cash theft include segregating custodial functions from recording functions. PT HM Batarai verifies the revenue amount against the counted cash and restricts access to the cash vault. However, the controls to mitigate the risk of cash theft during the cash collection process are still insufficient. PT HM Batarai should create a daily revenue document that includes the amount of fuel sold and the amount of cash counted and collected. The head of administrative staff and administrative staff 1 should sign it. This will make it easier for management to verify bank statements against the daily revenue document to ensure the accuracy of the company's revenue and cash amounts. PT HM Batarai also implements controls to mitigate the risk of miscalculation by counting the cash collected per dispenser and using a money-counting machine to minimize the risk of counting errors during the cash-counting process.

In the expenditure cycle, PT HM Batarai has implemented internal controls to mitigate risks in each company's activities. For ordering activities, PT HM Batarai uses the BBM Application, which allows the company to order directly from the Depot through the bank, and the bank automatically deducts the company's balance for payment, mitigating the risk of fictitious orders. PT HM Batarai also sets a minimum inventory standard for storage tanks to mitigate the risk of stockouts. However, PT HM Batarai does not have controls to mitigate the risk of ordering errors. It is recommended that PT HM Batarai create a purchase request document that includes the type and quantity of inventory to be purchased, signed by the finance director, supervisor, and administrative staff 1. This will ensure that the type and quantity of inventory ordered match the company's needs.

For inventory receipt activities, PT HM Batarai segregates custodial functions from recording functions and restricts access to the storage tanks, which can mitigate the risk of inventory theft. PT HM Batarai also inspects the received inventory using the Sounding method to check the quantity received and calculates the fuel density to check the quality of the received inventory. PT HM Batarai also verifies the Sounding results and fuel density calculations against the delivery invoice to ensure that the received inventory's type, quantity, and quality are correct.

Regarding technology control, PT HM Batarai limits access to the technology used. This includes dispensers, money-counting machines, ATG machines, and computers. Daily records are still manually maintained in the Sales and Fuel Receipt books, which are then entered into the master data on the computer at the end of each month.

PT HM Batarai does not have written policies and procedures. All activities are carried out based on the company's daily practices. Control activities should be formalized in written policies and procedures to help management mitigate risks and achieve the company's objectives. PT HM Batarai should document policies and procedures that cover all company activities. This will make it easier for employees to understand their duties and responsibilities and encourage accountability.

The control activities component analysis shows that PT HM Batarai has not yet implemented effective control activities in the revenue and expenditure cycles. Although It has selected and developed control activities in these cycles, they do not cover all company risks. PT HM Batarai also lacks written policies and procedures for all company activities.

4.7.4 Analysis of the Information and Communication Component

Management must obtain, generate, and use relevant and high-quality information. This is essential to support all operational and control activities within the company. High-quality and relevant information also aids management in making accurate decisions. In the revenue cycle, sales information is derived from the totalizer numbers recorded on the dispenser machine and is verified against the cash collected from the assigned operator. In the expenditure cycle, information on

inventory levels is obtained through the ATG machine, which measures the fuel volume in the underground tank. Information on inventory received from suppliers is gathered through the process of Sounding and fuel density calculations, which are verified against the receipt invoice, while payment information comes from payment documents and bank balance reports.

Communication is an ongoing process that involves providing, sharing, and obtaining relevant information. This helps employees clearly understand their duties and responsibilities. PT HM Batarai's internal communication uses the WhatsApp application online, allowing for rapid distribution without delay. Online communication facilitates direct interaction between employees and management, ensuring real-time information sharing without delays or lengthy processes. PT HM Batarai communicates with external parties via email or in person, such as customers, suppliers, banks, tax consultants, and local government offices.

Based on the information and communication component analysis, PT HM Batarai has effectively implemented controls in this area for both the revenue and expenditure cycles. In the expenditure cycle, PT HM Batarai has used high-quality and relevant information and employed adequate internal communication channels to convey this information. The company also communicates with external parties through various media.

4.7.5 Analysis of the Monitoring Activities Component

PT HM Batarai continuously monitors all operational activities within the company. However, PT HM Batarai lacks the resources to evaluate the company's internal control system. As a result, the company does not evaluate its internal control system. According to [Romney et al. \(2021\)](#) Implemented internal controls must be continuously monitored, evaluated, and developed. Evaluating internal controls ensures that all components of the internal control system are functioning as intended. PT HM Batarai should regularly evaluate its internal controls to mitigate the company's risks effectively.

PT HM Batarai has established reporting channels for internal issues. Reporting is done online, allowing for direct and unhindered communication. The owner's meetings are also online, enabling quick decision-making regarding internal issues. This allows the company to address problems or deficiencies swiftly, ensuring optimal operational performance.

The monitoring activities component analysis shows that PT HM Batarai has not yet effectively implemented internal controls in this area. The company does not evaluate its internal controls, which could result in the company being unaware of new risks arising from the development of its operational activities and, consequently, failing to implement internal controls that could mitigate these risks.

5. Conclusion

5.1 Conclusion

This study analyzed the internal control of the revenue and expenditure cycles at PT HM Batarai based on the COSO 2013 conceptual framework. Based on the results of the analysis, it can be concluded that PT HM Batarai has not yet implemented effective internal control. Shortcomings in the control environment component evidence this, as well as the risk assessment component, the control activities component, and the monitoring activities component within the company's revenue and expenditure cycles.

5.2 Recommendations

The following are recommendations for PT HM Batarai to improve the effectiveness of its internal control:

For the Control Environment:

1. Develop and establish documented rules that encompass company values and codes of ethics, as well as create an integrity pact to be signed by all employees.

2. Develop and establish policies regarding employee duties and responsibilities and clearly outline the organizational structure.
3. Develop documented policies for employee recruitment.
4. Design and implement performance measurement standards and establish sanction and bonus policies that cover all departments and levels of the company.

For the Risk Assessment Component:

1. Formulate and establish clear objectives that the company aims to achieve.
2. Develop a risk management guideline that can identify and assess the risks faced by the company. PT HM Batarai can use the [COSO \(2017\)](#) Enterprise Risk Management conceptual framework to develop the risk management guidelines.

For the Control Activities Component:

1. Create an attendance document for operators.
2. Create a daily revenue document.
3. Create a purchase request document.
4. Develop written policies and procedures for all company activities.

For the Monitoring Activities Component:

Conduct regular evaluations of the company's internal controls. PT HM Batarai can use the COSO 2013 internal control conceptual framework as a basis for this evaluation.

5.3 Limitations and Suggestions

The study is limited to focusing only on the company's revenue and expenditure cycles, neglecting other parts of the business process. Future research should expand the scope to investigate all company business cycles.

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