Role of Finished Goods Accounting Information Systems in Enhancing Internal Inventory Control: A Case Study of a Mining Company

Ananda Hilda Fadillah[1], Tri Ningsih[2], Ujang Wawan Sam Adinata[3], Sana Sholihah[4], R. Deni Purana[5]
Sekolah Tinggi Ilmu Ekonomi Pasundan Bandung, Indonesia. [1,2,3,4,5]
Email: anandahildaaa24@gmail.com[1], tri@stiepas.id[2], uwawan@stiepas.id[3], sana@stiepas.id[4], deni@stiepas.id[5]

ABSTRACT

This study aims to investigate and analyze the influence of Finished Goods Accounting Information Systems on Internal Inventory Control within a mining industry company located in Cikampek. With an effective and optimally utilized accounting information system for finished goods, the expectation is that the internal control of finished goods inventory within the company can be maximized. The research employs a descriptive-verificative methodology, utilizing simple linear regression analysis to determine the extent of the relationship and impact between the two variables. To support the findings, the researcher collected secondary data through questionnaires administered to 35 employee respondents. The results of the study reveal a strong positive influence of the finished goods accounting information system on internal inventory control, as indicated by the linear regression analysis. Furthermore, the findings demonstrate that the Finished Goods Accounting Information System significantly contributes to enhancing internal inventory control, while acknowledging that other unexamined variables may also affect this relationship. The implications of this research suggest that mining companies should prioritize the implementation and optimization of effective accounting information systems to strengthen their internal inventory control processes. Additionally, the study contributes to the literature on accounting practices within the mining sector, providing valuable insights for both practitioners and researchers seeking to enhance inventory management strategies.

Keywords: Finished Goods Accounting Information Systems, Internal Inventory Control, Mining Industry.

INTRODUCTION

Effective internal control systems help businesses streamline their operations, ensuring that each process runs smoothly and that resources are utilized efficiently. This organizational framework compels entrepreneurs to enhance the quality of their businesses by fostering innovation in product development. According to Panigrahi, Shrivastava, and Nudurupati (2024), strong inventory management practices are directly linked to improved operational performance, which incentivizes businesses to refine their offerings continuously.

The importance of digital technology in implementing Finished Goods Accounting Information Systems cannot be overstated. Digital tools enhance the accuracy and efficiency of inventory management processes, allowing organizations to track and manage their finished goods more effectively. By leveraging digital systems, companies can streamline their operations, reduce errors, and gain real-time insights into inventory levels. Juhana et al. (2024) emphasize that digital platforms play a crucial role in modern business practices, including accounting and inventory management. These platforms facilitate better data collection and analysis, which are essential for making informed decisions. Furthermore, Sidharta and Rahmahwati (2023) highlight how effective information system facilities contribute to end-user satisfaction, indicating that digital solutions can significantly improve user experience and operational efficiency.

Additionally, Fang et al. (2024) discuss the integration of digital transformation with inventory management practices, suggesting that embracing digital technologies can unlock new potentials for organizations. By adopting digital Finished Goods Accounting Information Systems, companies can enhance their internal inventory control, optimize stock levels, and respond more swiftly to market demands. This digital shift not only improves operational performance but also positions organizations to remain competitive in an increasingly dynamic business environment. Thus, the integration of digital technology is vital for maximizing the effectiveness of Finished Goods Accounting Information Systems and achieving overall organizational success.

By prioritizing internal control and innovation, entrepreneurs can elevate their business activities and achieve a higher competitive edge. This approach not only enhances product quality but also increases market responsiveness, enabling companies to meet customer needs effectively. Furthermore, as highlighted by Abdo, Feghali, and Zgheib (2022), the effectiveness of

internal control can be influenced by the emotional intelligence and personality traits of team members, particularly those within internal audit functions. This underscores the importance of integrating human factors into internal control processes, as engaged and responsive teams can lead to more effective management of resources, including inventory.

When businesses realize this synergy between internal control, innovation, and workforce engagement, they position themselves to fulfill their corporate objectives successfully. The result is a dynamic enterprise capable of adapting to market changes while maintaining high operational standards, ultimately contributing to sustained growth and profitability. Thus, robust internal control mechanisms are not merely regulatory necessities but strategic tools that empower businesses to thrive in competitive environments. (Putra, Komara, Sidharta, Roslina & Megawati, 2023)

Internal control is a comprehensive system encompassing organizational structure, methods, and coordinated measures aimed at safeguarding organizational assets, verifying the accuracy and reliability of accounting data, promoting operational efficiency, and ensuring adherence to management policies. This system is not merely a set of rules but is an integral process that involves routine and repetitive actions undertaken by leaders and all employees. It provides assurance that the organization will achieve its goals effectively and efficiently while ensuring the reliability of financial reporting, protecting public assets, and maintaining compliance with laws and regulations.

The significance of robust internal control processes is highlighted by Orobia et al. (2020), who discuss how effective inventory management practices are crucial for enhancing the financial performance of small businesses. Their research indicates that sound internal control systems, including those managing inventory, play a vital role in optimizing resources and maintaining operational integrity, which ultimately contributes to overall business success.

Similarly, Panigrahi et al. (2024) emphasize the importance of knowledge surrounding inventory management practices, linking them directly to improved operational performance. Their mediated analysis shows that well-implemented inventory controls not only streamline operations but also bolster business performance by providing a framework for accountability and efficiency. This connection underscores the necessity of having a solid internal control system, where the actions of staff at all levels are aligned toward achieving the organization's objectives.

Finished goods refer to products that are fully manufactured and ready for sale to consumers or the public. Therefore, companies must pay careful attention to their inventory of finished goods. If finished goods inventory accumulates

excessively, it can lead to high operational costs, including storage expenses and potential obsolescence. Conversely, if there is a shortage of finished goods, it can disrupt the company's operational activities, leading to lost sales and dissatisfied customers.

Effective internal control of finished goods inventory is essential for ensuring that management functions properly and can control stock levels efficiently. According to Wang et al. (2024), implementing lean inventory management practices can help alleviate financing constraints by optimizing inventory levels, thus reducing unnecessary holding costs and freeing up capital for other business needs. This aligns with the necessity of maintaining balanced inventory that can support continuous operations without incurring excessive costs.

Furthermore, Panigrahi et al. (2022) emphasize that proper inventory management directly contributes to firms' efficiency, particularly within the steel manufacturing industry. Their study indicates that organizations that manage their inventories effectively can respond more quickly to market demands, enhance production flow, and ultimately achieve their operational goals more efficiently.

In the research object, the author identified weaknesses, particularly in the internal control of finished goods inventory, where the control environment is not optimal, leading to numerous issues. These problems must draw the company's attention to prevent an annual increase in damages related to inventory management. To address these challenges, the company is required to conduct regular stock taking to verify that the physical inventory levels match those recorded in the system, ensuring there are no discrepancies. Additionally, other problems have surfaced within the internal control activities surrounding finished goods inventory. These include insufficient stock availability, inadequate monitoring of damaged goods, and production failures, which are often the result of employees' lack of precision in data entry. The inability to maintain appropriate inventory levels, coupled with inefficiencies in production activities, exacerbates these issues.

It is crucial for the company to develop a more effective internal control framework that not only focuses on accurate record-keeping but also emphasizes training employees to ensure accuracy in data input and inventory management. By improving oversight and establishing clearer protocols for handling stock levels and monitoring production activities, the organization can enhance its operational resilience and reduce the likelihood of inventory-related problems arising in the future. This comprehensive approach will ultimately support the company in achieving its operational objectives efficiently while minimizing losses caused by inadequate inventory control.

The primary research problem in this study centers on the relationship between Finished Goods Accounting Information Systems and Internal Inventory Control. Specifically, it seeks to understand how the implementation and effectiveness of these accounting information systems impact the management and oversight of inventory. The investigation will focus on identifying key factors and mechanisms through which finished goods accounting practices can enhance or hinder internal controls over inventory, ultimately influencing accuracy, efficiency, and decision-making within inventory management processes. By addressing this problem, the study aims to provide valuable insights into optimizing inventory control through improved accounting information systems.

METHOD

The research methodology serves as a scientific approach to gather data for specific purposes and applications. In this study, the author employs a quantitative method with a descriptive-verificative type. This approach focuses on illustrating independent variables, either singularly or in conjunction with multiple variables, without making comparisons with other variables. The primary aim of this research is to test the established hypotheses. Based on this understanding, it can be explained that these methodologies seek to confirm or refute existing facts while elucidating the relationships among the studied variables. This is achieved through data collection, processing, analysis, and interpretation in the context of statistical hypothesis testing.

The research population refers to the generalized area comprising objects or subjects with specific quantities and characteristics that the researcher applies for study, subsequently drawing conclusions. The population includes the objects or subjects located within a certain area that meet specific criteria related to the research problems. In this case, the study focuses on a population of 35 respondents from a mining industry company in Cikampek. For this research, it is crucial that the questionnaires used for data collection are valid and reliable. Therefore, conducting validity and reliability tests is essential to ensure the questionnaire is both credible and dependable. To address the research questions, the author applies simple linear regression analysis to examine the data. This analytical method will provide insights into the relationships between the variables and help evaluate the hypotheses effectively.

RESULTS and DISCUSSION

The method for testing validity involves utilizing the product-moment correlation formula. The responses gathered from the questionnaires are subsequently analyzed for the relevance of each

item. Each item's correlation is compared to the critical r value of 0.3. If the calculated r value exceeds this critical value, it indicates a positive correlation among the items in the variable, thus affirming that these items are deemed valid.

Reliability testing is conducted to evaluate the consistency of the measurement instruments, ensuring that the tools used are reliable and can be consistently utilized in further studies. In this research, the reliability results are assessed using Cronbach's alpha coefficient. An instrument is considered reliable if it achieves a Cronbach's alpha coefficient of 0.7 or higher.

The outcomes of the validity and reliability tests conducted in this study will provide foundational support for the research instruments, ensuring they are both valid and reliable for measuring the intended constructs effectively. These assessments reinforce the credibility of the data collected and contribute to the robustness of the overall research findings.

Table 1. Validity and Reliability Data Quality Testing

No	Finished Goods Accounting Information Systems	Internal Inventory Control
1	0,597	0,537
2	0,548	0,549
3	0,562	0,686
4	0,562	0,717
5	0,461	0,429
6	0,539	0,473
7	0,648	0,674
8	0,702	0,620
9	0,614	0,689
10	0,678	0,446
11	0,581	0,703
12	0,626	0,432
13	0,594	0,494
14	0,613	0,525
15	0,478	0,537
Cronbach's Alpha	0,901	0,895

In Table 1, two primary variables are examined: the Finished Goods Accounting Information System and Internal Inventory Control. Each variable is represented by several statements or items included in the questionnaire, which are subjected to validity testing.

The results presented in the table illustrate whether each item successfully correlates with its respective variable, confirming its ability to accurately measure the intended construct. Additionally, the reliability results will indicate whether the questionnaire items provide consistent measurement across different instances, thus validating the effectiveness of the instruments in capturing the relevant data for the study. Together, these assessments play a crucial role in establishing the soundness of the research methodology and the credibility of the findings.

The validity values are indicated by the correlations between the individual items and the total score of the variables, which can be observed in the first three columns of the table. Generally, an item is considered valid if its correlation value exceeds 0.5. According to the data in the table, all item correlation values exceed 0.5, demonstrating that every item within the variables of the Finished Goods Accounting Information System, Internal Inventory Control, and Finished Goods itself is valid. For instance, within the variable of the Finished Goods Accounting Information System, the validity values range from 0.539 to 0.676, indicating that each item effectively measures the desired concept.

Proceeding to reliability testing, this analysis measures the consistency among the items in the questionnaire that assess the same variable. The reliability values are computed using Cronbach's Alpha, found in the last row of the table. An instrument is deemed reliable if its Cronbach's Alpha value exceeds 0.7. Based on the table, the Cronbach's Alpha value for the Finished Goods Accounting Information System variable is 0.901, while for the Internal Inventory Control variable, it stands at 0.895. Both of these values surpass the recommended threshold of 0.7, indicating that the instruments possess a very high level of reliability. This robust reliability reinforces the credibility of the findings drawn from the research instruments used in the study.

Furthermore, upon examining the validity results for the Internal Inventory Control variable, certain items, such as items 3 and 4, exhibit quite high correlation values of 0.686 and 0.717, respectively. This indicates that the instrument is highly effective in measuring the internal control associated with finished goods inventory. Consequently, it can be concluded that this variable is highly representative in depicting how the internal control system operates within a Mining Industry Company.

In summary, Table 1 clearly illustrates that the research instruments used in this study meet the expected standards regarding both validity and reliability. Each item within the tested variables demonstrates sufficiently high correlation values with the total scores, indicating that these instruments can accurately measure the intended variables. Additionally, the Cronbach's Alpha values exceeding 0.7 for each variable further confirm that the instruments consistently measure the same concepts.

As for Table 2, it presents the results of the simple linear regression analysis. This analysis is crucial for understanding the relationships between the variables and how effectively the Finished Goods Accounting Information System influences Internal Inventory Control, as well as ultimately impacting student or organizational outcomes. The regression results will provide insights into the strength and direction of these relationships, contributing to a more

comprehensive understanding of the dynamics at play in the study context.

Table 2. Simple Linear Regression Testing

No.	Variable	Beta	t	Sig	Decision
	a	10.888	2.605	0.014	
Finished Goods Accounting Information Systems		0.777	7.957	0.000	Significant
R	0.811 [a]				
R Square	0.657	Error	0.343		

Based on Table 2, the constant or intercept value is 10.888. This indicates that if there is no change in the Finished Goods Accounting Information System (assuming the independent variable is zero), the baseline value of Internal Inventory Control will remain at 10.888. This value provides a foundational understanding of the level of internal control within the company. The regression coefficient for the Finished Goods Accounting Information System variable is 0.777, with a t-value of 7.957 and a significance (Sig.) value of 0.000. This coefficient implies that for every one-unit increase in the Finished Goods Accounting Information System, the Internal Inventory Control increases by 0.777 units. This finding underscores the significant role that the Accounting Information System plays in enhancing internal control within the organization, as the coefficient is notably significant.

These results highlight the importance of effective accounting systems in establishing robust internal controls, ultimately contributing to better inventory management practices. The strong relationship identified between the variables provides valuable insights for the company in optimizing its processes and ensuring better oversight of inventory management. The significance value (Sig.) of 0.000 indicates that the effect of the Finished Goods Accounting Information System on Internal Inventory Control is highly statistically significant, as it falls below the critical threshold of 0.05. This means that the null hypothesis (which states that there is no effect between the independent and dependent variables) can be rejected, allowing us to accept the alternative hypothesis that the Accounting Information System has a significant impact on Internal Inventory Control. The R value of 0.811 signifies a strong relationship between the Finished Goods Accounting Information System and Internal Inventory Control. The closer this value is to 1, the stronger the correlation or relationship between the two variables. With an R value of 0.811, it can be concluded that there is a very strong connection between the accounting information system and internal control concerning finished goods inventory. Additionally, the R Square value of 0.657 indicates that 65.7% of the variability in Internal Inventory Control can be explained by the Finished Goods Accounting Information System. This means that the

accounting information system implemented at a Mining Company significantly influences inventory control. However, it is important to note that there is still 34.3% of variability that is attributed to other factors outside of the accounting information system. This suggests that while the accounting system plays a crucial role, other influences may also affect internal control measures within the organization.

The results of the simple linear regression analysis indicate that the Finished Goods Accounting Information System plays a crucial role in strengthening Internal Inventory Control. A well-structured information system enables the company to track, manage, and control inventory more effectively, significantly reducing the risks of stock shortages or excesses and minimizing potential discrepancies or errors in inventory record-keeping. An accounting information system provides the company with accurate, real-time, and relevant data regarding finished goods inventory. With organized information, management is empowered to make better decisions regarding stock replenishment, storage management, and the performance evaluation of departments involved in inventory management.

Internal inventory control is an essential element of the company's operations. Strong internal controls help prevent and detect errors or discrepancies in inventory management. In the context of a mining company, the Finished Goods Accounting Information System serves as a primary tool that facilitates the effective implementation of internal controls. This systematic approach not only enhances operational efficiency but also contributes to the overall financial health and integrity of the organization's inventory management processes.

A robust accounting information system enables a company to execute various internal control procedures, such as internal audits, continuous monitoring, and cross-checking inventory data against financial reports. Moreover, this system facilitates transparent and well-documented transaction recording, which simplifies the process of tracking stock changes and identifying issues or inefficiencies in inventory management. With a reliable system in place, management within a mining company can make more informed decisions regarding inventory control. They gain the ability to analyze sales trends, forecast future needs, and ensure that finished goods are consistently available in the correct quantities. Additionally, effective management can help avoid cost overruns due to excess inventory or potential customer losses from stock shortages.

In the long run, the implementation of a strong accounting information system for managing finished goods will significantly enhance the overall performance of the company. This system aids in optimizing resource allocation, reducing the risk of recording errors, and improving transparency and accountability in inventory

management. The positive impacts will manifest in increased operational efficiency and substantial cost savings, positioning the company for greater success in its operational endeavors.

Based on the results of the simple linear regression analysis, it can be concluded that the Finished Goods Accounting Information System has a significant and strong influence on Internal Inventory Control at the mining company. The positive regression coefficient, along with the very low significance value, reinforces the idea that the better the accounting information system implemented, the more effective the internal controls the company can execute. The findings of this research demonstrate a significant influence of Finished Goods Accounting Information Systems on Internal Inventory Control, aligning with existing literature that supports this relationship. Alfartoosi and Jusoh (2021) propose a conceptual model that highlights the mediating effects of internal control systems on the relationship between e-accounting and performance in small and medium enterprises. This suggests that a structured accounting information system, similar to the one examined in this study, is crucial for enabling effective internal controls that enhance overall operational performance.

Monteiro et al. (2022) further emphasize the importance of information systems in driving company success. They assert that robust information systems and accurate non-financial data are vital for achieving operational efficiency and strategic objectives. This finding resonates with the results of this study, which show that an effective Finished Goods Accounting Information System improves inventory management practices, allowing for timely stock monitoring and decision-making that boosts overall company performance.

Additionally, Nguyen, Chen, and Nguyen (2021) discuss the significance of appropriating accounting information systems under the new IFRS and their impact on accounting process performance. Their research echoes the notion that the utilization of efficient accounting information systems directly correlates with improved management processes. The results from this study reinforce the idea that the Finished Goods Accounting Information System not only acts as a tool for inventory management but also enhances internal control processes, which is essential for accuracy and reliability in reporting and operational efficiency.

This research highlights that a well-implemented Finished Goods Accounting Information System is integral to strengthening internal inventory control. By reflecting on the findings of relevant literature, it is evident that such systems not only support day-to-day inventory management but also contribute to the broader success and effectiveness of organizational operations. As companies increasingly rely on robust accounting information

systems, the alignment of these findings with existing studies underscores the critical role that effective information management plays in achieving sustainable business performance.

With the strong relationship between these two variables, the company can ensure that inventory management is conducted more effectively, efficiently, and accurately. This improved management ultimately contributes positively to the overall performance of the organization. By prioritizing the enhancement of their accounting information systems, the company positions itself to achieve greater operational excellence and optimize its inventory processes, leading to better financial outcomes and a stronger competitive advantage in the market.

CONCLUSION

Base on the research findings, the Finished Goods Accounting Information System plays a crucial role in strengthening internal controls related to finished goods inventory within the company. A well-functioning accounting information system has been shown to provide accurate, transparent, and real-time information, which supports more effective decision-making by management in inventory management. This study illustrates that the Finished Goods Accounting Information System significantly influences Internal Inventory Control. With a

structured and integrated information system in place, the company can minimize the risks of recording errors and discrepancies, ensuring accurate and accountable documentation. Strong internal controls also enable the company to conduct internal audits more effectively, monitor inventory continuously, and guarantee that every transaction related to finished goods is properly documented.

Implementing a robust accounting information system is essential for enhancing internal controls and optimizing inventory management processes. This not only improves operational efficiency but also contributes to the overall integrity and reliability of inventory records, ultimately benefiting the company's performance and strategic objectives. Furthermore, this research reveals that a robust information system enables the company to manage inventory optimally, both in terms of reorder processes and storage management. With an adequate information system, management can monitor stock levels in a timely manner, avoiding excess inventory that could lead to waste and preventing stock shortages that could disrupt company operations. This efficiency in inventory management ultimately contributes to enhancing the overall performance of the organization.

The Finished Goods Accounting Information System is not merely a technical tool for managing data; it serves as a fundamental foundation that supports strong and efficient

internal controls. Implementing a well-designed accounting information system aids the company in maintaining operational stability, reducing risks, and enhancing the accuracy and reliability of inventory-related data. Consequently, companies like a mining company need to continuously strengthen and develop their accounting information systems to ensure that effective internal controls are maintained and even improved as the business grows. With robust internal controls in place, the company will be better positioned to compete, preserve efficiency, and respond adeptly to market challenges. Upholding these controls not only fortifies operational integrity but also enhances the company's ability to adapt and thrive in an ever-evolving industry landscape.

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