

THE IMPLEMENTATION OF INVENTORY ACCOUNTING INFORMATION SYSTEMS: A SYSTEMATIC LITERATURE REVIEW

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Abstract

The significance of efficiency and accuracy in inventory management is crucial for achieving operational success and making informed decisions. The objective of this study is to examine and evaluate the utilization of inventory accounting information systems in different organizations. This study employs the Systematic Literature Review (SLR) method to gather, assess, and integrate findings from diverse and pertinent literature sources. The findings of this study demonstrate that the adoption of an inventory accounting information system yields substantial advantages, such as enhanced operational effectiveness, decreased storage expenses, improved precision of financial statements, and simplified monitoring and analysis of inventory data. The discussion emphasizes the significance of choosing a suitable platform, providing employee training, and ensuring seamless integration with current business processes. This research demonstrates that investing in the implementation of an inventory accounting information system is a prudent measure to enhance operational efficiency, facilitate well-informed decision-making, and sustain competitiveness in a progressively competitive market.

Keywords: *Accounting, Inventory, Information Systems*

INTRODUCTION

The field of information systems has experienced substantial transformations in recent decades due to technological advancements. An exceptionally notable advancement is the rapid increase in the ability to process and store data. Computers are experiencing significant advancements in speed and processing power, enabling them to handle substantially larger volumes of data. As a result, they are capable of conducting more comprehensive and precise data analysis (Candra, 2018). Furthermore, the rapid and extensive expansion of internet networks has interconnected information systems on a global scale, thereby enabling seamless global communication and collaboration. Cloud computing technology has revolutionized the storage and retrieval of data for companies, allowing for increased scalability and cost-effectiveness. Furthermore, advancements in artificial intelligence (AI) have endowed information systems with the capacity to analyze and comprehend data with progressively elevated levels of cognitive ability. This has created novel prospects in the realms of decision-making, forecasting, and automation (Suprihati, 2021). In general, advancements in information systems technology have revolutionized our work methods, social interactions, and data management, resulting in significant advantages for the realms of business, government, and daily existence.

Information systems play a crucial role in multiple domains, including business, government, education, and daily life. Information systems enable us to gather, control, store, and distribute data with greater efficiency than in the past (Sonhaji, 2019). Information technology enables rapid, precise, and extensive access to information, which is crucial for making data-driven decisions. Furthermore, information systems facilitate enhanced collaboration and communication among individuals, organizations, and nations. In the current age of technology, where data holds significant value, information systems have a crucial role in ensuring the security and safeguarding of data (Sonhaji, 2019). Information systems play a crucial role in driving digital transformation and offer significant competitive benefits in the current era. Information systems and the accounting field have a symbiotic relationship, mutually assisting each other in the gathering, analyzing, and presenting of financial data. Accounting information systems are utilized to document corporate financial transactions, oversee financial data, and generate financial reports necessary for decision-making, reporting to relevant stakeholders, and meeting tax

requirements. This system enables the automation of accounting procedures, mitigates human fallibility, and enhances data precision.

Information systems facilitate the analysis and interpretation of financial data, enabling accountants and managers to gain a more comprehensive understanding of a company's financial performance. Accounting information systems facilitate expedited and effortless retrieval of transaction records, journals, and financial reports, thereby streamlining the internal and external audit procedure (Khomarudin, 2019). Furthermore, in the age of digitalization, the incorporation of information systems with cutting-edge technologies like data analytics and artificial intelligence (AI) can offer profound insights and aid in financial planning, trend forecasting, and financial risk mitigation (Winarno et al., 2022). The inventory accounting information system is a crucial element in the accounting process that involves the management and recording of a company's inventory of goods or products. This system is specifically designed to oversee and control information pertaining to inventory, including purchases, sales, receipts, shipments, write-offs, and price adjustments (Nugraha & Adhiati, 2020). By utilizing an inventory accounting information system, companies can effectively track and evaluate the quantity and worth of their inventory, detect patterns in demand, prevent overstocking or understocking, and reduce expenses related to storage.

Inventory accounting information systems contribute to the creation of precise financial reports, such as balance sheets, that accurately represent the worth of current inventory. It is crucial for determining profits, fulfilling tax obligations, and meeting financial reporting obligations. Information technology enables companies to employ different techniques, such as FIFO (First-In-First-Out) or LIFO (Last-In-First-Out), for inventory valuation, thereby exerting a substantial influence on financial statements (Habibah, 2016). An inventory accounting information system facilitates the surveillance of goods' quality, the management of inventory, and the detection of potential risks such as damage or fraud. Hence, this system aids companies in maximizing inventory management, minimizing expenses, and enhancing operational efficiency, thereby bolstering overall business triumph (Suprihati, 2021).

RESEARCH METHODS

The Systematic Literature Review (SLR) method is a rigorous and thorough research approach used to analyze literature that is pertinent to a specific research topic. A SLR is specifically designed to gather, evaluate, and combine information from various sources in a clear and unbiased manner. The SLR procedure consists of distinct steps, including the identification of inclusion and exclusion criteria, a thorough literature search, the assessment of the quality of the studies included, the extraction of pertinent data, and the analysis and synthesis of the findings (Siswanto, 2010). This approach is frequently employed across diverse scientific fields to address particular research inquiries and generate a more profound comprehension of a subject. The use of SLR is highly advantageous for decision making, policy formulation, and theory development due to its ability to integrate robust scientific evidence from diverse sources. The SLR employs a transparent and organized methodology to prevent selection bias and guarantee that research findings accurately represent the comprehensive body of knowledge present in the scientific literature pertaining to the subject of investigation (Alrashdi et al., 2023).

DISCUSSION OF RESEARCH RESULTS

Based on the SLR results of seven journals that match the searched keywords including information systems, accounting and inventory, the following results were obtained :

Table 1. Research Results

No.	Article Title	Writer	Research Findings/Results
1	Analysis of the Implementation of Inventory Accounting Information Systems Case Study at CV. Building Prosperous Enterprises in Malang	(Salsabila et al., 2023)	Even though the company has a Standard Operating Procedure (SOP) for the Inventory Accounting Information System, its implementation is not running effectively. This is due to the problem of uncoordinated roles and tasks in various departments as well as limited human resources, which has an impact on the invalidity of financial reports.

2	Analysis of the Accounting Information System for Internal Control of PT's Raw Material Inventory. Profilindah Kharisma	(Khomarudin, 2019)	Implementation of a raw material inventory accounting system at PT. Indah Kharisma's profile can be considered good. This company has chosen the FIFO method to determine the cost or cost of inventory, which suits their needs. Even though the procedures that make up the raw material inventory system are adequate, sometimes there are situations where some procedures are not carried out correctly, such as recording requests for raw materials for production where errors occur in the production process of wooden doors in the production area.
3	Designing an Accounting Information System for Merchandise Inventory at a Convenience Store Using PHP and MySQL	(Rahmasari, 2019)	This accounting information system uses the PHP and MySQL programming languages as databases. The existence of this application is expected to make it easier for users to manage transactions for ordering goods from suppliers, selling goods to consumers, as well as assisting the warehouse in monitoring inventory stock, determining selling prices, and preparing final financial reports. This merchandise inventory accounting information system is designed to overcome errors that may occur and produce optimal reports.
4	Analysis of the Accounting Information System for Internal Control of PT's Raw Material Inventory. Profilindah Kharisma	(Khomarudin, 2019)	In general, in companies, whether engaged in manufacturing or trading, there are regulations governing inventory management in accounting information systems. To achieve optimal performance, inventory management requires an efficient accounting information system, which can be run well by all parties involved. In the context of a trading company, the main activity is to acquire goods from suppliers and sell them to consumers without changing the form of the goods. To monitor inventory effectively, implementing an appropriate accounting information system is necessary.
5	Evaluation of the Implementation of Raw Material Inventory Accounting Information Systems at PT. Ciomas Adisatwa Medan	(Purba et al., 2021)	Raw material inventory management at PT. Ciomas Adisatwa Medan, there are several procedural stages that form a system, namely the process of receiving raw materials, requesting raw materials, and issuing raw materials. In the raw material request procedure, the production team orders raw materials from the chicken slaughterhouse (RPA) by sending a letter requesting raw materials according to existing needs. Then, the warehouse receives shipments of raw materials sent by RPA, and then sends these raw materials to the production department to be processed into finished products. This process is followed by the creation of proof of receipt of raw materials by the production party.

6	Implementation of the Goods Inventory Accounting Information System at the Duta Snack Shop in Subang	(Nugraha & Adhiati, 2020)	Through an inventory accounting information system, companies can track and understand purchasing or receiving activities as well as sales of finished goods, which is useful as a management control tool. In this way, companies can identify the types of goods that are in demand in the market. This system is closely related to the sales system, sales returns system, purchasing system, purchase returns system, and production cost accounting system.
7	Analysis of the Implementation of the Goods Inventory Accounting Information System at the MP One Stationary 16c West Metro Store	(Salsabila et al., 2023)	The inventory accounting information system implemented at the MP One Stationary Store involves a number of related benefits, including warehouse, purchasing, goods receipt, and accounting. Required documents and records include incoming goods forms and inventory records. The process involved involves purchase request procedures, goods ordering procedures, goods receiving procedures, as well as inventory storage and recording procedures.

Integrating an inventory accounting information system is a crucial measure to enhance the effectiveness and precision of a company's inventory management. This system enables companies to efficiently oversee, supervise, and trace their inventory of primary resources, finalized products, or goods. In addition, the adoption of an inventory accounting information system enables companies to streamline the process of calculating inventory expenses, oversee procurement and sales activities, and closely monitor inventory levels (Putra & Purba, 2022). Implementing an inventory accounting information system primarily enhances data accuracy. Through the implementation of automated transaction recording and the utilization of suitable inventory costing methods, the occurrence of human error can be reduced, resulting in the generation of more dependable financial reports (Nurlaila et al., 2020). This can assist managers in making more informed decisions and ensuring adherence to relevant accounting regulations.

Inventory accounting information systems facilitate real-time monitoring of inventory stocks, detection of shifts in customer demand, and optimization of inventory levels. Implementing this strategy can effectively decrease superfluous expenses related to storage and mitigate the likelihood of inventory deficiencies. This system can also offer enhanced understanding of inventory performance, enabling management to implement suitable measures to enhance operational efficiency (Alakel et al., 2019). Deploying an inventory accounting information system is a complex undertaking. It necessitates meticulous strategizing, comprehensive employee instruction, and seamless incorporation into current business operations. Furthermore, companies must select software or platforms that align with their requirements and financial resources. Companies must ensure that this system adheres to relevant accounting regulations and standards during the implementation process (Alakel et al., 2019).

Companies can derive significant advantages from the implementation of an inventory accounting information system. Initially, this system enables companies to enhance efficiency in the management of their inventory. The implementation of transaction recording automation, real-time stock monitoring, and automatic calculation of inventory costs enhances the efficiency of the inventory management process. This enables companies to mitigate the risk of excessive inventory, which may lead to profit erosion, and also minimizes the likelihood of stock shortages that could disrupt operations (Akay et al., 2019). In addition, the implementation of an inventory accounting information system can enhance the precision of a company's financial reports. Accurate and systematic data recording enhances the reliability of financial reports, ensuring compliance with accounting principles (Selviani & Siregar, 2021). This facilitates management in making well-informed decisions and enhances the trust of external stakeholders such as investors, lenders, or auditors.

Inventory accounting information systems facilitate the effortless monitoring and analysis of data. Managers can conveniently track fluctuations in stock, customer demand patterns, and price adjustments. Companies can

enhance their strategic decision-making by utilizing this approach, which includes optimizing factors such as product pricing, production planning, and supply chain management (Yuliasari et al., 2023). In addition to the advantages of increased efficiency and precision, the implementation of an inventory accounting information system can also contribute to the reduction of superfluous storage expenses. Enhanced stock monitoring enables companies to promptly detect sluggish or expired products and efficiently oversee storage capacity. This system facilitates corporate adherence to relevant regulations and accounting standards, thereby safeguarding the company's reputation and mitigating potential legal ramifications.

The implementation of an inventory accounting information system offers substantial advantages to companies in terms of operational effectiveness, precision, cost reduction, and market competitiveness. Investing in inventory management is a strategic decision that can greatly contribute to the overall success of a business. In summary, incorporating an inventory accounting information system is a worthwhile investment for the Company (Sitinjak, 2019). To enhance cost-effectiveness, operational efficiency, and competitive advantage in a highly competitive market, companies can achieve these goals by optimizing inventory management, improving the precision of financial reports, and facilitating informed decision-making. Failure to implement an inventory accounting information system can result in various issues and difficulties in inventory management, which can greatly affect a company's operations and financial performance. In the absence of adequate information systems, companies may resort to manual record-keeping methods that are susceptible to human fallibility. As a consequence, this can lead to errors in documenting transactions, computing inventory expenses, and overseeing stock levels. Such errors have the potential to compromise the precision of financial reports, thereby leading to erroneous decision-making by management (Sitinjak, 2019).

Monitoring inventory stock can be arduous and time-consuming without the aid of an information system. Consequently, this can lead to a diminished capacity to promptly adapt to fluctuations in customer demand, expensive inventory shortages, or surplus inventory that undermines profitability. Lack of precise and up-to-date stock information can impede companies' ability to strategize production, determine optimal inventory levels, and recognize significant market trends (Sitinjak, 2019). Without a suitable inventory accounting information system, the task of managing product selling prices and inventory costs becomes more intricate. Companies may encounter challenges in accurately determining the cost of inventory and promptly adapting to fluctuations in raw material prices or production expenses (Maharani & Khasanah, 2021). This can have an impact on the company's financial performance and ability to compete in the market. Companies will encounter challenges in adhering to relevant regulations and accounting standards. This may lead to unfavorable legal and reputational ramifications. In summary, the lack of an inventory accounting information system can lead to erroneous data, challenges in stock monitoring, higher storage expenses, complications in setting product prices, and the potential for non-compliance with regulations. Implementing an inventory accounting information system is crucial for addressing these challenges and enhancing the efficiency and precision of inventory management.

CLOSING

Conclusion

Based on the preceding discussion, it can be inferred that the adoption of an inventory accounting information system yields numerous substantial advantages for companies. This system enables companies to enhance operational efficiency in inventory management, mitigate superfluous storage expenses, and mitigate the potential of stock shortages. Furthermore, the precision of financial reports is enhanced, thereby establishing a more robust foundation for making well-informed decisions. This system additionally facilitates the monitoring of inventory data, the analysis of trends, and the optimization of strategic decisions. Adopting an inventory accounting information system enables companies to adhere to relevant accounting regulations and standards, thereby safeguarding the company's reputation. Therefore, making an investment in the implementation of an inventory accounting information system is a prudent measure to enhance operational efficiency, enhance financial reports, and sustain competitiveness in a fiercely competitive market.

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