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THE INFLUENCE OF ERP IMPLEMENTATION AND INTERNAL CONTROL EFFECTIVENESS ON FINANCIAL MANAGEMENT WITH ACCOUNTING INFORMATION SYSTEM QUALITY AS A MEDIATOR: A CONCEPTUAL MODEL

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ABSTRACT

During the period from 2021 to 2023, PT. Vektor Maritim Soechi Group experienced a significant decline in the financial management index. In 2021, the company recorded an index of 84.00, which decreased to 81.20 in 2022 and further declined to 79.00 in 2023. Enterprise Resource Planning (ERP) technology and the effectiveness of internal control have a significant impact on the quality of an organization's accounting information systems, which has a substantial impact on the financial management of an organization. This quantitative study aims to examine the influence of ERP implementation and internal control effectiveness on financial management, with the quality of accounting information systems as an intervening variable.

Keywords

ERP Implementation, Internal Control Effectiveness, Financial Management, Accounting Information System Quality, Conceptual Model.

INTRODUCTION

Enterprise Resource Planning (ERP) technology is a well-known solution in Indonesia. As many as 54.2% of companies in Indonesia have implemented e-business applications, including ERP. This ERP system is a modular software package aimed at integrating key business processes of a company, such as ordering, manufacturing, accounts payable, and human resources. The implementation of ERP has a significant impact on the quality of accounting information systems, as revealed by Chofreh et al. (2018). ERP not only affects accounting processes but also optimizes internal audit functions, measures non-financial performance, and applies profitability analysis methods per product.

The effectiveness of internal control has a significant impact on the quality of an organization's Accounting Information Systems. Internal control is a set of procedures and policies designed to ensure the reliability of financial reports, protect company assets, and prevent fraud. In the context of accounting information systems, the effectiveness of internal control ensures that the financial data generated by the system is accurate, relevant, and reliable. With strong internal controls in place, the risk of errors and fraud can be minimized, thereby enhancing the accuracy and integrity of the information generated by the accounting information system (Tantri, 2015).

The quality of accounting information systems has a substantial impact on the financial management of an organization. High-quality accounting information systems create a strong foundation for the collection, processing, and reporting of financial data. Accurate, relevant, and timely information generated by accounting information systems plays an integral role in effective financial decision-making (Yusuf, 2021).

PT. Vektor Maritim Soechi Group, established in 2012, is a ship management provider serving various ship owners. During the period from 2021 to 2023, PT. Vektor Maritim Soechi Group experienced a significant decline in the financial management index. In 2021, the company recorded an index of 84.00, which decreased to 81.20 in 2022, and further declined to 79.00 in 2023. This decline raises concerns about the efficiency and effectiveness of the company's financial management. Therefore, this research is conducted to examine the influence of ERP implementation and internal control effectiveness on the financial management of PT. Vektor Maritim Soechi Group, with the quality of accounting information systems as an intervening variable.

LITERATURE REVIEW

A. Enterprise Resource Planning

Enterprise Resource Planning (ERP) is an integrated software package designed to provide comprehensive integration related to a company's Information Systems, as explained by Susanto (2014). ERP is not limited to computers but can also be accessed through various electronic media, including computers and gadgets, with the ability to connect to the internet. The use of ERP software through these media provides significant information system coverage, making it easier for company management to obtain vital information to ensure operational continuity. ERP systems play a crucial role in ensuring that internal control objectives can be achieved as expected, especially in controlling accounting aspects to ensure the reliability of financial statements generated.

The implementation of ERP in an organization involves not only technological aspects but also several important factors that can influence the success or failure of implementation. According to Respationo (2003), there are five main factors that individually have a significant impact on the success of ERP implementation, namely organizational, human, data, process, and technology factors. Through understanding and addressing these factors, organizations can increase the chances of ERP implementation success. Alignment between organizational factors, human involvement, data management, process improvement, and careful technology implementation will form a solid foundation for integrating ERP systems into the company's ecosystem.

ERP systems are integral platforms that play a crucial role in managing and optimizing various operational aspects of a company. In this context, specific indicators demonstrate the quality and effectiveness of ERP systems. Based on the explanations by Romney & Steinbart (2015), several key indicators characterize the success and performance of ERP systems. By monitoring and evaluating ERP systems based on these indicators, companies can ensure that their investment in information technology provides optimal value and supports overall operational efficiency and effectiveness.

Indrayani and Maulidahniar (2017) and Akbar and Harahap (2021) provide insights into the extent to which ERP implementation affects the quality of accounting information and internal control systems. Studies by Oktavia (2019) and Fairuzaini and Azib (2019) offer a comprehensive overview of how ERP implementation can influence various aspects of financial performance.

B. Internal Control Effectiveness

Internal control is a system owned, controlled, and operated by the board of directors, management, and employees of a company, which is an integral part of the accounting information system. This system includes rules and procedures designed to meet management needs and ensure organizational operations align with established objectives. Key components of internal control, according to Herawati (2014), involve considerations of human resources, clear effectiveness measurements, cost-benefit analysis, and comprehensive information technology developments. Additionally, Wakhyudi (2018) emphasizes the importance of internal control in achieving organizational goals and outlines two critical elements: existence and function. These elements are further detailed by Harahap (2015) in COSO's five main components: control environment, control activities, risk assessment, information and communication, and monitoring.

The effectiveness of internal control is crucial for maintaining organizational integrity and sustainability. Wicaksono (2013) highlights factors such as audit quality, audit scope, and leadership style as key influencers. Quality audits ensure thorough testing and evaluation of internal control processes, while a broad audit scope allows for a comprehensive understanding of internal controls' operations. Effective leadership fosters a culture conducive to internal control implementation. By considering these factors, organizations can enhance internal control effectiveness, improve risk management, and ensure compliance with regulations.

Indicators of internal control effectiveness, as outlined by Mulyadi (2014) and R.A. Supriyono (2018), include organizational structure, authority systems, healthy practices, employee quality, control environment, risk evaluation, control activities, reliable information systems, and monitoring activities. These indicators help assess the quality, sustainability, and efficiency of the internal control system. Overall, internal control is essential for achieving organizational goals and maintaining operational efficiency. It requires careful consideration of various factors and continuous evaluation to ensure effectiveness.

The research by Ramadhan and Nurhayati (2023) provides a concrete overview of how the use of Software System Application and Product (SAP) ERP and the effectiveness of internal controls can contribute to the quality of accounting information systems at the company level. Another study focusing on a similar topic is the work of Tantri (2015), which offers a broad perspective on the influence of ERP implementation and internal control systems on the quality of accounting information. Nursin, Syamsuddin, and Nirwana (2022) reveal that the quality of human resources, utilization of information technology, and internal control systems have an impact on financial management. Consistent with these findings, Khoiriyah (2020) suggests that internal control systems and human resource competence are variables that affect the effectiveness of financial management.

C. Accounting Information System Quality

The quality of an Accounting Information System (AIS) holds immense significance in the modern business environment, where high-quality information serves as the primary basis for strategic decision-making. McLeod, as cited by Susanto (2014), identifies characteristics of quality information, including accuracy, relevance, timeliness, and completeness. An AIS integrates various business units and subunits within a company, aiming to establish a framework that generates high-quality information. Its main components encompass procedures, software, databases, hardware, and internet connectivity, all readily accessible across different locations. Often, a business unit is considered the elements forming an AIS, involving processes related to financial transactions, data management, and the generation of financial information supporting managerial decision-making.

The quality of an AIS in an organization is significantly influenced by several interconnected factors. Nurhayati (2021) outlines key factors impacting AIS quality, including technology, human resources, business procedures, policies and standards, internal controls, integration and interconnection, information security, and management support. These factors collectively contribute to enhancing AIS quality, ensuring reliable financial information, and supporting better decision-making processes.

The quality of an AIS is pivotal in supporting decision-making and organizational operations. Indrayani & Maulidahniar (2017) provide comprehensive indicators reflecting aspects needing evaluation to assess AIS quality. These indicators cover financial information, accuracy, neutrality, honesty, feedback mechanisms, consensus, uncertainty risk management, performance comparison, and timeliness of information provision. By considering and optimizing these indicators, organizations can evaluate their AIS quality, identify areas for improvement, and ensure the financial information produced by the system is reliable and beneficial for strategic decision-making.

The research by Yusuf (2021) provides in-depth insights into the role of the quality of accounting information systems. Additionally, Erawati (2020) offers a holistic perspective on how the quality of accounting information systems can interact with other elements, such as understanding the system, human resource capacity, and the utilization of information technology, to shape the quality of financial reporting information. Akbar and Harahap (2021) and Yusuf (2021) indicate that the implementation of ERP can enhance the efficiency and accuracy of financial data collection, which subsequently influences the quality of accounting information. Research by Ramadhan and Nurhayati (2023) and Erawati (2020) explain that high effectiveness of internal controls is expected to improve the quality of accounting information systems, ultimately contributing positively to financial management.

D. Financial Management

Financial management, also known as managerial finance, encompasses a series of activities involving planning, organizing, directing, and controlling within the financial context of a business entity. According to Purba et al. (2021), the main aspects of financial management include planning and organizing the use of business funds, which involve acquiring and utilizing financial resources. From Anwar's perspective (2019), financial management is understood as a discipline focusing on managing a company's finances, including sourcing funds, allocating them, and distributing profits. Literally, financial management stems from two words, "management," which means handling, and "finance," which relates to monetary aspects, financing, investment, and capital.

Corporate financial management is a crucial aspect of maintaining stability and operational sustainability for a business entity. Various factors influence how a company's finances are managed to achieve set objectives. In this context, several significant factors impacting corporate financial management need consideration (Pituringsih et al., 2020). These factors include market and industry conditions, economic conditions, government policies, industry characteristics, capital needs, risk levels, and corporate governance. Good corporate governance principles can positively influence financial management, shaping a solid foundation for it.

Indicators of Corporate Financial Management reflect critical aspects providing insight into the health and stability of a business entity's finances. Research conducted by Pituringsih et al. (2020) identifies several indicators focusing on measuring corporate financial management. These include overall financial health, cash stability, salary and benefit policies, employee welfare, career development opportunities, and job stability. Monitoring and periodically evaluating these indicators are crucial in efforts to improve sustainable financial management. Companies that maintain financial health, provide fair compensation, prioritize employee welfare, offer career development opportunities, and ensure job stability tend to have a strong foundation for long-term success. Thus, periodic monitoring and evaluation of these indicators are essential in improving sustainable financial management.

CONCEPTUAL MODEL

Based on the literature review above, the conceptual model is formulated as follows:

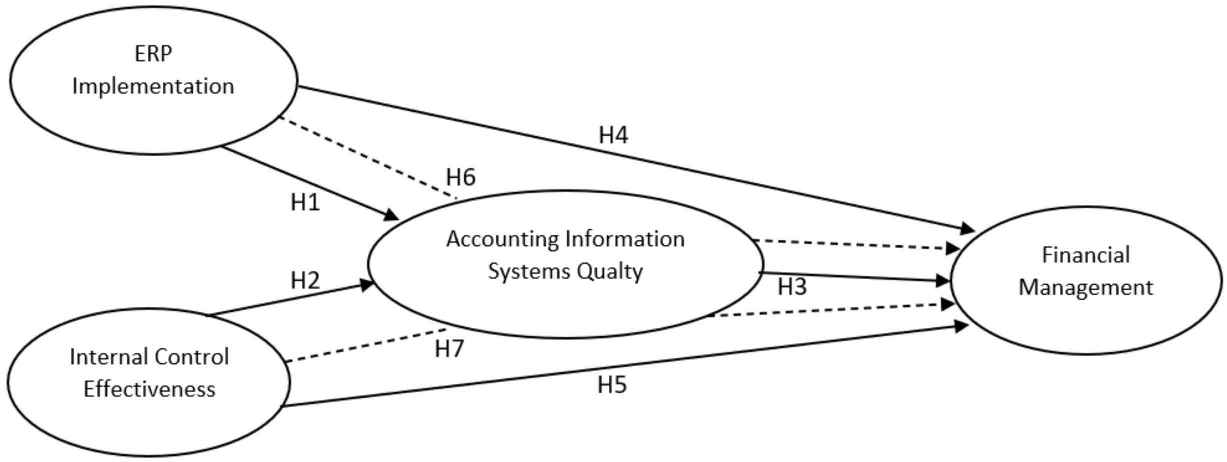

Figure 1. Conceptual Model

HYPOTHESES

Based on the conceptual model and literature review, the hypotheses can be formulated as follows:

H_1: ERP implementation has a positive and significant direct effect on accounting information systems quality.
H_2: Internal control effectiveness has a positive and significant direct effect on accounting information systems quality.
H_3: Accounting information systems quality has a positive and significant direct effect on financial management.
H_4: ERP implementation has a positive and significant direct effect on financial management.
H_5: Internal control effectiveness has a positive and significant direct effect on financial management.
H_6: Accounting information systems quality mediates the relationship between ERP implementation and financial management.
H_7: Accounting information systems quality mediates the relationship between internal control effectiveness and financial management.

METHODOLOGY

This research is a quantitative study using primary data in the form of questionnaire data. The research population is identified as 50 employees of Ship Management PT. Vektor Maritim Soechi Group who are directly involved with ERP. This research selects a method of studying the entire population, and saturation sampling is considered strategic. This is intended to ensure the involvement of every individual in the population, especially the crew at the analysis center. With this approach, it is expected that the research results will be accurate and reflect the characteristics of the entire population. This research adopts a data analysis method using path analysis techniques, which is an extension of multiple linear regression analysis and applied to analyze the cause-effect relationship between exogenous variables and endogenous variables within the framework of multiple linear regression.

CONCLUSION

This research aims to develop a conceptual model regarding the influence of ERP implementation and internal control effectiveness on financial management with accounting information system quality as a mediator. It also includes the research background, literature review, hypotheses, and research methodology. The status of the influence of ERP implementation and internal control effectiveness on financial management, through the mediation of accounting information system quality, can be identified by applying the conceptual model of this study.

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