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Accounting Information System and Financial Performance of Manufacturing Firms in Kenya

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Abstract

The integration of financial technologies has become a critical factor in enhancing the financial performance of firms across various industries. This study explores the role of financial systems, including cash ledger systems, data management platforms, automated payroll systems, and accounting information systems (AIS), in improving operational efficiency, accuracy, and financial decision-making. Through an extensive literature review, the study assesses both the benefits and challenges associated with adopting these technologies. Findings indicate that financial technologies contribute to streamlined financial reporting, improved compliance, and enhanced strategic planning. However, small and medium-sized enterprises (SMEs) in the manufacturing sector face significant challenges, including high implementation costs, technical skill gaps, and resistance to technological change. Additionally, existing research tends to focus on large corporations, leaving gaps in understanding how SMEs can effectively implement and benefit from financial technologies despite resource limitations. The study underscores the need for industry-specific research on financial technology adoption, particularly in developing economies, where firms often struggle with financial constraints and regulatory complexities. Future studies should explore phased implementation strategies, cost-effective technological solutions, and the long-term financial impact of adopting digital financial systems. By addressing these gaps, firms can develop tailored approaches to technology adoption, ensuring sustainable growth and improved financial performance.

Keywords: Financial technologies, accounting information systems, financial performance, manufacturing firms, technology adoption

1. Introduction

An accounting information system has become a vital component of successful businesses and organizations. Borthick and Clara (2020), supporting the above, stated that an accounting information system is vital to all organizations, whether profit- or non-profit-oriented. They further asserted that there is every need for every organization to maintain an accounting information system. According to Kamau et al (2023), an accounting information system produces more information to ease operations such as planning and control and performance evaluation.

An understanding of an accounting information system will therefore foster a better understanding of how businesses and organizations are assisted to operate more efficiently and effectively. An accounting information system has to do with any combination of information technology and people's activities that support operations, management, and decision-making, though in a narrow sense. In a broader sense, however, the term accounting information system is used to refer to the interaction between people, processes, data, and technology. It is equally in this wise that (O'Brien, 2024) asserted that the term does not only refer to the information and communication technology that an organization uses but also to the way in which people interact with this technology in support of business activities and processes. Furthermore, an accounting information system may be understood from the three words that constitute it (accounting, information, and system).

Wilkinson (2020) identified three components that relate to accounting as the information system, the language of business, and the source of financial information. Secondly, O'Brien identified information as valuable data processing that provides a basis for making decisions, taking actions, and fulfilling legal obligations. Finally, he stressed that a system is an integrated framework within an entity where the framework is focused on a set of objectives.

Accounting information guides the whole operation of an organization by evaluating previous performance, controlling current operations, and forecasting future operations and outcomes. The use of information technology (IT) improves the functions of recording, processing data, reporting, and other aspects of accounting information through the accounting information systems (AIS). The internal users, especially managers, may make inappropriate decisions due to a lack of accounting information, and this may place the future of the whole organization in jeopardy. An organization requires accounting information produced by the AIS to enable it to manage and control its financial and other resources better compared to the traditional manual system of the recording process (Lybaert & Wildermans, 2020).

Firm financial performance has received considerable attention as a substantial academic subject for investigating financial and management literature. According to literature, defining financial performance is a challenge across the world. Financial performance and success have been defined in various ways in the literature, and in any business, the related parties always want to see good financial performance in their business (Kareem et al., 2021). Perera and Thrikawala (2010) defines financial performance as a measure of how well a company can use its assets from its primary mode of business and generate revenues. On the other hand, the modern literature defines financial performance as the results of the activities of a company or investment over a given period. Financial performance can also be defined as the accomplishment of specified business objectives measured against known standards, completeness, and cost (Perera & Thrikawala, 2010).

Financial performance is so common in research about a company's management that its structure and definition are rarely explicitly justified; instead, its appropriateness, in no matter what form, is unquestionably assumed (Oawad et al, 2022). Financial performance can also be defined as the accomplishment of specified business objectives measured against known standards, completeness, and cost. The financial performance is the result of strategies the company employs to achieve market-oriented and financial goals (Kareem et al., 2021). The level of success of a company within the company's sector is measured through its financial performance based on a selected period of time. In business studies, the concept of success is sometimes used to refer to a company's financial performance (Oudat, 2021).

Accounting Information Systems (AIS) have a profound impact on the financial performance of manufacturing firms globally. In Europe, the adoption of AIS has significantly enhanced operational efficiency. For instance, in Germany, companies like Siemens have integrated advanced AIS to streamline financial reporting, thereby reducing errors and improving decision-making processes. This integration has led to more accurate financial forecasts and better resource allocation, directly contributing to improved financial performance.

In France, the implementation of AIS has facilitated compliance with stringent financial regulations. French manufacturing firms have leveraged AIS to ensure adherence to the International Financial Reporting Standards (IFRS), which has minimized legal risks and financial penalties (Castets-Renard & Besse, 2022). The enhanced transparency and accountability provided by AIS have not only safeguarded these firms against regulatory breaches but also bolstered investor confidence, thereby attracting more investments.

The United Kingdom presents another interesting case where AIS has revolutionized financial performance in the manufacturing sector. Companies like Rolls-Royce have utilized AIS to enhance inventory management and cost control (Smith, 2024). By providing real-time data on production costs and inventory levels, AIS has enabled these firms to optimize production schedules and reduce wastage. This efficiency gain has resulted in significant cost savings and improved profit margins.

In Africa, the impact of AIS on the financial performance of manufacturing firms is becoming increasingly evident. In South Africa, AIS adoption has significantly improved the accuracy and timeliness of financial reporting. Manufacturing firms in the region have benefited from real-time financial data, which has enhanced strategic planning and operational efficiency. The availability of accurate financial information has also enabled better compliance with tax regulations, reducing the risk of financial penalties.

Tanzania manufacturing firms have also experienced substantial benefits from AIS implementation. For instance, firms like Bidco Africa have utilized AIS to streamline their financial operations, leading to improved cash flow management (Mwangi, 2023). The integration of AIS has enabled these firms to monitor financial transactions more effectively, reducing incidences of fraud and enhancing financial accountability. This has not only improved financial performance but also strengthened stakeholder trust.

In Nigeria, the adoption of AIS has been pivotal in improving cost management within the manufacturing sector. Companies such as Dangote Cement have implemented sophisticated AIS to track production costs and manage expenses more efficiently (Efuntade et al., 2021). The enhanced visibility into financial data provided by AIS has allowed these firms to identify cost-saving opportunities and improve profitability. Additionally, the improved financial reporting capabilities have facilitated better access to financing, further supporting business growth.

In Kenya, the integration of AIS into manufacturing firms has had a significant impact on financial performance. One of the critical issues addressed by AIS is the enhancement of financial transparency (Lidovolo & Atieno, 2023). For instance, firms like East African Breweries Limited (EABL) have leveraged AIS to improve the accuracy of financial reporting. This transparency has not only facilitated better decision-making but also increased investor confidence, leading to higher levels of investment.

Another issue that AIS has addressed in the Kenyan manufacturing sector is fraud reduction. Manufacturing firms have implemented AIS to monitor financial transactions more closely, thereby detecting and preventing fraudulent activities (Chepkorir & Kariuki, 2024). This has resulted in significant cost savings and improved financial health for these firms. The enhanced security features of AIS have also ensured the integrity of financial data, which is crucial for maintaining stakeholder trust.

Furthermore, AIS has played a vital role in improving operational efficiency in Kenyan manufacturing firms. Companies such as Mumias Sugar have utilized AIS to streamline their financial operations, reducing the time and effort required for financial reporting and analysis (Mwangi, 2023). The automation of routine financial tasks has freed up resources that can be redirected towards more strategic initiatives, thereby enhancing overall productivity and profitability.

2. Literature Review

This chapter is divided into three main parts, namely theoretical literature review, conceptual framework, and empirical review. The theoretical review explains different theories written by different scholars on the study variables. Definition and discussion on key terms is covered; on the other hand, empirical review attempts to explain the gaps identified from different studies done on similar subjects and hence tries to bridge those gaps. The conceptual framework, on which the study is based, is also developed.

2.1. Theoretical Review

The theoretical framework of a research proposal relates to the philosophical basis on which the research takes place and forms the link between the theoretical aspects and practical components of the investigations undertaken. The theoretical framework, therefore, has an implication for every decision made in the research process.

Diffusion of Innovation Theory

The Diffusion of Innovation (DOI) Theory, advanced by Rogers (1962), explores how, why, and at what rate new ideas and technology spread through culture. According to Rogers, the process involves several stages: knowledge, persuasion, decision, implementation, and confirmation. The theory is foundational in understanding how technological innovations are adopted within organizations, influencing their operational and financial outcomes. Rogers' theory emphasizes the roles of different adopter categories: innovators, early adopters, early majority, late majority, and laggards. Each group plays a crucial role in the diffusion process, affecting how innovations like a cash ledger system are perceived and integrated within a firm. For instance, early adopters are pivotal as they set the stage for the broader acceptance of new financial technologies, showcasing their benefits and demonstrating successful use cases (Brigham & Houston, 2019).

Literature on the diffusion of innovations highlights that the adoption of technological solutions, such as cash ledger systems, can significantly enhance the financial performance of firms. These systems streamline financial transactions, improve accuracy in financial reporting, and enhance overall operational efficiency. Studies indicate that early adopters of cash ledger systems often experience improved financial management and control, leading to better financial outcomes compared to firms that delay adoption (Romney & Steinbart, 2020).

The DOI theory suggests that the rate of adoption is influenced by perceived attributes of the innovation: relative advantage, compatibility, complexity, trialability, and observability. In the context of cash ledger systems, their relative advantage is evident in the reduction of errors, time-saving in financial processes, and enhanced data security. Compatibility with existing systems and ease of use further accelerate adoption, thereby positively impacting the financial performance of firms by reducing costs and increasing productivity (Romney & Steinbart, 2020).

The Diffusion of Innovation Theory provides a comprehensive framework to understand the adoption dynamics of cash ledger systems in firms. By recognizing the factors that influence adoption and the benefits these systems offer, firms can strategically implement these innovations to enhance their financial performance and maintain a competitive edge in the market (Brigham & Houston, 2019). This is the overriding theory of the study.

Systems Theory

Systems Theory, proposed by Ludwig von Bertalanffy in the 1940s, provides a holistic framework for understanding complex entities by viewing them as interrelated and interdependent components. This theory posits that a change in one part of the system affects the entire system, emphasizing the importance of systemic thinking in organizational management and decision-making.

Kaufmann (2020) established systems to explain historical development as a dynamic process and was more fully developed by biologist Bertalanffy (2019). Bertalanffy argued that everything is consistent, and therefore, we should study the interconnectedness as a means of understanding the world. The systems theory method of analysis involves, first, the deconstruction of what was explained that was the observable fact under consideration; secondly, the formulation of an explanation that accounts for the behavior of properties of the component independently; and finally, the synthesis of these explanations into an aggregate understanding of the whole. Wide-ranging, the theory concerned with the system has an innovative framework that passes through various phases of neglect and ridicule. It obtained from the parallel emergency has drawn attention to the significance of cybernetics and information theory.

Systems Theory promotes a holistic perspective, encouraging firms to view their data management systems as integral to their operational success. By fostering a culture of continuous improvement and systemic thinking, firms can better align their data management practices with their strategic objectives. This alignment ensures that financial data are utilized effectively to drive growth, optimize performance, and sustain competitive advantage. Ultimately, an efficient data management system, viewed through the lens of Systems Theory, becomes a pivotal resource in achieving superior financial performance.

Resource-Based View Theory

The Resource-Based View (RBV) Theory traces its origins to earlier work by Barney (2006), whose framework established a solid foundation for subsequent research. This theory, centered on a firm's strategic use of resources, frames a business as a collection of capabilities, with a focus on economic rent and the organization's unique assets. Positioned as a forward-looking strategy, RBV integrates and enhances traditional approaches to competitive strategy (Kay, 2005).

RBV offers critical insights into why firms with valuable, rare, unique, and well-organized resources can achieve superior performance (Barney, 2006). Building on this framework, Hoopes, Madsen, and Walker (2003) advocate for a broader theory of competitive heterogeneity, suggesting that sustained differences among firms are often due to resource-based variations. However, RBV has been critiqued for its lack of clarity regarding its core premise and boundaries, which sometimes hinders productive debate. The theory's flexibility allows for both definition-based and hypothesis-based interpretations, leading some researchers to argue that resources may not be the sole source of competitive advantage, as competitive heterogeneity can also arise from factors beyond resource "stickiness" (Hoopes et al., 2003).

The Resource-Based View remains instrumental in understanding how unique resources contribute to competitive advantage. However, its limitations—such as the lack of a precise boundary and clarity in its premises—have led to ongoing debate within the field. The theory's broad applicability means that it can be interpreted in various ways, adding complexity but also depth to discussions about competitive heterogeneity.

RBV is particularly relevant to examining the impact of payroll systems on the financial performance of firms. According to RBV, a firm's resources and capabilities are fundamental to gaining and maintaining a competitive edge. A robust payroll system exemplifies a valuable resource by enhancing operational efficiency, automating payroll processes, ensuring accurate and timely compensation, and reducing administrative costs. These efficiencies contribute directly to cost savings and improved financial control, which are crucial for driving enhanced financial performance.

2.2. Empirical Review

Empirical research underscores the significant role that cash ledger systems play in improving the accuracy and efficiency of financial reporting. For example, Poston and Grabski (2001), found that firms that adopted computerized cash ledger systems experienced significant reductions in errors associated with manual record-keeping. The use of digital systems enabled faster reconciliation, improved the accuracy of cash flow statements, and provided real-time financial data, thus aiding better decision-making. Additionally, Cazazian (2022) observed that firms with automated ledger systems have stronger internal controls, reducing risks of fraud and improving compliance with regulatory requirements. The reduction of manual data entry through automation minimizes human error, speeds up processing, and helps track financial transactions with precision. However, studies also highlight the disparity in the adoption of such systems based on firm size. For example, small and medium-sized enterprises (SMEs), particularly in developing economies, may face challenges in adopting sophisticated cash ledger systems due to high upfront costs and lack of technological expertise. In contrast, larger firms with ample financial resources and technical support tend to experience smoother integration of these systems. Thus, while the benefits of cash ledger systems are well-documented, there remains a lack of studies addressing the adoption hurdles faced by smaller manufacturing firms, which often struggle with financial constraints and resource limitations.

The empirical literature on data management systems emphasizes their crucial role in enhancing the efficiency of financial operations and decision-making. Amade et al (2024) found that organizations with robust data management systems, particularly ERP (Enterprise Resource Planning) software, were able to streamline operations and reduce redundant data entries. These systems help integrate financial data across departments, offering real-time insights that are crucial for strategic decision-making. Data management systems also facilitate the extraction of relevant financial data for performance analysis, improving the accuracy of financial reporting and forecasts. Pincus et al (2017) further highlighted how effective data management systems convert raw data into actionable information, thus enhancing financial decision-making capabilities. However, a significant gap exists in understanding the challenges that manufacturing firms face when implementing such systems. According to Kanyanga (2022), while large organizations with substantial IT departments may successfully integrate ERP systems, many small and medium-sized firms encounter significant barriers, including the high costs of system acquisition, implementation, and maintenance. Moreover, data management systems often require specialized personnel, and many SMEs lack the resources to hire or train staff for this purpose. This challenge is particularly pronounced in manufacturing sectors, where firms may lack the infrastructure or technical know-how to fully capitalize on data management systems. Thus, while the literature supports the positive impact of data management systems on financial performance, it often fails to account for the implementation challenges faced by smaller firms with limited resources.

The adoption of automated payroll systems has been shown to positively influence organizational efficiency. Mancini,

Varsha and Dhanaraj (2024) found that automated payroll systems reduce administrative costs, eliminate errors in employee compensation, and ensure timely salary disbursements. Brigham and Houston (2019) further highlighted that such systems help firms comply with tax regulations, reducing the risk of costly penalties due to non-compliance. Payroll automation also streamlines the process of tracking employee benefits, bonuses, and other compensation-related data, allowing for more accurate financial reporting. Despite these benefits, the adoption of payroll systems in manufacturing firms is not without its challenges. In particular, the literature suggests that smaller manufacturing firms with fluctuating or seasonal workforces may struggle to adapt their payroll systems to their specific needs. Many studies focus on larger firms or those with a stable workforce structure, leaving a gap in understanding how payroll systems can be optimized in manufacturing industries with more dynamic workforces. Additionally, the successful implementation of payroll systems in SMEs may require substantial upfront investments, including both the cost of purchasing the software and the time needed to train employees, which can deter adoption. The existing literature on payroll systems tends to overlook these issues, leaving a gap in understanding the diverse requirements of manufacturing firms with varying workforce structures and resource limitations.

Several studies have explored the relationship between accounting information systems (AIS) and financial performance, consistently finding a positive correlation. Brigham and Houston (2019) observed that firms utilizing AIS were able to improve key financial performance metrics such as profitability, liquidity, and return on assets due to enhanced decision-making capabilities and operational efficiencies. Similarly, Romney and Steinbart (2020) found that AIS-enabled organizations enjoyed greater financial stability, thanks to better tracking of cash flows, improved budget forecasting, and more accurate financial reporting. However, while these studies generally conclude that AIS adoption leads to improved financial performance, they often treat this relationship as a direct cause-and-effect without adequately considering moderating factors. For example, the effect of AIS on financial performance can vary significantly depending on the industry in which the firm operates, its size, and its geographical location. Studies predominantly focus on large corporations, but the situation may differ for SMEs, particularly in manufacturing sectors where external factors such as market volatility, regulatory changes, and supply chain disruptions can impact financial outcomes. In addition, many of these studies fail to account for the implementation phase of AIS, which can be challenging and resource-intensive, especially for firms with limited technological infrastructure. The positive outcomes linked with AIS may thus not be immediately observable, particularly for manufacturing firms struggling with the initial setup and training phases.

The integration of AIS with organizational strategy has been shown to enhance firms' competitive advantage. Kinyua (2024) found that firms that aligned their AIS with their strategic goals reported higher cost savings, better resource allocation, and improved customer satisfaction. Effective integration allows firms to use AIS not just for operational tasks but also as a strategic tool that informs long-term planning and decision-making. However, McNamee and Selim (1999) pointed out that successful integration requires more than just technology—it demands a culture shift and a strategic commitment to utilizing AIS effectively. This can be particularly difficult in manufacturing sectors, where firms often prioritize short-term production goals over long-term strategic planning. Moreover, many small manufacturing firms face barriers such as limited managerial expertise, insufficient training, and resistance to change, which hinder the full integration of AIS into their broader organizational strategy. Additionally, there is a lack of empirical evidence on how manufacturing firms in emerging markets align their AIS with their strategic objectives, particularly in industries that face resource constraints and high levels of competition.

2.3. Critique

While the existing literature provides strong empirical support for the benefits of cash ledger systems, data management systems, payroll automation, and accounting information systems (AIS) in financial reporting and operational efficiency, several gaps and limitations remain. One primary shortcoming is the disproportionate focus on large corporations, with limited studies addressing the unique challenges faced by small and medium-sized enterprises (SMEs), particularly in the manufacturing sector. For instance, research by Poston and Grabski (2001) and Cazazian (2022) highlights the efficiency gains associated with automated cash ledger systems but does not sufficiently explore how financial constraints and limited technological expertise hinder SMEs from adopting such solutions.

Similarly, while Amade et al. (2024) and Pincus et al. (2017) underscore the effectiveness of data management systems, they primarily consider organizations with substantial IT infrastructure, overlooking the difficulties SMEs face in acquiring and maintaining these systems. Studies like those by Mancini, Varsha, and Dhanaraj (2024) emphasize the advantages of payroll automation but fail to account for the complexities of workforce variability in manufacturing firms. The literature on AIS, as presented by Brigham and Houston (2019) and Romney and Steinbart (2020), largely assumes a direct link between system adoption and financial performance, without sufficiently considering external moderating factors such as market volatility, regulatory requirements, and resource limitations that may affect the successful implementation of AIS in SMEs.

Moreover, while some research addresses the strategic integration of AIS (Kinyua, 2024), there is a noticeable gap in empirical studies examining how manufacturing firms, particularly in emerging markets, align these systems with long-term strategic goals. The focus on the benefits of these systems often overshadows the significant challenges of adoption, such as resistance to change, insufficient managerial expertise, and high implementation costs. Additionally, there is a lack of longitudinal studies that track the long-term impact of these financial systems on business performance, particularly for firms struggling with initial setup and adaptation phases.

Overall, while the literature establishes a clear link between financial system automation and organizational efficiency, it tends to generalize findings without adequately addressing firm-specific, industry-specific, and region-specific barriers. Future research should focus on the constraints faced by SMEs, particularly in developing economies, and explore solutions that facilitate the effective adoption of financial technologies in resource-limited settings.

2.4. Summary of Literature

The literature on financial system automation consistently underscores the benefits of digital financial tools in improving financial reporting accuracy, efficiency, and decision-making. Cash ledger systems have been shown to reduce errors and enhance cash flow management (Poston & Grabski, 2001; Cazazian, 2022), while data management systems streamline financial operations by integrating data across departments and enabling real-time insights (Amade et al., 2024; Pincus et al., 2017). Payroll automation has been found to minimize administrative errors, ensure compliance with tax regulations, and optimize employee compensation processes (Mancini, Varsha & Dhanaraj, 2024; Brigham & Houston, 2019). Similarly, accounting information systems (AIS) have been linked to improved financial performance, enhanced decision-making, and greater financial stability (Brigham & Houston, 2019; Romney & Steinbart, 2020).

However, the literature reveals notable gaps, particularly concerning the challenges SMEs face in adopting and implementing these systems. High costs, limited technological expertise, and resistance to change are common barriers, especially in the manufacturing sector. Additionally, while studies highlight the efficiency and strategic potential of financial systems, they often overlook the complexities of implementation, particularly in firms with resource constraints. The need for further research into how SMEs, particularly those in emerging markets, can overcome these barriers remains crucial for developing more inclusive financial technology solutions.

3. Research Methodology

This study utilized a literature review methodology as the primary approach to gather, analyze, and synthesize existing knowledge on the subject. By systematically examining a wide range of scholarly articles, books, reports, and other credible sources, the study identified key themes, trends, and gaps in the existing body of research. This method allowed for a comprehensive understanding of the topic by drawing insights from previous studies rather than conducting primary data collection. Through critical evaluation and comparison of various perspectives, the study was able to develop well-informed conclusions based on established theories, empirical findings, and expert opinions. Additionally, this approach facilitated the identification of best practices, challenges, and emerging discussions within the field, ensuring that the conclusions drawn are grounded in a thorough and objective analysis of existing literature.

4. Research findings and Discussion

4.1. Cash Ledger System

The study found that cash ledger systems are typically structured into modules to strengthen internal control measures. A well-designed general ledger system ensures that employees have access only to the module relevant to their job responsibilities, which significantly reduces the risk of fraud. Findings indicate that Peachtree First Accounting software is an effective tool for managing general ledger systems. Additionally, research by Nickels et al. (2021) highlighted that the widespread adoption of computer technology in accounting has simplified financial reporting processes, allowing managers and employees to access financial reports on demand. This has contributed to the increasing reliance on and integration of information technology within the manufacturing industry.

The study also established that a ledger account serves as a summary record for all transactions related to specific items such as bank accounts, stock, creditors, vehicles, and capital. In financial statements, each item is associated with a dedicated ledger account. Without a computerized accounting system, locating an individual ledger account among hundreds would be inefficient and prone to errors (Hardy, 2021). The study further underscored that general ledger software is vital for businesses as it serves as the core accounting record. The essential features of effective general ledger software include budget and financial data tracking, fraud detection, and accurate financial statement generation. A well-chosen general ledger software facilitates efficient year-end reporting and seamless integration with subsidiary ledgers, such as accounts payable and receivable, ensuring precise double-entry bookkeeping and balance sheet accuracy (Blanks, 2021).

4.2. Data Management System

The study identified data management as a crucial aspect of research and business operations, encompassing data planning, handling, analysis, documentation, and storage. The primary objective of data management is to establish a reliable database that maintains high-quality data. Tucci (2020) emphasized that data management is often overlooked in study design, yet it plays a critical role in determining data collection needs, entry, validation, manipulation, backup, and documentation.

Findings show that database files form the backbone of data management systems. These files store text, numerical data, images, and other forms of information in machine-readable formats. Database management systems (DBMS) allow for diverse data functions, including entry, validation, updating, and analysis. The study revealed a strong correlation between

effective data management procedures and improved return on investment (ROI). Businesses that implement robust data management practices experience enhanced performance measurement, improved management control, and reduced inefficiencies. Hardy (2021) noted that data processing systems, including billing and inter-organizational order systems, facilitate economic transactions and decision-making.

Pincus (2020) further clarified that data management transforms raw facts into useful information, a process known as data processing. This involves recording, classifying, sorting, summarizing, analyzing, and verifying data, among other activities. The study found that modern accounting systems integrate financial and non-financial data, supporting real-time decision-making. Oladipo (2020) asserted that relational database systems, such as enterprise resource planning (ERP), enhance data organization, minimize redundancies, and improve operational efficiency. Additionally, the integration of accounting information systems (AIS) into financial processes has led to better cost control, increased profitability, and improved decision-making capabilities.

4.3. Payroll System

Findings indicate that payroll systems are essential for managing employee records, including names, addresses, employment details, and salary payments. Payroll systems streamline processes such as entering work hours, computing tax deductions, and printing payroll checks. Research by Brigham & Houston (2019) highlighted that automated payroll solutions significantly reduce administrative workload and enhance payroll accuracy. Modern payroll systems incorporate interactive features that allow employees, HR personnel, and administrators to securely access payroll data through login credentials.

The study established that payroll management is increasingly automated to improve efficiency. Automated payroll systems calculate employee salaries, allowances, and deductions with minimal human intervention, ensuring compliance with company policies and tax regulations. Furthermore, these systems facilitate record-keeping for personnel data, pay slips, tax filings, and benefits administration. Mancini, Vaassen, & Dameri (2019) emphasized that web-based payroll applications provide a centralized platform for payroll operations, ensuring transparency and regulatory compliance.

4.4. Financial Performance

The study found that financial performance is a crucial indicator of an organization's operational health, commonly measured through return on investment (ROI), return on assets (ROA), and return on equity (ROE). Brigham & Houston (2019) noted that financial performance evaluations enable businesses to compare industry benchmarks and track profitability trends.

Mishkin (2007) observed that financial institutions continuously innovate to maximize profits by developing new products and services. This study found that organizations must adapt to changing economic environments by investing in research and innovation to remain competitive. Findings suggest that outdated business models may no longer yield profits, necessitating strategic financial planning and risk management measures. McNamee & Selim (1999) supported this assertion, indicating that businesses that fail to innovate risk financial instability.

Shivakumar (2004) concluded that the implementation of improved business systems enhances profitability and cost control. The study found that accounting information systems (AIS) play a critical role in financial management by enabling data analysis, performance monitoring, and decision-making. Additionally, financial reports generated through AIS provide stakeholders with insights into an organization's financial standing, influencing investment and strategic decisions. This reinforces the importance of adopting modern financial management practices to sustain long-term business success.

Overall, the study findings highlight the significance of integrating technological advancements into financial and accounting systems to enhance accuracy, efficiency, and decision-making capabilities across various business functions.

4.5. Conceptual Framework

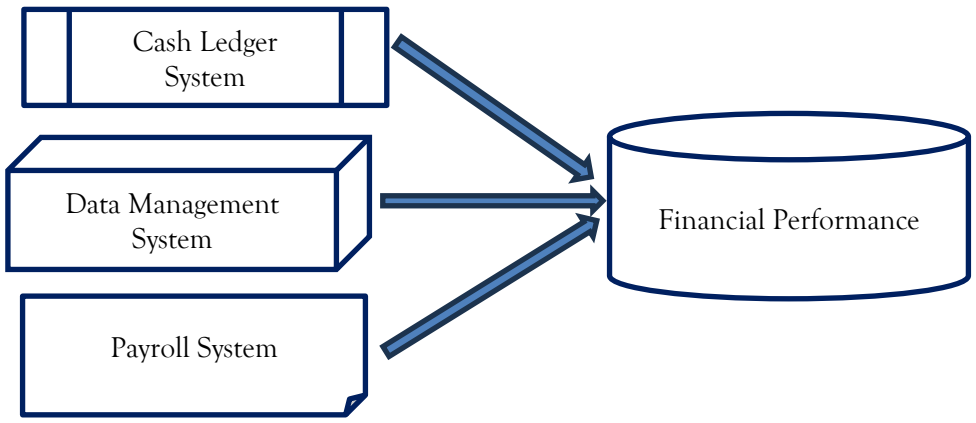

Figure 1: Conceptual framework

Figure 1 illustrates the conceptual framework, highlighting the relationship between financial management systems and financial performance. The framework identifies three key systems—Cash Ledger System, Data Management System, and Payroll System—as critical components influencing an organization's financial outcomes.

The Cash Ledger System plays a fundamental role in tracking financial transactions and ensuring cash flow accuracy. By structuring the ledger system into modules accessible only to relevant personnel, organizations strengthen internal controls and reduce the risk of fraud. A well-managed cash ledger system enhances financial transparency, facilitating better financial decision-making and contributing to overall stability.

The Data Management System is another essential component that supports financial performance by ensuring the efficient collection, storage, validation, and analysis of financial data. Effective data management minimizes redundancies, improves accuracy, and enhances decision-making by providing reliable and timely financial information. A strong data management system also facilitates performance measurement, ensuring that organizations can monitor financial trends and make informed strategic decisions.

The Payroll System is equally critical, as it ensures the accurate and timely compensation of employees while complying with tax regulations and organizational policies. Automating payroll processes reduces manual errors, streamlines employee payments, and enhances record-keeping. This, in turn, improves operational efficiency and contributes to financial stability by ensuring that salary disbursements and deductions are handled efficiently.

Ultimately, these three financial management systems collectively influence an organization's Financial Performance. By integrating robust financial management tools, organizations can improve financial reporting accuracy, optimize resource allocation, and enhance profitability. The conceptual framework emphasizes that well-structured financial systems lead to better financial control, increased efficiency, and improved organizational outcomes.

5. Summary, Conclusion and Recommendations

The study highlights the significant impact of financial technologies such as cash ledger systems, data management systems, automated payroll systems, and accounting information systems (AIS) on the financial performance of firms. These technologies enhance accuracy, efficiency, and decision-making in financial management. Cash ledger systems contribute to reducing human error, enabling real-time reconciliation, and strengthening internal controls. Similarly, data management systems such as ERP software streamline operations, eliminate redundancies, and improve financial reporting accuracy. Automated payroll systems enhance compliance, reduce administrative costs, and ensure payroll accuracy, while AIS are linked to improved financial performance metrics, profitability, and budget forecasting.

Despite these benefits, the study reveals that existing literature predominantly focuses on large enterprises and assumes seamless technological adoption, overlooking the financial and operational constraints faced by small and medium-sized enterprises (SMEs). Additionally, challenges related to system implementation, employee training, and long-term strategic alignment are underexplored. Contextual factors such as industry-specific demands, workforce dynamics, and regulatory environments are often neglected in research. While financial technologies contribute positively to financial performance, the adoption process is complex and requires significant resources, technical expertise, and strategic alignment.

Recommendations

To bridge the identified gaps, future research should focus on exploring industry-specific barriers to financial technology adoption, particularly within SMEs and the manufacturing sector. Studies should examine the phased implementation of financial technologies to understand the gradual impact on financial performance. More empirical research is needed to assess how firms integrate these technologies with broader strategic objectives to maximize their competitive advantage.

Policymakers and industry stakeholders should prioritize initiatives that support SMEs in overcoming financial and technological barriers. Governments and financial institutions should provide incentives, training programs, and funding options to facilitate the adoption of financial technologies in resource-constrained environments. Firms should also invest in employee training and change management strategies to ensure smooth implementation and optimal utilization of these systems.

By addressing these recommendations, businesses can fully leverage financial technologies to improve their financial performance, enhance operational efficiency, and maintain a competitive edge in the evolving economic landscape.

Conflict of Interest

The authors declare that they have no conflicting interests

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Ethical considerations

The article followed all ethical standards appropriate for this kind of research.

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