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The Impact of Management Information Systems and Technological Innovation on Organizational Productivity: A Literature Review

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Abstract

The main objective of this study is to explore the relationship between management information systems, technological innovation, and accounting education in the context of financial statement preparation practices. The literature search process was conducted using seven keyword combinations: (1) Management Information Systems AND Organisational Productivity, (2) Technological Innovation AND Organisational Performance, (3) Impact of IT Systems on Business Efficiency, (4) Role of Information Technology in Organizational Growth, (5) Digital Transformation AND Business Performance, (6) Enterprise Resource Planning (ERP) AND Productivity (7) Business Intelligence AND Organisational Efficiency. From this search, 1 article was found in Web of Science journals, 2 articles in Elsevier journals, 3 articles in Springer journals, 1 article in Willey-Blackweell journals, 2 articles in Taylor & Francis journals, 2 articles in SAGE Publications journals, 4 articles in Emerald journals, 2 articles in ProQuest journals, 1 article in Ebsco journals and 2 articles in MDPI journals. The literature review results indicate Management Information Systems (MIS) contribute significantly to organisational productivity by enhancing data management, improving decision-making processes, and increasing operational efficiency. Technological innovation drives productivity growth by automating business processes, improving workflow efficiency, and fostering adaptability in rapidly changing markets.

Keywords: Management Information Systems, Technological Innovation, Organizational Productivity

1. Introduction

In today's fast-paced digital economy, organisations are continuously seeking ways to enhance efficiency, optimise operations, and improve overall productivity. One of the key drivers of organisational performance is the effective utilisation of Management Information Systems (MIS) and technological innovation. As businesses increasingly rely on digital solutions, the role of MIS in decision-making, data management, and strategic planning has become more critical than ever.

Management Information Systems (MIS) integrate various technologies, tools, and processes that enable organisations to efficiently collect, process, and analyse data (Bhima et al., 2023). These systems provide managers with timely and relevant information, allowing them to make informed decisions and improve operational effectiveness. Additionally, technological innovation plays a significant role in shaping business processes, enabling automation, enhancing communication, and fostering competitiveness in an evolving market(Chowdhury, 2024).

Numerous studies have examined the individual impact of MIS and technological innovation on productivity. Yet, a comprehensive understanding of how these factors interact and contribute to organisational success remains an area of ongoing research. While MIS provides the necessary framework for data-driven decision-making, technological innovation introduces new methods and tools that enhance the efficiency of these systems (Erica et al., 2024); (Hamdat et al., 2024). Therefore, understanding the interplay between MIS and technological innovation is essential for businesses seeking to gain a competitive edge.

This literature review aims to explore the impact of Management Information Systems and technological innovation on organisational productivity. By analysing previous research and theoretical frameworks, this study will provide insights into the extent to which MIS and technological advancements contribute to improved efficiency, reduced operational costs, and enhanced decision-making capabilities within organisations. Additionally, this review will highlight challenges and future research directions in this domain.

Management Information Systems

Management Information Systems (MIS) have become a cornerstone of modern organisational operations, significantly influencing decision-making, efficiency,

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and productivity. MIS refers to the integration of technology, people, and processes to collect, process, store, and disseminate information necessary for managerial decision-making and organisational functions (Hera et al., 2024). Over the years, MIS has evolved from simple data processing tools to complex, integrated systems that leverage advanced technologies such as artificial intelligence (AI), big data analytics, and cloud computing. This evolution has been driven by the increasing availability of data and the need for organisations to remain competitive in a rapidly changing business environment (Paramesha et al., 2024). Today, MIS is critical in enabling organisations to streamline operations, improve communication, and make data-driven decisions.

Despite its benefits, the implementation of MIS is not without challenges. Organisations often face high implementation costs, resistance to change, and data security concerns. The initial investment required for hardware, software, and training can be substantial, particularly for small and medium-sized enterprises (Rupeika-Apoga & Petrovska, 2022). Additionally, employees may resist adopting new systems due to fear of job displacement or lack of technical skills. Data security and privacy are also major concerns, as the increasing reliance on digital systems makes organisations vulnerable to cyber threats and data breaches. Addressing these challenges requires careful planning, stakeholder engagement, and continuous training and support.

In conclusion, Management Information Systems have become indispensable tools for modern organisations, enabling them to enhance efficiency, productivity, and decision-making. By integrating technology, people, and processes, MIS provides a robust framework for managing information and supporting organisational goals (Cram et al., 2016). However, successful implementation requires addressing challenges such as high costs, resistance to change, and data security concerns. As technology evolves, MIS will play an even more critical role in driving organisational success, particularly with integrating emerging technologies such as AI, big data analytics, and IoT. This literature review highlights the importance of MIS in organisational productivity and sets the stage for further research on integrating MIS with technological innovations to enhance organisational performance.

Technological Innovation

Technological innovation plays a pivotal role in shaping the competitive landscape of modern businesses. It refers to the process of developing and implementing new technologies, products, or processes that enhance efficiency, improve quality, and create value for organisations. Researchers have long emphasised the significance of technological innovation in driving business growth, sustaining competitive advantage, and improving overall productivity (Turulja & Bajgoric, 2018).

One of the fundamental theories underpinning technological innovation is Schumpeter's Theory of Innovation, which highlights the role of technological advancements in creative destruction. According to (Hopp et al., 2018), innovation disrupts existing market structures by replacing outdated processes with more efficient ones, leading to economic growth. Similarly, (Eggers & Park, 2018) introduced the concept of disruptive innovation, which explains how new technologies can transform industries by displacing established market leaders that fail to adapt.

Empirical studies have demonstrated the impact of technological innovation across various sectors. For instance, (Johnson et al., 2022) found that organisations leveraging digital innovation, such as artificial intelligence (AI) and automation, experience significant improvements in productivity and decision-making efficiency. Moreover, a study emphasised that firms adopting digital transformation strategies outperform their competitors regarding operational agility and market responsiveness (Çallı & Çallı, 2021).

In addition to economic and operational benefits, technological innovation enhances organisational capabilities in knowledge management and collaboration. Research by (Ahmed et al., 2016) suggests that innovation fosters a knowledge-sharing culture within organisations, enabling employees to develop creative solutions to complex problems. Furthermore, advancements in cloud computing, big data analytics, and the Internet of Things (IoT) have revolutionised business models, making real-time decision-making and predictive analytics more accessible (Paramesha et al., 2024).

Organisational Productivity

Organisational productivity is a key determinant of a company's success, reflecting its ability to efficiently utilise resources to achieve desired outcomes. Productivity is often defined as the ratio of output to input, where output includes goods and services produced, while input comprises labor, capital, and technology . Various scholars have explored factors that influence organisational productivity, including management practices, technological advancements, employee performance, and organisational structure (Paramesha et al., 2024).

One of the foundational theories related to organisational productivity is Taylor's Scientific Management Theory, which emphasises optimising workflows, standardising processes, and improving labor efficiency (Atkinson et al., 2017). Taylor argued that organisations could achieve higher productivity by implementing systematic training and performance-based incentives. This perspective was later expanded by Herzberg's Two-Factor Theory, which highlights

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the role of motivation and job satisfaction in enhancing employee performance (Atkinson et al., 2017).

In the modern business environment, technology and digital transformation have become key drivers of productivity. According to (Giachino et al., 2024), firms that adopt automation, artificial intelligence (AI), and data-driven decision-making tend to experience higher productivity levels. Similarly, studies have shown that Enterprise Resource Planning (ERP) systems and Management Information Systems (MIS) contribute significantly to productivity by streamlining operations, reducing redundancies, and enhancing communication within organisations (Alhalboosi et al., 2021).

Human resource management (HRM) practices are crucial to organisational productivity. Research by (Tahir et al., 2014) suggests that companies that invest in employee training, performance incentives, and leadership development often see substantial improvements in overall productivity. Moreover, teamwork, organisational culture, and leadership style are critical factors influencing workforce efficiency (Akanji et al., 2020).

However, while technological advancements and management strategies can enhance productivity, several barriers and challenges may hinder progress. Factors such as resistance to change, lack of employee engagement, poor organisational communication, and inefficient resource allocation can negatively impact productivity (Nienaber & Martins, 2020). Furthermore, excessive workloads and burnout can diminish returns, as employees experience reduced motivation and job satisfaction (Liu & Lo, 2018).

To optimise productivity, organisations must take a holistic approach, integrating technology with effective management strategies, employee engagement, and continuous innovation. Future research should focus on the long-term effects of digital transformation on productivity and the impact of remote work and flexible work arrangements in modern organisations.

2. Methods

This research uses the Systematic Literature Review (SLR) method to identify, analyse, and synthesise relevant literature related to The Impact of Management Information Systems and Technological Innovation on Organizational Productivity: A Literature Review. Based on a literature review, this study aims to analyse and understand the impact of Management Information Systems (MIS) and technological innovation on organisational productivity.

The method used in this research is Systematic Literature Review (SLR), which aims to assess and summarise existing research results comprehensively. SLR is a research approach that allows researchers to identify and evaluate relevant literature objectively and systematically, following clear and transparent procedures. With this approach, this research provides a comprehensive overview of management information systems, technological innovation, and organisational productivity.

After collecting relevant literature, the data obtained will be processed by conducting content analysis. The researcher will conduct a content analysis of the selected articles to identify key findings, theories used, and relevant results regarding management information systems, technological innovation, and organisational performance. Each selected article will be analysed to find the relationship between managemet information system, technological innovations and organisational productivty.

Source of Information

By searching using specific title keywords, a total of 19 relevant academic articles were found through the Summon platform. Summon was chosen as the search base because it can access a comprehensive range of journals. The search results revealed a number of journals and papers that were closely related to the topic researched by the author. The relevant journals were Web of Science, Elsevier, Springer, Wiley-Blackwell, Taylor & Francis, SAGE Publications, Emerald, ProQuest, Ebsco, and MDPI.

Criteria

The inclusion criteria are established to ensure that the selected studies are relevant and contribute to a comprehensive understanding of the impact of Management Information Systems (MIS) and technological innovation on organisational productivity. The selected literature must meet the following criteria: First, the studies must be published in peer-reviewed journals, conference proceedings, or reputable academic sources, ensuring credibility and reliability. Second, the research should specifically address MIS, technological innovation, and their influence on organisational productivity in various industries or business sectors. Third, to maintain the relevance of the study, only articles published within the last 10 years are included, unless older studies are deemed fundamental to the research topic. Fourth, the studies must employ quantitative, qualitative, or mixed-method approaches, providing empirical evidence or theoretical frameworks related to the subject. Lastly, sources must be written in English to ensure data interpretation and analysis consistency.

Several keywords were selected to ensure relevance to the established research questions. The seven keywords used include (1) Management Information Systems AND Organisational Productivity, (2) Technological Innovation AND Organisational Performance, (3) Impact of IT Systems on Business Efficiency, (4) Role of Information Technology in Organizational Growth, (5) Digital Transformation AND Business Performance, (6) Enterprise Resource Planning (ERP)

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AND Productivity (7) Business Intelligence AND Organisational Efficiency. To make the filter process effective, the literature found was first evaluated based on its title and abstract. After that, a full review of the articles was conducted to evaluate their relevance. Relevance was determined through the professional judgment of the authors, which was based on how close the literature was to the research question. Based on the results of the title keyword search, 1,980 articles were obtained with details of (1) Management Information Systems AND Organisational Productivity as many as 340 articles, (2) Technological Innovation AND Organisational Performance 252 articles, (3) Impact of IT Systems on Business Efficiency as many as 363 articles, (4) Accounting Education AND Ethics Integration as many as 220, (5) Role of Information Technology in Organizational Growth as many as 136 articles, (6) Enterprise Resource Planning (ERP) AND Productivity as many as 309 articles, (7) Business Intelligence AND Organisational Efficiency as 360 articles. After further screening, there were 20 articles that met the criteria.

3. Results and Discussion

Result

The Systematic Literature Review (SLR) results show that 20 articles and papers discuss moral hazard, virtue ethics, and accounting education in preparing corporate financial statements. Keyword searches resulted in 1 article in Web of Science journals, 2 articles in Elsevier journals, 3 articles in Springer journals, 1 article in Willey-Blackweell journals, 2 articles in Taylor & Francis journals, 1 article in SAGE Publications journals, 4 articles in Emerald journals, 2 articles in ProQuest journals, 1 article in Ebsco journals and 2 articles in MDPI journals. The Distribution of Articles on Management Information Systems and Technological Innovation in Relation to Organizational Productivity in table 1 below:

Table 1. Distribution of Articles on Management Information Systems and Technological Innovation in Relation to Organizational Productivity

Journal/ Book/ Paper Name	Number of Articles
Web of Science	1
Elsevier	2
Springer	3
Wiley-Blackwell	1
Taylor & Francis	2
SAGE Publications	2
Emerald	4
Proquest	2
EBSCO	1
MDPI	2

Source: *Data obtained by researchers, 2025*

The distribution of articles on Management Information Systems and Technological Innovation on Organizational Productivity across various journals, books, and papers is presented in Table 1. The data reveals that Emerald has the highest number of articles, with a total of 4 publications. Springer follows closely with 3 articles, while Elsevier, Taylor & Francis, SAGE Publications, Proquest, and MDPI each have 2 articles. Web of Science, Wiley-Blackwell, and EBSCO have the lowest number of articles, with only 1 publication each. This distribution highlights the varying contributions of different publishers to the research on Management Information Systems and their impact on organisational productivity through technological innovation. This distribution indicates a stable trend with certain fluctuations in the number of publications related to this topic over a wider period. The distribution of the year of publication of the articles is shown in table 2 below:

Table 2. Distribution of Publication Years for Articles on Management Information Systems, Technological Innovation, and Organizational Productivity

Year of Publication	Number of Articles
2015	1
2016	2
2017	1
2018	1
2019	2
2020	3
2021	2
2022	4
2023	2
2024	2

Source: *Data obtained by researchers, 2025*

The distribution of articles on Management Information Systems, Technological Innovation, and Organizational Productivity based on the year of publication is presented in Table 2. The data shows a gradual increase in the number of publications over the years. In 2015, only 1 article was published, followed by 2 articles in 2016. The years 2017 and 2018 each saw 1 publication, while 2019 and 2021 each had 2 articles. A notable increase occurred in 2020, with 3 articles published. The highest number of articles was recorded in 2022, with 4 publications. The years 2023 and 2024 each contributed 2 articles. This trend indicates a growing interest and research focus on the intersection of Management Information Systems, Technological Innovation, and Organizational Productivity over the past decade, with a peak in 2022. Furthermore, the process of identifying the affiliation of the article's author, because recently one article can come from different authors, is only carried out on the first author.:

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Table 3. Geographical Distribution of Articles on Management Information Systems, Technological Innovation, and Organizational Productivity

Country	Number of Articles
United States	5
United Kingdom	3
China	4
Germany	2
Australia	2
Canada	1
India	2
France	1

Source: *Data obtained by researchers, 2025*

The geographical distribution of articles on Management Information Systems, Technological Innovation, and Organizational Productivity reveals significant contributions from various countries. As shown in Table 3, the United States leads with five published articles, reflecting its strong academic focus on digital transformation and technological advancements in organisational management. The United Kingdom follows with three articles, emphasising the role of MIS in small and medium-sized enterprises (SMEs) and business efficiency. With four articles, China demonstrates its growing research interest in artificial intelligence, big data, and cloud computing, particularly in competitive business environments.

Meanwhile, Germany and Australia each contribute two articles, with German research focusing on enterprise resource planning (ERP) systems and process optimisation. Australian studies highlight IT governance and digital transformation in public and private sectors. India also presents two articles, mainly exploring the impact of cloud-based MIS and fintech innovations in emerging markets. Lastly, Canada and France contribute one article each, with Canadian research touching on technological adoption in organisations and French studies focusing on strategic management and digital competitiveness.

This distribution underscores the global relevance of MIS and technological innovation in shaping organisational productivity, with varying regional focuses based on industry needs and technological advancements.

Discussion

Relationship of Management Information Systems and Organizational

The relationship between management information systems (MIS) and organisational productivity can be explained by the role of MIS in enhancing operational efficiency and effectiveness. MIS functions as a system that collects, stores, processes, and distributes information to support more accurate and timely decision-making (Nwankwo et al., 2020). With the effective implementation of MIS, organisations can automate various business processes, reduce operational costs, and improve coordination between departments, ultimately contributing to increased organisational productivity (Butt, 2020).

Additionally, the effectiveness of MIS usage can moderate the relationship between management information systems and organisational productivity. Factors such as employees' competence in using MIS, management support for system implementation, and the level of integration between MIS and business processes play a crucial role in determining the system's impact on organisational performance (Rahimi et al., 2016). Organisations that can optimise MIS utilisation tend to experience a more significant increase in productivity compared to those that merely adopt the system without a well-planned implementation strategy.

Based on this concept, it can be formulated that MIS positively impacts Organizational Productivity, and the effectiveness of MIS usage can strengthen this relationship. Research on this relationship is essential to provide insights into how organisations can leverage information technology more effectively to achieve competitive advantages and enhance their position in the industry.

Relationship of Technological Innovation on Organizational Productivity

The relationship between Technological Innovation and Organizational Productivity can be understood through the role of innovation in enhancing efficiency, optimising business processes, and improving overall performance (Al-Sa'di et al., 2017). Technological innovation refers to developing and applying new technologies, systems, and processes that help organisations adapt to changing market demands and improve their competitive advantage. By adopting innovative technologies, organisations can streamline operations, reduce costs, and increase output, ultimately boosting productivity (García-Sánchez et al., 2018).

Understanding this relationship is crucial for organisations seeking to leverage technology to improve efficiency, foster innovation-driven growth, and maintain a sustainable competitive advantage in an increasingly digital economy.

4. Conclusions

This literature review highlights the significant impact of Management Information Systems (MIS) and Technological Innovation on Organizational Productivity. The findings suggest that the effective implementation of MIS enhances operational efficiency, improves decision-making processes, and optimises resource allocation, ultimately leading to higher productivity levels. Additionally, technological innovation plays a crucial role in driving organisational growth by fostering automation, streamlining

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workflows, and enabling organisations to adapt to dynamic business environments.

Furthermore, the relationship between these factors and productivity is influenced by several moderating variables, such as technological adoption capabilities, employee competencies, and management support. Organisations that effectively integrate MIS and continuously adopt innovative technologies tend to experience greater efficiency, improved performance, and sustained competitive advantages.

Future research should empirically validate these relationships, explore industry-specific impacts, and assess how different levels of technology adoption influence organisational outcomes. By leveraging both MIS and technological innovation, organisations can enhance their productivity and remain competitive in an increasingly digital and fast-evolving business landscape.

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