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Article

THE ROLE OF STRATEGIC BUSINESS PLANNING IN DEVELOPING THE LEADERSHIP COMPETENCIES OF ACADEMICS AND IMPROVING INSTITUTIONAL PERFORMANCE

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Abstract: Background: Modern Management Information Systems (MIS) have become strategic organizational resources that integrate advanced technologies such as artificial intelligence, business intelligence, cloud computing, and data analytics to support managerial decision-making and enhance organizational performance. Despite substantial investments in digital technologies, many organizations continue to face challenges in translating technological capabilities into operational efficiency gains.
Objective: This study aims to examine the role of Modern Management Information Systems in supporting decision-making and improving operational efficiency. Specifically, it investigates the direct effects of Modern MIS on Decision-Making Support and Operational Efficiency, as well as the mediating role of Decision-Making Support in this relationship.
Methods: A quantitative cross-sectional research design was employed. Data were collected through a structured questionnaire distributed electronically to employees, supervisors, and managers working in organizations that utilize management information systems. A total of 385 valid responses were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) through SmartPLS 4. Reliability, validity, correlation, and mediation analyses were conducted to test the proposed hypotheses.
Results: The findings demonstrated positive perceptions toward Modern MIS (Mean = 3.74, $\alpha = 0.892$), Decision-Making Support (Mean = 3.81, $\alpha = 0.904$), and Operational Efficiency (Mean = 3.62, $\alpha = 0.879$). Correlation analysis revealed significant positive relationships between Modern MIS and Decision-Making Support ($r = 0.621$), Modern MIS and Operational Efficiency ($r = 0.605$), and Decision-Making Support and Operational Efficiency ($r = 0.658$). Structural model results indicated that Modern MIS significantly influenced Decision-Making Support ($\beta = 0.687$, $t = 12.74$, $p < 0.001$) and Operational Efficiency ($\beta = 0.348$, $t = 5.21$, $p < 0.001$). Furthermore, Decision-Making Support had a significant positive effect on Operational Efficiency ($\beta = 0.462$, $t = 7.33$, $p < 0.001$). Mediation analysis confirmed that Decision-Making Support significantly mediated the relationship between Modern MIS and Operational Efficiency ($\beta = 0.318$, $t = 6.75$, $p < 0.001$).
Conclusions: The study confirms that Modern Management Information Systems contribute significantly to organizational effectiveness by enhancing managerial decision-making capabilities and improving operational efficiency. The findings suggest that the strategic value of MIS is realized not only through direct operational improvements but also through its ability to facilitate informed, data-driven decision-making. Organizations seeking sustainable competitive advantages should therefore invest in advanced information systems while simultaneously strengthening analytical and decision-making competencies to maximize operational performance and support digital transformation initiatives.
Keywords: Modern Management Information Systems (MIS), Decision-Making Support, Operational Efficiency, Digital Transformation, Artificial Intelligence, Business Intelligence, Organizational Performance

1. INTRODUCTION

The current global organizations are characterised as fast technological advancement, volatility in the markets, and being very data-driven. The companies have begun to consider "Modern Management Information System (MIS)" as a strategic asset in helping to manage information, assist manager's decision making and enhance business performance, in order to catch up. In recent years, MIS has evolved to understand machine learning, artificial intelligence, data analysis, cloud computing and business intelligence to create efficient intelligence for decision maker (Biswas et al., 2024; Hamdat et al., 2024; Saremi, 2025; Kommisetty & Dileep, 2022).

Today's MIS is used to help the managers with the effective, timely and adequate information. These systems enhance ease for leaders to govern the decision with accuracy, cut down the degree of uncertainty in contexts of decision and offer the evidences based on piece of knowledge, guiding a rational choice. Evidences suggest that the effectiveness of the business and the rank with decision increase when an organization builds up an intelligence systems management plan (Niu. Et al., 2021; Hosen. Et al., 2024, Ahmed. Et al., 2022). Moreover, as agreed by Biswas: Et al., 2024 and Hamdat.

Similarly, the 21st-century management information system (MIS) also improves the effectiveness and speed of decision-making as the system supplies information equally throughout an organization. The use of AI in management information systems also introduces changes in decision-making processes.Additionally, the implementation of AI in management information systems leads to shifts in decision-making processes. According to many researchers, the effects of AI technologies in business decision-making are enormous, as it allows the analysis of huge volumes and sets of data that would be impossible to analyze without the support of AI (Ashuri et al., 2021; Beham et al., 2020; Vanmans & Alzu, 2024). AI in the organization became a reason for excellent project management methods and distributed systems (Foone et al., 2022; Alam and Alrouhi, 2023) which helps data calculation in various situations (Nelson et al., 2022; El Khatib et al., 2022; Kharuni et al., 2023; Mulyani et al., 2023). With AI, for example, managerial can develop smart, automatic approaches that make their organization agile, flexible long-range strategic plans, new products or services, and a gaining marketplace advantage (Kaggwa et al., 2024; Hamadaqa et al., 2024; Mullangi et al., 2023; Shwedeh & Alzoubi, 2024; Attah et al., 2024; Hammad & Abu-Zaid, 2024).

The modern MIS doesn't only aid the management in decision making process, but it also assists the business to get operational excellence. In the present times, business relies on several intelligent and sophisticated technologies to enhance their current business operation through effective business process streamlining, lower overall cost of business, more competitive products/services and higher service level (Bhima et al., 2023; Ajiga et al., 2024; AVILES, 2023). With the help of this digital framework organizations have achieved the higher levels of improvement in the process integration, better deployment of resources, automated workflows and overall performance in general that leading to operational excellence and organizational performance (Cosa & Torelli, 2024; Sadiq et al., 2022).

Most of the studies, however, are focused on operational efficiency and on decision support separately. The mechanism of how the current management information systems supports decisions in the organization in terms of operational efficiency is not explored in empirical studies. This study aims to clarify the role that modern management information systems and other developing technologies such as AI plays today.

1.1 Problem Statement

Although modern management information systems (MIS) are widely used in organizations, and they invest heavily in digital technologies, artificial intelligence, and data analytics, many organizations still fail to get a clear benefit in terms of operational efficiency from their technology. Although the new MIS gives the advanced tools for data collection, data analysis and information transmission, the efficiency of these systems is highly dependent on their capability to serve management decision making processes. A review of current evidence indicates that many organizations have advanced information systems and don't make the best use of them in supporting the strategic aspects of improving the quality of decisions and their operation. Moreover, with the complexity of business environment, decision makers must be able to process huge amount of information quickly and accurately; thus there is an increasing need to comprehend the role of modern MIS in the effectiveness of the business organization. Saremi (2025) believes that information systems have become a strategic asset for enhancing decision making and maintaining

a competitive edge, but the mechanisms by which information systems impact on the operational results have not been fully investigated. Hence, there is a significant research gap on the role of decision making support as a pathway in which MMIS improves operational efficiency, which needs further empirical research.

Accordingly, this study seeks to answer the following research questions:

1. To what extent do Modern Management Information Systems influence decision-making support?
2. To what extent do Modern Management Information Systems influence operational efficiency?
3. What is the effect of decision-making support on operational efficiency?
4. Does decision-making support mediate the relationship between Modern Management Information Systems and operational efficiency?

2. Hypotheses Development

2.1 Modern Management Information Systems and Decision-Making Support

Today, businesses rely on information intensive processes in order to make strategic and operational decisions. The markets have become more complex, technology is evolving quicker than ever and uncertainty is becoming more pervasive, making it more imperative than ever to have advanced information systems that can transform vast amounts of information into usable knowledge. Modern Management Information Systems (MIS) are a technological advancement that brings business intelligence, big data analytics, artificial intelligence, cloud computing and predictive technologies together to improve organization information-processing. These systems can deliver decision-makers timely, accurate, and relevant information to assess alternatives, mitigate uncertainty, and enhance the quality of managerial decisions (Biswas et al., 2024; Hamdat et al., 2024; Saremi, 2025).

The Information Processing Theory states that an organization that can gather, process, and act on information effectively will make better decisions and have better organizational results. Modern MIS can integrate information from different departments of the organization, improve communication within the organization and offer analytical tools, which can help in making decisions based on the information. With the help of sophisticated data analytics and business intelligence functions, managers are able to detect trends, forecast risks, assess performance, and plan and execute strategies more effectively (Niu et al., 2021; Hosen et al., 2024; Ren, 2022). Furthermore, quality information increases certainty and enhances management confidence when it comes to making complex decisions.

The use of management information systems in decision making has been further enhanced by recent developments in artificial intelligence. AI-driven systems can analyze vast amounts of data, uncover patterns, make predictions, and offer intelligent recommendations that enhance managerial decision-making (El Khatib & Al Falasi, 2021; Gupta et al., 2022; Prasanth et al., 2023). AI-based decision support systems have been shown to enhance decision-making accuracy, speed, and strategic impact, allowing managers to make decisions based on data in dynamic environments (Kaggwa et al., 2024; Hamadaqa et al., 2024; Mullangi et al., 2023; Shwedeh & Alzoubi, 2024). In addition, the adoption of emerging digital technologies in information systems has been proven to increase strategic flexibility and organizational adaptability by having a positive impact on the performance of decision making (Yoshikuni et al., 2023; Abdel-Basset et al., 2025).

From these theoretical considerations and empirical results, it may be inferred that organizations which employ advanced management information systems will have more managerial decision-making supporting capabilities.

H1: Modern Management Information Systems positively influence Decision-Making Support.

2.2 Modern Management Information Systems and Operational Efficiency

Operational efficiency is one of the major factors in the success of an organization, which is defined as the use of resources, the improvement of processes, cost reduction and productivity improvement. Modern Management Information Systems are gaining in importance in the context of the increasing competitiveness of the world.

Advanced information systems enable organizations to manage information in real-time, by integrating processes, automating workflows, and monitoring performance in activities, improving efficiency and effectiveness of the organization's activities (Biswas et al., 2024; Hamdat et al., 2024).

According to the Dynamic Capabilities Theory, the performance of an organization can be improved by the development of the capabilities which allows the organization to adapt its resources and processes to the changing environmental situation. Modern MIS provides an integrated platform that enhances coordination, communication and decision execution between organizational units to support these capacities. These systems aim to provide real-time and accurate data, which helps to improve operational efficiency, eliminate data duplication and facilitate ongoing process improvement (Sadiq et al., 2022; Cosa & Torelli, 2024).

In addition, the application of technologies such as artificial intelligence and automation in the management of information systems has revolutionized the operational processes. AI systems can automate repetitive tasks, optimize resource usage, predict operational needs, and uncover inefficiencies in processes, leading to improved productivity and cost savings for organizations (Bhima et al., 2023; Ajiga et al., 2024). The machine learning and predictive analytics features also help with operational planning and performance optimization by allowing organizations to anticipate operational issues and optimize resource use (AVILES, 2023; Ahmed et al., 2022). Likewise, research has revealed that the use of advanced digital technologies in organisations is associated with agility and flexibility in operations, making it easier for organisations to adapt to market changes and customer requirements (Kommisetty & Dileep, 2022; Saremi, 2025).

The advantages of advanced information systems in organizations consistently manifest in improved operational results, such as better process visibility, process automation and analytical capabilities, as shown by empirical evidence (Bhima et al., 2023; Ajiga et al., 2024; Cosa & Torelli, 2024). Thus, the use and successful application of modern MIS is expected to positively affect the efficiency of operations.

H2: Modern Management Information Systems positively influence Operational Efficiency.

2.3 Decision-Making Support and Operational Efficiency

Decision making is an important managerial task that affects organizational performance and effectiveness, and is widely recognized. Managers are tasked with making decisions on resource allocation, process management, risk handling and strategic implementation that are timely, accurate and informed, and to a large extent, the quality of operational outcomes depends on managers' ability to do this. Decision-making support helps organizations be more productive, more efficient and reach organizational goals.

Based on information Processing Theory, organizations with greater information processing ability are more likely to be able to create effective responses to environmental challenges and operational demands. Decision making support systems augment these capabilities through decision analytical tools, forecasting models, live data and smarter suggestions, which result in better quality and more effective decisions for managers. The capabilities allow for operational planning, performance monitoring and resource optimisation, thereby directly contributing to operational efficiency (Niu et al., 2021; Hosen et al., 2024).

This has been reinforced by the increasing use of data-driven decision-making methods, which brings the role of decision-making support and organizational performance together in a stronger manner. The studies showed that organisations that use data analytics and business intelligence, can obtain better operational results because the managerial decisions are made on objective evidence instead of intuition (Ahmed et al., 2022; Hosen et al., 2024). In addition, AI-powered decision support systems can enhance the precision of forecasts, risk analysis, and strategic planning, allowing organizations to address operational challenges proactively and effectively (Gupta et al., 2022; El Khatib & Al Falasi, 2021).

Recent research has indicated that IDSS systems are capable of enhancing organizational agility, responsiveness, and efficiency by helping managers to identify opportunities and threats more effectively (Kaggwa et

al., 2024; Hamadaqa et al., 2024; Mullangi et al., 2023). Similarly, in the healthcare sector, a variety of AI-driven decision support systems have been found to enhance decision-making processes, making them faster and more accurate (Attah et al., 2024; Shwedeh & Alzoubi, 2024). In the public administration sector, AI-driven decision support systems have proved to be beneficial for the performance of the organization by improving decision-making speed and accuracy (Shwedeh & Alzoubi, 2024). In the business sector, the performance of AI-integrated decision support systems has shown positive results, making the decision-making process faster and more accurate (Attah et al., 2024). Hence, it is expected that the organizations that have better decision-making support will have higher operational efficiency.

H3: Decision-Making Support positively influences Operational Efficiency.

2.4 The Mediating Role of Decision-Making Support

Modern Management Information Systems give organizations a sophisticated array of technical capacities, but do not provide any organizational performance for free. The benefits of information systems, however, are actually achieved when managers make effective use of the information created by the information system to make informed decisions that enhance organizational processes and results. The value of modern information systems is thus realized as a key mechanism in decision-making support.

The IS success model proposes that information quality, system quality and service quality affect organizational performance by impacting on user behavior and decision effectiveness. While valuable information resources are created in the modern MIS, their ultimate effectiveness will depend on the ability of the managers to utilize them to direct the organization's actions and operational strategies. Decision making support can therefore be seen as an intermediate stage between Technological Capabilities and Organizational Outcomes.

The importance of decision making in the realization of value of information systems is highlighted by several studies. Saremi (2025) stated that the competitive advantages information systems provide are mostly sustainable because they enable managerial decision making. In the same way, Biswas et al. (2024) and Hamdat et al. (2024) highlighted the role of information systems in improving the effectiveness of the organization by improving the quality of decisions and responsiveness. Furthermore, studies in the areas of business intelligence and big data analytics reveal that organizational value can be created through the use of information systems when the analytical information is converted into efficient managerial actions (Niu et al., 2021; Hosen et al., 2024).

Furthermore, AI-driven decision support systems have been found to be key enablers that enhance organizational performance and operational outcomes (Gupta et al., 2022; Kaggwa et al., 2024). Emerging technologies that are incorporated into information systems can improve the strategic flexibility and operational effectiveness of information systems, as well as information systems decision-making performance (Yoshikuni et al., 2023; Abdel-Basset et al., 2025). Thus, it is only appropriate to believe that contemporary management information systems not only directly enhance operational efficiency, but also indirectly due to its positive effect on supporting decision-making.

H4: Decision-Making Support mediates the relationship between Modern Management Information Systems and Operational Efficiency.

3. THEORETICAL FOUNDATION

This study's theoretical underpinning is based on three complementary theories: Resource-Based View (RBV), Information Processing Theory (IPT) and the Information Systems Success Model (ISSM). All these theories together offer a broad understanding of the role of Modern Management Information Systems (MIS) in the process of supporting decision-making and enhancing operational efficiency in modern organizations.

3.1 Resource-Based View (RBV)

The Resource Based View which was developed by Barney (1991) proposes that organizations can gain sustainable competitive advantage from their valuable, rare, inimitable and non-substitutable resources. Information and technological skills are now one of the most important assets of an organization in the digital world. Modern Management Information Systems are a key organizational asset, as they allow firms to gain, process, analyze and use information more effectively than their competitors. Modern MIS adds the concept of AI, business intelligence, big data analytics, and cloud-based technologies, which boosts the capacity of organizations to create knowledge and helps managers to be more effective (Biswas et al., 2024; Saremi, 2025; Kommisetty & Dileep, 2022).

From the RBV point of view, an organization with effective advanced information-processing systems will be able to make superior decisions and be able to perform operations more effectively. MIS can provide accurate and timely information, helping managers to identify opportunities, reduce risks, and optimize the use of resources, which will ultimately improve the efficiency and effectiveness of the organization (Yoshikuni et al., 2023; Abdel-Basset et al., 2025). As such, RBV offers a theoretical background in explaining the direct impact of Modern MIS on decision-making support, and impact on operational efficiency.

3.2 Information Processing Theory (IPT)

Another explanation of the role of information systems in organizational decision making is Information Processing Theory. The theory suggests that organizations need to be constantly taking in information to minimize uncertainty and respond to environmental complexity. In the current world of business, where business environments are becoming very dynamic and data intensive, organizations need to have highly sophisticated information systems which can gather, analyse and provide relevant information to the decision makers (Galbraith, 1973).

Modern MIS provides a significant improvement in the capacity of organizations to process information by combining various sources of information and by providing actionable information from raw data. By using advanced analytical tools, business intelligence applications and artificial intelligence technology, the managers can analyze complex information more efficiently and make decisions based on objective facts and data instead of relying solely on their intuition (Niu et al., 2021; Hosen et al., 2024; Ren, 2022). Additionally, AI-powered decision support systems enhance forecasting, problem-solving, and strategic planning capacities, enabling organizations to navigate dynamic environments and challenges more capably (Gupta et al., 2022; Kaggwa et al., 2024; Hamadaqa et al., 2024).

This view makes decision making support a direct result of improved information processing. Hence, IPT gives a theoretical underpinning for the relationship between Modern MIS and the decision making support and the later effect of decision making support on the operational efficiency.

3.3 Information Systems Success Model (ISSM)

The Information Systems Success Model created by DeLone and McLean (2003) is arguably one of the most well-known models in the field for the assessment of IS effectiveness and organizational impact. It states that system quality, information quality and service quality affect system use and user satisfaction. These determine individual and organizational impact.

In this study, however, Modern Management Information Systems are perceived as a computer-based platform depending on different levels of system quality and information quality. As seen before, high-quality information produced by information systems is correct, precise, timely, relevant, and, thus, helpful to managers in their decision-making and organizational performance. It has been found in the previous research that organizations gain more from their information systems when their information is well used in decision makings (Biswas et al., 2024; Hamdat et al., 2024).

The model implies that the organizational benefits do not come directly from technologies themselves, but through the effective utilization of the information generated by the system. This fact provides the argument of decision support mediating the impact of Modern MIS on operational processes and production performance (Saremi, 2025; Gupta et al., 2022; Bhima et al., 2023)

3.4 Theoretical Framework of the Study

Drawing on the combination of the RBV, IPT, and the IS Success Model, this study hypothesizes Modern Management Information Systems as a strategic organizational capability that facilitate information-processing capacity leading to high-quality managerial decision-making. As a result, high-quality managerial decision-making enhances operational efficiency by facilitating to optimize process, improve productivity, and decrease costs. From this presumption, the research framework adopts the hypothesis that Modern MIS directly and indirectly through the mediating effect of decision-making support influences on operational efficiency.

Combining these theoretical perspectives equips us with a comprehensive framework to analyze the role of sophisticated information systems in enhancing organizational performance within today's digital transformation, artificial intelligence, and data-centered environment.

4. RESEARCH METHODOLOGY

This study employed a quantitative research approach using a cross-sectional survey design to investigate the role of Modern Management Information Systems (MIS) in supporting decision-making and improving operational efficiency. The study was guided by a deductive research strategy, whereby hypotheses derived from the theoretical framework and previous empirical studies were empirically tested using primary data. Data were collected through a structured questionnaire distributed electronically to employees, supervisors, and managers working in organizations that utilize management information systems in their daily operations. A total of 385 valid responses were obtained and included in the final analysis. The questionnaire comprised three main constructs: Modern Management Information Systems (MIS), Decision-Making Support, and Operational Efficiency. Measurement items were adapted from established studies in the fields of information systems, decision support, and organizational performance and were assessed using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Data analysis was conducted using SmartPLS 4 following the two-step approach recommended for Structural Equation Modeling (SEM-PLS). First, the measurement model was evaluated through reliability and validity assessments, including Cronbach's Alpha, Composite Reliability (CR), and Average Variance Extracted (AVE). Second, the structural model was examined by assessing path coefficients, coefficients of determination (R^2), and hypothesis testing using the bootstrapping procedure. Additionally, mediation analysis was performed to evaluate the mediating role of Decision-Making Support in the relationship between Modern Management Information Systems and Operational Efficiency.

5. Data Analysis and Results

Number of valid data was 385 responses which are analyzed for final result. The respondents of Modern Management Information Systems (MIS) were drawn from wide variety of organizations in various sectors, from supervisory level up to top management level. This comprises employees working at various position in the organization at various experience level which the research team considers sufficient for Hypothesis Testing.

Table 1. *Descriptive Statistics and Reliability Analysis*

Construct	**Mean**	**SD**	**Cronbach's Alpha**
Modern MIS	3.74	0.81	0.892
Decision-Making Support	3.81	0.77	0.904
Operational Efficiency	3.62	0.85	0.879

The descriptive statistics indicate positive perceptions toward Modern Management Information Systems, Decision-Making Support, and Operational Efficiency. The mean values ranged between 3.62 and 3.81, suggesting that respondents generally agreed with the statements measuring the study constructs. Furthermore, Cronbach's Alpha values exceeded the recommended threshold of 0.70, confirming the reliability and internal consistency of the measurement scales.

Table 2. Correlation Analysis

Variables	MIS	Decision-Making Support	Operational Efficiency
Modern MIS	1.000	0.621	0.605
Decision-Making Support	0.621	1.000	0.658
Operational Efficiency	0.605	0.658	1.000

The obtained correlations shows significant positive relationship between all variables investigated. The impact of modern MIS on Decision-Making Support and Operational efficiency showed positive relationships, same for the relationship between Decision-Making Support and Operational efficiency shows a significant positive impact meaning more effective decision management leads to a higher operation efficiency.

Table 3. *Hypotheses Testing Results*

Hypothesis	Relationship	β	t-value	p-value	Result
H1	MIS → Decision-Making Support	0.687	12.74	<0.001	Supported
H2	MIS → Operational Efficiency	0.348	5.21	<0.001	Supported
H3	Decision-Making Support → Operational Efficiency	0.462	7.33	<0.001	Supported

It can be observed that Modern Information System positively affects Operational Efficiency and it also has significant impact on Decision-Making Support, in additional, it also positively impact on Decision-Making Support from its structural models result. Based on result, we could conclude the organizations can be resulted to better of their operational efficiency from well developed information system and decision making capacity.

Table 4. *Mediation Analysis*

Indirect Relationship	β	t-value	p-value	Result
MIS → Decision-Making Support → Operational Efficiency	0.318	6.75	<0.001	Supported

However, in light of the mediating impact that can explain how modern information systems indirectly promote operational outcomes, the test of indirect effect indicates that Decision-Making Support serves as a mediating variable between Modern Management Information Systems and Operational Efficiency.

6. DISCUSSION

This research sought to investigate how Modern Management Information Systems (MIS) help in supporting decision-making and increasing operational efficiency. Based on findings from the research and further analysis, there is compelling evidence that Modern Information Systems (MIS) have a positive and significant impact on the organizational effectiveness through their role in enhancing managerial decision-making capability and increasing the operational results. It was discovered that the impact of Modern MIS is positively significant with respect to Decision-Making Support, meaning that organizations implementing modern information systems have better ability to process,

develop and produce required information to make their operational and strategic decisions effectively, in support of prior researchers' claims of the influence of the quality of the available information, the level of system integration, and of analytical function and capacity of a given system (Biswas et al., 2024; Hamdat et al., 2024; Niu et al., 2021).

Furthermore, results indicate a positively significant relationship between the adoption of Modern MIS and Operational Efficiency, concluding that organizations effectively implementingmodern information systems can streamline its business processes, make better allocations of resources, reduce operation's delays, and improve organizational productivity overall, corroborating what previous research found about how technological advancements help in streamlining organization operations, allocation of resources, process execution, and improvement of overall productivity and productivity (Bhima et al., 2023; Ajiga et al., 2024; AVILES, 2023).

The study also found evidence of a significant positive association between Decision-Making Support and Operational Efficiency;this finding highlights the effect of having clear information and being able to develop and produce it through an operational and management system, which contributes to higher levels of performance for any given entity, as corroborated by some empirical studies that investigate the role of data in decision making and AI to improve efficiency and organizational performance (Ahmed et al., 2022; Gupta et al., 2022; Kaggwa et al., 2024). The results of this study's investigation provide support that Modern MIS has indirect but significant effect on Operational Efficiency through Decision-Making Support which plays a moderating role. That means the advantage of adopting advanced technology information system would only be realized if these technologies enhanced managerial decision-making processes. This supports the Information Systems Success Model, which suggest that the benefits of technology were obtained when information system results can actually lead to an improvement in decision makers process.

Also the result is compatible to what was concluded by researchers that organizations that take the advantage of Modern Information Systems will lead to increased decision-making performance and organizational effectiveness (Saremi, 2025; Yoshikuni et al., 2023).

This study reinforces the contribution to the theoretical perspective that Information systems represent valuable organisational resources that add to the company's IT capabilities, enhancing information processing efficiency and facilitating effective decision-making, in support of Resource-Based View (RBV) and Information Processing Theory (IPT). This is practical implications for organizations that not only should they invest in advanced IT, but also build up decision-making ability, analytic skill and workforce competency.

7. LIMITATIONS AND FUTURE RESEARCH

Although the research has contributed to the understanding of the issue, it does have limitations that must be highlighted here. Firstly, this research employed a cross-sectional study design; therefore, causality amongst variables of interest over time can not be determined. In future research, longitudinal study may be taken so as to observe the impact of Modern Management Information Systems on various phases of Organizational Growth and Digital transformation development.

Secondly, due to the use of questionnaire, only self-rated data may consist of Common Method bias, and be subjective by any individual. As an alternative, future research may combine survey based questionnaires with the actual indicators on actual performances.

Thirdly, only direct and indirect impacts between Modern MIS, Decision-Making Support and Operational Efficiency have taken into consideration. Organizational culture, technological readiness, innovation capacity, leadership styles and digitalization maturity are likely other potential variables which can either positively or negatively impact these relationships, and Future research should investigate these factors' moderation effects on these relationships.

Further, the evolution of artificial intelligence, machine learning and predictive analytics will open new perspectives of research in this area. New research will likely examine the impact of information systems which enabled by AI/ML on Strategic decision-making, Organizational Agility and Sustainability. Comparison among industries as well as types of organization, it will be helpful to see how information system will build value under various conditions of surrounding.

Lastly, with multiple datasets and advanced quantitative analysis methods, future research may enhance the findings in this dissertation, by contributing to a richer and fuller explanation on the strategic impact of information systems.

8. CONCLUSION

This study explored the contribution of Modern Management Information Systems toward decision making and operational efficiency. Results validated that modern information systems considerably aid in decision making process, due to provide them fact based, authentic and timely data that guides the managers toward the alternate options on the part of the decisions. Furthermore results validated that Modern MIS have direct contribution toward operational efficiency through process efficiency, resource efficiency and production efficiency.

Furthermore our analysis demonstrated the fact that Decision-Making Support is the major contributing mechanism in operational efficiency & provides the major mediating mechanism through which Modern Management Information Systems deliver the value in the organization.

The effectiveness of IT in the organization mainly depends upon ability to improve the management decision-making. This study addresses this research question and enhances the body of information and digital transformation literatures by documenting these interdependencies. The key contributions of this research study suggest that managers should focus on integrating the strategic perspective of their MIS implementation in terms of enhancing and supporting the decision making capacity of the organization

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