

The Impact Of Management Information Systems On Management Decision-Making In Saudi Arabian Firms

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Abstract

Information has developed as a vital reserve for managing contemporary organizations, since today's commercial environment is instable, dynamic, tempestuous, and necessitates the escalating demand for precise, relevant, wide-ranging, well-timed, and cost-effective information needed to get-up-and-go the decision-making method in order to emphasize organizational capabilities to manage opportunities and pressures. Unfortunately, Saudi Arabian organizations have generally lagged behind as compared to developed countries in developing and implementing MIS for management decision-making. This research paper is a reflection of the collective discourse available in the literature regarding the relationship between management information systems and managerial decision-making and their impact on Saudi organizations. A thorough development and organization of MIS in an organization is capable of activating choices that would not only be debauched and precise but would be in streak with industry best practices and eventually result in organizational competence and efficiency in Saudi Arabian organizations.

Keywords: *Management, Organization, Information, Systems, Management Information Systems, Management Decision-Making, Organizational Efficiency, Management in Saudi Arabia, MIS in Saudi Arabia.*

Introduction

Management Information System (MIS) is a systematized, computerized, and diverse information classification that gathers, supplies, processes, and dispenses data related with diverse divisions of the business. This data is treated in numerous forms, such as charts, illustrations, tables, and reports to produce precise, pertinent, and valued information for the organization. This information is further interconnected to the numerous divisions to be used for Management Decision-Making. MIS system delivers central storing of all the corporate information. There are numerous kinds of MIS classifications which are rummage-sale to advance improved understanding of the marketplace. MIS is used transversely in all levels in a business. For instance, MIS delivers vital information at high-ranking levels to aid making deliberate decisions. At supplementary levels, MIS detects an administration's activities and allocates information to the organization and clients. MIS is very significant for each organization since it not only gathers and manages information, but also signifies it in numerous formats valuable for the organization to make significant management decisions. The literature will be primarily searched with the help of the key words, i.e. Management, Organization, Information, Systems, Management Information Systems, Management Decision-Making, Organizational Efficiency, Management in Saudi Arabia, and MIS in Saudi Arabia. The information needs of contemporary organizations have developed quite enormous and thought-provoking to the degree that each organization necessities to pay great consideration to how information is collected, stored, dispersed, and applied (Thong, 1999). This state has arisen because of factors such as augmented organizational size, extended operational room, competitive impact, and overall environmental impulses. Today's organizations necessitate tools to support faster and automatic decisions; only an operational management information system can amend this test. It is significant though to identify that the computer takes recognition for amplified interest in management information systems since it affluences and enables data processing. With quicker access to desirable information through MIS, executives are capable to make dynamic and well-timed decisions regarding finance, HR, operations, and countless more as it anxieties their

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organizations. Management decision-making refers to the procedure of selecting certain outlines of action from between many substitutes. Decision is essentially an essential piece of management and it happens at every level.

Statement Problem

The primary challenge confronting many Saudi Arabian firms lies in the ineffective development and integration of Management Information Systems (MIS), which significantly hampers the quality and agility of managerial decision-making. In an era defined by global digital transformation, the ability to leverage information systems for processing complex data into actionable intelligence is a cornerstone of competitive advantage. However, a substantial gap persists between the technological capabilities available and their practical application within the Saudi business context. This deficiency creates a critical problem, as organizations struggle with delayed, inaccurate, or insufficient information flows, leading to strategic decisions that are reactive rather than proactive. This inadequacy prevents firms from fully capitalizing on the strategic initiatives outlined in Saudi Vision 2030, which emphasizes digital economy growth. A recent study by Alghamdi and Beloff (2021) supports this, finding that a significant number of Saudi organizations still rely on fragmented data sources and legacy systems, which directly constrains the strategic analytical capabilities of their management teams.

Further compounding this issue is the strategic-operational misalignment in how MIS is utilized. Even in firms that have invested in advanced information systems, there is often a disconnect between the system's potential and its actual use in supporting high-level strategic choices. The problem extends beyond mere technological adoption to encompass the strategic mindset and digital literacy of decision-makers. Many managers are not adequately equipped to interpret complex data outputs or integrate them into long-term planning, causing a reliance on intuition over data-driven insights. This was highlighted in the research of Alotaibi (2022), who investigated the manufacturing sector and concluded that while operational-level data collection had improved, the translation of this data into predictive analytics and strategic foresight remained markedly weak. This indicates that the problem is not solely one of system infrastructure but also of managerial competence and the strategic framework governing MIS implementation.

The consequences of this overarching problem are profoundly reflected in diminished organizational efficiency and competitive edge. Without a robust MIS framework, Saudi firms face internal inefficiencies, including redundant processes, poor resource allocation, and slow response times to market fluctuations. This internal drag makes them vulnerable to both international competitors and more agile local enterprises that have successfully embraced digital tools. The inability to make swift, precise, and forward-looking decisions stifles innovation and limits market expansion opportunities. A study by Al-Matari and Al-Swidi (2023) provided empirical evidence for this, demonstrating a strong positive correlation between the sophistication of MIS use and key performance indicators like operational efficiency and customer satisfaction in the Saudi service industry. Their findings underscore that the failure to resolve the MIS-decision-making nexus is not just a technological shortfall but a direct impediment to achieving sustainable organizational competence and economic growth in the Kingdom.

The Gap

Despite the acknowledged importance of Management Information Systems (MIS) in enhancing organizational decision-making, a significant research gap exists concerning the specific human and organizational factors that determine the success of MIS implementation within the unique socio-economic context of Saudi Arabia. Existing literature, while establishing a general correlation between MIS and improved performance, often overlooks the critical mediating variables. There is a lack of in-depth, qualitative studies that explore how elements such as organizational culture, leadership support, and resistance to change among middle management specifically influence the effective adoption and utilization of MIS in Saudi firms. For instance, while a study by Alghamdi and Beloff (2021) identified the prevalence of legacy systems, it did not extensively investigate the underlying cultural or leadership barriers that perpetuate their use, leaving a gap in understanding how to facilitate a successful transition to more advanced systems.

Furthermore, a clear gap is evident in the development and testing of tailored frameworks or models designed to guide Saudi organizations in integrating MIS with strategic decision-making processes. Most available models are derived from Western contexts and may not fully account for the distinctive characteristics of the Saudi business environment, including its specific regulatory landscape, nationalization policies, and the rapid pace of transformation driven by Vision 2030. The

research by Al-Matari and Al-Swidi (2023) demonstrates a correlation but does not provide a prescriptive model for achieving it. Therefore, there is a pressing need for research that not only identifies these challenges but also proposes and validates context-specific implementation frameworks that can help Saudi Arabian firms bridge the gap between merely having an MIS and leveraging it as a true strategic asset for superior decision-making and competitive advantage.

The Research Questions

1. What is the current status and perceived effectiveness of Management Information Systems (MIS) in supporting the management decision-making process within Saudi Arabian firms?
2. What are the principal challenges and critical success factors influencing the implementation and utilization of MIS in the Saudi business context?
3. How does the use of MIS quantitatively and qualitatively impact financial and organizational performance indicators in these firms?
4. What are the key components of a practical and cost-effective MIS model tailored to meet the management decision-making needs of Saudi Arabian organizations?
5. What specific recommendations and strategic guidelines can be developed for senior management to enhance the integration of MIS into their strategic planning and operational decisions?

Research Aims & Objectives

1. To conduct an in-depth Research Study on the role of MIS in Management Decisionmaking Process in Saudi Arabian Firms.
2. To collect exhaustive Primary Data on MIS Implementation in Saudi Arabian Firms.
3. To undertake Empirical Studies and Analysis; using both Primary and Secondary Data to produce accurate findings.
4. To assess ever-increasing importance of MIS in Saudi Arabian Firms.
5. To analyze Financial and Organizational Performance Indicators that are dependent on the use of MIS in Management Decision-making Process for Saudi Arabian Firms.
6. To formulate a practical and cost-effective MIS Model for Saudi Arabian Firms for their Management Decision-making needs.
7. To propose recommendations and guidelines for Senior Management at Saudi Arabian Firms.
8. To identify Research Gaps and propose a Roadmap for Future Research on the Impact of Management Information Systems on Management Decision-making in Saudi Arabian Firms.

Literature Review

Defining Management Information Systems would first necessitate splitting the topic into three sides of Management, Information, and Systems. Therefore, management is defined as the method through which planning, establishing, starting, and governing of processes within business are conducted. Information refers to tributary of data that have been treated to the procedure that it makes logic to its handlers. Briefly put, information is systematized data that has sense (IMF, 2012). System is an accumulation of diverse but consistent and symbiotic parts that work as a whole to accomplish shared concern; a set of fundamentals combined together for a shared objective. Arbitrating from these opinions, it is debatable that each system includes parts, which are unified and consistent; becomes one unit and subsequently tracks shared objective (Goulding, 2012).

Sketch from the previous researches, it appears that defining MIS is now an unpretentious job, nonetheless that is not precisely so. There is no generally accepted meaning of MIS and those that happen reproduces the stress and preconceptions of the specific researcher that offers it (Walsham, 2006). MIS is essentially related with the procedure of gathering, treating, storing, and conveying pertinent information to assist decision-making in any organization; an arrangement to adapt data from inner and outer sources into evidence; and to interconnect that information in a suitable arrangement to executives at all levels, in all purposes to allow them make welltimed and operative decisions for planning, leading, and controlling the actions for which they are accountable. MIS is a prearranged technique of providing historical, current, and forecast Information concerning to internal processes and

industry intelligence. It provisions the planning, leading, and operational tasks of an organization by supplying even information in an appropriate timeliness to support the decision-making procedure.

Inferring from the available literature on management decision-making and MIS, numerous points of merging are characteristic:

- MIS includes data gathering from any obtainable source,
- treating, dispensation, and ultimate practice.
- Such information is collected on historical, current, and predictable future proceedings 8 from inside and exterior of the organization.
- MIS is made accessible to those that necessitate it at the correct time and correct place.
- MIS eventually provisions decision-making process (Misa, 2003).

Nevertheless, the accomplishment of MIS in any organization is dependent on its plan. Evolving an operational MIS includes the efforts of executives as well as those of experts. The professional is burdened with delivery of technical proficiency. Functional professional must be involved to propose pertinent ideas vis-à-vis their field. For instance, a bookkeeper should be fragment of bookkeeping information systems, similarly marketers and so on. MIS design also necessitates acquaintance from numerous disciplines. Extensive and increasing range of ideas and methods need to function correctly. A worthy and valuable MIS requires satisfactory acquaintance of the connections and interactions among numerous fields. It is significant to understand that the MIS of every organization can be sectioned in sub-systems that are the well-designed fragments of the enterprise (Senyucel, 2006).

Limitations

This study on the Impact of Management Information Systems on Management Decision-Making in Saudi Arabian Firms was conducted within a specific set of boundaries to ensure focus and feasibility. The primary limitations were as follows:

Temporal Boundaries: The literature review was deliberately bounded by a specific time frame. The core of the selected literature was published in recent years, with a specific, additional set of 100 articles being selected from the period of 1995 to 2014. Consequently, the findings and the resulting "up-to-date understanding" were contextualized within this specific era and may not fully reflect technological or managerial developments post-2014.

Geographical and Contextual Boundaries: The research exclusively focused on firms operating within the Kingdom of Saudi Arabia. The case studies were drawn from various organizations across different industries within the Kingdom. Therefore, the findings are primarily relevant to the Saudi business environment, with its unique economic, cultural, and regulatory context, and their direct generalizability to other national or regional contexts is limited.

Methodological Boundaries: The study adopted a parallel research approach that combined historical/theoretical, contemporary/scientific, and empirical/comparative sources. While this was a strength, it also presented a boundary. The reliance on a case study methodology, although valuable for depth and real-world context, meant that the findings were more illustrative and in-depth rather than being broadly statistically generalizable to all Saudi firms. The authenticity of these case studies was prioritized, as per Gallivan (2003), over quantitative breadth.

Source and Scope Boundaries: The research was fundamentally a critical analysis of existing literature and case studies rather than a primary data collection effort such as a widespread survey or a controlled experiment. The identification of literature was constrained by the accessibility of the sources, and the selection was based on perceived relevance to the thesis topic. While references were tracked to find additional sources, the study was ultimately limited to the body of literature that was identified and deemed relevant through its screening process.

Conceptual Boundaries: The study was centered on specific key concepts, namely Management, Organization, Information, Systems, Management Information Systems, Management Decision-Making, and Organizational Efficiency. While the review spanned multiple fields (E-commerce, International Business, Management, Marketing, and Finance), the analysis was funneled through the lens of MIS's impact on decision-making. Broader organizational or technological factors not directly tied to this central relationship were outside the core focus.

Disciplinary Balance as a Boundary: The thesis explicitly navigated the tension between qualitative and quantitative research traditions within the MIS field. By choosing a blended approach, it committed to a specific philosophical and methodological stance. This meant that the study did not fully align with purely positivist/quantitative paradigms dominant in fields like economics, nor did it fully embrace the purely technical approaches of computer science. Its findings were thus framed by this particular, balanced academic position

Research Methodology

This research employed a comprehensive methodology to investigate the Impact of Management Information Systems on Management Decision-Making in Saudi Arabian Firms. The existing academic research on the topic was carefully deliberated, and an effort was made to deliver a combined depiction of the present level of acquaintance in this arena. To present a holistic viewpoint of the alterations among different research methods, this thesis comprised contributions from varied and hitherto pertinent fields of understanding. It incorporated opinions on the topic from the domain of MIS experts concerning the impacts of Management Information Systems on Management Decision-Making in Saudi Arabian Firms. Academic papers, books, and additional electronic sources published in recent years were utilized for this purpose. Study papers and accounts from a recent time period were designated on the foundation of their significance to the topic of this thesis.

The key concepts related to the Impacts of Management Information Systems on Management Decision-Making in Saudi Arabian Firms were clarified. Subsequently, aid and concentrate on the previously suggested space of the topic were designated and presented. The significant findings were developed through a complete review of literature in varied fields: E-commerce, International Business, Management, Marketing, and Finance. The key words guiding the research were Management, Organization, Information, Systems, Management Information Systems, Management Decision-Making, Organizational Efficiency, Management in Saudi Arabia, and MIS in Saudi Arabia. The summaries of these writings and their foundations were prudently screened to identify the most relevant articles. An additional 100 articles published between 1995 and 2014 were selected. The chief sources of these articles were accessible in a table provided at the end of the thesis. This study provided MIS scholars with an up-to-date understanding of how MIS affects Saudi commerce and marketing activities, and what the tendencies of MIS-related business and marketing are in the immediate future.

References in those papers were inspected to classify additional contributions from supplementary sources. This thesis provided a critical valuation of the literature in the arena of MIS in business and management to propose the information relevant to the topic, while simultaneously affirming literature gaps and boundaries of research. It was not merely a summary but also assessed and displayed associations among these possible sources.

The research integrated diverse source types: Research Papers & Reports: (Historical-Theoretical) . Case Studies: (Contemporary- Scientific). Expert Analysis: (Empirical- Comparative)

As an in-depth study, a combination of qualitative and quantitative research of an investigative and explorative nature was undertaken. Various empirical findings and case data were incorporated to substantiate the findings.

Case studies were examined from various organizations in different industries across the Kingdom of Saudi Arabia. The case study methodology was selected because it enabled the examination of the phenomenon in real-world settings. While deriving data and analysis from various case studies and researches, authenticity and acceptance of the findings were given utmost importance (Gallivan, 2003).

To achieve an all-inclusive analysis, a parallel research approach was adopted to include historical, contemporary, and futuristic findings on one hand, and theoretical, empirical, and pragmatic findings on the other hand. This research methodology balanced out the gaps in existing research and managed to present an academic-cum-professional perspective on the Impact of Management Information Systems on Management Decision-Making in Saudi Arabian Firms.

This study aligned with the standard course of investigation accomplishments in developed research studies, which often include both qualitative and quantitative approaches. Academics may gain standings based on one or the other, or in particular cases on a mixture of both. In arenas such as sociology, history, management, and political science, the equilibrium has been hit, and the rubrics are acknowledged. Commercial studies in over-all, and information systems in specific, have had a far tougher time coming to terms with this equilibrium. With many contemporaries consuming wholly quantitative approaches in economics, accounting, and behavioral sciences, and others jabbing strictly

to recognized approaches in computer science and technology, one had to contest a difficult battle at epochs. This thesis stood as evidence of the maturation of information systems as a field, which can simultaneously make out the space for qualitative and quantitative research methods. Qualitative research in MIS was established from a wide diversity of traditions, as demonstrated in this study. MIS researchers observed other disciplines to smear qualitative human-computer boundaries. Only lately, nevertheless, had it appeared essential to try to describe what qualitative investigation fundamentally is and, even more immediately, to protect it in contradiction of those who disregard or disparage it. Qualitative investigation in MIS needed to reunite two services in each example. The first was the method and standard predictable in the discipline from which the technique was occupied. The second was to safeguard that the method, or the linked academic legacy from other fields, did not reduce the MIS purpose and importance in studying the Impact of Management Information Systems on Management Decision-Making in Saudi Arabian Firms. This was not a laidback job. Occasionally the subject at stake was as relevant to MIS as a subject that one could or should supervise, or avoid the values that the causative subject applies. There was also a need to take up the techniques that had established themselves as effective in other subjects, without losing sight of the core MIS issues in the context of Saudi Arabian firms.

Selected Research Sources

Following is a selective list of peer-reviewed scholarly journals that deal with Management and Organizational Implications of Management Information Systems.

Name	A Short Description
International Journal of Electronic Commerce (IJEC)	First-ever academic journal dedicated exclusively to advancing the understanding and application of Electronic Commerce. Presents an integrated view of the discipline covering the areas of Organizational Performance, Management Information Systems, Computer Science, Economics, and Social Sciences.
Electronic Markets (EM)	Concerned with the effects of the Electronic Commerce, Organizations, and Consumers.
Electronic Commerce Research (ECR)	The periodical concentrates on academic and empirical research that leads to better awareness of Electronic Commerce and its Practical Implications.
Electronic Commerce in Organizations (ECO)	Provides wide-ranging coverage and understanding of the social, cultural, organizational, and psychological cognitive impacts of Electronic Commerce technologies and advances on Organizational Performance.
Organizational Computing and Electronic Commerce (OCEC)	Publishes research articles related to the impact of Electronic Commerce on organizational design, operations, and performance.
Quarterly Journal of Electronic Commerce (QJEC)	Covers Electronic Commerce Applications in general.
Electronic Business (EB)	The magazine for management professionals; describes business impacts of Electronics Commerce.

Name	A Short Description
Electronic Commerce Research and Applications (ECRA)	Creates and disseminates continuing knowledge in the Electronic Commerce environment. Addresses major contemporary dilemmas in Electronic Commerce.
Journal of Theoretical and Applied Electronic Commerce Research (JTAER)	Majors topics of JTAER are: Applications of Electronic Commerce; Business Models for Electronic Commerce; Legal, Ethical, and Social Considerations of Electronic Commerce; Methodology of Electronic Commerce Design, Electronic Government, etc.

Recommendations

1. Establish Central Data Governance: Create a central office to unify data standards and build a single data warehouse, breaking down departmental silos.
2. Implement Tiered Training: Deliver customized training: data literacy and dashboards for executives, and technical report generation for operational staff.
- + Integrate Processes with Cross-Functional Teams: Form teams from different departments to redesign workflows, ensuring MIS directly feeds strategic Key Performance Indicators (KPIs).
4. Adopt a Phased Implementation: Start with a small-scale pilot project in one department to demonstrate value and manage change effectively before full rollout.
5. Create a Performance Measurement Framework: Continuously track MIS ROI with pre- and post-implementation KPIs and assign "Business Owners" to align system evolution with user needs.
6. Leverage Localized Expertise: Partner with vendors and consultants who have proven regional experience to access tailored solutions and reduce implementation risk.

Conclusion

This research concludes that the core challenge for Saudi Arabian firms is not a lack of technology, but a strategic gap in its integration. The findings reveal a significant disconnect where advanced Management Information Systems (MIS) are often underutilized. Many organizations possess the technical tools but fail to leverage them for strategic decision-making, relying instead on fragmented data or intuition. This gap between potential and practice ultimately hinders competitiveness and operational agility in a rapidly evolving market.

Bridging this gap requires a shift in focus from purely technological solutions to a more holistic approach. The human and organizational dimensions emerge as equally critical. Success is fundamentally linked to cultivating digital literacy among managers and fostering a corporate culture that values data-driven insights. Furthermore, strong leadership commitment is indispensable to champion this transformation and guide the organization through the necessary changes.

A practical pathway forward involves adopting a phased and tailored implementation strategy. Rather than overwhelming the organization with a massive system overhaul, starting with pilot projects in key departments can demonstrate value and build momentum. This should be supported by a robust governance framework that continuously measures performance and ensures the system evolves to meet real business needs, transforming the MIS from a support tool into a core strategic asset.

Ultimately, the effective integration of MIS is a strategic imperative that aligns directly with the broader objectives of Saudi Vision 2030. By building a data-centric culture, investing in human capital, and implementing systems thoughtfully, firms can unlock superior decision-making and sustainable +growth. This journey positions Saudi Arabian organizations not only to enhance their internal efficiency but also to strengthen their contribution to the Kingdom's ambitious digital economic transformation

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