

THEORETICAL FRAMEWORK OF MANAGEMENT INFORMATION SYSTEM: ROLES AND CHALLENGES

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Abstract: This study aims to investigate the theoretical framework of information systems, focusing on their role. The issue arises from the absence of a management information system, which negatively impacts performance. The study highlighted the significance of the social cognitive theory. The study also highlighted the importance of the roles and challenges of implementing management information systems. The study employed a quantitative research method to explore the theoretical framework of management information systems, specifically focusing on their roles and challenges. The findings of the study reveal that the organization used a management information system to improve performance. Furthermore, the primary challenge for management information systems was the employees' lack of experience. The study recommends using employee self-efficacy to understand the regulation of management information systems.

Keywords: Management Information System, Roles, Challenges, theoretical framework

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INTRODUCTION

The management information system is crucial for the success of modern organizations. It is a method and a set of practices that aid people in obtaining the necessary information for effective management. This article intends to delineate the fundamental responsibilities and issues that management must address, along with the policies and procedures it must implement to proficiently oversee the corporate information systems function (Tallon et al., 2019).

It can classify management functions in information systems based on the essential actions that all managers undertake: planning, regulating, organizing, staffing, and leading. Planning involves identifying critical areas of management expertise and prioritizing them appropriately. Controlling requires the formulation of suitable regulations and procedures to ensure the effective functioning of information systems. Organizing entails establishing a structural framework that facilitates information dissemination and assigns accountability. Staffing involves acquiring the necessary personnel with the appropriate skills and expertise to manage the information systems. Leadership requires fostering a culture of information security awareness and commitment to effective information management.

PROBLEM STATEMENT

The issue lies in the challenges that management information systems encounter within organizations. Furthermore, a lack of understanding about the role of management information systems can result in a decline in the organization's performance. Thus, this study aims to determine the role of management information systems. Furthermore, this study aims to determine the challenges associated with management information systems. This study could potentially offer valuable insights into how management information systems could enhance performance in this particular setting. This research emphasized the significance of social cognitive theory.

SOCIAL COGNITIVE THEORY

Albert Bandura, the esteemed psychologist, developed Social Cognitive Theory (SCT), a comprehensive conceptual framework that elucidates the mechanisms by which people acquire and sustain behavioral patterns, while also providing valuable insights into the determinants that impact the learning process. This theory posits that a complex and interactive relationship between personal, behavioral, and environmental elements, known as "triadic reciprocity," influences human conduct. (Stewart et al., 2020).

The core principle of Social Cognitive Theory is that individuals may acquire novel behaviors via the process of observational learning or modeling, whereby they see and imitate new management information systems. This process includes the assimilation of knowledge, skills, and techniques by observing others, and it may take place in several contexts, such as the information system and community. In addition, social cognitive theory acknowledges the influence of cognitive processes, such as attention, memory, and motivation, on behavior. Individuals are not passive receivers of information; instead, they actively interact with their surroundings, choosing which signals to pay attention to, processing and retaining information in their memory, and using this knowledge to direct their behavior. The theory acknowledges the influence of extrinsic factors like social norms, reinforcement, and punishment on the selection or maintenance of a particular behavior (Otaye-Ebede et al., 2020).

Social cognitive theory has extensive applications that include a wide range of areas in human behavior, such as self-efficacy and work performance. Within the managerial environment, this theory has played a crucial role in comprehending the elements that influence work performance, such as self-efficacy, goal planning, and the influence of employees and managers as role models. Moreover, social cognitive theory has played a crucial role in comprehending and tackling organizational difficulties, such as workplace efficiency, self-confidence, and job effectiveness. The theory offers a complete framework for understanding and influencing human behavior in the workplace by acknowledging the interaction of personal, behavioral, and environmental elements. Ultimately, social cognitive theory is a potent and important paradigm that has greatly enhanced our comprehension of human behavior (Otaye-Ebede et al., 2020).

RESEARCH METHODOLOGY

According to Berends and Deken (2021), a research design refers to a formal scientific way to explain the research problem. Such scientific method identifies the formulation of research hypotheses and the implications deduced from them. On the other hand, the research hypotheses entail the descriptions of specific behavior and happening. The research plan has been formulated to employ a quantitative research method approach, which entails the utilisation of statistical analysis to interpret phenomena and derive logical solutions for addressing the study's problem (Berends and Deken, 2021). This study aims to examine the theoretical framework of management information system: roles and challenges. is important to acknowledge that the descriptive approach plays a significant role in elucidating phenomena and events, with the aim of uncovering their underlying causes and facilitating the development of accurate descriptions and effective solutions.

THEORETICAL FRAMEWORK DEFINITION OF MANAGEMENT INFORMATION SYSTEM

The Management Information System (MIS) is a concept that involves the integration of human resources, technology, marketing strategies, and data collection techniques from both internal and external sources. The primary objective of the MIS is to streamline the decision-making process inside a corporation by effectively processing and analyzing this information (Awan and Khan, 2016).

MIS is not a recent concept; only its computerization is novel. Prior to the advent of computers, MIS procedures were already in place to provide managers with the necessary information for corporate planning and operational management. The computer has introduced additional dimensions, including enhanced speed, precision, and improved data capacity, which enable the assessment of a greater number of choices in the decision-making process.

A management information system is a cohesive collection of components or organizations that collaborate to accomplish a certain purpose, aim, or goal. Thus, it is a computerized system that offers information to facilitate decision-making in the areas of planning, organizing, and managing the operations of the firm's sub-system. Additionally, it fosters a synergistic organization in the process (Chege et al., 2020).

The driving forces of management information systems include technological revolutions in all industries, which need current managers to access substantial amounts of selected information for difficult tasks and choices (Okeke, 2020).

The duration of most products' existence has progressively decreased, posing a challenge for managers to create products with a longer lifespan. To achieve this, managers must stay updated on the factors that impact on their organization's products and services. In this regard, a management information system proves to be a valuable tool in facilitating this process.

Today's managers have access to a vast quantity of information, leading them to depend more on management information systems to access this rapidly growing information. Management information services enable managers to get pertinent, precise, and current information, therefore ensuring the most reliable basis for making informed choices. Additionally, it facilitates the automation and integration of research and management science

methodologies into the comprehensive management information system, such as probability theory (Sukmawan and Wahdiniwaty, 2020).

The management information services may use the company's computing capabilities, including processing power and storage capacity, among other factors.

Given the importance of relevance, it is crucial to implement and update management information systems across various businesses. This is because modern managers rely on these systems to obtain information necessary for making managerial decisions and carrying out management tasks.

To have a better understanding of the scope and purpose of management information systems (MIS), it is helpful to define each component separately (Tallon et al., 2019).

The idea of management information systems (MIS) aims to optimize the organization's output by establishing connections between the operational subsystems via information exchange.

The Management Information System (MIS) is a relatively recent notion that has emerged in the last two decades. People have understood and defined it in various ways. People sometimes refer to it as the information system, the information and decision system, or the computer-based decision system (Rainer et al., 2020).

Data is crucial for the functioning of a company, especially when using a system approach to management. The body of information that others share or acquire through research or study is known as an information system, or MIS. The system provides essential information to each management team in a timely manner in a relevant and understandable style, thereby facilitating comprehension and prompting action.

MIS is a structured approach to gathering and analyzing historical, current, and future data pertaining to internal processes and external knowledge. It facilitates the planning, management, and operational operations of an organization by providing consistent information within a suitable timeframe to aid the decision-making process (Berdik et al., 2021).

MIS is a comprehensive user-machine system that delivers information to facilitate operational, managerial, and decision-making tasks inside an organization. The system employs computer hardware and software, manual procedures, and analytical models. Similar to land, labor, and money, people view information as an asset. It is necessary to acquire, process, store, modify, analyze, and disseminate, among other tasks. An organization that has a well-defined information system often enjoys a competitive edge over organizations without a robust management information system (MIS) or having an inadequate one.

The role of a management information system (MIS) is to collect, process, analyze, and present data and information to support decision-making and improve the overall efficiency and effectiveness of an organization (Pearlson et al., 2024).

It might liken the function of the Management Information System (MIS) inside an organization to that of the heart within the human body. Information is vital, serving as the lifeblood, while Management Information Systems (MIS) acts as the central organ, or heart, that sustains and circulates it. The heart functions as the distributor of oxygenated blood to all the components of the body, including the brain. The heart exhibits an accelerated rate and increases blood supply as required. It regulates and controls the flow of polluted blood, filters it, and transports it to the necessary location in the appropriate amount. It adequately meets the

requirements for blood circulation in the human body under regular circumstances as well as during emergencies (Rainer et al., 2020).

MIS fulfills the same function inside the company. The system ensures the collection of pertinent data from multiple sources, processes it, and then distributes it to all necessary destinations. It anticipates the system to meet the information requirements of individuals, groups, and management personnel, including managers and senior executives.

SIGNIFICANT OF MANAGEMENT INFORMATION SYSTEM

These are many significant functions performed by the Management Information System (MIS):

The Management Information System (MIS) caters to a wide range of purposes by using many systems, including a query system, analytical system, modeling system, and decision support system (Pearlson et al, 2024).

The managerial Information System (MIS) facilitates strategic planning, managerial control, operational control, and transaction processing. The Management Information System (MIS) assists clerical personnel in processing transactions and providing information on transaction data, record status, and other document references.

The Management Information System (MIS) assists junior management staff by supplying operational data for the purposes of planning, scheduling, and control. Additionally, it aids in decision-making at the operational level to rectify situations that are not under control. The Management Information System (MIS) assists middle management in the areas of short-term planning, goal formulation, and business function control. It is facilitated by the use of management tools for planning and control (Collins et al, 2021).

The Management Information System (MIS) assists senior management in establishing objectives, formulating strategic strategies, and developing and executing business plans. The Management Information System (MIS) fulfills the functions of generating information, facilitating communication, identifying problems, and aiding in the decision-making process. The Management Information System (MIS) is crucial for overseeing, directing, and executing the functions of a company (Oates et al, 2022).

THE ROLE OF MANAGEMENT INFORMATION SYSTEM

Management Information Systems (MIS) plays a pivotal role in the organization, exerting influence on its operations, performance, and production. The implementation of Management Information Systems (MIS) has a significant influence on several operations inside an organization. A well-implemented MIS enhances the efficiency of managing marketing, finance, production, and people. Tracking and monitoring the functional goals is simplified. The functional managers are provided with updates about the progress, accomplishments, and deficiencies in the activity and the set objectives (Wager et al, 2021).

An organized information reporting system establishes a structured database and knowledge base accessible to all individuals inside the company. The information is presented in a manner that allows for immediate use via integration and examination, hence conserving the manager's precious time (Recker, 2021).

The Management Information System (MIS) has a significant influence on the company, particularly in enhancing the comprehension of the business itself. The MIS starts by providing precise definitions for data, entity, and their respective properties. The system utilizes a comprehensive database of data, entities, and characteristics specifically tailored for generating information inside the company. Given that all information systems rely on a shared lexicon, there is a collective comprehension of words and terminology inside the company. This fosters clear communication and a uniform understanding of events within the organization (Chin et al, 2020).

Computers provide him the ability to use tools and procedures that are unfeasible to employ manually. The pre-assembled bundles facilitate this work by providing a straightforward solution. The influence affects the management capacity to execute tasks. It significantly enhances decision-making capacity (Recker, 2021).

As the Management Information System (MIS) focuses on fundamental tasks like transaction processing and database management, it shifts the monotonous clerical labor to automated systems, freeing up human cognitive capacity for more valuable tasks. It is evident that a significant number of human resources are involved in this activity inside the firm. Seventy percent of the time is allocated to the activities of recording, searching, processing, and transmitting. This Management Information System (MIS) directly affects the overhead costs. It fosters a culture of information-driven work throughout the business (Oates et al, 2022).

THE SIGNIFICANCE OF MANAGEMENT INFORMATION SYSTEMS

Undoubtedly, all managerial functions necessitate decision-making. To make rational decisions, it is crucial to have timely and dependable information, which can be obtained through a systematic and well-organized approach to collecting, processing, and distributing information to decision makers. The term often used in the management profession to refer to such an approach is MIS (Rainer et al, 2020).

Management Information Systems (MIS) play a crucial part in the current business landscape due to the increased significance of decision-making for managers. These choices are made in the face of two primary challenges: (Berdik et al, 2021).

Furthermore, in this era of abundant information when the amount of data is doubling every two or three years, it is essential for a manager to effectively handle a substantial volume of data. Failure to do so may result in making a significant choice that may prove to be very expensive for the firm (Pearlson et al, 2024).

Managers in such circumstances need tools or a system that may aid them in their demanding task of decision-making. MIS is believed to be of enduring relevance and is often viewed as the central hub of a company due to the reasons. These systems aid decision makers in businesses by supplying information at different points in the decision-making process, hence considerably assisting organizations in reaching their set goals and objectives.

Conversely, a badly planned, evaluated, built, implemented, or maintained Management Information System (MIS) might generate erroneous, irrelevant, or outdated information, which can have detrimental consequences for the business.

Put simply, modern firms cannot thrive and expand without a well-structured, devised, executed, and upheld Management Information System (MIS). It is well recognized that

Management Information Systems (MIS) allow small firms to surpass the cost advantages obtained by larger rivals, hence offering a competitive advantage (Collins et al, 2021).

The following are the fundamental ways for possessing an effective management information system:

Despite the prolonged use of diverse non-paper storage mediums, the quantity of paper in our workplaces continues to increase. An efficient records management system encompasses both creation control, which restricts the unnecessary generation of records or copies, and records retention, which involves the disposal of useless or inactive records. This ensures the controlled growth of records in all formats. To decrease expenses associated with operations

Recordkeeping necessitates financial resources for the procurement of filing equipment, allocation of office space, and employment of personnel to maintain an orderly filing system (or to locate misplaced documents in the absence of such a system) (Chin et al, 2020).

The cost per linear foot of storing inactive documents is much lower in a Data documents Center compared to storing them at the office. By applying for a records management program in an office without an existing program, one can potentially achieve cost savings in terms of space and equipment, as well as enhance staff productivity. In order to enhance efficacy and enhance output. The time dedicated to locating a missing or incorrectly filed record is unproductive. An effective records management program, such as a document system, may assist any business in improving its recordkeeping procedures, resulting in greater information retrieval and increased office efficiency and productivity. An efficiently structured and managed file system, complemented by a proficient index, may expedite the retrieval process and promptly provide users with the required information (Recker, 2021).

Furthermore, an efficiently controlled information system functioning as a valuable resource for a company allows firms to impartially assess their use of information and precisely outline a plan for enhancements that maximize business profitability. To incorporate and integrate new technology for managing records

An effective records management program enables a business to incorporate new technologies and use their many advantages. Investments in new computer systems, regardless of their purpose (financial, commercial, etc.), do not resolve filing issues unless the existing manual recordkeeping or accounting systems are thoroughly examined and, if necessary, revamped prior to implementing automation. To guarantee adherence to regulations (Oates et al, 2022).

China has stringent regulations when it comes to recordkeeping needs. These regulations may provide significant compliance challenges for companies and government agencies due to their elusive nature, complex interpretation, and application. To ensure complete adherence to rules and regulations, a firm must have a robust management information system that assumes accountability for regulatory compliance and maintains close collaboration with local authorities. Noncompliance with rules and regulations may lead to substantial fines, penalties, or other legal ramifications. To mitigate any legal disputes

Every company, regardless of whether it is public or private, needs a thorough policy to safeguard its crucial documents and information from potential catastrophes or tragedy, since every organization is susceptible to potential loss. When incorporated into an effective management information system, vital records programs ensure the preservation of crucial documents, maintain their integrity and confidentiality, and secure valuable information assets

in accordance with a comprehensive protection plan. Financial information, particularly in big firms, is increasingly being managed via the use of ERP (Enterprise Resource Planning) systems. To facilitate more effective managerial decision-making (Chin et al, 2020).

In the contemporary corporate landscape, the manager who acquires the essential facts in a timely manner often emerges victorious, either by making decisions before their competitors or by making superior and well-informed choices. An effective management information system may enable timely access to relevant information for managers and executives.

Managers may efficiently gather and organize relevant information for immediate decision-making and future company planning by establishing a comprehensive system for file organization, complete with indexing and retrieval capabilities. Similarly, using an effective ERP system to manage all the financial and operational activities of a corporation would provide greater benefits compared to using a manual approach. To maintain institutional knowledge (Oates et al, 2022).

An organization's archives, records, and financial data include its institutional memory, which is a valuable and irreplaceable asset that is often disregarded. On a daily basis, you generate records that may serve as background data for future management choices and planning. In order to cultivate a culture of professionalism in managing the company

An untidy company office, with disorganized paperwork, documents, and financial data scattered haphazardly on file cabinets and in various boxes, results in an unfavorable working atmosphere. The intangible factors such as customer and public perceptions, as well as staff "image" and "morale", which are difficult to measure in terms of cost-benefit, may be seen as some of the most compelling justifications for implementing an effective management information system (Wager et al, 2021).

FINDINGS

The findings discussion in the light of research objectives:

1. To determine the role of management information system.

The Management Information System (MIS) necessitates the organization and standardization of corporate processes to achieve efficient system architecture. As a result, the processes are streamlined, which adds complexity to the system architecture. It enhances the management of the organization by instilling discipline in its operations, since everyone is obligated to adhere to and use processes and procedures. This technique enhances the level of professionalism in corporate operations.

The aims and objectives of the Management Information System (MIS) are derived from the goals and objectives of the company. By supplying pertinent information to the business, it indirectly facilitates the alignment of the whole organization towards the corporate aims and objectives. An intricately crafted system that prioritizes the manager's needs has a significant influence on managerial efficiency. An informed manager is motivated to use a diverse range of management techniques due to the abundance of knowledge available. Engaging in activities such as exploration and modeling is beneficial for him.

The manager remains vigilant by receiving specific information that indicates potential trends in different areas of the firm. This facilitates the prediction of future events and enables strategic planning over an extended period. The manager is alerted to an anticipated circumstance, prompting him to make a choice or act.

2. To investigate the challenges of management information system.

The result shows that, in the current era of growing business complexities, it is essential for organizations to have a well-structured and well-maintained Management Information System (MIS) to effectively serve and expand. This MIS should be carefully planned, analyzed, designed, and maintained to ensure that it delivers timely, reliable, and valuable information. This information is crucial for management to make quick and logical decisions. Due to the liberalization and globalization of markets, firms are now compelled to compete on a worldwide scale rather than only regionally. Consequently, managers must make prompt judgments to prevent their rivals from seizing their company. This has further intensified the need for such a system.

Business organizations use management information systems and programs to mitigate the risks linked to litigation and possible fines. This holds true in Government entities as well. For instance, implementing a regularly executed records management program helps mitigate the risks linked to document disposal by establishing a systematic and routine process for disposing of them as part of regular company operations. To protect crucial data.

SUMMARY

This study concludes that the procedures are streamlined, thereby increasing the complexity of the system design. It improves organizational management by enforcing discipline in operations, since all individuals are required to comply with and use established processes and procedures. This strategy elevates the professionalism of company operations. This Management Information System must be meticulously planned, evaluated, constructed, and maintained to guarantee the provision of timely, trustworthy, and relevant information. This information is essential for management to make prompt and rational choices. As a result of market liberalization and globalization, companies are now obligated to compete on a global level rather than only within regional confines. This study recommended that employee self-efficacy should be used to improve management information system. Moreover, the foundation of this research is based on social cognitive theory, which suggests that people's actions are influenced by their ideas, perceptions, and thoughts, as well as external and situational circumstances.

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