The role of Information Technology and its impact on Knowledge Management process for Organizational Sustainability in the context of gaining a competitive advantage

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Abstract. This study used a descriptive approach to investigate the theoretical framework of the role of information technology and its impact on knowledge management processes. The theoretical framework was developed through a review of previous research, which was carried out by the researchers. Information technology and knowledge management practices were used to select the sample organisations, which were then evaluated on their effectiveness. This study investigates the potential of organizations to influence the long-term development of their organizations by using information technology to improve knowledge availability and human resource management. According to the study's findings, information technology has a statistically significant positive relationship with the implementation and utilisation of knowledge management for the organization's long-term development. The findings of this study provide some suggestions and recommendations for improving the overall performance of the organisation. This study provides fundamental guidelines on the practical and managerial implications of the findings.

Keywords: information technology, knowledge management and sustainable development

1 Introduction

Any organization's knowledge base is an asset to have. To improve organizational performance and long-term development, every organization has adopted the concept of knowledge management. Knowledge can be applied by a variety of organisations to achieve maximum efficiency in a variety of working methods, functions, performances, and organisational styles. Information technology and knowledge manage-
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Systems were required by the organisation to perform a variety of activities and functions to achieve the predetermined goals and objectives. The support of top management in sharing of knowledge, and in the development of a knowledge management system are important for the long-term development of an organisation. To achieve this, top management of the organisation required ongoing education and training to learn how to apply their knowledge to increase the group effort and productivity of the organisation.

Organizations in this competitive era must contend with global competition as well as a variety of changes in the organisational environment. Organizations are constantly changing and expanding because of the advancement of information technology. It is necessary for organisations to adopt new and innovative technology to reach global consumers. As a result of this significant shift, information technology's role in knowledge management applications has grown significantly. Information technology is critical in the implementation and management of change across organizations when it comes to organizational development. As identified in this study, there are numerous measures that can be used to assess the impact of information technology on knowledge management processes in any organization. This study examines the role played by information technology in the successful implementation of a knowledge management system. Knowledge management implemented properly at every level of Management has the potential to positively impact the long-term progress and growth of the entire organisational system. It was necessary for any organisation to have knowledgeable, skill-oriented managers and employees to achieve long-term success. Every organisation must manage and control the available capacity and skill of employees and management to reap the potential benefits of information technology when it comes to the transfer of information and knowledge between departments and employees.

To compete effectively in the global marketplace, organisations must evolve in accordance with the trends and changes in information technology. Organizations must develop their capabilities to compete against other organisations with the assistance of technological advancements and strategic management to achieve organisational goals.

The ability to develop, adopt, implement, and control existing information systems is essential to any organization's success. It is also critical to improve the ability to manage knowledge and information for them to be successful.

2 Issue Identification / Obstacles to be Surmounted

The study examines information technology and its role in organizational growth and long-term development. It also recognizes the link between ICT and Knowledge Management processes to improve the overall performance of the organization. Most organizations use information technology to reach many knowledgeable people and persuade them to share their knowledge and expertise. All of this demonstrates the significance of information technology in the processes of recruitment and selection of employees.

Following employee selection, the organization offers training and development programs to assist them in improving their skills and abilities so that they can perform...
their jobs more accurately. The organisation also uses a continuous development programme to ensure the success and advancement of all human resources. When it comes to the acceptance of changes and the development process, organisations place a high value on knowledge management to facilitate the acceptance of changes and new technology, particularly advanced technology. However, because of the nature of human beings, most employees will be reluctant to adopt new technologies and information technology. During the development stage, information technology plays a significant role in the advancement of excellence, the advancement of progress, and the achievement of success. Any new creative experiment, as well as, the implementation of creative ideas and innovation, necessitate the development of a new organisational culture that supports all these activities as well as the accumulation of complex knowledge. To comprehend the importance of information technology, as well as the interdisciplinary approach, it is necessary to investigate the factors that influence the adoption of information technology, such as competition at the global level, technological advancement, poor recruitment knowledge, improvement in working conditions, organisational nature, types and sizes of organisations, financial condition to adopt information technology, and so on.

3 Literature Review

According to Sattam Allahawiah (2013), Information technology has had an impact on the Arab Potash Company's knowledge management processes. The primary goal of this research was to use information technology and knowledge management to help the organisation achieve its objectives. A questionnaire was developed by the researcher to collect data, and a sample of 336 people participated in this study. Following the completion of this study, the researchers concluded that information technology had a positive impact on the Arab Potash Company's knowledge management processes. As explained in this study, the Company used information technology to gather the necessary information and increase work speed by utilizing cutting-edge technology and networks to achieve these goals. According to the findings of this study, the dimensions of technology were responsible for 48.7 percent of the variation in Knowledge Management processes. In its recommendations, the study stated, among other things, that the Potash Arab Company should pay close attention to information technology and knowledge management to improve employee satisfaction, organisational performance, and the level of knowledge management.

Based on this research study, Simon Colnar, Vlado Dimovski, and David Bogataj (2019) created social work settings to improve the knowledge management system. This study found that knowledge management had a positive and statistically significant impact on organizational performance. This research contributes to the understanding of the critical role played by social workers in any organisation. The purpose of this research is to look at the existing literature on knowledge management and information technology in the public sector, particularly in social working organizations, as well as the knowledge-based perspective on the organization. As a result of this study, a research model for analyzing and evaluating the overall quality of the national policy system for the social work profession was developed. Additionally, this study found that knowledge management solutions had a positive impact on the
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entire social work organisation. Using measuring tools and techniques to analyse the predetermined objective, this study developed an actuarial–mathematical method to analyse the data that was gathered and collected.

According to Muhammad Saqib (2017), he investigates the overview of knowledge management. The findings of this study highlight the importance and necessity of knowledge management practice. The primary goal of this research is to analyze some case studies for successful knowledge management implementation, as well as its adoption in various industries. This research study demonstrates that knowledge management has a positive impact on organizational performance by analyzing several case studies related to knowledge management. It also provides some practical implications for improving organisational performance.

Every organisation considers knowledge management to be as important as technological capital. According to Hayfa.Y. Abuaddous and Abdullah A.M. Al Sokkar (2018), knowledge is the most valuable asset in any organization. This paper reviewed a variety of academic publications to determine the influence of ICT and knowledge management on organizational performance. It had previously been stated that knowledge management encompassed infrastructure capabilities as well as the knowledge management process itself. According to the findings of this study, knowledge management had a positive impact on organisational performance, either directly or through indirect effects.

Arnold Mwanzu (2021) investigates the impact of Knowledge Management on long-term sustainability and innovation for organizational development. This study employs a quantitative approach and a descriptive research design for data collection and analysis. The research population was chosen by the researcher, and it included corporate organisations that had implemented knowledge management practices. The researcher put together questionnaires and scheduled an interview to collect information from respondents. According to the researchers, the findings show that sustainable organizational development has a statistically significant relationship with both innovativeness and knowledge management in an organization.

According to Muhammed A. Badamas (2009), information technologies provide support for the development of organizations across a wide range of economic and non-economic sectors. This study's findings show that knowledge management and information technology are inextricably linked and interdependent. It also stated that proper information technology and knowledge management were required. The purpose of this research was to investigate the relationship between information technology and knowledge management in the context of the development of e-commerce in Africa.

Knowledge Management in Corporate Sustainable Development and Green Innovation Activities by Abbas, Jawad, and Mustafa Sagsan (2019) is an investigation into the function of knowledge management in business for sustainable development and green innovation activities. The researcher interviewed various management-level executives from small, medium, and large-sized manufacturing and service companies in Pakistan to compile his or her findings. The researcher uses structural equation modelling to analyse the data he has collected and to investigate knowledge management processes, such as knowledge acquisition, creation, application, sharing, and transfer of available knowledge, to better understand them. Specifically, it looked at
how knowledge management impacts green management innovation and green technology, and how it affects aspects of the organization's economic, social, and environmental aspects of sustainable development. According to the findings of this study, knowledge management has had a substantial influence on corporate sustainability development activities. Green innovation had a positive and significant impact on the long-term sustainability of the company. Using information technology and knowledge management, D. M. L. Wong (2010) investigates how organisations can achieve sustainable development using information technology. The findings of this study revealed a relationship between knowledge management and sustainable development in the context of gaining a competitive advantage. The case study method is being used by the researchers to investigate the influence of knowledge management on the long-term development of an organization. Sample cases were chosen by the researcher from the industries for mapping. According to the principles of McKinsey 7S framework, which provides the best practises of knowledge management for sustainable development, the researcher will develop a research framework. Wei (2013) investigates, information technology accessibility for employees, organisation information system, information technology supports, information technology skill, information technology infrastructure and investment, and information technology infrastructure and investment on the knowledge management process. MSC Malaysia and other world-class companies in the Klang valley participated in the survey and completed questionnaires, which were then distributed to employees and managers in the information technology departments of the participating companies. According to the study's findings, the entire information technology infrastructure, except for the organization's knowledge management system, does not support it. The data analysis revealed that Knowledge management and information technology process have a significant positive relationship. Most organisations had knowledge management practises in place; however, all this information was insufficient to develop a proper information technology model for knowledge management implementation. This study provides valuable recommendations to industrial practitioners and managers on how to select an appropriate model to assist them in conducting a practical assessment about ICT and its influence on best practices in knowledge management.

Fatemeh (2017) investigates knowledge management's role in tacit knowledge sharing on organizational performance to increase productivity and long-term development. The researcher created a descriptive research framework to collect and analyse hypotheses that had been developed. These findings revealed various aspects of an organization's role in information transfer and knowledge sharing, as well as their implications. The researcher conducted a survey at the Koosa Bank of Iran to gather information about the employees' attitudes toward the sharing of tacit knowledge. The survey results revealed that tacit knowledge has a statistically significant positive impact on the productivity of the organisation.

What Sets This Study Apart from Previous Research?

Although previous research has provided fundamental knowledge and theoretical information about information technology and its role in knowledge management, this study differs from previous research in that it focuses on the impact of information
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technology on knowledge management for sustainable development, whereas previous research has concentrated on the effect of knowledge management on organizational performance. As with (Muhammad Saqib, 2017) and (Hayfa.Y. Abuaddous, 2018), this study addressed the function of information technology and its impact on knowledge management for the long-term development of organizations (Bathandwa Vazi, 2020). According to the researchers, information technology and knowledge management and the function of information technology in knowledge management for organizational sustainability in today's competitive climate and epidemic time are the subjects of the current study.

4 Objective of the study

The purpose of this research is to investigate the role of information technology and knowledge management in organizations, followed by an examination of the impact of information technology on knowledge management for long-term organizational development in the face of a pandemic crisis. Additionally, Covid 19 pandemic and this research examine the following secondary objectives:

1. To develop a theoretical framework for understanding the role of information technology and knowledge management in the long-term development of an organisation.
2. To determine the impact of information technology on knowledge management for the purpose of ensuring the long-term viability of organisations in a competitive environment.
3. To make recommendations and suggestions considering the study's findings.
4. To evaluate the role and contribution of information technology to the success of organisational knowledge

5 Research methodology

This study used a descriptive approach to investigate the theoretical framework of the role of information technology and its impact on knowledge management processes. Theoretical framework was developed through a review of previous research, which was carried out by the researchers. Information technology and knowledge management practices were used to select the sample organisations, which were then evaluated on their effectiveness. These organisations were chosen at random from a variety of different areas and locations, including rural and urban settings.

Knowledge Management

Because there is no specific and clear definition of knowledge management, the researcher would gather some information and definitions that would provide a proper understanding of Knowledge Management. According to Chong Chin Wei (2013) “Knowledge management is a critical tool for any successful organisation, and it encompasses the creation, collection, and processing of knowledge, as well as the storage, transfer, and sharing of knowledge.”
According to Dr. Georg Huttenegger (2004) “Knowledge management is a broad base concept that analyses available data. Organizations gather, create, store, validate, transform, and share information and knowledge for this purpose.”

Information Technology

Dale Stokdyk (2019) “Information technology (IT) is a broad term that encompasses everything that businesses do with computers.

“Information technology refers to anything that has anything to do with computers or computing technology,” according to Information Technology Trends in 2019. The Internet, for example, is classified as "information technology." Computer hardware, software, and networking are all important.”

The development, maintenance, and application of computer software, systems, and networks is referred to as information technology (IT). It also includes their use in information processing and distribution. Data is any information, facts, statistics, or other pieces of information gathered for reference, storage, or analysis.

6 Information Technology's Role in Knowledge Management

Information technology plays a critical role in the creation, analysis, and storage of knowledge, as well as the transfer and sharing of that knowledge. The information technology industry, according to Vusumzi Neville Funda (2019), provides useful tools and technology for gathering information, analysing the data that is available, and enhancing the knowledge of an organisation. It is possible to gather, collect, transfer, and share information using various applications and capabilities provided by information technology (IT).Information technology is a powerful tool that helps to complete knowledge management processes by facilitating the acquisition of better knowledge, which helps to increase the overall efficiency of an organisation’s activities. In this competitive environment, the advancement and development of information technology systems has resulted in increased effectiveness of various applications and knowledge management. Internet technologies, digitalization, and automation in all aspects of business operations are all beneficial to knowledge management efforts. Knowledge management encompasses a variety of tasks and processes, each of which necessitated the use of appropriate technology to achieve its objectives. The advancement of information technology has increased the storage capacity of computers and servers, allowing for the analysis and creation of accurate knowledge from collected data in substantial quantity. Using digital networks and communications technologies, information technology can assist with transformation, knowledge sharing, and knowledge transfer to employees and managers in a simple and effective manner all over the world.

Impact of information technology on knowledge management in the context of long-term organisational development
When it comes to knowledge management, information technology systems are always there to help. They provide some advantages and benefits to knowledge management in the form of infrastructure, storage, transfer, and sharing of knowledge for better results. Information technology is critical to a company's or organization's strategy, policy, and procedure (S. Fattahiyan, R. Hoveida, S. Siadat, and H. Tallebi, 2012). To gain a competitive advantage, top management is concentrating on the various opportunities created by information technology. Information technology allows for the easy integration of data systems to identify a variety of opportunities. Strategic information systems can assist top management in achieving long-term development by reducing competition and changes in the organization's macroenvironment (Wu J., Lo M.F., Ng A.W, 2019). This implies that information technology plays an extremely important role in knowledge management. A fundamental requirement for search, documentation creation; data storage in a database; and knowledge sharing to improve organizational performance are all made possible by information technology. Coordination, communication, and support for knowledge management are all enhanced using comprehensive information technology applications. Applications for knowledge browsing, location, filtering, and retrieval are required for finding the right knowledge, as well as for the analysis and presentation of knowledge during the research and development process.

With the help of some tools such as teleconference, email, internet, and videoconference, information technology can enhance and improve knowledge transfer facilities. These tools can be used to share valuable data and information with trainees and other appropriate people during training and development programmes. Information technology also aids in the collection, capture, maintenance, and updating of knowledge, among other things. Information technology also aids in collecting, capturing, maintaining, and updating knowledge, among other things. In addition, information technology facilitates communication, coordination, direction, control, motivation, and leadership functions (Azmee, N.N.; Kassim, N.A.; Abdullah, C.Z.H., 2017). Users can benefit from knowledge management programmes such as browsers, the Internet, data warehouses, and data mining, which can help to improve an organization's knowledge management system. Knowledge sharing and transfer from experts related to organisational procedures, policies, rules, and regulations, among other things, is stored in the organisational knowledge data base. According to Batista, A. A. D. S., & Francisco, A. C. D. 2018, Information technology is a critical component of knowledge management, and it encompasses the integration of information technology and knowledge management in the pursuit of organisational sustainability.

7 Findings/Observations

According to the findings of this study, the implementation of information technology and knowledge management are significant indicators of organisational performance and long-term development in the context of the pandemic crisis. Using information technology to improve the available knowledge and management of human resources, this study investigates the potential of organisations to influence the long-
term development of their organisations. Furthermore, it has the potential to have an impact on knowledge management for the long-term development of an organisation through the adoption of advanced technology as well as the improvement of information technology services. Information technology supports the process of identifying the most qualified employees at the most appropriate time. It also emphasises the availability of knowledgeable employees and their proper management through the training and development process. According to current research, organizational success is determined by the effective use of available information technology and its impact on knowledge management. As a result of this discovery, it is possible to conclude that the availability of information technology in an organization will improve the use of existing knowledge. It also assists in the adoption of modern information systems to support management decisions and strategies, procedures, improve production processes, increase efficiency, skill, and knowledge of their employees, and to reduce costs while saving time and reducing effort. Information technology platforms and systems are being integrated by the organisation to provide better understanding and interpretation of real-time data and management information, allowing it to make the necessary decisions. (Alawamleh, H. Kloub, M, 2013), according to the findings of this study, information technology has a statistically significant positive relationship with the implementation and utilisation of knowledge management for the organization's long-term development.

8 Conclusion

Most developing-country organisations use information technology to improve knowledge management to facilitate long-term viability of the organisation and to compete in the global marketplace. Information technology platforms and knowledge management systems are integrated by the organisation to collect appropriate information for better understanding and interpretation of real-time data and managerial information. Top management focuses their efforts on ensuring the adoption of appropriate information technology and the integration of data, as well as on removing the unnecessary information gathered by big data systems from the environment. The majority of developing organisations leverage information technology to enhance knowledge management, ensure the organization's long-term viability, and compete on a global scale. Information technology platforms and knowledge management systems are integrated by the organisation to collect relevant information for improved understanding and interpretation of real-time data as well as managerial information. It is the top management's responsibility to ensure the adoption of appropriate information technology and data integration, as well as the removal of redundant data gathered by big data systems.

An organisation can advance sustainable development by utilising innovative information technology to assist in the development of new products, strategies, and planning, as well as the improvement of services and organisational processes using knowledge. To support sustainable development, innovativeness will also assist an organisation in adapting and modifying their organisational environment in response to changes that occur over time because of the organization's innovativeness.
In this study, the most significant finding was that information technology components have a positive impact on organisational knowledge management (Kamel Mohamad Hawajreh & Abdel-Aziz Ahmad Sharabati, 2012) and competitiveness, resulting in increased organisational efficiency and productivity. This study represents a possible future trajectory for the organization, in addition to sustainable development. Innovativeness in information technology and knowledge management was strongly linked to long-term organizational development in this study.

9 Recommendation and Suggestions

This study discovered some suggestions and recommendations, and based on these findings, the researcher can make some valuable recommendations for enhancing the role of information technology and its impact on knowledge management, including the following:

1. To assist in the implementation of improved knowledge and skill, information technology and management strategies, as well as organizational policies, should be implemented by the organization.
2. To further enhance the training and development programme, the organisation should also develop new and innovative information technology platforms.
3. Top management should create an organisational culture and environment that will support changes that occur because of market conditions, the emergence of advanced technology, and competition.
4. To support creativity, progress, out-of-the-box thinking, and innovativeness, organisations should implement effective knowledge management practices; this will contribute to development and growth not only for the fulfilment of current needs, but also for the fulfilment of future requirements.
5. The implementation of information technology in organisations should be accomplished through the acquisition of new knowledge and skills.
6. Knowledge management should also be promoted within the organisation to assist managers in fostering employee initiative and creativity, which will ultimately contribute to the long-term development of the organisation.

10 Managerial Implications

Using information technology to improve the available knowledge and management of human resources, this study investigates the potential of organisations to influence the long-term development of their organisations. Furthermore, it has the potential to have an impact on knowledge management for the long-term development of an organisation through the adoption of advanced technology as well as the improvement of information technology services. As a result of this study, we have gained valuable knowledge and insights that will help us improve the quality of training and development programmes. Managers who manage and control the available knowledge in an organisation can improve the information technology of achieving the predetermined goals and objectives for improvement in sustainable development by utilising knowledge management techniques and procedures. According to the
findings of this study, managers can benefit from participating in and supporting the adoption and maintenance of a supportive organisational culture and environment in which all human resources – particularly employees – are encouraged and motivated to apply their best knowledge and skills in their work environments. The paper's findings suggest that in selecting and implementing information technology, top managers should focus on knowledge-based goals.

11 Theoretical Implications

This study is useful for building on previous knowledge in the fields of information technology and knowledge management while also addressing the challenges of long-term organizational development. Previous research has discovered that information technology can aid in the improvement of knowledge management in a variety of different organizational settings. Additionally, the impact of information technology on organizational human resources is considered, and this is evaluated through more systematic efforts and the implementation of information technology to increase the available knowledge and skill of organizational human resources. In this study, it is demonstrated how information technology has impacted on the knowledge management of available workers using a theoretical framework, validation, and dependability of collected data. This study sought to conceptualise and validate new, innovative skills and knowledge that can assist organizations in achieving total quality management throughout the organization.

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