

## KNOWLEDGE MANAGEMENT SYSTEM IMPORTANCE TO INFORMATION TECHNOLOGY

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### **Abstract**

The study was conducted to explore knowledge management system importance to information technology in an organization. Specifically, to examine the relationship of knowledge management system and information technology in an organization. This paper uses quantitative research approach with questionnaire as the primary source of data collection. To achieve this, we have used both descriptive and inferential statistics to give meaning to the data. The descriptive analysis was done using frequency, percentage and mean. While the Spearman Rank Correlation Coefficient was used as the inferential statistics to evaluate the relationship between the variables. The finding from the study indicates that, knowledge management was effective management with the support of standard information technology. The study recommends that business organizations need to structure their knowledge management system within a well-developed information technology foundation.

**Keywords:** *Knowledge Management System, Information Technology, Information, communication Technology*

### **Introduction**

Knowledge management is a flexible instrument for boosting company resilience, sustainability, and commercial growth. It is a strategy used to make corporate operations simpler by offering useful information for sensible decision-making. The process for idea generation among an organization's top employees has been labeled as an inventive trait for competitive advantage. With social networks, blogs, email, and other online platforms, knowledge and information are created, acquired, shared, transferred, and stored. Organizational management has made use of this digital platform to foster knowledge creation and sharing among employees and other internal players while also providing opportunity, with some limitations, to external actors like consumers, distributors, and government authorities (Emeti & Odo, 2022).

Post-industrial society refers to the era following the 1960s. The fundamental trait of such a society is the assumption that all innovations and political choices are driven by theoretical knowledge. This denotes an obvious transition in the economy and industry from one based on production to one based on services. Technical abilities were thus put in the backseat while management and professional services occupied the driver's

seat. A culture where access to information and its effective use are increasingly important to quality of life, social transformation, and economic growth. In such a society, improvements in information and knowledge have a significant impact on living standards, work and leisure habits, the educational system, and the economy. (Sivakumar & Dominic, 2018).

It is impossible to ignore the significant contribution that ICT contributes to knowledge management. Knowledge management employs various methods and procedures to find, develop, represent, communicate, and assist the adoption of insight and experiences that comprise knowledge, whether they are embodied in individuals or embedded in organizational processes or practices. Consistent knowledge management projects often focus on organizational goals such as improved performance, competitive advantage, innovation, sharing of lessons learned, integration, and continuous organizational improvement.

Although KM projects and organizational learning may overlap, they may be distinguished by a greater emphasis on managing knowledge as a strategic asset and a focus on facilitating knowledge sharing. Individuals and groups can benefit from KM initiatives by sharing insightful organizational information, reducing duplication of effort, avoiding outright reinventing the wheel, reducing new hire training time, retaining intellectual capital as employees leave an organization, and adapting to changing environments and markets (Sivakumar & Dominic, 2018).

It is critical to highlight that the advancement of information and communication technologies (ICT) over the last ten years has offered new options for knowledge management that may be critical in resolving current concerns related to knowledge sharing, technology exchange, and dissemination. ICT allows Knowledge, Science, and Technology (KST) to better capitalize on the amount of information and knowledge available. The ultimate aims of KST operations are, among other things, to give discoveries that may be used to enhance research in certain disciplines and to develop technologies that KST stakeholders can use to increase output and growth.

### **Problem Statement**

The first issue is a lack of appropriate national and regional infrastructure and mechanisms for disseminating agricultural research findings. Many research initiatives are repeated due to a lack of such infrastructure and methodology at the national level. Finding research papers published locally in local journals, conferences, theses, and technical reports are more challenging for researchers than finding research articles published globally in international journals and conferences.

The second issue is poor infrastructure and processes for directly or indirectly bringing research-produced innovations to growers (extension sub-system). Knowledge and technology aid in the production of goods and services in all industries. Even though previous researchers and systems created a plethora of materials to inform managers

and business owners about the most recent recommendations for various managerial practices, these materials are not widely distributed, updated, or managed to meet the needs of employees and businesses.

### **Objectives**

The study is carried out to explore knowledge management system importance to information technology in an organization. Specifically,

1. to ascertain the relationship of knowledge management system and information technology in an organization.
2. to find out the relationship of knowledge management system and organization growth.

### **Research questions**

1. What is the relationship between knowledge management system and information technology in an organization?
2. Is there a relationship between knowledge management system and organization growth?

### **Hypothesis**

$H_{01}$ : There is no meaningful relationship between knowledge management system and information technology in an organization.

### **Literature and Theoretical Review:**

#### **Knowledge Management**

Knowledge management is a deliberate discipline that aims to use the individual knowledge base to achieve corporate objectives. There are two categories of knowledge. One comes from a person's thinking and is referred to as tacit knowledge, and the other is found in papers that are given in writing and is referred to as explicit knowledge. Managerial initiatives should make individuals' implicit knowledge apparent. The goal of knowledge management is to foster the generation and transfer of knowledge, but the true difficulty comes from knowing what information to use and how to utilize it.

To effectively compete and build a sustainable knowledge base, organizations must manage knowledge. Creativity in information and timely availability of information are key factors in knowledge base development. Access to top-notch information and services may help an organization spread like wildfire. Understanding the technical viewpoints and concepts that enable knowledge management is crucial for organization and information professionals to support the phenomena effectively.

#### **Knowledge Management System**

The process of knowledge management often entails actions including knowledge

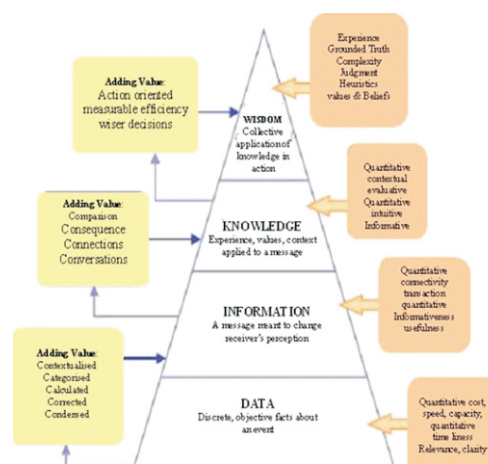
creation, capture, refinement, storage, management, and dissemination. The process of turning tacit information into explicit knowledge is known as knowledge creation. To determine knowledge demands, knowledge resources, and knowledge flows, a knowledge audit is initially conducted. It is necessary to offer more chances to produce fresh information (Emeti & Odo, 2022).

Eltayeb and Kadoda (2017), knowledge management system was empirically revealed to have a link with formulation and implementation of business strategies, which also relatively has improved business outcomes such as performance. through a structured knowledge management system business communication, workplace collaboration, employee learning and adaption has been achieved in the organization. Additionally, Putra and Winoto (2017), presented a result which indicate that knowledge management system has significant and positive correlation with IT investment success. This strategic investment in information technology has relatively boost organizational performance. This result was achieved after conducting an inferential analysis on survey data.

Knowledge capturing is the process of identifying and storing new bodies of knowledge. The process of refining knowledge is placed in conveniently accessible contexts or containers. New knowledge is deposited in a repository for later use. To determine its correctness and applicability, knowledge management is examined and appraised. When information spreads, everyone always has access to the most recent corpus of knowledge.

### Relationship between Data, Information and Knowledge

Data are necessary components of information. Various sorts of data provide varying interpretations. The data become information once it is brought under public scrutiny. By gathering data, we ensure that generalization develops into knowledge. Wisdom is a state of being that results through the application of information, experience, understanding, common sense, and insight over the course of a lifetime.



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According to Russell Ackoff, human mental content may be divided into five categories:

1. Symbols are data.
2. Information: data that has been processed to offer valuable answers to who, what, where, and when queries.
3. Knowledge: the use of data and information to answer how-to queries.
4. Comprehension: appreciation for Why.
5. Wisdom: Evaluated comprehension.

According to Ackoff, the first four categories deal with what has happened or is known to have happened in the past. Wisdom is the sole category that encompasses vision and design, and it is concerned with the future. Wise people can see into the future rather than only the past and present.

### **Information Technology (IT)**

The ability to process and store information has been made possible by the convergence of data processing techniques, and telecommunications provides the means of transferring that information. Information can now be sent at incredibly fast rates from anyplace to anyone thanks to advancements in telecommunications. Instantaneous online database access is made feasible. The benefits of IT include the processing and distribution of electronic documents. The creation of expert systems can be used for activities involving information and documentation. Improving retrieval performance.

Serrat (2016) emphasized the importance of information technology when he buttressed what it can help achieve in the organization. Baltzan (2017) explained further by singling out IT-related contributions in achieving successful businesses, exploring organizational intelligence, streamlining organizational operations, and organizational accomplishments. From a review of experience, impacts of information technology on organizations has been nothing but astonishing; cheaper, easy access to information, which boosts organizational efficiency and productivity, generates a means for business reorganization, and minimizes cost of transactions and entry barriers (Serrat, 2016).

### **Information, Technology and Knowledge Management**

Until it exists in people's thoughts, the information found in books and periodicals is turned into useable knowledge. Face-to-face contacts and gatherings can help spread knowledge. On the other side, information management is the process of

gathering, planning, and controlling information. Enhancing the application of organizational knowledge through effective knowledge management activities is the goal of knowledge management. Even though technology management is all about technology, it does play a significant part in knowledge management. Information exchange and transmission are made easier or possible by technology. Technology must be used to create a knowledge management system that can support both explicit and tacit knowledge. Nevertheless, interactive usage of knowledge technology is made with users [Singh & Yuvaraj, 2013].

### **Resource Based View (RBV) Theory**

Penrose developed resource-based vision theory (RBV) (1959). He argued that the organization's resources—what it owns, uses, and deploys—are more essential than the structure of the industry. According to Barney (2001), a firm's resources are its principal source of competitive advantage. As a result, the resource-based view (RBV) is a management paradigm that identifies strategic resources that a firm may exploit to gain a long-term competitive advantage. The resource-based view (RBV) emphasizes the influence of an organization's resources on its capacity to compete in the business environment and emphasizes businesses' internal environments as a source of competitive advantage.

According to Barney (2001), in addition to a firm's overall resources, there are other resources such as physical capital, human capital, and organizational capital. He highlighted "all assets, capacities, organizational processes, organizational traits, information, knowledge, and so forth" that a business possesses for it to create and implement plans to boost its efficiency and effectiveness.

### **Empirical Investigations**

In Iran, Khodro, Saedi, and Yazdani (2010) established a process model for knowledge management implementation based on organizational learning. Through describing Iran Khodro experiences, the study examined the periods of knowledge acquisition and their relationship with loop learning. This process model depicts how knowledge management development is implemented through a four-loop learning process that enhances organizational resources and converts them into critical corporate capabilities and competencies.

Hassanbeigi published a thesis titled "providing a model of important success qualities of knowledge management in order to increase organizational learning and competence in Iran Airports Corporation" (2011). The study identified and selected essential success aspects of knowledge management that are shared with success factors of innovation and organizational learning as independent variables, and their effect on creativity growth and organizational learning as dependent variables was

explored. Of the seven fundamental success criteria for knowledge management, the findings demonstrated that knowledge-based strategies and policies, as well as human resource management, promote both creativity and organizational learning.

Information sharing may improve interpersonal relationships and interactions inside a company, which fosters creativity. Organizational learning happens when companies use or acquire information that has a positive impact on their receptivity to innovation or innovativeness (Darroch & McNaughton, 2002). Additionally, effective knowledge management increases an organization's knowledge reservoir, which produces infrastructure to facilitate innovation and increases an organization's innovativeness.

### Methodology and Analysis

This paper uses quantitative research approach with questionnaire as the primary source of data collection. The study adopts both descriptive and inferential statistics to give meaning to the data. The descriptive analysis was done using frequency, percentage and mean. While the Spearman Rank Correlation Coefficient was adopted as the inferential statistics to evaluate the relationship between the variables.

S/N	Items	SA (5)	A (4)	MA (3)	D (2)	SD (1)	Agg. Score	Mean X
<b>Knowledge Management</b>								
1	Knowledge is acquired from market, clients, customers, and competitors.	9 (37.5)	6 (25)	6 (25)	2 (8.3)	1 (4.1)	90	3.7
2	Knowledge is stored for futures usage.	8 (33.3)	6 (25)	3 (12.5)	4 (16.6)	3 (12.5)	84	3.5
3	Knowledge is transferred for making quality business decisions.	8 (33.3)	6 (25)	5 (20.8)	2 (8.3)	3 (12.5)	86	3.5
<b>Information Technology</b>								
4	Knowledge is sourced using electronic means from the market, clients, customers, and competitors.	4 (16.6)	11 (45.8)	3 (12.5)	3 (12.5)	3 (12.5)	82	3.4
5	Knowledge is stored using I.T devices for futures usage.	9 (37.5)	5 (20.8)	4 (16.6)	4 (16.6)	2 (8.3)	87	3.6
7	Knowledge is transferred with electronic medium for making quality business decisions.	4 (16.6)	11 (45.8)	3 (12.5)	3 (12.5)	3 (12.5)	82	3.4

Source: Survey Data Computation. All figures in parenthesis are (%)

**Correlation outcome between knowledge management system and information technology**

		Correlations		
			KMS	IT
Spearman's rho	KMS	Correlation Coefficient	1.000	.524**
		Sig. (2-tailed)	.	.000
		N	24	24
	IT	Correlation Coefficient	.524**	1.000
		Sig. (2-tailed)	.000	.
		N	24	24

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The result in the table above, 0.524, indicates a substantial association between the knowledge management system and information technology in a business. This suggests that the previously stated null hypothesis is rejected. This indicates that a substantial link exists between a knowledge management system and information technology in a business.

**Conclusion and Recommendations**

Information systems, technologies, and human capital are all combined in knowledge management. Management should take advantage of this opportunity for knowledge management and provide access to world-class information and services to assess the organization's position and grow its workers' skills. To summarize, effective knowledge management requires standard information technology. IT promotes the classification and collaboration of explicit categories of knowledge at a low cost (Pinho, 2012). Moreover, information technology is a "key facilitator of KM operations in enterprises, with the usual proviso that the KM issue also contains significant social and cultural dimensions."

Businesses must construct their knowledge management systems on a sound information technology foundation.

Management should assess and analyze their knowledge management system to guarantee it is properly connected with the invested information technology for efficient knowledge and information management.

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