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Evaluation of the Conceptual Theories, Elements, and Processes of Knowledge Management in Modern Day Organisations

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Abstract

The objective of this paper is to evaluate the conceptual theories, elements, strategies along with the prospects and challenges of knowledge management (KM). The findings indicated that KM is a complex yet important process that requires organisations to create, process, disseminate and apply of knowledge. The findings also revealed knowledge is one of the most valuable resources of any organization. Therefore, effective KM is critical to the growth, performance, and survival of organisations. Furthermore, the many definitions of KM serve as a theoretical framework and empirical basis for multidisciplinary applications and prospects for organisations. Furthermore, the proper adoption and implementation of KM provides a systematic management approach for organisations to create, store, disseminate and apply knowledge critical to organizational performance and decision-making processes. Furthermore, KM can minimize the time, operational costs and material losses during product design, lifecycle, and quality assurance. Despite its merits, KM has numerous challenges. Most notable is the lack of an acceptable definition and understanding of KM concepts and practices. This can result in poor adoption and implementation thereby affecting sustainable organisational growth and development. Therefore, the paper concludes that KM adoption and implementation is critical to organisational goals, growth and performance.

Keywords:*Organisation, Commitment, Performance, Knowledge, Management.*

JEL Classification: I26, M5.

1. Introduction

Knowledge management (KM) is a set of processes or practices employed by an organisation for the purpose of acquisition, application, and sharing vital information critical to its goals, missions, and objectives [1]. As a result, the concept is fundamental to the growth, development, and lifespan of any organisation in today's global business climate. Due to its importance, KM is

often described as the backbone of organizational processes and day to day operations, which can typically comprise various forms of learning, teaching, and skills development [2, 3]. However, some researchers opine that many organisations are yet to fully grasp the concept of KM or how to exploit and implement its principles and process to achieve its goals, missions, and objectives.

Consequently, numerous researchers around the globe have sought to examine and highlight the importance of KM in the global knowledge economy [4, 5]. This has become particularly crucial in today's highly competitive global business climate where organisations are battling dwindling resources, shrinking profits, and scarcity of talents [6, 7]. Therefore, modern-day organisations are required to consistently and efficiently design, adopt or adapt novel approaches and sustainable strategies to stay ahead in the business world. Accordingly, many researchers posit that knowledge management is a crucial dynamic in any organisations quest to sustainably transition into a dominant global player in its business niche [8, 9]. Others opine that the novel approach of KM could significantly influence the world economy by promoting the competitiveness of small, medium, and large enterprises [10, 11].

Recently, various studies have sought to highlight the significant role of KM in stimulating innovative changes in the organizational cultures [12-15]. The study by Swan *et al.,* [12], examined the role of networks and networking on the concept of knowledge management and innovation by means of a conceptual model. The findings indicated that knowledge development, personal characteristics and personal development are critical to the innovation and competitiveness in organisations. Similarly, Carneiro [13] examined the role of KM in influencing innovation and competitiveness in organisations. The findings revealed that KM plays a crucial role in strategic management and the formulation of competitive strategies in organisations.

Other studies have examined how organisations can sustainably leverage KM to create a positive impact within its corridors and across its niche business, social justice, and environmental settings [16, 17]. Gloet [16], examined the links between KM and human resources management (HRM). The findings showed that the developing leadership and management capabilities are critical to sustainability across the business, environment and the social spheres in the society. The study by Lopes *et al.,* [17], investigated the interaction between organizational sustainability, knowledge management, and open innovation. The results demonstrated that the sustainable organisation of novel ideas, knowledge and practices can promote organisational management. In addition, the authors revealed that open innovation and organisational sustainable can help organisations leverage KM. In addition, the findings of Gloet [16] and

Lopes*et al.,* [17] show that KM can promote cooperation amongst organisations, its customers, and business partners. As a consequence, the process of KM can assist all stakeholders sustainably achieve their goals, thereby promoting sustainable growth and organisational development [18-20].

Over the years, KM has become a major factor in promoting the global knowledge economy aimed at ensuring efficient organisational management. Various studies have revealed that KM is not only crucial to achieving the goals within an organisation but also other aspects of the larger society [8, 16, 19, 21]. As a result, KM involves various stages of organisational management operations or practices that encompass the acquisition (creation), adoption, storage, and sharing of knowledge [21, 22]. According to Pirró *et al.,* [23], KM has considerably influenced various researchers, policymakers, stakeholders, and practitioners to achieve progress in various organisational climes. The importance of KM is further amplified by its application in various disciplines such as information system, management, business administration, engineering, architectural design and library information sciences among others [24-27].

Despite its strategic importance and multidisciplinary applications, the concept of KM plagued by numerous challenges. Most notably is the lack of an acceptable definition for the concept due to its widespread applications, interpretations, and multidisciplinary nature. Furthermore, the lack of comprehensive understanding of KM concepts and practices can result in poor implementation, thereby affecting the sustainable organisational growth and development. Therefore, this paper seeks to evaluate, present, and highlight the various conceptual theories, critical elements, and strategic processes of knowledge management in modern day organisations. The paper also presents the prospects and challenges of the adoption, acceptance, and implementation. It is envisaged that the findings will avail managers, governments, policy and other decision makers with sustainable tools, strategic information, and skills to achieve their outlined organisational goals.

2. Historical Overview of KM

Historically, KM dates back to the epistemological deliberations of ancient Greek society. However, contemporary studies on KM indicate that the concept was pioneered in the mid-1970s[28]. Over the years, various researchers have contributed significantly to the evolution of KM. The most notable include; Alavi and Leidner [28], Gu [29], Donate and de Pablo [30], Geisler and Wickramasinghe [31], Hislop *et al.,* [32], Koenig and Srikantaiah [33], Dalkir [34] and Wiig [35]. According to these studies, the history of KM dates back to the early or mid-1980s. Over the years, the concept has evolved into what Wiig [35] describes as

the "logical next step in a sequence of societal developments". According to the study, KM is a socio-technical and environmental concept that can be described based on four perspectives. These include management practice, information technology, organizational efforts and lastly, the development-adoption perspective of KM [35]. Other notable management theorists have also contributed to the evolution of KM. Amongst these include Peter Drucker, Paul Strassman, and Peter Senge, Chris Argyris, Christopher Bartlett, Dorothy Leonard-Barton from the United States. The published findings of Druker and Strassman have highlighted the rising significance of information and explicit knowledge as the resources of an organisation. However, the Harvard trio of Argyris, Bartlett, and Leonard-Barton have written extensively on the importance of knowledge management [36].

Other schools of thought from the 1980s opine that KM consists of the acquisition and engineering of knowledge along with knowledge-based systems and data technologies [37-39]. However, according to Becerra-Fernandez [40] and Liebowitz [41], the concept of KM was first proposed by researchers in the field of artificial intelligence. According to Becerra-Fernandez [40], the development of KM requires the acquisition, sharing, and regulation of knowledge by persons and organizations through the use of knowledge-sharing systems that include but are not limited to knowledge repositories or data banks. The study examined the problems and prospects of knowledge management systems (KMS) based on artificial intelligence (AI). The findings showed that AI technologies can improve KMS particularly in data mining and information management. Similarly, Liebowitz [41], examined the role of AI in KM. The findings showed that AI is a significant building block for the development and advancement of KM. In addition, AI can serve as a facilitator for the transformation of the individual to organisational knowledge. As a result, organisations along with industry and governments around the globe will need to adopt and adapt to the changing climate of global business.

However, the 1990s heralded the birth of KM as a scientific discipline championed by early researchers such as the in Japanese academics Ikujiro Nonaka and Hirotaka Takeuchi of Hitotsubashi University along with the American scholars Thomas H. Davenport and Baruch Lev of Babson College and New York University, respectively [24, 42]. This era also steered the definition and integration of information technology (IT) and data into the core ideology of KM. As a result, the principles and practices of KM have flourished as evidenced in its utilization addressing organisational problems and challenges through the use of information technology (IT) [43].

Other researchers have demonstrated the use of KM in implementing managerial practices such as Total Quality Management (TQM) and e-Business

engineering processes[44, 45]. As a result, KM and IT have become a significant factor in numerous organizations such as start-ups, small-medium enterprises (SMEs), and large corporations [21, 46]. This is reportedly ascribed to its growing role in the day to day operations such as supply chain, human resources, talent scouting among other operations in organisations around the globe [47]. In spite of its benefits, KM is plagued by various theoretical, practical, and developmental challenges as highlighted in the literature[48-51]. According to the findings of these studies, the widespread applications, interpretations, and multidisciplinary nature of KM and its numerous definitions are problematic to its adoption, acceptance and implementation. Therefore, the next sections of this paper will present the many definitions of KM to address the lack of comprehensive understanding of its concepts and practices.

3. Definitions of KM

The term knowledge management (KM) is derived from the words knowledge and management. Knowledge is expressed as the information possessed in the mind, understanding or experience of people. It typically consists of useful or ready to use information for actions or processes required to make crucial decisions [52]. According to Anand and Walsh [53], knowledge avails users with information, expertise, and skills to perform their day to day activities. Over the years, various researchers and academics have contributed significantly to the understanding of production, utilization and diffusion of knowledge within organisations around the globe [36, 54]. Most notably, the works of Rogers [55] and Allen and Henn [56], Allen [57] have examined the diffusion of innovative technologies and the transfer of information and knowledge [58]. In the process, the authors helped to pioneer the concept of knowledge as a valuable resource or a “competitive asset”. Management, on the other hand, is a set of processes, practices or activities undertaken by individuals or organisations to accomplish its objectives. This typically involves the process of planning, organising, coordinating, or controlling people and resources with the aim of accomplishing outlined mission and objectives of an organisation [59, 60].

The concept of “knowledge management (KM)” as earlier highlighted is complex. This is due to the numerous definitions of the concept, which can vary significantly depending on the subject or field of discipline applied in its study. Hence, the notion of KM has evolved significantly over time, which has hampered a wide-scale engagement of KM [61]. Furthermore, the lack of a

singular definition of KM means that knowledge and knowledge management could be viewed in different ways. Typically, the main purpose of disseminating knowledge is to increase its value and visibility. With increased significance, organizational knowledge can inspire employee performance and organisational commitment. In addition, it can nurture behaviours like building knowledge, infrastructure and knowledge sharing [62]. Nonetheless, knowledge acquisition without adequate management is impractical and obsolete as surmised by various researchers in the literature[63, 64]. As a result, it is recommended that organizations manage, implement or apply knowledge in phases to maximise its value and visibility as opined by OuYang [65]. As such the contextual management of knowledge in organisations has given rise to the field of science now known as knowledge management (KM).

Over the years, numerous researchers have attempted to define KM. Gold *et al.,* [66], defined KM as the ability to manage, organise or collate external or internal knowledge within an organization. The definition also encompasses all the procedures required to process, convert, implement and protect knowledge into a new notion or approach. According to Lytras *et al.,* [67], KM is an explicit or systematic approach to implementing knowledge to enable organisations to maximize the value of knowledge as an asset. Furthermore, the KM is known to stimulate and inspire new competencies, innovation and performance in organisations [52, 68]. Based on this view, KM is defined as the systematic process of capturing, storing, sharing and utilization of knowledge [52, 68]. KM is also described as a meticulous method applied for gathering, organizing, and communicating both explicit and tacit knowledge of employee, which can be exploited for the good of the organisation [69, 70]. Consequently, organizations can effectively acquire, maintain and influence their resources of knowledge by mean of KM creativities and technologies [71, 72]. Consequently, the main objective of KM is to shape and sensitize organizations about their knowledge to ensure effective and competent implementation[69]. Although, it has been claimed that the scientific comprehension of KM organizational settings is still at the infant stage [73].

One of the most notable definitions of knowledge management was proposed by Fischer and Otswald [74]. The paper examined the problems, promises, realities, and challenges of knowledge management (KM). In addition, the study examined the implications of KM from a design perspective. Based on the paper, KM is defined as a recurring process that comprises three (3) connected actions namely: creation, integration, and dissemination of knowledge. This is illustrated diagrammatically by Fig. 1 [74].

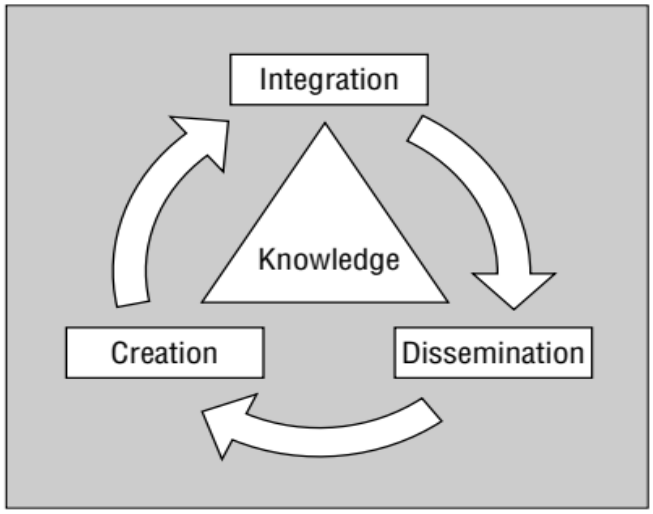

Figure 1: Cyclic Process of Managing Knowledge [74].

As observed, the KM process involves creating, integrating, and disseminating knowledge within an organisation. This typically requires specialists or experts to *create* knowledge or information that can be efficiently *deployed* through various means or tools such as lectures or broadcasts. Over time, the knowledge is further processed, *integrated* or transferred to accomplish the organisation's tasks or goals. During the cycle, social structures comprising individuals in hierarchical and communication structures are erected to ensure the efficient use of the knowledge within the organisation [74]. As a result, these processes form the core elements of KM as will be detailed in the subsequent section of the paper.

4. Core Elements of KM

According to studies in the literature[74-77], knowledge management (KM) typically comprises four (4) major elements namely;

I. Acquisition or Creation: This stage consists of the implementation of new information or resources that can replace existing content within the organizations' tacit and explicit knowledge base. It typically involves the search, acquisition, and processing for new or useful information or knowledge within or outside the organization [78]. This can be accomplished by processes such as simulating, benchmarking, replicating or outsourcing [79]. This process of knowledge creation is

considered important as it generates new knowledge inside an organization that can be converted to a success factor or increased innovation. Furthermore, it can foster collaborative processes within organizations, since the sourcing or creation of knowledge allows for shared and maximized efforts of the employees [80].

II. Storage: The tacit and explicit knowledge created by organizations or individuals within the organization needs to be stored before processing or dissemination. Therefore, the organization is expected to assemble, manage or control the knowledge for easy accessibility, processing or application [81, 82]. Furthermore, the integration and application of stored knowledge, information, or resources can assist in curtailing redundancies within the organization and by extension improving efficiency [69]. Nemati [83] posits that storing knowledge is critical not only to reuse of knowledge but also for effective dissemination and application.

III. Transfer or Dissemination: This element of KM consists of sharing or exchanging knowledge. This can typically be between individuals or a group of people in a network or organization [84]. During this process, the acquired or stored information or resources is transformed tacit or explicit knowledge[18, 80].

IV. Application: This involves the utilization of knowledge. Typically, it requires altering the direction, determining the challenges, proffering conclusions, increasing efficiency and reducing costs [85]. According to Martelo Landroguez *et al.,* [86], organizations that need to exploit knowledge, must comprehend how the knowledge was acquired or created to ensure efficient utilization or dissemination.

5. Types of KM

Knowledge is categorized into two major groups namely; tacit and explicit knowledge [87]. It is established that these two classes of knowledge are the most robust in KM [88]. The findings of Mooradian *et al.,* [89] and Grant [90] state that tacit knowledge is the foundation of KM. Tacit knowledge is typically articulated in the form of drawings or writing, whereas explicit knowledge is retrieved from documents, papers, books, journals, databases [25]. In the organizational context, tacit knowledge is entrenched in the culture of the organization. However, the explicit form of knowledge is abstracted or saved in databases that can be transferred in a formal condition. Furthermore, it can be

acquired by means of experience, internalization and reflection, which can be managed and taught [91].

In addition, explicit knowledge can be stored in a technological system or medium [92, 93]. Sanchez [94], concluded that tacit knowledge has no value without explicit knowledge which is in good agreement with Nonaka *et al.,* [95]. The study by Nonaka *et al.,* [95] posits that knowledge is created by the interactions between explicit and tacit knowledge. In principle, tacit knowledge can be documented, codified and shared, whereas explicit is formed from the perceptions of people [96]. Hence it is difficult to appraised and access explicit knowledge whereas tacit knowledge can be stored digitally or in other technological systems [97]. Lastly, tacit knowledge is transferable whereas explicit knowledge cannot.

6. Prospects of KM

Knowledge is considered one of the most valuable resources known to mankind [98]. In addition, the quality of knowledge is critical to the process of decision making in organisations. As a result, the higher the growth and performance of any organization increase significantly with the availability of high-quality knowledge. Likewise, KM is considered one of the most valuable enterprise resources and sources of intellectual capital in the world [98]. The intellectual capital of any organisation is the entire value of its knowledge resources, which exists within or outside [99]. As a result, KM has numerous prospects for any organisation.

Firstly, KM provides organisations with a systematic approach to create, store, disseminate and apply information and knowledge to achieve its goals and aspirations. In addition, it ensures that organisations can efficiently utilize knowledge to gain competitive advantages in its niche business environment[100, 101]. Many studies have demonstrated that knowledge is a critical success factor required for organizations to gain a sustainable competitive advantage [102]. Over the years, the growth and value of knowledge in organizations have soared, thereby demonstrating its importance reaching sustainable competitive advantage [103, 104].

Furthermore, the adoption of KM offers organisations the potential to create a new management system which can improve the organizational performance [105]. According to Rasula *et al.,* [106] the key objective of introducing KM is for organizations to achieve positive influence and organization performance [106]. KM can also improve innovation, product

enhancement and employee performance [107, 108]. The adoption and implementation of KM can help organizations gain a sustainable competitive advantage over its competitors in its niche business environment [109]. Based on the literature, KM can minimize the design cycle, lead and marketing time required for efficient product quality and delivery [110, 111]. This view is corroborated by Zaied *et al.,* [112] whose study showed the relationship between performance enhancement and KM.

Furthermore, the implementation of KM can improve efficiency, quality of service, marketing, and customer service [113, 114]. KM is an avenue for organizations to explore and exploit the explicit and tacit forms of knowledge in rival organizations, groups or entities. Knowledge acquisition of this form can be beneficial to the decision making systems of the organizations. The customer service division of organizations and its operational performance can also be are enhanced by KM. The adoption of KM can enable organizations adequately and securely acquire, store, and utilize data, information, and knowledge resources. With KM, employees have access to customer information, which can enhance competitiveness [115].

7. Challenges of KM

Despite the growing importance of knowledge management to the growth, operation, and survival of organisations, it is plagued by a plethora of problems. Therefore, it is important for organisations to identify, highlight and examine these challenges so as to thrive particularly in the face of shrinking profit margins, talent shortages, and scarce resources. One of the major challenges of the adoption and implementation of KM is the lack of understanding of its theories, concepts, and practices [116]. These challengesare ascribed to failure factors that comprise the lack of a comprehensive definition, experiential knowledge, recognized theories, and conceptual framework of KM [117]. These failure factors are generally categorised into causal and resultant.

Lack of performance indicators, measurable benefits; and inadequate management support are termed causal factors. Others include poor planning, design, coordination, and evaluation; insufficient proficiency of knowledge managers or workers; poor organizational culture and structure. Conversely, the resultant failure factors are mainly poor overall contribution; absence of relevance, quality, and usability; over-elaboration on formal learning, systematisation, and determinant needs. These also include; incorrect implementation of technology, budgeting and excessive costs, poor responsibility and ownership, and loss of knowledge due to defection or departure [117].

According to Selamat and Ahmad [116], many organisations are unaware of the factors that influence KM and its effects on employee performance. The inability to identify these factors and their effects employees' beliefs, goals, commitment, and performance present challenges for organisations.

Furthermore, many organisations encounter challenges implementing KM due to their inability to attract, train, and retain talented people. As a result, there is a dearth of employees with the requisite skills or expertise in KM tools and practices. This challenge is aggravated by the nonexistence of administrative structures, cultures, and strategies to effectively develop, organize, and utilize employee's capabilities and the KM at their disposal. According to Liao and Wu [118], organizations that lack such structures can neither stimulate organisational commitment nor impact on its employees' performance.

Another major challenge of KM is due to the inability of organisations to effectively exploit innovative technologies such as IT (information technology) and human skills to remain competitive. This can particularly hamper the processes and mechanisms for analysing, creating, facilitating, transferring, handling and maintaining technical infrastructure [119]. Lastly, the absence of robust frameworks required to acquire, implement or transfer knowledge greatly affects organizational strategies and support systems. These can lead to problems collecting, classifying and executing the optimal strategies to stimulate employee performance and organizational commitment. According to Dost *et al.,* [120], pertinent concerns such as efficiency, productivity, and performance that foster commitment is also not emphasized in organisations. As a result, employee commitment and employee performance are greatly affected in many organisations [120].

8. Conclusions

The objective of the paper was to evaluate and highlight the conceptual theories, core elements, and strategic processes of knowledge management (KM) in modern day organisations. In addition, the paper presented the prospects and challenges of the adoption, acceptance, and implementation of KM in organisations. The findings indicated that KM is an important process that involves the creation (acquisition), processing/storage, dissemination and application of knowledge in organisations. The findings also revealed knowledge can either be tacit or explicit, both of which have significant importance on the growth, performance, and survival of organisations. Furthermore, the wide-ranging definitions of KM potentially provide a theoretical and empirical basis for

application in various disciplines. However, KM is plagued by numerous challenges. Most notably is the lack of an acceptable definition for the concept. Furthermore, the lack of comprehensive understanding of KM concepts and practices can result in poor adoption and implementation, thereby affecting the sustainable organisational growth and development. In spite of the above, KM has numerous prospects. Accordingly, the adoption and implementation of KM can provide a systematic management approach for organisations to create, store, disseminate and apply information and knowledge to improve organizational performance, decision making and customer services. Furthermore, KM can assist organizations to gain a sustainable competitive advantage over its competitors by minimizing production time, operational costs and material losses in its niche business environment. As a result, the resources required for creating a quality product are significantly reduced. Based on the foregoing, the author envisages that the findings herein will avail managers, governments, policy, and decision makers with strategic information to achieve their outlined organisational goals.

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