KNOWLEDGE MANAGEMENT PRACTICES AND PERFORMANCE OF NATIONAL GOVERNMENT MINISTRIES IN KENYA

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ABSTRACT

This study examined the relationship between KM practice and the performance in public service sector with a special focus on government ministries in Kenya. The study focused was on two practice dimension namely sharing and re-use of knowledge. A conceptual framework had been formulated to guide the study along the two variable dimensions. The study adopted descriptive research design to provide a detailed, highly accurate picture, could locate new data that confirmed or contradicted new data, among other advantages. The target population of the study was the national government ministries, which were 20 in number and the population of the study were the ministries headquarters. Similarly, the unit of analysis were the ministries while the unit of observation was the 224,600 employees of the 20 ministries in Kenya. The sample size for the study was 384 that was proportionally redistributed to every ministry. The sample was drawn from the population using simple random sampling technique to promote generalizability and representativeness. Computer generated random numbers were used. The study collected data using questionnaires which were semi structured to allow both qualitative and quantitative data. A pre-test of the instrument was conducted to determine the reliability and validity of the instrument and necessary adjustment was done based on the Cronbach's alpha value cut off of 0.66. The data was cleaned, coded and entered into SPSS for both descriptive and inferential tests to determine the level of practice of knowledge management within the national government ministries in Kenya. Based on the study findings, the study concluded that knowledge management practices had highly been adopted in government ministries in Kenya. It was also recommended that the ministries should adopt integrated knowledge sharing systems to facilitate the KM process. It was recommended that knowledge producers be keen in articulating when to withhold or disseminate knowledge for reuse.

Keywords: *Knowledge Sharing, Knowledge Re-use, National Government Ministries in Kenya, Performance*

INTRODUCTION

Knowledge management practices are becoming increasingly imperative for various reasons (Quast, 2012). The three foremost motives are to 1) improve decision-making capabilities, 2) develop learning organizations, and 3) stimulate cultural change and innovation. With an increasing awareness and importance of the "knowledge" residing in organizations, there has been a rise in the awareness of the concept, methods, and tools to retain and grow this knowledge (Ahmad and Khan, 2008).

KM is becoming a research priority by the academic community (Salmador and Bueno, 2007) and companies are allocating a greater share of spending for its implementation (Call, 2005).The entire community is affected by public policy, thus governments play a large part in a society's success. Societal responsibilities, for delivering public policy that benefit the common good further enhance the importance of effective KM in public services (Wiig, 2002). Furthermore, governments globally are under continual pressure from the society to increase their effectiveness and quality with fewer resources (Keating and Weller, 2001; McAdam and Reid, 2000), while simultaneously being expected to demonstrate greater accountability and transparency in processes.

Clear communication of policy outputs and outcomes to stakeholders, and attempts to achieve those together in partnerships with stakeholders can be the starting point to transforming relatively uncompetitive public sector organizations into dynamic and knowledge-intensive learning organizations. Whilst knowledge has been recognized as a core strategic asset in increasingly dynamic public business environments and communities, more effective governing and public policy development depends on a more systematic and effective capture, dissemination, transfer and application of knowledge.

Some governments are at risk of falling behind practices of leading private sector firms unless they start being conscious of the benefits of setting KM goals and strategies (OECD, 2001),that is, viewing knowledge as a significant competitive differentiator and resource of wealth and value-creation. There is more evidence in literature that points to the direction that KM first started in the private sector of developed economies like Japan, Canada and the US around the mid-nineties. Beccerra- Fernandez, et.al. (2005) refers to this as the re-engineering era of the nineties. Typically, public policies are based on theories about the world and human behaviour within a nation, and articulate preferred directions and philosophies that influence government decisions about public resource allocation in that nation. The better the knowledge base upon which public policies are built, the more likely they are to succeed.

Delegates to the KM Africa conference (DBSA 2006) also acknowledge and agree that KM refers to a body of practices that have emerged from the corporate world as organisations strive to cope with the pace of change. As a result, Kenya was mandated to spearhead the establishment of the East Africa KMA Chapter whose focus will be mainly on capacity building and education. In the Kenya vision 2030, Kenya intends to become a knowledge driven economy wherein the creation, adaptation and use of knowledge will be among the most critical for rapid economic growth. However, existing practices of knowledge management are largely derived by international organizations and private commercial companies. Limited evidence is found on the use of knowledge management at organizational levels and more specifically from developing countries. In light of the potential value of knowledge management practices, such qualitative views and case studies should act as a significant prospective for benchmarking and reflection.

Statement of the Problem

Knowledge Management is the latest driver of the economy, hence a Knowledge driven economy.

Researchers and practitioners have already stated that knowledge management should be an integral part of business strategy, in order to out-think the competition (Snyman and Kruger 2004). Over forty percent (40%) of the U.S. economy is directly attributable to the creation of intellectual capital (Klasson1999), and that over ten percent (10%) of the gross domestic product (GDP) in developed countries around the world are being reinvested in the development of knowledge (OECD 2001).

In the Vision 2030 which is Kenya's development economic blueprint, there is a desire to implement KM through awareness, training and research. However, Sutton (2007) finds that academics and practitioners have not yet been able to stabilize the phenomenon of KM enough to make sense of what it is and what it comprises. Despres (2011) finds that there are no technologies, applications, practices, prescriptions, as well as theory of economics, organization, systems or human interaction specific to KM. Jennex (2009) holds that Knowledge Management is really about leveraging what the organisation "knows" so that it can better utilise its knowledge assets, and connecting knowledge generators, holders, and users to facilitate the flow of knowledge through the organisation; hence the need to establish the practice status as the entry point to progress on KM institutionalization and subsequently achieve a knowledge driven economy.

Despite the fact that KM has been extensively discussed by many theorists and practitioners, very few literature and/or information on KM (Cong and Pandya, 2003; Edge, 2005; Riege and Lindsay, 2006; Rowland and Syed, 2004) have been found in the public sector. Edge (2005) states that current examples of public sector knowledge management are often narrowly focused and do not provide rich data on the strategies and experiences of those engaged in the process at the organizational level. These researches often focus on the role of technology or e-government services (Ling, 2002; cited by Edge, 2005). It is therefore difficult to start since empirical evidence on the status of KM in the public sector is scanty. There is an inconclusive findings on the knowledge management to performance relationship. This therefore creates a need for establishing KM practices in the national government ministries of Kenya in relation to their performance.

Study Objective

The main objective of this study was to examine the relationship between Knowledge Management Practices on the performance of National government ministries in Kenya. The specific objectives were:-

- To find out the relationship between Knowledge Sharing Practices and the performance of National government ministries in Kenya.

- To investigate the relationship between Knowledge Re-use Practices and the performance of National government ministries in Kenya.

LITERATURE REVIEW

Theoretical Review
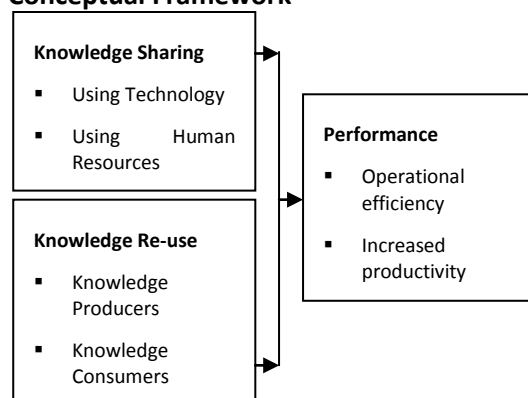
Theories of KM

Knowledge Sharing theory - In this study, we focus only on the salient beliefs which affect the knowledge sharing attitude, because we assume that the knowledge sharing behaviour is motivated and executed mainly at the individual level .Theory of Reasoned Action (TRA) assumes that human beings are usually quite rational and make systematic use of information available to them. For this reason, this approach is referred as a 'Theory of Reasoned Action (TRA)' (Fishbein & Ajzen, 1975). TRA is a widely accepted model in social psychology to explain virtually any human behavior (Fishbein & Ajzen, 1980). A particularly helpful aspect of TRA is that it assumes all other factors influence behavior only indirectly by

influencing attitude, subjective norms, or their relative weights (Davis, et al., 1989). Based on this explanatory power, TRA can be a useful model for explaining the knowledge sharing behaviour in organizations.

The person's beliefs that the behaviour leads to certain outcomes and his evaluations of these outcomes. The person's beliefs that specific individuals or groups think he should or should not perform the behaviour and his motivation to comply with the specific referents. Attitude toward the behaviour ($A = \Sigma biei$); Subjective norm ($SN = \Sigma nbimci$); Relative importance of attitudinal and normative consideration; Behavioural Intention ($I = Aw_1 + SNw_2$) Behavior ($B = f(I)$).

Knowledge Re-use theory - Synthesis of evidence from a wide variety of sources suggests four distinct types of knowledge re-use situations according to the knowledge re-user and the purpose of knowledge re-use. The types involve shared work producers, who produce knowledge they later re-use; shared work practitioners, who reuse each other's knowledge contributions; expertise-seeking novices; and secondary knowledge miners (Markus, 2001). Each type of knowledge reuser has different requirements for knowledge repositories. Owing to how repositories are created, re-users' requirements often remain unmet. Repositories often require considerable rework to be useful for new re-users, but knowledge producers rarely have the resources and incentives to do a good job of repurposing knowledge. Solutions include careful use of incentives and human and technical intermediaries.

Conceptual Framework

Knowledge Sharing
- Using Technology
- Using Human Resources

Knowledge Re-use
- Knowledge Producers
- Knowledge Consumers

Performance
- Operational efficiency
- Increased productivity

Figure 1: Conceptual Framework

Knowledge Management Practices

For the last few years, a large number of national governments, departments and agencies have embraced KM practices with a quest to creating more innovative and complex systems that connect people to information and knowledge. Knowledge is described as an essential part of KM. Baloh, Desouza, and Paquette (2011) say that without having knowledge to manage, there would be no knowledge management. Knowledge basically refers to a collection/or a body of information. Management involves motivating resources, both human (e.g. employees) and artificial (e.g. technologies) to work in a coordinated fashion toward the achievement of organisational goals and strategies (Moon and Desouza, 2011). Peter Drucker, regarded as one of the greatest management thinkers state that management has to do with directing the resources and efforts of the business toward opportunities for economically significant results (Drucker, 2006). The management of knowledge has generated considerable interest in business and management circles due to its capability to deliver to organisations, strategic results relating to profitability, competitiveness and capacity enhancement (Chua, 2009; Jeon, Kim and Koh 2011).

There are various examples in the literature highlighting the successful use of KM policies and solutions at various government levels. Since 2002, for example, the OECD has been publishing an annual survey of KM practices for ministries, departments, agencies of central government in OECD member countries; and there are over 200 KM cases accessible via their web site (see www.oecd.org). A main driver for the adoption of diverse KM initiatives in public services is the change of organizational culture. In particular, governments seem to face certain critical issues, key which is to drive efficiencies across all public

services, for instance, by connecting silos of information across different levels of government and across borders. For example, the ''Project Exodus'', a US Army KM initiative promotes KM practices and techniques as well as collaboration between novices with experts, and concentrates on the capture and application of knowledge, especially tacit knowledge, to leverage organizational learning and enhance organizational competencies across the entire US Department of Defence (E-Government Institute, 2004).

Knowledge Management is here to stay, according to Koenig (2012). Koenig's answer in the affirmative to the question, "Is KM here to stay?" was backed by a compelling bibliometric analysis. The number of articles in the business subject area with the phrase "Knowledge Management" or the abbreviation "KM" in the title has been growing since 2001, from a little below 8,000 in 2001 to above 12,000 in 2011 (Koenig, 2012). Much of this literature, no doubt, was private sector oriented. As has been explained, the market and competition positioning of major KM initiatives leave only a small room for public sector KM in the literature; this is true even in the case of public sector KM in the advanced countries. However, Bate and Robert (2002), Abdullah and Date (2009) and Berce (2004) have attempted to explore KM in the public sector.

Public and private institutions are finding ways to develop strategies to optimize the use of their resources, especially knowledge, which has become a source of lasting competitive advantage (Nonaka, 1987 and 1994; Drucker, 1968; Toffler, 1990) driven by the knowledge economy phenomenon. According to the World Bank, the challenge for African countries is their inability to create a favourable environment that nurtures knowledge creation and sharing (World Bank, 2003) for which Kenya is not an exception; thus public sector knowledge management has attracted only a few knowledge management research and publications.

Governments in developed economies, including the United Kingdom, have embraced knowledge management initiatives in various facets of public management with encouraging results (BSI, 2004). Some studies have attempted to explore how private sector knowledge management concepts and practices might contribute to public sector quality improvement initiatives (Bate & Robert, 2002). To therefore facilitate maturity of KM in the public sector, there will be the need to collate KM best practices.

Knowledge Sharing Practices

As one of the knowledge-centred activity, knowledge sharing is the fundamental means through which employees can contribute to knowledge application, innovation, and ultimately the competitive advantage of the organization (Jackson, Chuang, Harden, Jiang, & Joseph, 2006). Knowledge sharing is also known as knowledge transfer which means sharing knowledge between individuals and groups in an enterprise (Disterer, 2001). According to Lee & Al-Hawamdeh (2002) knowledge sharing is a deliberate act that makes knowledge reusable by other people through knowledge transfer. Van den Hooff, Elving, Meeuwsen & Dumoulin (2003) define knowledge sharing as a process where individuals exchange knowledge (tacit or explicit) and together create a new knowledge. Yang (2004) asserts knowledge sharing as a dissemination of information and knowledge to the entire organization or department.

Knowledge sharing between employees and within and across teams allows organizations to exploit and capitalize on knowledge-based resources (Cabrera & Cabrera, 2005; Damodaran & Olphert, 2000; Davenport & Prusak, 1998). Research has shown that knowledge sharing and combination is positively related to reductions in production costs, faster completion of new product development projects, team performance, firm innovation capabilities, and firm performance including sales growth and revenue from new products and services (e.g.,

Arthur & Huntley, 2005; Collins & Smith, 2006; Cummings, 2004; Hansen, 2002; Lin, 2007d; Mesmer-Magnus & DeChurch, 2009). Because of the potential benefits that can be realized from knowledge sharing, many organizations have invested considerable time and money into knowledge management (KM) initiatives including the development of knowledge management systems (KMS) which use state-of-the-art technology to facilitate the collection, storage, and distribution of knowledge. However, despite these investments it has been estimated that at least $31.5 billion are lost per year by Fortune 500 companies as a result of failing to share knowledge (Babcock, 2004).

Public organizations seem to give attention on the importance of knowledge management in drafting policies and enhance service delivery (Thomas, 2005). However, there is little study both on knowledge management and knowledge sharing in such a sector (McAdam & Reid, 2000). This could be due to the status of public sector as non-profit organizations (Syed Ikhsan & Rowland, 2004). For non-profit organizations, knowledge sharing has its limitation. It is seen relevant to areas such as to continuously increase performance, other than to increase customer and employee satisfaction (Pan & Scarbrough, 1999). Although several studies on knowledge management has been carried out, but studies pertaining to knowledge sharing in public organization particularly in Malaysia is at scarce (Syed Ikhsan & Rowland, 2004). Among the studies carried out on knowledge management in public organizations elsewhere are a study by Liebowitz & Chen (2003), a study on knowledge management initiatives by Shields, Holden, & Schmidth (2000) and a study on knowledge management practice particularly on decision making and situation handling by Wiig (2002). Studies on knowledge management in public sector in Malaysia are carried out by Quin, Yusoff & Hamdan (2005) on public sector readiness in implementing knowledge management and by

Salleh & Syed Ahmad (2005) on knowledge management in local authorities.

Knowledge Re-use Practices

Reusing knowledge inevitably requires the active participation of knowledge workers, typically organised in work groups in an organisation (Hislop, 2013; Dul et al., 2011). Markus (2001) describes the process of "knowledge reuse" in terms of the following: capturing or documenting knowledge; packaging knowledge for reuse; distributing or disseminating knowledge; and reusing it. Szulanski (2001) identified four major elements in knowledge reuse: the source, content, context and recipient. The source refers to the creator of the knowledge, the content refers to the knowledge which is intended for reuse, the context refers to the environment in which the knowledge is transferred; and recipient refers to the knowledge consumer (the one who reuses the knowledge).

As one of the criteria used to decide to reuse knowledge for innovation, (Majchrzak, Cooper & Neece (2004) suggests that individuals scanned for adaptability of the ideas to their current research through search for reusable ideas, brief evaluation of reusable ideas, in-depth analysis of reusable ideas and a selection of one full development of the reused idea.

The work of Csikszentmihalyi's (1994) on data, information and knowledge was extended by Gene Bellinger (2004) and this work was further attempted by Harsh (2007b). Harsh and Sajeev (2006) extended the work of Hastings and Sajeev (2001) to three dimension to explicitly involve reusability by proposing a three dimensional model that accounts for reusability as a separate third dimension. Recently Harsh (2007a) has proposed a three dimensional knowledge management model that extends the well-known Nonaka and Takeuchi model (1995) by involving independent knowledge reusability. Earlier Harsh (2007b) proposed a model on data, information and knowledge by extending the work of Gene

Bellinger (2004). The entire knowledge of any given system always increases as time increases. In modern technological environments, increasing data and information with time cannot be avoided and thus time should also be considered along with the effective reusability (Harsh, 2007b). Thus the project is that reusability (data, information and knowledge) and time should be taken into consideration. Thus in the present work the inclusion of effective reusability over the time allows management of data, information and knowledge more effectively.

Performance

The study of Al-Hakim and Hassan (2011) investigated the role of middle managers in knowledge management implementation to improve organizational performance. They established a significant role of middle managers in KM execution, hence a positive relationship between the construct. Annette and Trevor, (2011) examined Knowledge management and organizational performance. The findings indicated that some knowledge resources such as structure of organization, application of knowledge are directly associated with organizational performance, while others such as technology, knowledge conversion did not have significant relationship to performance.

Nawaz, Hassan and Shaukat (2014) argued on the influence of three knowledge management practice of knowledge acquisition, dissemination and responsiveness to knowledge on innovation and firm performance. The result shows a positive and significant relationship between the study variables, innovation was found to partially mediate the association between knowledge management practices and firm performance.

However, Sandhwalla and McDermott (2011), established a strong positive relationship between the knowledge management and performance. Kharabsheh, Magableh and Sawadha (2012) in their study of knowledge management practices and its impact on organizational performance.

They also emphasis on effectiveness and ability of an organization to implement knowledge based activities will determine the development and sustainability of its competitive advantage. They argue about the importance of knowledge management as a valuable instrument in improving performance.

Empirical Review

Other studies on knowledge management practices have shown that the main benefit of KM practices is to maximize productivity in the public sector, while enhancing public service delivery. More specifically, the objectives for KM initiatives include (Riege and Lindsay, 2006); maximizing efficiencies across all public services by connecting silos of information across different levels of government and across borders, developing new or consolidate outdated systems to improve overall performance and capitalize on a broader, more integrated and easier accessible knowledge base, improve accountability and mitigating risk by making informed decisions and resolve issues faster, supported by access to integrated, transparent information across all organizational boundaries and finally deliver better and more cost effective constituent services such as enhancing partnerships with and responsiveness to the public.

KM is one of the initiatives within e-Government program, the challenges for a successful implementation of e-Government plan would be similar to that for KM programs. These common challenges include (Ndou, 2004); Role of Leaders and strategy definition, change management, development of human capital and lifelong learning, provision of ICT infrastructure, partnership and collaboration and ultimately policies and legislation.

Some researchers suggest that future research on KM practices in the public sector needs to see a stronger focus on refining the presented frameworks and ideas, particularly as most have not specifically evolved from application in public

policy environments. More qualitative empirical research is required to explore KM-driven public policy development issues. This includes an examination of the suitability of the frameworks for different types of public policy, investigating issues such as complexity and social versus economic objectives, together with greater consideration of practical issues faced by governments, including for example case study applications of the frameworks in actual organizational settings. Thus, successful governments need to be ahead of the general public policy debate in the wider community and be able to effectively manage emerging issues (Perrott, 1996). Governments may seek to obtain advice on emerging issues through the public service or seek to use stakeholder consultation proactively through, for instance, community-based think tanks. Governments that effectively use such consultative techniques are more likely to have up-to-date knowledge on issues and not be overtaken by matters that then require quick reactionary responses (Bridgman and Davis, 2004). Based on the analysis of some 100 knowledge management initiatives, Skyrme (2002) lists seven recurring levers of common knowledge management practices adopted by the surveyed organizations. These were aimed at strengthening organizational knowledge-building efforts and improving the performance across the organization. These seven knowledge levers include; Customer knowledge, Knowledge-enhanced products/services, Knowledge in people, Organizational memory, Knowledge in processes, Knowledge in relationships (Stakeholders) and Knowledge assets (Business Environment Insights).

Existing literature indicate that knowledge management can only be a powerful tool if successfully implemented (Ackoff, 1999; Ahn and Chang, 2004; Anantatmula and Kanungo, 2007; Bali et al., 2009; Benassi et al., 2002). A study published by the United Nations in 2007 that examined how organizations implemented knowledge management systems found that surveyed organizations have adopted diverse knowledge management solutions to structure, generate, and disseminate knowledge. Those results were further validated by a recent study published by the International Competitiveness Network (ICN) publication in 2013 (ICN, 2013). The ICN report also indicated numerous methods followed by the surveyed organizations for knowledge capture and conversion.

Despite such positive outlooks, the field study established that more than half of these organizations did not have a defined knowledge management strategy and that less than 12% of these organizations had their knowledge management strategies linked to an overall corporate strategy (Turner and Minonne, 2010). This finding is also confirmed by many other studies (see, for example, ICN, 2013; Akhavan et al., 2005; Benassi et al., 2002; GarciaPerez and Ayres, 2009; Pettersson, 2009; Weber, 2007). In a more recent study, an ICN survey confirmed the above findings and indicated that 56% of the organizations did not have a transparent knowledge management strategy within their organizations, and for the few that did, they tended to have a set of processes and an electronic systems rather than a defined strategy. The interesting fact is that, in most of the above surveys, half of the organizations actively engaged in knowledge management practices admitted to being unable to judge their performance because they have had few or no measurement tools and lacked the appropriate skills to develop them (ICN, 2013; Turner and Minonne, 2010).

RESEARCH METHODOLOGY

In this study, descriptive survey design was used to obtain information that would help the study unveil the knowledge management practices within the national government ministries in Kenya. Descriptive survey design is flexible enough to provide opportunity for considering different aspects of a problem under study

Kothari (2003). The target population of this study was the national government that comprised of 20 government ministries in Kenya. The population of the study however was the ministry's headquarters based in Nairobi. The population constituted all the 224, 600 employees of the National government within the ministries, thus the researcher had to derive from it detailed data at an affordable costing in terms of time, finances and human resources (Mugenda and Mugenda, 2003). Both primary data and secondary data was collected. Primary data was collected using questionnaires which the interviewer administered. The generated both quantitative and qualitative data. Descriptive statistics data analysis method was applied to analyze numerical data gathered using closed ended questions. The Statistical Package for Social Sciences (SPSS) computer software was used for analysis to generate data array that was used for subsequent analysis of the data. SPSS Version 20 has got descriptive statistics features that assist in variable response comparison and give clear indication of responses frequencies.

DISCUSSION OF RESULTS

The number of questionnaires that were administered to the respective ministries were 384. A total of 280 questionnaires were properly filled and returned. This represented an overall successful response rate of 72.92%. On gender of the respondents, majority of the employees were male accounting for 79% while female employees accounted for only 21%. The findings implied that a big percentage of the interviewees used for the study were male as compared to female. On age of the respondents, majority of the employees were aged between 36-45 years as they accounted for 54% of the entire sample interviewed and was followed by employees between the ages of 46-55 years accounting for 18%. The study also found that 16% of the employees were aged between 26-35 years, 11% of the employees aged between 56-60, while, the only 1% of the employees aged between18-25.

This implied that majority of the employees in the national government ministries were middle aged. On respondent's level of education, it was established that majority of the employees had university education as they accounted 46.78% of the employees interviewed. On the other hand 36.02% of the respondents had a college/polytechnic education. 11.26% of the employees had post-graduate qualification and only 5.94% had a secondary school education comprising of the least proportion of the employees.

Knowledge Sharing Practices

Internet: This question sought to find out whether the internet was popularly used in the organisation to share knowledge. Majority of the respondents (40.10%) agreed that internet was mostly used whereas (15.60%) strongly agreed that internet was popularly used for knowledge sharing, totaling to (55.7%) respondents agreed that internet was most used in knowledge sharing; however a large number (23.70%) disagreed with this statement.

Social Media: This question sought to find out whether social media has a positive influence on performance in the organization. Majority of the respondents (46.40%) agreed that social media has a positive influence on performance in the organization ,14.80% strongly agreed whereas 25.50% were neutral on whether the social media has a positive influence on performance in the organization .

These findings meant that use of social media affected performance. The findings were in agreement with the study of Noe, Hollenbeck, Gerhart and Wright (2003) that social media could be used to enhance competitive advantage hence had a great impact on performance.

Organizational website: This question sought to find out whether the use of organizational websites helped the organization interact with the outside world by providing information about the organization. Majority of the respondents

(50.00%) agreed that organizational websites helped the organization interact with the outside world by providing information about the organization, (5.50%) strongly agreed that organizational websites helped the organization interact with the outside world by providing information about the organization. These findings meant that an organizational website was of paramount importance in enhancing the interaction of the organization with its outside world. The findings were in agreement with the study of Waters, Burnett, Lamm and Luca (2009) that the organisational websites are a vital tool in information sharing and enables communication between the organisation and its stakeholders.

Online services: This question sought to find out if the introduction of online services had improved service delivery. Majority of the respondents (47.10%) agreed that the introduction of online services had improved service delivery, 12.50% strongly agreed that the introduction of online services had improved service delivery.

This meant that introduction of online services enhanced service delivery. The findings were in agreement with the study of West (2004) that introduction of online services improves effectiveness in service delivery.

Blogs: This question sought to find out whether Blogs have provided a platform for knowledge sharing by supporting employees of the organization interact with the public. Majority of the respondents (51.60%) agreed that Blogs have provided a platform for knowledge sharing by supporting employees of the organization interact with the public, (35.70%) strongly agreed that Blogs have provided a platform for knowledge sharing by supporting employees of the organization interact with the public. The findings meant that blogs had provided a platform for knowledge sharing through supporting employees of the organization interact with the public .The findings were in agreement with the study of

Razmerita, Kirchner and Nabeth (2014) that blogs provide a platform for knowledge sharing.

Management Information Systems: This question sought to find out whether management information systems improved Knowledge Sharing as practice in the organization. Majority of the respondents (45.70%) agreed that management information systems improve Knowledge Sharing practices in the organization, (28.20%) strongly agreed that management information systems improve Knowledge Sharing as practice.

These findings meant that management information systems enhanced knowledge sharing practices. The findings were in agreement with the study of Waters, Burnett, Lamm and Luca (2009) that use of information systems enhances knowledge sharing practices; hence their importance.

On Job Training: This question sought to find out whether the organization's On Job training programme is used to induct new employees in the organization. Majority of the respondents (44.50%) agreed that the organization's On Job training programme is used to induct new employees in the organization, 18.80% strongly agreed that the On Job training programme is used to induct new employees in the organization.

These findings meant that the organization's On Job training programme was mostly used to induct new employees in the organization. The findings were in agreement with the study of Kwame and Asiedu (2016) that organisations use on job training to assimilate new employees in the organization.

Internships: This question sought to find out whether Internships in the organization help learners gain knowledge through experiential learning impacted by the organization's employees. Majority of the respondents (44.80%) agreed that Internships in the organization help learners gain knowledge through experiential learning impacted by the organization's

employees, 9.90% strongly agreed that Internships in the organization help learners gain knowledge through experiential learning.

This findings meant that internships played an important role in learners with knowledge through experiential learning. The findings were in agreement with the study of Kwame and Asiedu (2016) that internships were fundamental in knowledge sharing through helping learners gain knowledge through experiential learning.

Apprenticeships: This question sought to find out whether apprenticeships offered in the organization facilitated knowledge and skill transfer from experienced employees. Majority of the respondents (44.30%) strongly agreed that apprenticeships offered in the organization facilitate knowledge and skill transfer from experienced employees, 36.70% agreed that apprenticeships offered in the organization facilitated knowledge and skill transfer. The findings meant that apprenticeships offered in the organization were a vital tool in facilitating knowledge and skill transfer. The findings were in agreement with the study of Bryant (2005) that mentoring offered in the organisation facilitated the transferring of knowledge and skills from experienced employees.

Meetings, Workshops and Seminars: This question sought to find out whether meetings, workshops and seminars were forms of disseminating information and knowledge in the organization. Majority of the respondents (55.20%) agreed that meetings, workshops and seminars were forms of disseminating information and knowledge in the organization, 39.30% strongly agreed that meetings, workshops and seminars were forms of disseminating information and knowledge. These findings meant that meetings, workshops and seminars were ways organizations could use to share information and knowledge. The findings were in agreement with the study of McAdam and McCreedy (1999) that

meetings, workshops and seminars were forms of knowledge sharing.

On a five point scale, the average mean of the responses was 3.74 which meant that majority of the respondents were agreeing with most of the statements; however the answers varied with a standard deviation of 0.94.

Knowledge Re –use

Produce knowledge for later reuse: This question sought to establish whether knowledge producers produce knowledge for later reuse. Majority of the respondents (28.90%) agreed with the statement that knowledge producers produce knowledge for later reuse whilst (21.60%) were undecided regarding the same and 18.20% strongly agreed that knowledge producers produce knowledge for later reuse.

The findings meant that knowledge producers produce knowledge for future use. The findings were in agreement with the study of Markus (2001) that knowledge producers produce knowledge they later reuse.

Capture Knowledge for Reuse: This question sought to establish whether knowledge producers capture knowledge for reuse. Majority of the respondents (49.50%) agreed that knowledge producers capture knowledge for reuse, 34.40% strongly agreed with the statement that knowledge producers capture knowledge for reuse.

These findings meant that knowledge producers captured and retained knowledge to use it again. The findings were in agreement with the study of Merali and Davies (2001) that knowledge producers capture knowledge for future reuse.

Storage of knowledge for future reuse: This question sought to establish whether knowledge was stored for future reuse by Knowledge producers. Majority of the respondents (53.40%) agreed that knowledge producers store knowledge for future reuse, 38.30% strongly

agreed that knowledge was stored by knowledge producers for future reuse. This meant that knowledge producers store knowledge for future use in the organization. The findings were in agreement with the study by Chirumalla and Parida (2016) that knowledge was stored for future reuse by Knowledge producers.

Determinant of Time for Knowledge Reusability: This question sought to establish whether time for knowledge reusability was determined by knowledge producers. Majority of the respondents (40.40%) agreed that knowledge producers determined when knowledge should be reused, a good number (23.70) disagreed that knowledge reusability time was determined by knowledge producer, 23.40% were neutral that is they never agreed nor disagreed with the statement.

These findings meant that even though knowledge producers were mostly the determinants of the time knowledge can be reused, there were as well other determinants apart from knowledge producers. The findings were in agreement with the study by Filieri and Willison (2016) that time for knowledge reusability was determined by knowledge producers.

Management of Knowledge Warehouse/Storage: This question sought to establish whether knowledge warehouse/storage was managed by knowledge producers. Majority of the respondents (58.60%) agreed that knowledge producers manage knowledge warehouses/storage determine whereas, 25.50% strongly agreed that knowledge warehouses/storage were managed by knowledge producers.

These findings meant that knowledge producers were responsible for the management of knowledge warehouses/storages. The findings were in agreement with the study by Filieri and Willison (2016) that knowledge

warehouse/storage was managed by knowledge producers.

Novices are Knowledge Consumers: This question sought to establish whether novices were knowledge consumers who were seeking expert knowledge to gain expertise. Majority of the respondents (53.10%) agreed that knowledge producers manage knowledge warehouses/storage determine whereas, 27.30% strongly agreed that novices were knowledge consumers who were seeking expert knowledge to gain expertise. This findings meant that novices were consumers of knowledge and they seek expert knowledge so as to gain expertise. The findings were in agreement with the study by Cakici, Cakici, Shukla and Shukla (2017) that novices are knowledge consumers who are seeking expert knowledge to gain expertise.

Knowledge Consumers are Secondary Knowledge Miners: This question sought to establish whether Knowledge consumers were Secondary knowledge miners searching for existing knowledge. Majority of the respondents (61.20%) agreed that Knowledge consumers were Secondary knowledge miners searching for existing knowledge whereas, 22.70% strongly agreed Knowledge consumers were Secondary knowledge miners searching for existing knowledge. The findings mean that knowledge consumers also participate in mining like knowledge producers though not as intensive as knowledge producers themselves. The findings are in agreement with the study by Filieri and Willison (2016) that Knowledge consumers are

Secondary knowledge miners searching for existing knowledge.

Knowledge Consumers Reuse of each other's contribution: This question sought to establish whether Knowledge consumers re-use each other's knowledge contributions. Majority of the respondents (46.60%) agreed that Knowledge consumers re-use each other's knowledge contributions, 31.00% strongly agreed Knowledge consumers re-use each other's knowledge contributions. These findings mean that knowledge consumers rely on each other's knowledge contribution for knowledge consumption. The findings were in agreement with the study by Cakici, Cakici, Shukla and Shukla (2017) that knowledge consumers re-use each other's knowledge contributions. On a five point scale, the average mean of the responses was 3.83 which meant that majority of the respondents were agreeing with most of the statements; however the answers were varied as a result of a 0.97 standard deviation.

Performance

Knowledge base usage: This question sought to establish whether operational efficiency was achieved when knowledge management practices were applied through knowledge base usage. Majority of the respondents (50.80%) agreed that knowledge base usage is a way of achieving operational efficiency when knowledge management practices are applied, 10.20% strongly agreed with the same statement, whereas, (14.10%) were uncertain and to some extent (14.60%) disagreed with that statement. These findings mean that operational efficiency is achieved when knowledge management practices were applied through knowledge base use. The findings were in agreement with the work of Pearlson, Saunders and Galletta (2016) that operational efficiency is achieved when knowledge management practices are applied through knowledge base usage.

Cost avoidance: This question sought to establish whether operational efficiency was achieved when knowledge management practices are applied through cost avoidance. Majority of the respondents (42.20%) agreed that operational efficiency was achieved when there was cost avoidance, (26.00%) strongly agreed with the same statement, whereas, (15.10%) were uncertain and to some extent (15.90%) disagreed with that statement. These findings mean that operational efficiency is achieved when knowledge management practices are applied through knowledge base use. The findings were in agreement with the study by Jayaram and Xu (2016)) that operational efficiency is achieved through cost avoidance.

Problem Resolution: This question sought to establish whether operational efficiency was achieved through quick problem resolution when knowledge management practices are applied. Majority of the respondents (44.00%) agreed that operational efficiency is achieved when there is quick problem resolution, (17.70%) strongly agreed with the same statement, whereas, (17.40%) were not sure with the statement and quite a number (18.80%) disagreed. The findings mean that application of knowledge management practices enhances operational efficiency through quick problem resolution. The finding is in agreement with the study by Duffield and Whitty (2016) that operational efficiency is achieved through quick problem resolution.

Professional Development: This question sought to establish whether operational efficiency was achieved through professional development when knowledge management practices were applied.Majority of the respondents (50.80%) agreed that operational efficiency is achieved when there was enhanced innovation, (20.10%) strongly agreed with the same statement. These findings meant that application of knowledge management practices enhanced operational efficiency through professional development. The finding was in agreement with the study by

Marchington, Wilkinson, Donnelly and Kynighou (2016) that operational efficiency was achieved through professional development.

Enhanced Innovation: This question sought to establish whether operational efficiency was achieved through enhanced innovation when knowledge management practices were applied. Majority of the respondents (56.50%) agreed that operational efficiency was achieved when there was enhanced innovation, (13.30%) strongly agreed with the same statement. These findings meant that application of knowledge management practices enhanced operational efficiency through enhanced innovation. The finding was in agreement with the study by Heizer (2016) that operational efficiency is achieved through enhanced innovation.

Knowledge Retention: This question sought to establish whether operational efficiency was achieved through improved knowledge retention when knowledge management practices were applied. Majority of the respondents (60.70%) agreed that operational efficiency was achieved when there was improved knowledge retention, (9.40%) strongly agreed with the same statement. These findings meant that application of knowledge management practices enhanced knowledge retention hence increasing operational efficiency. The findings were in agreement with the study by Martinsons, Davison and Huang (2017) that operational efficiency is achieved through improved knowledge retention .

Quality Services/Products: This question sought to establish whether increased productivity was achieved through quality products/services when knowledge management practices were applied. Majority of the respondents (53.60%) agreed that productivity was increased when knowledge management practices were applied through improved quality services/products, (9.40%) strongly agreed with the same statement.

These findings meant that there was increased productivity, which was reflected through the quality of services/products offered when knowledge management practices were applied. The finding was in agreement with the study by Psomas and Jaca (2016) that increased productivity is achieved through quality products/services.

Customer Satisfaction: This question sought to establish whether increased productivity is achieved through customer satisfaction when knowledge management practices are applied. Majority of the respondents (43.20%) agreed that productivity is increased when knowledge management practices are applied through customer satisfaction, 21.60% strongly agreed with the same statement, whereas, 20.80% were uncertain.

The findings meant that there was increased productivity, which was reflected through customer satisfaction when knowledge management practices were applied. The finding was in agreement with the study by Psomas and Jaca (2016) that increased productivity is achieved through increased customer satisfaction.

Cost Reduction: This question sought to establish whether increased productivity was achieved through cost reduction when knowledge management practices were applied. Majority of the respondents (39.30%) agreed that productivity was increased when knowledge management practices were applied through cost reduction, 10.70% strongly agreed with the same statement, whereas, 22.90% disagreed with the statement.

The findings meant that there was increased productivity, which was reflected through cost reduction when knowledge management practices were applied. Nevertheless there were contrary opinions of the same. The findings were in agreement with the study by Heizer (2016) that increased productivity is achieved through cost reduction.

Employee satisfaction / Morale: This question sought to establish whether increased

productivity was achieved through Employee satisfaction / Morale when knowledge management practices were applied. Majority of the respondents (49.20%) agreed that productivity was increased when knowledge management practices were applied through employee satisfaction / Morale, (13.50%) strongly agreed with the same statement whilst a larger number (21.40%) disagreed.

The findings meant that there was increased productivity, which was reflected through employee satisfaction/morale when knowledge management practices were applied. The finding was in agreement with the study by Elnaga and Imran (2013) that increased productivity is achieved through Employee satisfaction / Morale.

Skills/Competency: This question sought to establish whether increased productivity was achieved through improved skills/competency when knowledge management practices were applied. Majority of the respondents (52.10%) agreed that productivity was increased when knowledge management practices were applied through improved skills/competency, 38.80% strongly agreed with the same statement.

The findings meant that there was increased productivity, which was reflected through improved skills/competency when knowledge management practices were applied. The findings were in agreement with the study by Elnaga and Imran (2013) that increased productivity is achieved through improved skills/competency.

Trust: This question sought to establish whether increased productivity was achieved through trust when knowledge management practices were applied. Majority of the respondents (56.50%) agreed that productivity was increased when knowledge management practices were applied through trust, 14.10% strongly agreed with the same statement whilst 18.20% were uncertain.

These findings meant that there was increased productivity, which was reflected when knowledge management practices were applied

through trust. The findings were in agreement with the study by Dobre (2013) that increased productivity is achieved through trust.

On a five point scale, the average mean of the responses was 3.63 which mean that majority of the respondents were agreeing with most of the statements; however the answers were varied which were depicted by a standard deviation of 0.99.

CONCLUSIONS AND RECOMMENDATIONS

The first objective of the study was to find out the relationship between Knowledge Sharing Practices and the performance of National government ministries. Results revealed that there were a positive relationship between knowledge sharing and performance. In addition, results revealed that social media had a positive influence on performance in the organization. Further, the study findings showed that management information system improve knowledge sharing practices in the organization. The results also revealed that the organizational websites helped the organization interact with the outside world by providing information about the organization thus introduction of online services has improved service delivery.

Correlation analysis showed that knowledge sharing practices and performance were positively and significantly associated. Regression analysis indicated knowledge sharing practices had a positive and significant effect on the performance of National government ministries. The statistical significance results indicated that there was a significant relationship between knowledge sharing practices performance of National government ministries.

The second objective of the study was to investigate the relationship between Knowledge Re-use Practices and the performance of National government ministries in Kenya. Results revealed that knowledge producers captured and store knowledge for future reuse. Further, the results

also indicated that knowledge producers manage the knowledge warehouses/storage and also determine the time for knowledge reusability. The results further revealed that knowledge consumers were secondary knowledge miners searching for existing knowledge and majority of the respondents agreed with the statement that knowledge consumers re-use each other's knowledge contributions.

Correlation analysis showed that Knowledge Re-use Practices and performance were positively and significantly associated. Regression analysis indicated that knowledge re-use practises had a positive and significant effect on performance of National government ministries in Kenya. The statistical significance results indicated that there was a significant relationship between Knowledge Re-use Practices and performance of National government ministries in Kenya.

The results revealed that increased productivity was as a result of quality services/products, customer satisfaction, cost reduction, employee satisfaction / morale, improved skills/competency and trust. Further results revealed that operational efficiency was achieved when knowledge management practices were applied in knowledge base use and cost avoidance. The results further showed that majority of the respondents agreed with the statement that operational efficiency was achieved when knowledge management practices are applied in cost avoidance, quick problem resolution and when knowledge management practices were applied in professional development. The results also showed that operational efficiency was achieved when knowledge management practices are applied in enhanced innovation and improved knowledge retention.

Conclusion of the Study

Based on the study findings, the study concluded that knowledge management practices have highly been adopted in the government ministries. Knowledge producers acquire knowledge, stores it and later disseminates it when it's needed and this had increased operational efficiency. Knowledge users had also over time been informative in building up knowledge through feedback as such play a vital role in organization knowledge management systems. National government ministries were also compelled to use social media, websites and other online platforms in sharing information with the public so as to improve operational efficiency. Earlier studies found that the management of knowledge had the capability to deliver to organisations, strategic results relating to profitability, competitiveness and capacity enhancement.

From the regression results the study concluded that knowledge sharing practices had a positive and significant effect on performance.

The study concluded social media had a positive influence on performance in the organization. That management information system improve knowledge sharing practices in the organization and that the organizational websites helped the organization interact with the outside world by providing information about the organization .This agreed with Annette and Trevor(2011) study that knowledge resources such as structure of organization, application of knowledge are directly associated with organizational performance The study also concluded that introduction of online services in the government ministries had improved service delivery though this was in contrast with Annette and Trevor study which showed that technology did not have significant relationship to performance.

From the regression results the study concluded knowledge re-use practices has a positive and significant effect on performance of National government ministries.

Based on the study findings, the study concluded that knowledge producers capture and store knowledge for future reuse. The study also concluded that knowledge producers manage the

knowledge warehouses/storage and also determine the time for knowledge reusability .The consumers on the other hand are secondary knowledge miners searching for existing knowledge and re-use each other's knowledge contributions.

Recommendations of the Study

Following the study results, it was recommended that the ministry should adopt integrated knowledge sharing systems to facilitate the process. This would enhance the online knowledge sharing and increase efficiency in the knowledge sharing process.

It was recommended that knowledge producers should be keen in articulating when to withhold or disseminate knowledge for reuse. Consumers of knowledge feedback should also be carefully captured to be incorporated in the knowledge warehouse for future decision making.

Proposed Areas(s) for Further Study

What is the knowledge contributed by your study and what other things needs to be exposed which your study had not done it. This should be the basis of your proposed area or areas for further studies.

Suggested Areas for Further Study

The study made contributions to theory building. First, the study developed a conceptual framework for underpinning future research work on the relationship Knowledge management practices and performance of national government ministries in Kenya. The study successfully tested hypothesis related to the original conceptual framework developed in chapter two. Based on research findings, it was found that future conceptual frameworks and theories should focus on particular aspects of Knowledge management practices.

The study also added value to theory building by itemizing the most important Knowledge management practices in Performance of national government ministries. In particular, this study was able to pinpoint particular aspects of Knowledge sharing, knowledge re-use, knowledge creation and acquisition which are relevant to certain aspects of performance in national government ministries in Kenya.

The study sought to establish the relationship between Knowledge management practices and performance of national government ministries in Kenya and therefore an area for further studies could consider the influence of knowledge management practices on performance in manufacturing firms for the purpose of making a comparison of the findings with those of the current study. Future researchers could also consider introducing different variables other than knowledge sharing, creation, acquisition and re-use in testing for moderation effect of such variables on the influence of knowledge management practices on performance. This is because as much as this study used this variable; there are other variables which may influence performance of national government ministries for example organizational learning culture.

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