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MODERATING ROLE OF TECHNOLOGICAL INFRASTRUCTURE ON THE RELATIONSHIP BETWEEN KNOWLEDGE MANAGEMENT TOOLS APPLICATION AND ORGANIZATIONAL PERFORMANCEIN MULTINATIONAL FIRMS IN NIGERIA

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ABSTRACT

This work examined the influence of competence network application on organizational performance, a moderating role of technological infrastructure of multinational corporations in Rivers State, Nigeria. Every multinational corporation aims at continuously optimizing its business performance. One of the deliberate ways multinational corporations maximize this, is by embracing knowledge management tools application. The application of knowledge management tools such as social media tools, video tools, collaborative tools, and competence networks enhances operational processes and ultimately organizational performance of multinational corporations. Specifically, knowledge management tools application makes managerial procedures and service delivery processes a lot easier because it makes relevant information and knowledge available to intended users in real time thereby enhancing organizational performance in terms of improved production, improved market share, and client/stakeholders' satisfaction. The study concluded that increase in knowledge management application brings about corresponding improvements in the organizational performance of multinational corporations. Consequently, the study recommended among other things that all administrative offices should be equipped with functional state of the art desktop/laptop computer system, and other digital office resource to enhance the quality and speed of data processing across administrative offices.

Keywords: Knowledge Management, Technological Infrastructure, Network Application, Organizational, Performance

INTRODUCTION

One of the major challenges faced by multinational corporations in Nigeria over the years appears to be corporate under-performance. For instance, some of the multinational corporations have not been able to improve their products and services by way of diversification and quality improvement (Uriarte, 2018; Akpan, Ibekwe, Worgu, & Nwangwu, 2018). Some of them have not been able to innovate better customer services and this led to downsizing customer base and low sales revenue. It has also been observed that across industries like Banking, Telecommunication, Oil and Gas, and Fast Food Movable Goods, some of the major players in the past have lost their competitive edge (Al-Shura, Zabadi, Abughazaleh, & Alhadi, 2018). Lack of improvement in product lines and downsizing market share makes it difficult for such multinational corporations to secure reasonable return for their shareholders.

While the poor performance of companies could be blamable on economic realities, the underperformance of many companies in Nigeria has been attributed to inadequate adoption of emerging knowledge management systems (Ozoigbo & Chukuezi, 2017; Agwamba, Onwudiwe, & Ugwuegbu, 2019). Although knowledge management tools like social media tools, video tools, intranet, and communities of practices have existed in many multinational corporations in Nigeria, the level of their adoption has been very low. There appears to be very little deliberate efforts

towards employing these tools in the capturing, storage, sharing, and use of implicit and explicit knowledge resources.

The importance of organizational performance and knowledge management tools has spurred various research efforts within and outside Nigeria. For instance, Rašula, Vukšić, and Štemberger, (2012) examined the impact of knowledge management on organisational performance and it was found that knowledge management practices enhance organizational performance. Suryaningrum (2012) examined knowledge management and performance of small and medium entities in Indonesia. The study revealed that organizational learning and competitive strategy have positive correlation with knowledge management. In another study, Meihami and Meihami (2014) examined knowledge management as a way to gain a competitive advantage in manufacturing companies. The study revealed that the adoption of knowledge management enhances organizational performance, customer-oriented and product innovation. Ezinma, Ebele, and Henry (2015) investigated knowledge management and organizational performance in selected commercial banks in Awka, Anambra State, Nigeria; the study equally showed that knowledge management enhances corporate performance of Deposit Money Banks in Akwa, Anambra State, Nigeria. Bagiwa (2016) examined how knowledge management tools such as cloud storage, cloud computing Microsoft, and cloud architect influence organizational performance and it was found that cloud services enhance organizational performance.

In another case, Nada, Rusinah, Ibrahim, and Mahmoud (2016) examined the impact of information technology infrastructure on innovation performance in private Universities In Iraq. The study revealed that information technology infrastructures are positively correlated with innovation performance. Akpan, Ibekwe, Worgu, and Nwangwu (2018) examined the relationship between social media usage and firm performance in Nigerian Telecommunication Sector and it was found that a significant positive correlation exists between social media tools usage and the performance of Telecommunication firms in Nigeria. The weakness of this study is that it did not cover most of the prominent Telecommunication firms in Nigeria. Another study examining the role of knowledge management process and intellectual capital as intermediary variables between knowledge management infrastructure and organizational performance by Shadi, Ra'ed, Khaled, and Ala'aldin (2018) revealed that knowledge management infrastructure enhances organizational performance when the right intellectual capital is in place. This study amplifies the importance of communities of practices in successful knowledge management processes. Agwamba, Onwudiwe, and Ugwuegbu (2019) theoretically examined the relationship between knowledge management and organizational innovation and it was found that knowledge management gives birth to organizational innovation and better performance.

While it is evident that the studies cited above showed how knowledge management practices has enhanced organizational performance in Anambra State in Nigeria and other countries of the world, none of these studies was done in Rivers State, Nigeria and within the context of multinational corporations. Another issue of knowledge gap necessitating this study is that none of the studies reviewed examined how knowledge management tools such as video tools, intranet, shared database, competence network influence organizational performance of multinational corporations. There is need therefore, to carry out this study.

Hypothesis

Ho_1: Technological infrastructure does not significantly moderate the relationship between knowledge management and organizational performance of Multinational Corporations in Rivers State.

Concept of Knowledge Management Tools Application

Knowledge management is essentially about getting the right knowledge to the right person at the right time. This in itself may not seem so complex, but it implies a strong tie to corporate strategy, understanding of where and in what forms knowledge exists, creating processes that span organizational functions, and ensuring that initiatives are accepted and supported by organizational members (Emil, 2018). Alan (2012) stated that knowledge management entails a systematic management of an organization's knowledge assets for the purpose of creating value and meeting tactical and strategic requirements; it consists of the initiatives, process, strategies and systems that sustain and enhance the storage, assessment, sharing, retirement, and creation of knowledge. It is also a conscious effort to get the right knowledge to the right people at the right time so that it can be shared and put into action (Aziri, Veseli, & Ibraimi in Ezinma, Ebele, & Henry, 2015). Furthermore, Sveiby (2014) defined knowledge management as the art of creating value from an organization's intangible assets. Davenport, Thomas and Prusak (2015) defined knowledge management as concerned with the exploitation and development of the knowledge assets of an organization with a view to furthering the knowledge objectives. The above denotes that the purpose of knowledge management is to enhance organizational performance by explicitly designing and implementing tools, processes, systems, structures, and cultures to improve the creation, sharing, and use of different types of knowledge that are critical for decision-making.

Knowledge management tools (KMTs) are systems organizations use in sharing information internally and externally (Lewis, 2015). They are platforms, kits, devices and arrangements used in creating value and meeting tactical & strategic requirements of an organization, through initiating, processing, strategizing, systematizing and sustaining knowledge. These tools enhance organizations' storage, assessment, sharing, refinement, and creation of knowledge. It also helps in attaining predetermined goals and objectives of the organization. Apparently, in today's competitive business world, knowledge management must create/provide the right tools, people, knowledge, structures (teams), culture, etc. so as to enhance learning; it must understand the value and applications of the new knowledge created; it must store this knowledge and make it readily available for the right people at the right time; and it must continuously assess, apply, refine, and remove organizational knowledge in conjunction with concrete long and short-term factors (Emil, 2018).

Concept of Organizational Performance

The concept of performance has gained increasing attention in recent decades, being pervasive in almost all spheres of the human activity. Performance is a subjective perception of reality, which explains the multitude of critical reflections on the concept and its measuring instruments. The multitude of studies at international level in the field of performance is due to the financial crisis that swept the economy globally, which has led to a continuing need of improvement in the area of performance of organizations (Ion & Criveanu, 2016). According to Hashem (2015), organizations perform various activities to accomplish their organizational objectives. It is these repeatable activities that utilize processes for the organization to be successful that must be quantified in order to ascertain the level of performance and for management to make informed decisions on where, if needed within the processes to initiate actions to improve performance. Therefore, it can be claimed that there is a close relationship between the organizational objective and the concept of organizational performance. Therefore, all companies probably attempt to achieve certain pre-determined objectives with the help of available resources. Hence, the two aspects of the concept, i.e., the organizational objective, and the organizational inputs or resources can be considered in the definition of organizational performance.

Didier (2002) believes that the performance consists in "achieving the goals that were given to you in convergence of enterprise orientations". In his opinion, performance is not a mere finding of an outcome, but rather it is the result of a comparison between the outcome and the objective. Unlike

other authors, Didier considers that this concept is actually a comparison of the outcome and the objective. The author's definition is far from clear, as both outcomes and objectives vary, most often, from one field of activity to another. Most recently, there are a variety of definitions attributed to the concept of performance due to its subjective nature. In the literature there are many articles or studies that define organizational performance closely related to environmental factors. Nevertheless, the researcher took cognizance of some authors' definition of organizational performance that have ties with the measures understudy.

Michel cited in Ion and Criveanu (2016) characterizes the performance as future-oriented, designed to reflect particularities of each organization/individual and is based on a causal model linking components and products. He defines a "successful" business as one that will achieve the goals set by the management coalition, not necessarily one that achieved them. Thus, performance is dependent as much of capability and future. Unlike other authors, Michel Lebas noted the difference between "a performance", "performance" and "being performance". "A performance" is subject generally to a measured result, higher than that provided for or arising from the previous results. "A performance" thus indicates always a positive connotation. "Performance" can be both positive and negative and relates to past results. Patently, organizational performance is not an objective reality, waiting somewhere to be measured and assessed, but a socially constructed reality that exists in people's minds, if it exists somewhere. Organizational performance may include: components, products, consequences, impact and can also be linked to economy, efficiency, effectiveness, cost effectiveness or equity.

Concept of Technological Infrastructure

Technological infrastructure is defined as the configuration of technologies, information technology (IT) work processes, and shared services that build and sustain present and future business applications. It includes the following components: user involvement in information system (IS), connectivity, distributed computing, flexibility, and technology awareness. User involvement refers to the personal engagement and collaboration of individuals in all aspects of IT in the organization (Croteau, Solomon, Raymond, & Bergeron, 2011). Connectivity is understood as the configuration of networks that integrates systems and applications, and enables the access of information from any location, where distributing computing corresponds to the distribution of information and processing power to the user. An organization's technological infrastructure is characterized as flexible if businesses experience a greater degree of freedom in communication and in information processing capabilities through data and application components that are independent, sharable and reusable. Hence, technology awareness is a general concern to acquire IT knowledge and an openness to infuse new technology in the organization.

Hitherto, technology refers to fundamental information, technological structure and composed of hardware, software, database and network system, within and beyond organizations (Yang & Chen, 2007), which organizes the proper use of information. Technology is always human action oriented and ultimately depends on people for its existence. Information technology (IT) is highly connected to knowledge management because it helps in disseminating structural knowledge, both vertically and horizontally. It also facilitates convenient access and utilization of the information. As a result, organizations always strive to implement knowledge management with IT for achieving significant outcomes (Pooja & Manoj, 2017). Schroeder and Pauleen (2007) describes that practices generally, used to manage knowledge resources extends from core knowledge applications to IT mechanism. These practices might help to find solution to the problem and manage intellectual capital effectively. Application of advanced technological equipments accelerates knowledge management capabilities which, gradually leads to high level performance. Previous researchers referred IT as a crucial factor in creating and transferring knowledge (Gupta, Iyer, & Aronson, 2010). Knowledge mapping can be adopted as a major trend in KM which refers to the process of capturing knowledge initially, acquired by individual and shared throughout the organization through IT applications.

METHODOLOGY

Research Design

The study adopted the Explanatory Cross-sectional Survey design.

Research Population

Considering the fact that the criterion (organizational performance) occurs at the organizational level (macro level) rather than employees' performance (micro level), the population of the study consisted of fifty (50) Multinational Corporations operating in Port Harcourt, Rivers State. Data regarding the population of this study was obtained from Corporate Affairs Commission in Port Harcour. The researcher chose two (2) top level managers which included the General Manager and Information Technology Manager. The convenient selection of two (2) top managers across the fifty (50) multinational corporations gave a total of one hundred (100) respondents.

Method of Data Analysis

The presentation and analysis of data/results were done using Statistical Package for Social Science (SPSS) Version 22.0. The analysis of data to test the hypotheses analysis was done using Spearman Rank Order Correlation.

Results

Multivariate Analysis

This subsection

Ho_{13}: Technological infrastructure does not significantly moderate the relationship between knowledge management tools application and organizational performance of Multinational Corporations in Rivers State.

Moderating Role of Technological Infrastructure on the Relationship Between Knowledge Management Tools Application and Organizational Performance

Control Variables			Knowledge Management	Organizational Performance	Technological Infrastructure
-none-[a]	Knowledge Management	Correlation	1.000	**0.624****	**0.571****
		Significance (2-tailed)	.000	.000	.000
		Df	0	92	92
	Organizational Performance	Correlation	0.**624****	1.000	0.635
		Significance (2-tailed)	.000	.000	.000
		Df	92	0	92
	Technological Infrastructure	Correlation	**0.571****	**0.624**	1.000
		Significance (2-tailed)	.000	.000	.000
		Df	92	92	0
Technological Infrastructure	Knowledge Management	Correlation	1.000	0.536	
		Significance (2-tailed)	.000	.000	
		Df	0	92	
	Organizational Performance	Correlation	**0.571****	1.000	
		Significance (2-tailed)	.000	.000	.000
		Df	92	0	

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

Table above reveals correlation value of 0.624 at a significance level of 0.00 depicting a correlation between knowledge management tools application and organizational performance. This represents a significant and positive relationship. The partial correlation controlling coefficient ((0.571) for

technological infrastructure is a moderate positive association. Moreso, the significance value of 0.00 which is less than the alpha level of 0.05 implies that the increase between knowledge management tools application and organizational performance are significantly attributable to technological infrastructure as a moderating variable. This implies that the extent to which knowledge management tools application positively influences organizational performance in Multinational Corporations in Rivers State is moderated by technological infrastructure as an organizational factor.

CONCLUSIONS

Every multinational corporation aims at continuously optimizing its business performance. One of the deliberate ways multinational corporations maximize this, is by embracing knowledge management tools application. The application of knowledge management tools such as social media tools, video tools, collaborative tools, and competence networks enhances operational processes and ultimately organizational performance of multinational corporations. Specifically, knowledge management tools application makes managerial procedures and service delivery processes a lot easier because it makes relevant information and knowledge available to intended users in real time thereby enhancing organizational performance in terms of improved production, improved market share, and client/stakeholders' satisfaction. The study therefore concluded that increase in knowledge management tools application brings about corresponding improvements in the organizational performance of multinational corporations. The study also concluded that multinational corporations who fail to continuously embrace knowledge management tools application may not perform considerably in terms of production, market share, and client/stakeholders' satisfaction.

RECOMMENDATIONS

Based on the conclusions, the following recommendations were made:

1. Various group of professionals in the organization should constitute community of practice to enable them create and share professional updates that will contribute to the continuous improvement of product and service delivery.
2. There should be serious collaboration among various knowledge management machineries such as community of practice, work committees, and quality assurance unit to ensure that products and services.
3. Customer service units of Multinational Corporations should collaborate with communities of practice, quality assurance units, and other knowledge management machineries. Such collaboration will help them to innovate ways of improving customers' experience thereby giving rise to client/customers satisfaction.
4. More investment should be done on organizational technological infrastructure ranging from basic office information systems to cloud computing facilities ensure the smooth flow of knowledge resources across all arms of the organization. The availability of functional internet connectivity, cloud computing services, and basic office tools such as laptops, printers, etc. will smoothen the knowledge management process which will in turn boost organizational performance.

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