

Impact of Knowledge Management on Growth of Telecommunication Firms in Kaduna Meropolis

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Abstract

This study is conducted on the impact of knowledge management on growth. The study seeks to determine the impact of knowledge management on growth of telecommunication firms in Kaduna Metropolis. Knowledge acquisition, knowledge conversion, knowledge application and knowledge protection were the proxies for the independent variable while the dependent variable is growth. Primary method of data collection is employed and the study employed the use of questionnaire to solicit for information on the variables of the study. The sample of the study comprise of 114 employees of the 4 telecommunication firms in Kaduna metropolis. Correlation and regression are used to analyse the collected data. The study therefore discovered that there is a positive relationship between knowledge acquisition, knowledge conversion, knowledge application and knowledge protection and growth. Based on the finding the study concludes that knowledge management impacts on growth of telecommunication firms in Kaduna metropolis and therefore recommends that the management of telecommunication firms should employ the effective use of knowledge management processes to ensure growth of the firm.

Keywords: Knowledge Management, Growth, Telecommunication Firms

Introduction

In today's rapid technological change, companies incessantly struggle to maintain competitive advantage through the adoption of differentiation strategies that will develop and differentiate their products and services. It has then become obvious that knowledge is fast becoming the most paramount factor of production next to labor, land and capital (Singh & Soltan, 2010). Among various methods, management focus a lot on their employees know-how, past experience and expertise in the quest to excel in achieving their goal. Even though some forms of intellectual capital are transferable, internal knowledge is not easily copied and reused, as such the knowledge in the minds of employees can get lost if they decide to leave the organization (Daud & Yusoff, 2010). It is therefore one of the objectives of management to improve the processes of knowledge acquisition, integration and usage, which is exactly what knowledge management is about (Katsuro Pension, Nyasha, Sheiller, & Vhuramai, 2013). Though an intangible asset (Knowledge) is difficult to be conveyed, it is very significant as it helps the organization in the achievement of productivity and growth overtime (Katsuro Pension, Nyasha, Sheiller, & Vhuramai, 2013).

Looking at the world today, it is seen that firms need to grow if they want to remain relevant in the industry, and as such knowledge management provides the proper structure and the necessary technological infrastructure needed in the

organization which further develops and makes the growth of the organization successful (Mills & Smith, 2011). This is because the different types of information technology and techniques that are applied in the function of knowledge management reflect various effects in separate processes as well as improving diverse indicators in the organizational efficiency. Organizations need more information and communication so as to cut cost given to the scarcity of resources, this will aid in increasing quality, improving productivity and then the growth of the firm overtime (Daud & Yusoff, 2010). For the firm to grow, it needs knowledge management to play a key role through the creation, sharing, dissemination and retention of knowledge and offering the organization a superior value proposition. In order to attain such growth, the firm will need to encourage its employees to work together more effectively, to collaborate and share (knowledge) as this will lead to the growth of the firm (Ahmed, Fiaz, & Shoaib, 2015).

Since knowledge management have been seen to be important as firms struggle to employ it in their operations, it has therefore become the concern of researchers as they are curious to know what knowledge management really entails and how it brings about the growth and productivity of the firm. Looking at studies conducted on knowledge management, it is discovered that most of these studies like Ahmed, Fiaz and Shoaib (2015), Holsapple and Wu, (2011), Mishra and Bhaskar (2011) have looked at the relationship between

knowledge management and organizational performance. However, there has been less concentration on how knowledge management leads to the consistent growth of the firm. Though the importance of knowledge management has been understood by firms and scholars, more of the studies on knowledge management have been done in other countries and few of the studies have been conducted in the Nigerian telecommunication industry. Based on these stated problems, the study seeks to investigate the extent to which knowledge management impact on growth of telecommunication firms in Kaduna metropolis.

The main objective of the study is to determine the impact of knowledge management on the growth of telecommunication firms in Kaduna metropolis. Other specific objectives are; to

examine the impact of knowledge acquisition on the growth of telecommunication firms in Kaduna metropolis

analyse the impact of knowledge conversion on the growth of telecommunication firms in Kaduna metropolis

investigate the impact of knowledge application on the growth of telecommunication firms in Kaduna metropolis

determine the impact of knowledge protection on the growth of telecommunication firms in Kaduna metropolis.

The hypotheses of the study were all stated in null form;

There is no significant impact between knowledge acquisition and growth of telecommunication firms in Kaduna meetropolis

There is no significant impact between knowledge conversion and growth of telecommunication firms in Kaduna meetropolis

There is no significant impact between knowledge application and growth of telecommunication firms in Kaduna meetropolis

There is no significant impact between knowledge protection and growth of telecommunication firms in Kaduna meetropolis

The study will be of relevance to the management of telecommunication firms by showing them how knowledge management will lead to the growth of their firms. It will also be relevant to academics as it will add to existing literatures on the subject matter.

Literature Review

Concept of Knowledge Management

Scholars have tried to define knowledge management as there are different views as to what knowledge management is, to follow this suit of definitions, Daud

and Yusoff (2010) define knowledge management as a process of creating, acquiring, capturing, sharing and using knowledge, wherever it resides to enhance learning and performance in organizations. To further support the definition, knowledge management is also defined as the ability to utilise, share, foster, facilitate, transform and manage the knowledge based on the competences and assets of the organization (Mills & Smith, 2011).

On the other hand, Mishra and Bhaskar (2011) define knowledge management as the practices and strategies that a company uses in an attempt to create, distribute and enable the adoption of strategic insights and specific experiences. This definition shows that individual knowledge consists of intangible awareness, learned facts and information which are manifested as ideas, judgements, talents, root causes, relationships, perspectives and concepts. In another view, knowledge management is defined as a methodology of information creation, endorsement, presentation, spread and appraisal (Schiuma, 2012). Katsuro Pension, Nyasha, Sheiller and Vhuramai (2013) view knowledge management as an arrangement of philosophies, systems and specific and administrative gadgets, laid out towards making, granting, utilizing information and data inside and around an association.

Knowledge management is also defined as an exact and integrative system of encouraging association wide activities of securing, making, chronicling, offering, diffusing, making and passing on learning by individuals and totals in chase for major authoritative goals (Tubigi, Alshawi, & Alalwany, 2013). Looking at these views it is seen that knowledge management has to do with how people may be enlivened and motivated to best utilize their insight, comprehension and creativity by using condition of the speciality building and diverse resources for better results (Mills & Smith, 2011).

Concept of Growth

So many scholars have tried to define the concept of growth of firms, as such growth is defined as a combination of precision and optimal use of manpower and material resources available and efficiency is determined through performance (Abiodun, 2013). This definition shows that efficiency and effectiveness are two important components of growth in the organization, and they are normally affected by different factors. Growth of the organization is defined as a series of coordinated and planned actions to improve the program and better use of talents, facilities, spaces and places (Katsuro Pension, Nyasha, Sheiller, & Vhuramai, 2013). These practices design and implement in modern programs

of the organization and leads to the growth of the firm.

In other to know what growth is, Khalid (2012) posits that growth is the ability of the firm to utilize its assets and generate profit either in the short or long-term and then develop its business activities. In other words, the concept is a combination of the firms' assets to attain profit over a given time. On the other hand, growth of the firm is what the firm gets after it has deducted all expenses from its generated revenue, which could either be retained or shared amongst the shareholders of the firm (Ahmed, Fiaz, & Shoaib, 2015). Here growth is viewed as an increase in the finance and assets of the firm. The definition failed to capture the growth of the human capital in the organization. In another definition, Katsuro Pension, Nyasha, Sheiller, & Vhuramai (2013) define growth as the consistent development and increase in size of a firm. Growth of the firm is also defined as a progressive development, which includes increase and expansion especially in the area of capital value and income of the firm (Schiuma, 2012). This definition shows the importance of growth since it is connected with the progressive development of the firm in line with capital and value of the firm. The concept of growth therefore goes beyond the concept of profitability of the firm because it includes both profitability and the ability of the firm to progressively develop (Torabia & El-Denb, 2017).

Empirical Review

In other to understand the relationship between knowledge management and growth of firms, studies have been conducted and some of these studies are look at.

Rasula, Vučič and Stemberger (2012) determined the impact of knowledge management on organizational performance in Slovenia and Croatia. The aim of the study is to show that through creating, accumulating, organising and utilising knowledge, organisations can enhance organizational performance. The impact of knowledge management practices on performance was empirically tested through structural equation modelling. The sample included 329 companies both in Slovenia and Croatia with more than 50 employees. The results show that knowledge management practices measured through information technology, organization and knowledge positively affect organisational performance. However, using a different set of variables to measure knowledge management like the knowledge management process will make the finding more specific to the process of knowledge management and it will give way of implementing the process efficiently.

Tubigi, Alshawi and Alalwany (2013) investigated the impact of knowledge management (KM) processes on organisational performance (OP). The study employed an inductive qualitative approach based on a preliminary study. The study conducted a pilot study and the study involved the use of interview as a primary data collection technique. Content analysis approach was used to identify ideas relevant to the main themes. The study showed that knowledge usage is the most influential aspect of KM that impacts OP. Moreover, the study revealed that knowledge transfer is a common knowledge management process employed by organizations. Accordingly, it was ranked as the second most influential factor of KM with respect to OP. However, this study made use of content analysis, which means that the employment of an empirical approach can make the finding to be different.

Pension, Nyasha, Sheiller, and Vhuramai (2013) investigated the impact of knowledge management on organizational performance. The research used a case study approach in which a sample of 60 employees out of a population of 100 employees was used. The targeted population was stratified into departments from which a simple random sampling procedure was employed to come up with departmental representatives who were then summed to make the final 60 sample elements. Questionnaires and interviews were used in triangulation to collect data on the sample. An analysis of the collected data revealed that knowledge management had positively impacted on the performance of the organization through improvements in design time, costs reduction, employee flexibility and reduced employee frustration and confusion. However, the research also found that knowledge management can be negatively affected once a culture that embraces learning and sharing knowledge is minimum. Looking at this study it is seen that both questionnaires and interviews were employed so using structural equation model (SEM) would have captured the data well and made the analysis more robust.

Ahmed, Fiaz, and Shoaib (2015) examined the impact of knowledge management practices on performance of organizations in Pakistan banking sector. The study made use of variables like knowledge acquisition, knowledge conversion, knowledge application and knowledge protection on organizational performance. The study employed survey design and questionnaire was used to get response from 256 banking sector respondents. Data was analyzed by using SPSS. The results showd that knowledge management activities which are knowledge acquisition, knowledge conversion, knowledge application and knowledge protection results in provision of quality services to

customers, high customer satisfaction, efficiency in resource utilization, more profits and overall improved organizational performance. For practitioners implication of the research is that it will provide a guide to implement knowledge management activities within the organization for organizational performance improvement. Though a positive impact was discovered in the banking sector, the finding of the study if conducted in a different sector can make the finding differ.

Torabia and El-Denb (2017) examined the impact of knowledge management on organizational productivity in Iran. The study employed the use of a survey research design. The survey, which was conducted at Koosa Bank of Iran, demonstrated that the employees' intention to share and consequently the sharing of tacit knowledge has direct positive impacts on productivity. In addition, the analysis demonstrated that not only productivity would increase as a result of knowledge sharing, but also employees' innovative contributions increased as a result of exposure to others' knowledge, expertise, and experiences.

Theoretical Framework Structuration Theory

The structuration theory was propounded by Giddens (1984) and the structuration theory is an attempt to dispel division within the social sciences between those who consider social phenomena as determined by the influence of objective social structures (determinism) and others who see social phenomena as products of human agents as they subjectively interpret the world (voluntarism) (Timbrell, Delaney, Chan, Yue, & Gable, 2005). Giddens' conception of structuration theory purports a duality of structure which relates to the fundamentally recursive character of social life, and expresses the mutual dependence of structure and agency. In other words, the agents within a social system are both influenced by the structural elements of that system, and recursively reproduce those structural elements through interaction between agents. Giddens views social structure as being drawn upon by human agents to constrain (rules) or enable (resources) interaction, while simultaneously the actions of actors in social contexts serve to produce (create or change), and reproduce (homoeostasis) the social structure.

A founding principle of Giddens' theory is that every social actor knows a great deal about the conditions of reproduction of the society of which he or she is a member (Mills & Smith, 2011). This theory also posits that social systems, such as knowledge-based organizations, are comprised of day-to-day social interactions involving situated activities of human

agents existing in time-space, and are constituted by regular, reproduced relations of interdependence between either individual agents or a collective group (Pension, Nyasha, Sheiller, & Vhuramai, 2013). According to this theory, institutions are a product of human agency but are an outcome of action only in so far as they are also involved recursively as the medium of its production (Ahmed, Fiaz, & Shoaib, 2015).

In structuration theory, structure refers to patterns of social relationships and only exists as structural properties. These structural properties exist virtually as rules and resources that in social reproduction bind time (Giddens 1984) and result in enduring practices in social systems (reproduced relations between actors or groups, organized as regular social practices that occur in time and space).

This theory is adopted because it explains that the structure in the organization is created by social relationships as a structural property. This means that knowledge management is a structure that can be achieved through humans who are the employees.

Methodology

The study employed the use of survey research design and questionnaires were used to solicit for information from the sample of the study. The instrument used is adopted and modified from Gold and Malhotra (2001) to measure knowledge management and growth. The population of the study comprise of the employees of the telecommunication firms in Kaduna metropolis which are MTN, GLO, Airtel and 9 mobile. The employees of the firms are MTN = 25, Glo = 55, 9 mobile = 39 and Airtel = 25. This makes the population of the study to be 114. The study therefore employed the use of census sampling technique and all the population were studied because the population is not above 200 (Sekaran, 2005). A total of 114 questionnaires were issued to the respondents and the study employed the hand-to-hand approach of distribution to ensure successful retrieval. After the collection of the questionnaire, the study made use of correlation and regression to analyse the collected data.

Results and Discussions

All the 114 questionnaires were issued to the respondents for the study and were retrieved. Out of the retrieved questions 3 of them were wrongly filled as such the valid response is 111 which represent 97% of the sample. Having a response rate that is above 50% ensures a certain level of reliability of the data (Mills & Smith, 2011). After the collection of the data, the study employed the use of the cronbach

alpha to test for reliability. Table 1 presents the reliability of the construct.

Looking at the reliability table, it is discovered that all the constructs have 6 questions each and knowledge acquisition (KA) has a coefficient of .67 which implies that the variable has internal consistency. Knowledge conversion (KC) as well as knowledge application (KAP) all had coefficient of .61 and .69 respectively. All the variables have internal consistency and finally knowledge protection as well as organizational growth has internal consistency as the variables are all above .5. According to Cronbach (1951) decision rule, any variable that has an alpha of above .5 is reliable and has internal consistency as indicated in the study.

Table 1: Reliability Test

Construct	Number	Alpha Coefficient
KA	6	.67
KC	6	.61
KAP	6	.69
KP	6	.71
OG	6	.83

Source: SPSS Output, (2018)

A correlation analysis was conducted check for the relationship between the variables. Table 2 presents the correlation between the variables.

Table 2: Correlation

	OG	KA	KC	KAP	KP
OG	1				
KA	.871	1			
KC	.825	.624	1		
KAP	.883	.537	.721	1	
KP	.811	.776	.650	.522	1

Source: SPSS Output, (2018)

Considering table 2, it is discovered that knowledge acquisition (KA) and organizational growth (OG) has a coefficient of .871 which implies that an increase in knowledge acquisition of the employees will lead to about 8% increase in the growth of the firm. The relationship between knowledge conversion (KC) and organizational growth (OG) has a coefficient of .821 which implies that an increase in knowledge conversion of the employees of the firm will lead to about 8.2% of growth. Knowledge application (KAP) and growth also has a coefficient of .883 which implies that 1% increase in knowledge application will lead to about 8.8% increase in the growth of the firm. Finally the relationship between knowledge protection and growth has a coefficient of .811 which also implies that an increase in the knowledge that has

been gained by protecting it will lead to about 8.1% increase in the growth of the firm.

The independent variables also had positive relationship between themselves because the table shows knowledge conversion and knowledge acquisition has a coefficient of .624. Knowledge application also had a positive relationship with knowledge acquisition with a coefficient of .537. Knowledge protection and knowledge acquisition has a coefficient of .776. All the variables in the study have a positive relationship and there was no problem of multicollinearity since none of the variables had a relationship that is equal to 1. Table 3 presents the regression analysis of the study.

Table 3: Regression Analysis

R ₂	Adj. R ₂	Sig.	Std. Error
.881	.823	.003	.44217

Source: SPSS Output, (2018)

The regression analysis of the study had an R₂ of .881 which signifies that 88% of growth of telecommunication firms is explained by knowledge management. The relationship happens to be

significant with a significant value of .003. The model has a standard error of .44217 which signifies that there is a low error and the coefficients are not biased. The model shows that knowledge management

impacts on growth of telecommunication firms positively and significantly. Table 4 presents the

coefficient of the combined relationship between the variables.

Table 4: Coefficient of the Variables

Variable	Coefficient	Std. error	t-stat	Sig.
KA	.268	.056	4.771	0.000
KC	.410	.200	2.050	0.041
KAP	.392	.059	6.289	0.000
KP	.191	.052	3.668	0.000

Source: SPSS Output, (2018)

Considering the output in table 4 it is discovered that knowledge acquisition had a coefficient of .268 and a significance of .000. This implies that knowledge acquisition impacts on growth positively and significantly. Knowledge conversion also had a coefficient of .410 and a significant value of .041. This implies that knowledge conversion impacts on growth of telecommunication firms positively and significantly. This finding goes in line with the finding of Daud and Yusoff (2010). Knowledge application impacts on growth of telecommunication firms with a coefficient of .392 and a significant value of .000. This also signifies that knowledge management impacts on growth positively and significantly. Finally the table shows that knowledge protection impacts positively and significantly with a coefficient of .191 and a significant value of .000. This finding goes in line with the finding of Ahmed, Fiaz and Shoaib (2015).

Based on all the findings of the study, the stated hypotheses were therefore all rejected.

Conclusion and Recommendations

Looking at the major finding of the study which showed that knowledge management impacts on growth, the study therefore concludes that knowledge acquisition, knowledge conversion, knowledge application and knowledge protection impacts on growth of telecommunication firms in Kaduna metropolis.

Based on these conclusions, the study therefore recommends that, management of telecommunication firms should employ the process of knowledge management to attain the desired growth. This could be achieved if the firm creates an effective knowledge management process that encourages employees to acquire knowledge easily, convert the knowledge and then apply it in running their daily activities and finally to be able to protect it. The firm should motivate the employees with incentives so that the process of sharing knowledge will be widely accepted and this will ensure the flow of knowledge. The study also recommends that other studies should consider looking at other sectors like the oil and gas sector to make comparison with available studies on the subject matter.

References

- Abiodun, B. (2013). The effect of firm size on firms profitability in Nigeria. *JED*, 4(5) .
- Ahmed, S., Fiaz, M., & Shoaib, M. (2015). Impact of Knowledge Management Practices on Organizational Performance: an Empirical study of Banking Sector in Pakistan. *FWU Journal of Social Sciences*, 9(2) , 147-167.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *psychometrika*, 16(3), 297-334.
- Daud, S., & Yusoff, W. (2010). Knowledge management and firm performance in SMEs: the role of social capital as a mediating variable. *Asian Academy of Management Journal*, 15 (2), 135–155.
- Giddens, A. (1984). *The Constitution of Society*. Berkeley, CA, : University of California Press.
- Gold, A. H., & Malhotra, A. H. (2001). Knowledge management: An organizational capabilities perspective. . *Journal of management information systems*, 18(1), 185-214.
- Holsapple, C. W., & Wu, J. (2011). An elusive antecedent of superior firm performance: The knowledge management factor. *Decision Support Systems*, 52(1), 271-283.
- Katsuro Pension, K., Nyasha, M., Sheiller, M., & Vhuramai, C. (2013). Impact of Knowledge Management on Organizational Performance: A Case Study of Grain Marketing Board. *Greener Journal of Business and Management Studies*, 3(6), 270-278.
- Mills, A. M., & Smith, T. A. (2011). Knowledge management and organizational performance: a decomposed view. . *Journal of knowledge Management*, 15(1), 156-171.
- Mills, A., & Smith, T. (2011). Knowledge management and organisational performance, a decomposed view. *Journal of Knowledge Management*, 15 (1), 156-171.
- Mishra, B., & Bhaskar, A. (2011). Knowledge management process in two learning organisations. *Journal of Knowledge Management*, 15 (2), 344-359.

- Moorthy, S., & Polley, D. (2010). Technological knowledge breadth and depth: performance impacts. *Journal of Knowledge Management, 14* (3), 359-377.
- Novak, A. (2017). Knowledge management and organizational performance . *International conference, 7*(3).
- Pension, K., Nyasha, M., Sheiller, M., & Vhuramai, C. (2013). Impact of Knowledge Management on Organizational performance: A case study of Grain marketing board. *Greener Journal of Business and Management Studies, 3*(6), 270-278.
- Rasula, J., Vucsik, V., & Stemberger, M. (2012). The impact of Knowledge management on organizational performance. *Economic and Business review, 14*(2), 147-168.
- Schiuma, G. (2012). Managing knowledge for business performance improvement. *Journal of knowledge management, 16*(4), 515-522.
- Sekaran, U. (2005). *Research Methods for Business: A Skill Building Approach. 4th ed.* . New York: John Willey.
- Singh, A., & Soltan, i. E. (2010). Knowledge management practices in Indian information technology companies. *Total Quality Management, 21* (2), 145-157.
- Tan, M., & Narsuridin, E. (2011). Developing a knowledge strategy. *California Management Review, 41*(3), 125-145.
- Timbrell, G., Delaney, P., Chan, T., Yue, A., & Gable, G. (2005). A structurationist review of knowledge management theories. *Twenty-Sixth International Conference on Information Systems.*
- Torabia, F., & El-Denb, J. (2017). The impact of Knowledge Management on Organizational Productivity: A Case Study on Koosar Bank of Iran. *Procedia Computer Science, 124* , 300–310.
- Tubigi, M., Alshawi, S., & Alalwany, H. (2013). Impact of Knowledge Management Processes on Organisational Performance; a Preliminary Study. *European, Mediterranean & Middle Eastern Conference on Information Systems, 17*(9).
- Vaccaro, A., Parente, R., & Veloso, F. M. (2010). Knowledge management tools, inter-organizational relationships, innovation and firm performance. . *Technological Forecasting and Social Change, 77*(7), 1076-1089.