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Enterprise Knowledge Audit and Organizational Sustainability of Oil and Gas Companies in Rivers State

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Abstract: *This study examined the relationship between enterprise knowledge audit and organizational sustainability of oil and gas companies in Rivers State. The study adopted a cross-sectional survey in its investigation of the variables. Primary data was generated through structured administered questionnaire. The population for this study was is made up of the twenty-four registered indigenous oil servicing companies in Port Harcourt. Since the population is small, this study therefore adopts the entire population of 24 oil and gas companies in Rivers State as a census. Five (5) managers were selected from each of 24 oil and gas companies in Rivers State giving a total of 120 respondents. The reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring above 0.70. The hypotheses were tested using the Spearman's Rank Order Correlation Statistics while the partial correlation was used to test the moderating effect of organizational culture. The tests were carried out at a 0.05 significance level. The hypotheses were tested using the Spearman rank order correlation Coefficient. The tests were carried out at a 95% confidence interval and a 0.05 level of significance. The study findings revealed that there is a significant relationship between enterprise knowledge audit and organizational sustainability of oil and gas companies in Rivers State. The study concludes that when the investment in enterprise knowledge audit by oil and gas companies in Rivers State positively enhances organizational sustainability. The study recommends that management of oil and gas companies should*

Key words: *Enterprise Knowledge Audit, Organizational Sustainability, Knowledge Need Analysis, Knowledge Mapping*

INTRODUCTION

The idea of organizational sustainability has over time become an important rating factor, driver of growth, value creation, social relationship builder, a survival tool, for firms around the globe (Setia & Soni, 2013). It is the ability to continue the organization's activities into the long-term future, which might also be described as survivability (Mclntosh & Arora, 2001). Sustainability is the essence of the existence of any organization, be it for profit maximization or for social concern. This is in accord with the assertions of Onwuzuligbo (2014) that organizations are usually established as a going concern, hence, it is expected to continue in perpetuity.

Organizational sustainability appears to be the life-wire of every firm in the world. This is because; no business wants to go into extinction rather always wanted to remain in the apex of leadership. In the course of labeling and translating the meaning of this concept, Munck and Souza (2009) posit that sustainability is a state in which an organization or a society exhibits a relation to economic, environmental and social aspects. Wales (2013) viewed sustainability as being to "keep the business going". In this study, sustainability refers to the ability to maintain something very tangible and useful. According to Epstein and Buhovac (2011) it is the ability of any establishment to better comprehend the role of their host communities, customers,

employees, stakeholders and proffer solutions to their respective needs which ensures better cooperation with the organization. According to O'Riordan in Economist Intelligent Unit (2008) sustainability is captured as the adoption of policies and processes that promotes the financial, environmental, societal, human and other resources on which the organization in question relies on for its long-term health. EIU research portends that sustainability benefits the drive for cost reduction and confers greater competitive advantage. Hence, sustainability is perceived to reduce reputational risk and improve the organizations' product image and value. It is imperative that for organisations to be sustainable in today's knowledge economy, they must invest in knowledge audits.

In this knowledge era, the growth of the internet has made vast amounts of information accessible to various professionals (Simeone, Secundo & Schiuma, 2017). Factors such as globalization, advancements in technology, and workforce diversity combined with the effect of a more educated and informed society have contributed to increased focus on learning and development activities in all types of organizations. These developments have led to the growth of knowledge-based economies where much attention is on how to effectively manage the human capital so they can contribute to national development of a country as expected (Omotayo, 2015).

In view of the critical role played by the workforce and the increased focus on knowledge as a contributor to sustained business success; it is imperative that organizations constantly manage the vast amounts of knowledge available in a manner which will make them remain competitive. Work environments no longer use manual labour-intensive methods of production but rather large scale and specialized methods which are highly mechanized, with clear emphasize on specialized roles and responsibilities (Ibua, 2014).

Knowledge audit (KA) is an important tool in achieving organizational objectives. Also, a lot of risk exist in a knowledge economy, knowledge risk needs to be evaluated in an organization and an effective tool used for this is knowledge audit. Cheung, Cheung, Li and Shek (2007) opined that for an organization to evaluate knowledge asset, the organization needs to identify the source, usability, and creation of the knowledge asset in an organization.

Knowledge audit is an important tool for knowledge asset extraction and processing and nurturing. Cheung *et al.* (2007) asserted that conducting a knowledge audit to identify and evaluates that the present state of knowledge inventories and useable among and within the organization is needed. Also, Sharma et al., (2008) asserted that there is no adequate measure for the successful execution of knowledge management initiative; a working solution is the knowledge audit and also, they claimed that knowledge management lifecycle impacted by the organization of intellectual capital into corporate taxonomy or at the least a knowledge map which can be achieved via knowledge audit. The purpose of this paper therefore was to examine the relationship between enterprise knowledge audit and organizational sustainability of oil and gas companies in Rivers State. The specific objectives were to:
i. Examine the relationship between enterprise knowledge audit and organizational sustainability of oil and gas companies in Rivers State?
ii. Examine the relationship between enterprise knowledge audit and organizational sustainability of oil and gas companies in Rivers State?
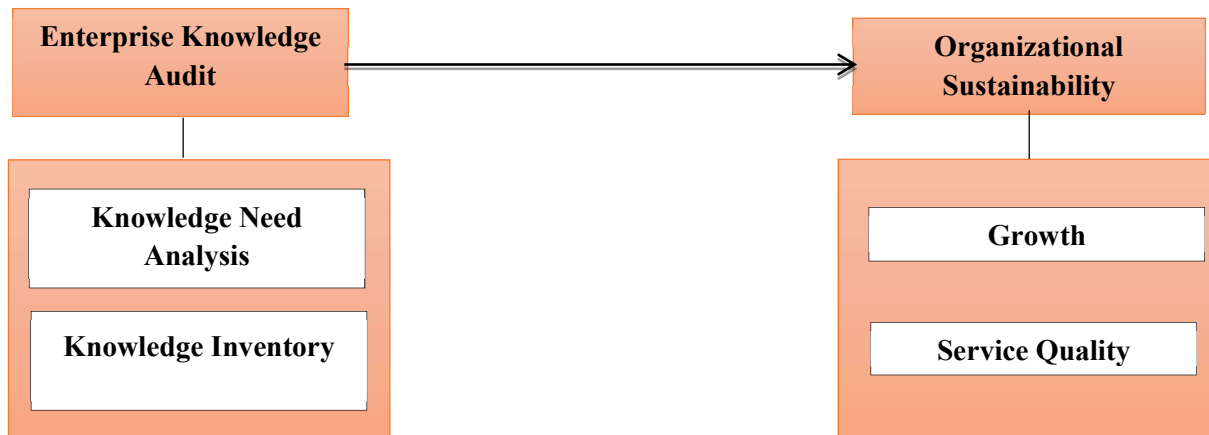
Figure 1: *Conceptual model for the relationship between enterprise knowledge audit and organizational sustainability*

Source: Desk Research (2022)

LITERATURE REVIEW

Theoretical Foundation
Knowledge Based View Theory

This theoretical concept is of the view that knowledge has a life cycle in terms of its applicability within an organization or at the external environment as professional knowledge. The focus of this study is on the use of knowledge for organizational for internal purposes. As an outgrowth of the resource-based view, the knowledge-based view focuses upon knowledge as the most strategically important of the firm's resource (Cheng, Wang & Qu, 2020). According to this view, its rationale is based on the fact that certain key decisions need to be made by the top management regarding the management of knowledge.

One decision is on the development of professional knowledge internally and modalities of doing it with an option of when it would be desirable to draw upon external expertise, and internal and external knowledge when jointly used through consultants. A third could be on how the internal knowledge can be marketed beyond organizational boundaries (Salina & Wan Fadzilah, 2010). This study focused on how the internal knowledge can be leveraged through the use of communities of practice and knowledge mapping, within a culture and structure that encourages knowledge sharing. Recent studies have pointed out the role of knowledge management (KM) and employees' knowledge sharing practices (Singh, 2019) in the enhancement of firm performance and the development of a firm's competitive advantage (Santoro, Bresciani & Giudic, 2019).

This view further proposes that the aforementioned decisions and others can only be effective if organizational members are accorded professional support in their day-today activities which include clarity of instructions, free flow of information, constant review and improvement of

recurring tasks and transparent coordination techniques, (Salina & Wan Fadzilah, 2010). Furthermore, a study by Aminga (2015), recommends implementation of KM practices policy to improve institutional accountability and performance in public universities.

Another study by Gichuhi (2014) also recommends the adoption of KM strategies to empower employees with techniques of creating and utilizing their knowledge. All these basic functions were aligned to the objectives of this study which were focused on combining management of employee core competencies within a knowledge culture and supportive structures of communities of practices, knowledge mapping and organizational learning.

Enterprise Knowledge Audit
Knowledge is the concept, skill, experience and vision that provides a framework for creating, evaluating and using the information (Soltani & Navimipour, 2016). Generally, knowledge can be divided into two types, tacit and explicit. Tacit knowledge is the personal and context-specific knowledge of a person that resides in the human mind, behavior and perception (Sikome et al, 2019). Koenig (2012) suggested that explicit knowledge means information or knowledge that is set out in tangible form.

Knowledge audit (KA) is an important tool in achieving organizational objectives. Also a lot of risk exist in a knowledge economy, knowledge risk need to be evaluated in an organization and an effective tool used for this is knowledge audit. Cheung et al. (2007) opined that in order for an organization to evaluate knowledge asset, the organization needs to identify the source, usability, and creation of the knowledge asset in an organization. That is why there is need for periodic evaluation of units, departments and organizations to see which of the processes or procedures that are not documented, which skills needs to be documented, to evaluate the knowledge assets, knowledge asset risk, to see the availability, accessibility and affordability of the knowledge asset and also where there are gaps in knowledge assets, duplications within and among departments and how they could harmonize duplications in order to achieve organizational objectives effectively and efficiently.

Scholars in the past has given different definitions on KA based on their various fields; KA is applicable to all field such as finance, data science, information science, engineering, library science etc because all disciplines are moving into data and knowledge economy. Debenham and Clark (1994) defined KA as resource that organization used to identify both hiding and unhiding in order to gain competitive advantage. Liebowitz (1999) defined KA as a qualitative assessment of the state of the knowledge health of an organization. KA identifies major knowledge, information needs and exploit it to maximum in an organization. It scruntizes systematically and review adequately, the integrity of vital knowledge assets and systems in order to see that there are gaps, inadequacies and duplications. Knowledge audit will solve the problem of what knowledge organization have, what is missing, who needs the knowledge and how to use the knowledge to add d value to the organizational objectives (Liebowitz, 1999).

Liebowitz et al. (2000) defined KA as the process that clarifies, interactions, gaps, flows and how they impact on business objective. KA is the evaluation of knowledge management process, is the review of the organizational assets when it comes to knowledge and anything in conjunction of knowledge management systems. KA is a systematic test, examining and

evaluating of tacit and explicit knowledge resources in an organization (Hylton, 2002). Knowledge audit is defined as KM activity which investigates and analyzes organizational knowledge states and mechanism, reports the knowledge gap of organization according to the knowledge need of organization (Wu and Li, 2008).

Knowledge audit is an important tool in achieving organizational objectives. Also a lot of risk exist in a knowledge economy, knowledge risk need to be evaluated in an organization and an effective tool used for this is knowledge audit. Cheung et al. (2007) opined that in order for an organization to evaluate knowledge asset, the organization needs to identify the source, usability, and creation of the knowledge asset in an organization. That is why there is need for periodic evaluation of units, departments and organizations to see which of the processes or procedures that are not documented, which skills needs to be documented, to evaluate the knowledge assets, knowledge asset risk, to see the availability, accessibility and affordability of the knowledge asset and also where there are gaps in knowledge assets, duplications within and among departments and how they could harmonize duplications in order to achieve organizational objectives effectively and efficiently.

Dimensions of Enterprise Knowledge Audit
Knowledge Need Analysis
Knowledge need analysis simply means, productivity identifying internal organizational knowledge identified internally or in the firm operating environment. It is the knowledge management process whereby organizations take steps to identify the relevant and needed knowledge that exists within their boundaries. Mills and Smith (2011) stated that the term knowledge need analysis refers to an organization's capability to recognize, obtain and amass knowledge, whether internal or external that is vital to its operation. Pacharapha and Ractham (2012) define knowledge need analysis as the process of development and creation of insights, skills and relationships. Knowledge need analysis examples include conducting an external survey, acquiring a knowledge rich firm, sending employees to external training, hiring an employee, purchasing a data set, monitoring technological advances, purchasing a patented process, and gathering knowledge through competitive intelligence (Holsapple & Singh, 2001). Ruchi et al (2016) in study of Knowledge Management and performance of Indian software companies found that knowledge acquisition and protection (storing) do not affect organization's performance may be due to inadequate attention to knowledge acquisition and protection strategies. Nonaka and Takeuchi (1995), avows that for knowledge that is acquired to be useful, the process of accessibility, collecting and application should be easy and transparent to the knowers as such knowledge is predominantly tacit.

According to Tiwana (2008), organizations subconsciously engage in knowledge need analysis and fail to realize that, in the process, talents and relationships are lost, but in the absence of knowledge retention strategies, organizations continue to lose valuable acquired knowledge. For knowledge to be acquired therefore, the willingness and ability of a recipient to acquire and use such knowledge are crucial elements (Gupta and Govindarajan, 2000; Ragsdell, 2009). For purposes of this study, the measurement indicators for knowledge acquisition will be: external environmental scanning; benchmarking; external employees training; investments in Research & Development; upskilling teams for identifying best practices; and purchase of data sets

For William, John and Dell (2015), knowledge need analysis is the first step taken in efficient knowledge management at work, organizations are faced with the challenges of identifying the knowledge gaps existing within its boundaries. It is imperative that most relevant knowledge important for employee growth be identified in knowledge management efforts of firms. "Organizations cannot beverage or tap into knowledge, they do not know they have. Organizations cannot use this knowledge or share it with others to use, this often means that employees possessing knowledge and skills that could be relevant needed by both colleagues and managers within the same organization are unknown to those same colleagues managers".

The objective of knowledge needs analysis is to identify what tacit and explicit knowledge individuals, groups, and the organization possess; and what knowledge they might require in the future to perform better. The analysis can help an organization develop strategy and it can also draw attention to staff skills and competency enhancement needs; opportunities for staff learning and development; organizational culture practices concerning leadership, collaboration, team work, and the performance management and rewards system; and staff relationship with management, peers, and subordinates

Knowledge Mapping

A knowledge map is a visual tool that guides a user where to find certain types of knowledge within a group or an organization as it points at individuals who may be the masters in specific field (Passi, Luoma & Valkotri, 2010). Knowledge mapping is therefore the process through which an organization develops reviews and improves tools of how knowledge is shared among employees (Lee & Fink, 2013).

The management of knowledge is organizations today lies on the ability of the organization to effectively access and leverage the knowledge they currently possess by establishing what is and is not useful or relevant for now and future purposes. In an attempt to deal with this challenge, many organizations create a record of knowledge, which is known as the knowledge spread (Balaid, 2012). The main dilemma even with an established inventory of knowledge is the ability to access the relevant knowledge as quickly as would normally be required. To address this challenge, organizations have embraced knowledge mapping as a technique which enables a structure to be created out of a large amount of useful and complex information available at any given time (Davies, 2011).

According Watthanon and Mingkhwan (2012), employees would normally search for knowledge from either their colleagues, different types of documents or the internet. This knowledge is located in various places and forms, and often takes some more time to get what is required in a timely fashion impacting on employee performance. A knowledge map becomes useful in simplifying the navigation and easily pinpoints where exactly the required knowledge can be found within a knowledge environment, (Balaid, Rozan, Hikm & Memon 2016).

According Lee and Fink, (2013), a knowledge map only directs or guides the user to the location of required knowledge but does not hold any in itself. It is therefore a useful method for sharing knowledge within organizations and helps in the creation of groups of people who may share a common concern and easily link them to particular kinds of knowledge that they may find useful.

In the same breath, knowledge mapping helps organizations distinguish between what is important knowledge and whether or not it needs to be protected, or if it requires a review in view of emerging issues (Zhang & Zhang, 2017).

Since knowledge presents itself in various forms like tables or databases, a knowledge map not only saves time in tracing the exact knowledge required but in the long run save costs for the organization by improving implementation of processes such as learning & development and recruitment, (Watthanon & Mingkhwan, 2012). Knowledge maps are also able to enhance the flow of information among organizational members and in coordinating research projects and programs by facilitating sharing relevant information, (Lee & Fink, 2013). Knowledge in universities is regarded as the key resource for production as well as its final product.

Studies by Gichuhi, (2014) and Ogola (2010) show that the KM function in public universities in Kenya mainly focuses on the activities of Library Department viewed as the main repository centre for knowledge. The role of KM in other functional areas in the institutions is still in its initial stages and therefore not fully embedded in their processes. If fully developed as a practice, knowledge mapping can be useful to counter the challenge of how to organize and coordinate the vast amounts of knowledge that becomes available in an ever changing knowledge environment of academic departments (Murtaza, 2015).

Knowledge mapping as a practice is made up of four main players. First is the knowledge initiator/maker who handles the details of how the knowledge map will flow which is graphic tool used to show where and who owns particular kinds of knowledge in a specified setting. Second person is the map user who uses the maps to complete a task and generate learning opportunities or gaps; the map innovators monitor and review the maps by making any changes to the current maps on a need-to-need basis.

Concept of Organizational Sustainability

The concept of organizational sustainability has gained and attracted lots of attention in recent time, as companies or organisation with its stakeholders are turning their attention towards these critical issues of sustainability, that encompasses the economic, environmental and social dimension of sustainability. This concept according to Bhatia and Tuli (2016) is based on the Brundtland Report Published in 1987. Thus, it emphasized the need or importance of making progress towards economic development that could be sustained without diminishing natural resources or damaging and destroying the environment (Gallo & Christensen, 2014).

Bestman, Chinyere and Adebayo (2022) defined organizational sustainability as the ability of an organization to encourage and support growth over time by successfully meeting the expectations of various stakeholders. Zahid and Ghazali (2015) assert that sustainable development is a concept of organizational sustainability practices that assures and ensure long-term survival and financial success of a firm or corporation. Thus, as the balanced utilization of resources for ensuring better living and working at present by incorporating existing economic, social and environmental necessities without compromising with the needs of future generations (Ongisoh, The & Ng, 2016). Wilson (2003) posit that a review of literature suggests that organizational sustainability concept borrowed elements from four more established concepts,

namely sustainable development, corporate social responsibility, stakeholders' theory and corporate accountability theory.

However, Steger and Lonescus-Somer (2005) have defined organizational sustainability management as a profit driven corporate response to environmental and social issues that are caused through the organizations primary and secondary activities. Hence, from a broader business perspective, it is perceived as a business approach that creates long term shareholders value by embracing opportunities and managing risk derived from economic, environmental and social development (Dow Jones sustainability indexes, 2009).

Besides, organizational sustainability management could be described in terms of functional as well institutional terms. The functional perspective is designed to steer ecological, social and economic impacts of business activities in such a way that an enterprise develops in the direction of sustainability. With the aim of ensuring a systematic management of the triple bottom line, but also to integrate them in the conventional business management process. On the other hand, the institutional perspective describes the group of actors and organizational structure within the business enterprise that are concerned with the social and ecological aspects and their integration in the conventional process of operational management of business activities (Schaltegger, Herzig, Weiber & Muller, 2007).

Bansal (2005), Caroll and Shabana (2010) argued that key constructs for corporate social responsibility (CSR) and organizational sustainability have proliferated in the past decades, hence have added to management uncertainty. To Christofi, Christofi and Sisaye (2012) assert that organizational sustainability as a practice is the updated concept of corporate social responsibility (CSR) or sustainable development. Thus, organizational sustainability practice is a new thought which integrate the concept of economic, environmental and social contribution of the firm to ensure long-term financial success and survival of the organization or companies (Loannous & Serafein 2012, 2016, Lopatta *et al.,* 2016).

According to San (2016) the notion of organizational sustainability practices implies to the way of living and working that meet and integrate the economic, environmental and social needs without destroying the betterment of the upcoming generations. In the same vein Nemli (2004) opined that organizational sustainability encompasses three dimensions of needs known as triple bottom line, economic prosperity and opportunity social equity and quality of life, ecological resource preservation. To this end, organizational sustainability can be attributed to an organizational commitment to achieving competitive advantage through the strategic adoption and development of ecologically and socially supportive production processes products and services and innovation human resource management practices.

Measures of Organizational Sustainability

Growth

Organizational growth is, in fact, used as one indicator of effectiveness for small and large businesses and is a fundamental concern of many practicing managers. Organizational growth means different things to different organizations. Most companies will measure their growth in

terms of net profit, revenue and other financial data (Caplow, 1983). The parameter chosen tend to influence amount of growth that is perceived. Weinzimmer *et al.* (1998), found that there is a significance relationship between determinants and organizational growth, as well as the amount of explained variance depend on the specific approaches used to measure growth. Companies have to grow in order to accommodate the increased expenses that develop over the years (Crosby, 1990). Most firms therefore desire growth in order to prosper, not just to survive.

The growth and survival prospects of new firms will depend on their ability to learn about their environment and to link changes in their strategy choices to the changing configuration of that environment (Geroski, 1995). Van (2002) say that organizations appear in the market, survive, grow and eventually die, transferring their knowledge and information to surviving firms. In this sense, organization size reflects how the firm evolves and adapts to its environment. Weinzimmer *et al.* (1998) views growth as a derivative of another successful strategy which may be deliberately sought to facilitate the achieving of management goals and also make organization less vulnerable to environmental influences as larger organizations tend to be more stable and less likely to go out of business.

An organisations growth rate measures the percentage increase in the value of a variety of markets in which an organisation operates (Zack, 2009). An organisations growth rate can be achieved/improved on by boosting the organisations top line or revenue of the business with greater product sales or by increasing the bottom line or profitability of the operation by minimizing costs. Organisations are seen as living organisms and therefore, they possess same characteristics with living organisms. In other words, organisations also have life cycle, they are formed (born), grow to maturity, decline, and finally die of age.

Service Quality

Service quality can also be defined as the capacity to exceed customers' expectations (Berry *et al.*1988) as far as the service company is concerned service quality is extremely important because it reflects an organization's capability to work effectively and also to brand themselves and hence customer satisfaction. Berry *et al.* (1988) & Parasuraman *et al.* (1988) argue that service quality is a perception resulting when customers compare their expectations to their perceptions of service received. Grönroos, (1994) suggested that service quality issue could be split into technical quality (what is done) and functional quality (how it is done).

Since service delivery occurs during the interactions between contact employees and customers, attitudes and behaviors of the contact employees can influence customers' perceptions of service quality (Schneider & Bowen, 1985). Additionally, Beatson, Lings & Gudergan (2008) found that perceived employee satisfaction, perceived employee loyalty, perceived employee commitment had an impact on perceived product quality and on perceived service quality. Providing high quality service is a key concern for organization. Oliver (1997) argues that customer satisfaction mostly depends on the quality of service offered. Perceived customer service can be identified only in terms of the provided service quality and the overall satisfaction of the customer' experiences (Zelthaml *et al.,* 2006).

According to Zeithaml and Bitner (1996), contact employees represent the organization and can directly influence customer satisfaction, they perform the role of marketers. They can perform these functions well, to the organization's advantage, or poorly, to the organization's detriment. According to Bettencourt and Gwinner (1996) contact employees has the opportunity to tailor in real-time not only the services the firm offers, but also the way in which those services are delivered.

Service is largely intangible and is normally experienced simultaneously with the occurrence of production and consumption (Har, 2008). Service is often conceptualized as the interaction between the buyer and the seller that renders the service to customers (Groonroos, 1988). Service could also be viewed as any act or performance that one party can offer to another that is essentially intangible and does not result in the ownership of specific costs and risks (Kotler & Keller, 2006). Kotler, *et al.* (2006) described service as a form of product that consists of activities, benefits, or satisfactions offered for sale that are essentially intangible and do not result in the ownership of anything. In the words of Lovelock and Wright (2002) and cited by Nimako and Azumah (2009) services is an economic activities offered by one party to another, most commonly employing time-based performances to bring about desired results in recipients themselves or in objects or other assets for which purchasers have responsibilities. Services are also distinguished from goods because they possess some unique characteristics. Fisk *et al.,* 1993, (as cited in Hinson, 2006) suggest four service characteristics and these are intangibility, inseparability, heterogeneity and perishability.

Enterprise Knowledge Audit and Organizational Sustainability

Knowledge Audit can impact organization performance by evaluating the knowledge assets organization possess which can bring about competitive over competitor, increase sales and profit and provide strategic information for decision making. Social network analysis maps visualize non-formal relationships. Knowledge Audit standardized and visualized the social network analysis mapping to identify and establish the number of people that like or disliking the organization's brands, product, pages and also comments on social media which assist in bring customer's opinions or comment directly and closer to the organization; also help organization to know what the customer needs via the use of social network such as Facebook, Twitter, Instagram, and LinkedIn. It is very fast and cost effective. It shows how staffs seek knowledge, and how they share knowledge among themselves.

Knowledge audit (KA) is an important tool for knowledge asset extraction and processing and nurturing. Cheung, Li and Shek (2007) asserted that conducting a knowledge audit to identify and evaluates that the present state of knowledge inventories and useable among and within the organization is needed. Also, Sharma et al., (2008) asserted that there is no adequate measure for the successful execution of KM initiative; a working solution is the KA and also they claimed that KM lifecycle impacted by the organization of intellectual capital into corporate taxonomy or at the least a knowledge map which can be achieved via knowledge audit. A knowledge audit has long been regarded as the first crucial step in the knowledge management (KM) journey (Choy, Lee & Cheung, 2004; Henczel, 2001; Tiwana, 2002). When carrying out KA; knowledge, data, information, internal and external environment, organization culture and values, organization policies, organizational politics should be taken in consideration. KA output assist organizations

to recommend the best KM strategy which is used to manage knowledge better (Shukor et al., 2013).

KA was viewed from that aspect of what information is in the organization and where it can be found, knowledge of the expert in handling, maintaining and sustaining knowledge asset in the organization, identify expertise outside the organization and how they could work with the organization to achieve the organization objectives, best sources that are germane to external and internal information and knowledge. KA is done in order to evaluate to find out results achieved, what to improve on, identifies various policies, strategies, ethics, programs and projects in a knowledge economy or environment.

According to Schwikkard and Du Toit (2004), a knowledge audit should be undertaken before a knowledge management strategy is decided upon. For a knowledge management audit to be a true reflection of the organisation's knowledge status, a holistic approach must be utilised, instead of solely focusing on content identification and document repositories. The argument in this thesis is that knowledge audits should also consider knowledge management infrastructure elements factors. Becerra-Fernandez and Sabherwal (2010) identify organisational culture, organisational structure, information technology infrastructure, common knowledge, and the physical environment as infrastructure elements that matter for knowledge management. A successful knowledge audit should be conducted holistically by involving the entire organisation in the process.

Based on the foregoing, the study thus hypothesized:

H_{o1}: There is no significant relationship knowledge need analysis and growth of oil and gas companies in Rivers State.

H_{o2}: There is no significant relationship knowledge need analysis and service quality of oil and gas companies in Rivers State.

H_{o3}: There is no significant relationship knowledge mapping and growth of oil and gas companies in Rivers State.

H_{o4}: There is no significant relationship knowledge mapping and service quality of oil and gas companies in Rivers State.

METHODOLOGY

The study adopted a cross-sectional survey in its investigation of the variables. Primary data was generated through structured administered questionnaire. The population for this study was is made up of the twenty-four registered indigenous oil servicing companies in Port Harcourt. Since the population is small, this study therefore adopts the entire population of 24 oil and gas companies in Rivers State as a census. Five (5) managers were selected from each of 24 oil and gas companies in Rivers State giving a total of 120 respondents. The reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring above 0.70. The hypotheses were tested using the Spearman's Rank Order Correlation Statistics while the partial correlation was used to test the moderating effect of organizational culture. The tests were carried out at a 0.05 significance level. The hypotheses were tested using the Spearman rank order correlation Coefficient. The tests were carried out at a 95% confidence interval and a 0.05 level of significance.

DATA ANALYSIS AND RESULTS

This segment presents the data results for the analysis and tests for all previously hypothesized bivariate associations are presented. The hypotheses stated in the null form were all tested using the Spearman Rank Order correlation.

Table 2: Correlations for Knowledge Need Analysis and Measures of Organisational Suatainability

			Knowledge Need Analysis	Service Quality	Growth
Spearman's rho	Knowledge Need Analysis	Correlation Coefficient	1.000	.791**	.755**
		Sig. (2-tailed)	.	.000	.000
		N	103	103	103
	Service Quality	Correlation Coefficient	.791**	1.000	.741**
		Sig. (2-tailed)	.000	.	.000
		N	103	103	103
	Growth	Correlation Coefficient	.955**	.741**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	103	103	103

**. Correlation is significant at the 0.01 level (2-tailed).
Source: SPSS Output

H_{o1}: There is no significant relationship knowledge need analysis and growth of oil and gas companies in Rivers State.

The result of correlation matrix obtained between knowledge need analysis and growth was shown in Table 1. The correlation coefficient of 0.791 confirms the direction and strength of this relationship. The coefficient represents a positive correlation between the variables. The test of significance shows that this relationship is significant at p 0.000<0.01. Therefore, based on observed findings the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between knowledge need analysis and growth of oil and gas companies in Rivers State.

H_{o2}: There is no significant relationship knowledge need analysis and service quality of oil and gas companies in Rivers State.

The result of correlation matrix obtained between knowledge need analysis and service quality shown in Table 1. The correlation coefficient of 0.755 confirms the direction and strength of this relationship. The coefficient represents a positive correlation between the variables. The test of significance shows that this relationship is significant at p 0.000<0.01. Therefore, based on observed findings the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between knowledge need analysis and service quality of oil and gas companies in Rivers State.

Table 2: Correlations for Knowledge Need Analysis and Measures of Organisational Suatainability

			Knowledge Mapping	Service Quality	Growth
Spearman's rho	Knowledge Mapping	Correlation Coefficient	1.000	.880**	.883**
		Sig. (2-tailed)	.	.000	.000
		N	103	103	103
	Service Quality	Correlation Coefficient	.880**	1.000	.741**
		Sig. (2-tailed)	.000	.	.000
		N	103	103	103
	Growth	Correlation Coefficient	.883**	.741**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	103	103	103

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

Source: SPSS Output

H_{04}: There is no significant relationship knowledge mapping and growth of oil and gas companies in Rivers State.

The result of correlation matrix obtained between knowledge mapping and growth was shown in Table 1. The correlation coefficient of 0.880 confirms the direction and strength of this relationship. The coefficient represents a positive correlation between the variables. The test of significance shows that this relationship is significant at p 0.000<0.01. Therefore, based on observed findings the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between knowledge mapping and growth of oil and gas companies in Rivers State

H_{04}: There is no significant relationship between knowledge mapping and service quality of oil and gas companies in Rivers State.

The result of correlation matrix obtained between knowledge mapping and service quality was shown in Table 1. The correlation coefficient of 0.883 confirms the direction and strength of this relationship. The coefficient represents a positive correlation between the variables. The test of significance shows that this relationship is significant at p 0.000<0.01. Therefore, based on observed findings the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between knowledge mapping and service quality of oil and gas companies in Rivers State.

DISCUSSION OF FINDINGS

This study is to examine the relationship between enterprise knowledge audit and organizational sustainability of oil and gas companies in Rivers State. The findings revealed that there is a positive and significant relationship between enterprise knowledge audit and organizational sustainability of oil and gas companies in Rivers State. The finding of the study corroborates with the study on enterprises knowledge audit and organizational sustainability, according to Hylton (2002) affirmed that knowledge audit is the first step in effective knowledge management and corporate knowledge valuation. He went further to emphasize that intangible assets cannot be quantified, measured and valued easily. He sees knowledge as intangible assets in

organization. Lateef and Omotayo (2019) affirmed that data, information and knowledge are tangible assets in the organization such as other factors of production, such as land, labour and capital which can quantified, measured and valued.

Cheung, Li and Shek (2007) made it clear that knowledge audit is an important tool for knowledge asset extraction and processing and nurturing. Knowledge audit is used to identify and evaluates that the present state of knowledge inventories and useable among and within the organization is needed. Also, Sharma, Foo and Morales-Arroyo (2008) asserted that there is no adequate measure for the successful execution of Knowledge Mapping initiative; a working solution is the KA and also, they claimed that knowledge management lifecycle impacted by the organization of intellectual capital into corporate taxonomy or at the least a knowledge map which can be achieved via knowledge audit. A knowledge audit has long been regarded as the first crucial step in the knowledge management journey (Henczel, 2001; Tiwana, 2002). Knowledge audit can impact organization performance by evaluating the knowledge assets organization possess which can bring about competitive over competitor, increase sales and profit and provide strategic information for decision-making. Social network analysis maps visualize non-formal relationships. In addition to previous finding, Becerra-Fernandez and Sabherwal (2010) identify organisational culture, organisational structure, information technology infrastructure, common knowledge, and the physical environment as infrastructure elements that matter for knowledge management.

CONCLUSION

The overall finding of the study indicates that enterprise knowledge audit enhances organizational sustainability of oil and gas companies in Rivers State. Specifically, knowledge need analysis when adopted strengthens organizational sustainability of oil and gas companies in Rivers State. Similarly, knowledge mapping when effectively utilized facilitates organizational sustainability of oil and gas companies in Rivers State.
Therefore, the study recommends that:

i. Management of oil and gas companies should ensure proper knowledge audit and analysis is carried out periodically so as to ensure a sustainable environment within the organization.
ii. Management of oil and gas companies should consider different policies and convenient methods for every knowledge mapping processes so that it can obtain greatest value from the knowledge acquisition process.

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