



Knowledge Management and Organizational Sustainability of Nigerian Port Authority (NPA)

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Abstract: *This study examined the relationship between knowledge management and organizational sustainability of Nigerian port authority. The cross-sectional survey design was used and the population covered 3029 Nigerian port authority workers. A sample size of 341 employees were drawn from the population and the simple random sampling technique was used. Data were collected using copies of questionnaires and the data were analyzed using Spearman Rank Order Correlation so as to determine the relationship between the dimension of knowledge management (knowledge acquisition, knowledge organization) with the measures of organizational sustainability (economic organizational sustainability and environmental organizational sustainability). The result of the analysis showed that there is a significant and positive relationship between knowledge management and organizational sustainability. The study concluded that enhancing knowledge acquisition and knowledge organization is vital in boosting the economic sustainability and environmental sustainability of the Nigerian port authority. Among others, the study recommended that the Nigerian port authority should employ highly talented workers who can help drive the success of the organization as such will help boost the firm's sustainability.*

Keywords: *Knowledge Acquisition, Knowledge Organization, Economic Organizational Sustainability, Environmental Organizational Sustainability*

1.0 Introduction

Rapid change is not new in the business domain and every day brings new discoveries, a turbulent environment and change has become the only constant. The focus of sustainable management is on analyzing firms' performance based on achieving the triple bottom line: social, environmental, and financial outcomes (Horak, *et al.*, 2018). Adopting sustainability initiatives can provide firms with several forms of benefits, including a positive image, enhanced trust from stakeholders, efficiency in resource management, a competitive advantage, superior returns on investments, and profitability. Organizational sustainability is generally accepted to be a combination of environmental, social and economic performance. In today's dynamic business world, companies are moving toward business sustainability strategy rather than growth strategy

and regard it as a core company business (Lim & Ping, 2018). Organizational sustainability mirrors a company's determinations exceed just focusing only on profitability, by also managing its environmental, social, and broader economic impact on the marketplace and society as a whole (Lim & Ping, 2018). To achieve this, all stakeholders of organisation must be committed and particularly, organizational leaders has a great role to play. Sustainable leadership involves the adoption of a long-term view in decision making, nursing innovation targeted at serving value to customers, skill development, and highly agile workforce (Nkuda, 2019).

Considering the fact that the present-day business domain is knowledge driven, organizations are starting to give attention to knowledge management in order to enhance the fortune of the organization. According to Intezari and Gressel (2017), knowledge is regarded as an essential economic resource and possibly the only means of gaining a competitive advantage. To boost businesses' performance, organizations are constantly searching for highly talented employees owing to the knowledge driven economy. According to Tseng and Lee (2014), it is an organization's responsibility to implement knowledge management strategies for increasing both internal and external competitiveness. According to Botha, Kourie, and Snyman (2014), knowledge management initially concentrated primarily on technical aspects and the provision of information technology to enhance business outcome. However, as time went on, it expanded to include social aspects like the community, individual development, and the environment to which the organization is subjected. However, through the creation of knowledge assets, the organization can gain a competitive advantage through the successful implementation of knowledge management practices (Heisig, Suraj, Kianto, & Faith, 2016).

Knowledge management is a key source of organization's competitive advantage and can help in enhancing the firms sustainability because it enables organizations to acquire skills and understanding through experimentation (Yiu & Law, 2014). However, the primary concern is that organizations must identify and comprehend the essential practices that will influence the success of knowledge management initiatives in order to implement knowledge management effectively (Yiu & Law, 2014). These practices may have significant effects on the performance of the organization. These methods are the main focus of learning management because, in addition to broadening information in the organization by accelerating the formation of information, they also persuade group members to share their knowledge and experiences with one another, allowing authoritative information to grow simultaneously and effectively (Muthee, 2014). Some researchers have carried out studies on the issue relating to organizational sustainability. Hahn and Scheermesser (2006) looked into the approaches to corporate sustainability among German companies. Artiach, Lee, Nelson and Walker (2010) examined the various determinants of corporate sustainability performance. Cella-De-Oliveira (2013) examined how organizational sustainability can be attained from the standpoint of organizational competences. There is a paucity of work on how knowledge management relates with organizational sustainability of Nigerian port authority and this study is aimed at bridging this gap.

Statement of the Problem

Happenings in the business world of today such as high competition, product diversity, sophisticated customers, and complex cost structure are putting pressure on organizations to reinvigorate their business strategies to align with environmental trends and market sentiments. The Nigerian Ports Authority (NPA) has pledged to ensure that business activities in the nation's seaports become eco-friendlier in line with the targets of the International Maritime Organization (IMO) of protecting the environment. The problem of low economic, social and environmental sustainability of organization can negatively affect the firm's wellbeing and fortune. However, according to Hahn and Scheermesser (2006), many organizations have been forced to seek alignment with sustainability as a result of constant environmental change and social and legislative pressure. The activities of a company that are developed within a social-environmental context that influences the quality and availability of natural and human capital is the concept of a company that is aligned with sustainability. The equilibrium between these three factors is more important than anything else (Lemme, 2010). Notwithstanding, this study comes handy to tackle issues of organizational sustainability in the Nigerian port authority through knowledge management.

Conceptual Framework

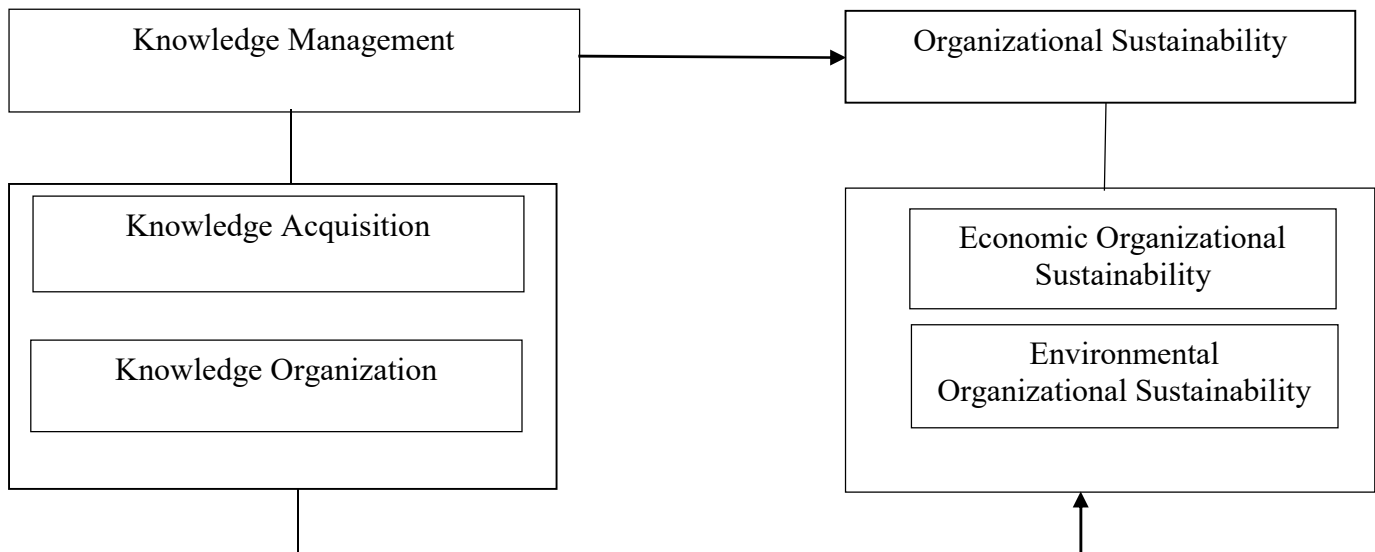


Fig. 1: A conceptual framework of knowledge management and organizational sustainability

Source: Adapted from: Al-Qarioti (2015) and Cella-De-Oliveira (2013).

Aim and Objectives of the Study

The aim of this study is to ascertain the empirical relationship between knowledge management and organizational sustainability of Nigerian port authority. However, the specific objectives are to;

- i. Examine the relationship between knowledge acquisition and economic organizational sustainability of Nigerian port authority.
- ii. Investigate the relationship between knowledge acquisition and environmental organizational sustainability of Nigerian port authority.
- iii. Determine the relationship between knowledge organization and economic organizational sustainability of Nigerian port authority.
- iv. Examine the relationship between knowledge organization and environmental organizational sustainability of Nigerian port authority.

Research Questions

The research questions are presented below;

- i. What is the relationship between knowledge acquisition and economic organizational sustainability of Nigerian port authority?
- ii. How does knowledge acquisition relate with environmental organizational sustainability of Nigerian port authority?
- iii. How does knowledge organization relate with economic organizational sustainability of Nigerian port authority?
- iv. What is the relationship between knowledge organization and environmental organizational sustainability of Nigerian port authority?

Research Hypotheses

H₀₁: There is no significant relationship between knowledge acquisition and economic organizational sustainability of Nigerian port authority

H₀₂: There is no significant relationship between knowledge acquisition and environmental organizational sustainability of Nigerian port authority

H₀₃: There is no significant relationship between knowledge organization and economic organizational sustainability of Nigerian port authority

H₀₄: There is no significant relationship between knowledge organization and environmental organizational sustainability of Nigerian port authority

2.0 Review of Related Literature

Concept of Knowledge Management

For enterprises all around the world, knowledge is acknowledged as a fundamental skill, a key source of competitive advantage, and a means of adding value (Liu et al., 2018). Many authors in the literature emphasize the importance of knowledge management as a crucial skill for an organization to have success in both the public and private sectors (Al Ahbabi *et al.*, 2018; GaviriaMarin *et al.*, 2019; Gonzaga de Albuquerque *et al.*, 2018). The KM improves information sharing amongst stakeholders, which spurs the development of innovations. As a result, KM promotes collaboration within businesses (Hamdoun *et al.*, 2018; Santoro *et al.*, 2018; Singh and El-Kassar, 2019). Managing information flows inside an organization also leads to improvements in knowledge management that are advantageous to the organization. Companies can share knowledge from various industries and employee groups using KM to achieve strategic advantages (Nisar et al., 2019). The definition of KM that takes into account the significance of KM for the creation, sharing, and promotion of information both internally and externally to companies deserves special attention among those offered in the literature. Thus, KM should prioritize long-term goals (Evangelista and Durst, 2015; Oliva *et al.* 2019). Organizations that employ knowledge management have the resources necessary to develop, distribute, maintain, and utilize knowledge information as needed (Ngoc-Tan & Gregar, 2018). Although effective knowledge management inside a company may not be challenging, doing so without the right policies and procedures can be a difficult endeavour that could ultimately lead to the collapse of the entire firm (Waribugo, Ofoegbu&Akpan, 2016). According to Kaba and Ramaiah (2017), knowledge management is the efficient application of the knowledge development process.

Knowledge Acquisition

Kraaijenbrink, Spender, and Groen (2010) defined knowledge acquisition as the process by which information is passed from a source to business employees through a variety of sub processes, including written form, physical objects, people, collaboration between the source and recipient, courses, and outsourcing. Using previously acquired, improved information or obtaining new, improved knowledge is related to knowledge acquisition (Lin, 2007). By acquiring knowledge both inside and outside the organization, each participating organization can improve its capacity to both produce and transform new knowledge (Chen & Huang, 2009).

Knowledge Organization

A focus of knowledge organization is the conceptual structure of knowledge (Smiraglia, 2012). In addition to the knowledge organizing systems used to arrange documents, document representations, and document concepts, it is also concerned with the nature and quality of knowledge organizing processes (Hjrland, 2008). Processes for organizing knowledge include various classifications, cataloguing, indexing, and subject analysis techniques. Systems for organizing knowledge include ontologies, taxonomies, thesauri, semantic networks, bibliographic systems, classification systems, knowledge maps, and classification systems.

Traditionally, KO curricula have included all of these systems and processes (Dodge, 2005); more recently, info-mapping, knowledge mapping, taxonomies, and typologies have also been incorporated to KO curricula.

Concept of Organizational Sustainability

It is frequently said that sustainability is a three-dimensional notion that encompasses environmental, social, and economic sustainability. Environmental sustainability focuses on how human activity affects the ecosystem's carrying capacity (such as materials, energy, land, water, etc.). The term "social sustainability" relates to the social well-being of the populace and the balancing of individual and communal needs (equity). Last but not least, economic sustainability emphasizes resource utilization that maximizes market value and operational profit (Olawumi, & Chan, 2018). According to Barkemeyer *et al.* (2014), organizations play a crucial role in the economy and the development of a country. As a result, without their support and dedication, the long-term objective of meeting sustainability targets and enhancing overall sustainability performance is impossible to achieve.

The objective of organizational sustainability performance, according to Orlitzky and Swanson (2012), is to determine whether an organization's activities are connected to sustainable development while taking into account its societal obligations at the institutional, organizational, and individual levels. This concurs with Artiach *et al.* (2010), who proposed that organizational sustainability performance measures the extent to which a firm adopts environmental, social, economic, and governance factors into its operations and, in turn, how its operations would impact the firm's performance; consequently, the society and environment. Finding and developing a consistent and useful approach for monitoring sustainability performance and subsequent comparison is undoubtedly one of the biggest issues facing enterprises (Searcy, & Elkhawas, 2012; Montiel, & Delgado-Ceballos 2014).

Economic Organizational Sustainability

Economic sustainability refers to a manufacturing system that meets current consumption levels without jeopardizing the needs of the future. The economic system itself must be sustainable in order for there to be economic sustainability. Economic viability, which creates profit and jobs and hence contributes to overall social welfare, is the foundation of this sustainability (Azapagic, 2003). Even in a climate of sustainable development, it is important to acknowledge the traditional accounting perspective (Dyllick & Hockerts, 2002), as a corporation cannot exist without its financial resources. The authors contend that the EcOS must provide above-average returns for its owners in order to ensure enough liquidity and cash flow. Additionally, it covers issues like competitiveness, job offers, entry into new markets, and long-term profitability. To put it simply, achieving EcOS entails that the organization conducts its operations in a way that is respected and accountable, with benefits for all parties involved both socially and economically (Munck, Munck, & Souza, 2011).

Environmental Organizational Sustainability

Focuses on issues including the preservation of biodiversity, the ability for resource regeneration, re-use, and recycling, as well as limiting the use of non-renewable resources and waste production. Businesses that support EnOS (Dyllick & Hockerts, 2002) only use natural resources at a pace that is less than their capacity for natural regeneration or less than the rate at which substitute resources are produced. Also, these businesses do not produce emissions at levels that exceed the environment's natural ability to absorb and assimilate them. The main issue raised by the writers is that there is either no known equivalent for the numerous functions given by the environment, or if there is, it would be extremely expensive. The EnOS encompasses the prevention of the organization's effects on the natural system, which includes both living and inanimate objects. It includes a comprehensive approach to the organization's operations, which are governed by the evaluation of the impacts generated by the company's products, processes, and daily services, by the elimination of unnecessary costs and high emissions, in addition to minimizing practices that may affect the access of future generations to crucial natural resources (Munck, Munck, & Souza, 2011). This goes beyond certifying compliance with governmental regulations and initiatives, such as recycling or efficient energy usage.

Empirical Review

Olufemi (2019) conducted a study on knowledge management practices and organizational effectiveness: A focus on the contemporary Nigerian manufacturing Industry. The main purpose of the study was to gain a better understanding of the theoretical and empirical relationship between Knowledge management (HCD) practices and some dimension of organizational effectiveness of Nigerian Banks particularly after the manufacturing sector reforms of Responses from survey were analyzed using descriptive statistics and Pearson product movement correlation. The study found that involvement in HCD practices are found to correlate positively with organizational effectiveness.

Chijioke, (2018) examined the effect of knowledge management on organizational performance specifically the study aimed to pursue the following objectives to determine the relationship between knowledge management and organizational performance; to evaluate the importance of training and development in the Nigerian manufacturing sector; to ascertain the impact of motivation on employees level of commitment in knowledge sharing and to evaluate how E-learning tools affect knowledge sharing in Nigerian manufacturing sector. The study had a population of 948 employees drawn from three pharmaceutical manufacturing firms in Enugu State. The sample size of 284 was drawn using Taro Yamane formula at 5% error of tolerance and 95% level of confidence. Instrument used for data collection was the questionnaire. A total of 284 questionnaires were distributed while 246 were returned. A descriptive survey research design was adopted for the study. Four hypotheses were tested using Pearson statistical package for social sciences. The findings indicates that knowledge management had positive impact on performance organization; training and development affected employee performance positively;

employee motivation has positive impact on the ability to share knowledge, and E-learning tools affect knowledge sharing positively in Nigerian manufacturing industry.

Adeyemi, (2019) also conducted a study on knowledge management and its implications on organizational performance. The objective of the study was to determine the effect of knowledge management on the organizational performance of selected pharmaceutical manufacturing firms in South West, of Nigeria. They employed a survey research design in which a structured questionnaire was administered to the sample of 275 drawn from the population of the study. The data collected from the respondents were analyzed with the Product Moment correlation coefficient in an attempt to determine the magnitude of the relationship between knowledge management and organizational performance. It was found that there is a positive relationship between knowledge management and organizational performance and therefore concludes that organizations that wish to survive in the changing business environment must exert considerable efforts in training their human capital for enhanced employee job performance. The study recommends that organizations should come up with a workable plan as part of their policy in investing on knowledge management for enhanced job performance.

Zack, McKeen, and Singh, (2019) investigated of the organizational impact of knowledge management (KM). There examines the relationship between KM practices and performance outcomes. It was expected that a direct relationship between KM practices and organizational performance would be observed. It was also expected that organizational performance would mediate the relationship between KM practices and financial performance. These expectations were supported. KM practices showed a direct relationship with intermediate measures of organizational performance, and organizational performance showed a significant and direct relationship to financial performance.

Maran, (2019) studied Knowledge management and its Impact on Firm Performance: Evidence from Developmental Economics opined that human capital is getting wider attention with increasing globalization and also the saturation of the job market due to the recent downturn in the various economies of the world. Developed and developing countries put emphasis on more knowledge management towards accelerating economic growth by devoting necessary time and effort. The research adopted a survey research design. They posited knowledge management as one of the fundamental solutions to enter the international arena. Specifically, firms must invest necessary resources in developing human capital which tends to have a great impact on performance. Their work examines the extent to which human capitals have direct impact on firm performance from various critical perspectives. Firm performance is viewed in terms of financial and non-financial performance. Finally, their work develops a model that explains the relationship between human capital and firm performance.

3.0 Methodology

This study used the cross-sectional survey research design because it made it easier to collect data without manipulating any of the variables that the study was interested in. The population

covered 3029 Nigerian port workers. The Krejcie and Morgan (1970) table was used to derive a sample size of 341 employees. The simple random sampling technique was used and data were collected using copies of questionnaires. Knowledge management was operationalized using knowledge acquisition and knowledge organization as presented in Al-Qarioti (2015). Each of the construct was measured using 5 items each. Organizational sustainability was measured using economic organizational sustainability and environmental organizational sustainability as given in Cella-De-Oliveira (2013). Economic organizational sustainability was measured with 6 items and environmental organizational sustainability was measured using 5 items. The instrument was subjected to validity and reliability as presented in table 1 and 2 respectively. The data was analyzed using the Spearman Rank Order Correlation in order to ascertain the relationship between knowledge management and organizational sustainability.

Table 1: Validity of Variables

	AVE	KNA	KNO	ECOS	ENOS
KNA	0.552	0.743			
KNO	0.525	0.228	0.725		
ECOS	0.519	0.298	0.272	0.721	
ENOS	0.516	0.358	0.352	0.225	0.719
Where:					
AVE = Average Variance Extracted; KNA = Knowledge Acquisition; KNO = Knowledge Organization; ECOS = Economic Organizational Sustainability; ENOS = Environmental Organizational Sustainability;					
<i>Variables with diagonal values greater than the AVE and greater than 0.7 are valid.</i>					

Source: SmartPLS Output, 2023

Table 2: Reliability for Variables

S/N	Variables	Number of Items	Cronbach's Alpha
1.	Knowledge Acquisition (KNA)	5	0.751
2.	Knowledge Organization (KNO)	5	0.714
3.	Economic Organizational Sustainability (ECOS)	6	0.789
4.	Environmental Organizational Sustainability (ENOS)	5	0.803
<i>Variables with Cronbach's Alpha scores above 0.7 are reliable.</i>			

Source: SPSS Output, 2023

4.0 Results and Discussion

Table 3: Knowledge Acquisition and Measures of Organizational Sustainability

			knowledge acquisition	economic organizational sustainability	environmental organizational sustainability
Spearman's rho	knowledge acquisition	Correlation Coefficient	1.000	.970**	.988**
		Sig. (2-tailed)	.	.000	.000
		N	341	341	341
	economic organizational sustainability	Correlation Coefficient	.970**	1.000	.968**
		Sig. (2-tailed)	.000	.	.000
		N	341	341	341
	environmental organizational sustainability	Correlation Coefficient	.988**	.968**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	341	341	341

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

Source: SPSS Output, 2023

H₀₁: There is no significant relationship between knowledge acquisition and economic organizational sustainability of Nigerian port authority.

H₀₂: There is no significant relationship between knowledge acquisition and environmental organizational sustainability of Nigerian port authority

The test of hypothesis one and two, as shown in the Table 3, the SPSS output reveals that Significant level (Sig) = 0.000 which implies that (Sig<0.01) while Spearman Correlation coefficient (rho) = (0.970, 0.988) also indicates that knowledge acquisition has strong and positive correlation with organizational sustainability. We therefore reject the Null hypotheses and accept the alternative hypotheses.

Table 4: Knowledge Organization and Measures of Organizational Sustainability

			knowledge organization	economic organizational sustainability	Environmental organizational sustainability
Spearman's rho	knowledge organization	Correlation Coefficient	1.000	.991**	.964**
		Sig. (2-tailed)	.	.000	.000
		N	341	341	341
	economic organizational sustainability	Correlation Coefficient	.991**	1.000	.968**
		Sig. (2-tailed)	.000	.	.000
		N	341	341	341
	Environmental organizational sustainability	Correlation Coefficient	.964**	.968**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	341	341	341

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

Source: SPSS Output, 2023

H₀₃: There is no significant relationship between knowledge organization and economic organizational sustainability of Nigerian port authority.

H₀₄: There is no significant relationship between knowledge organization and environmental organizational sustainability of Nigerian port authority

The test of hypothesis three and four, as shown in the Table above, the SPSS output reveals that Significant level (Sig) = 0.000 which implies that (Sig<0.01) while Spearman Correlation coefficient (rho) = (0.991, 0.964) also indicates that knowledge organization has strong and positive correlation with organizational sustainability. We therefore reject the Null hypotheses and accept the alternative hypotheses.

Knowledge Acquisition and Organizational Sustainability

This covers the findings from the test of hypotheses (H₀₁) and (H₀₂). The result of H₀₁ and (H₀₂) indicated that strong relationship exists between knowledge acquisition and Organizational Sustainability. Further, the positive correlation between knowledge acquisition and Organizational Sustainability is evidenced in analysis where 341 respondents were analysed. Output reveals that Significant level (Sig) = 0.000 which implies that (Sig<0.05) while Spearman

Correlation coefficient (ρ) = (0.970, 0.988) also indicates that knowledge acquisition has strong and positive correlation with organizational sustainability. Furthermore, the coefficient of determination between knowledge acquisition with economic organizational sustainability and environmental organizational sustainability was 0.94 and 0.97 respectively. This indicates that a unit change in knowledge acquisition will account for 94% and 97% variation in economic organizational sustainability and environmental organizational sustainability respectively. Similarly, the positive correlation is attuned with the findings of previous studies like Chijioke (2018) who found that knowledge management does positively relate with organizational performance. This shows that knowledge acquisition in organization helps position the organization in a stance to enhance their economic and environmental sustainability.

Knowledge organization and Organizational Sustainability

This covers the findings from the test of hypotheses (H_{o3} and H_{o4}) respectively. The result of H_{o3} indicated that a positive and strong relationship exists between Knowledge organization and economic Organizational Sustainability while H_{o4} indicated that a positive and strong relationship exists between environmental Organizational Sustainability. The correlational value was 0.991 and 0.964 which indicates that knowledge organization has strong and positive correlation with economic and environmental sustainability. This shows that knowledge organization does help enhance the sustainability of organization. The coefficient of determination of knowledge organization with economic and environmental sustainability was 0.98 and 0.93 respectively. Hence, a unit change in knowledge organization will account for 98% and 93% variation in economic and environmental sustainability respectively. This finding aligns with the outcome of Zack, McKeen and Singh, (2019) which noted that knowledge management plays a vital role in enhancing the performance of organization and enhancing the fortune. This indicates that knowledge management is a vital factor in boosting the economic and general sustainability of the organization.

5.0 Conclusion and Recommendations

This study empirically investigated the impact of Knowledge management on organizational sustainability of Nigerian port authority and we were able to ascertain that Knowledge management. Economic sustainability of the organization can be enhanced when the organization is able to enhance their knowledge management ability. Through knowledge management, organizations are able to attract highly talented workforce which can help in enhancing the fortune of the organization in terms of boosting their sustainability. In conclusion, enhancing knowledge acquisition and knowledge organization is vital in boosting the economic sustainability and environmental sustainability of the Nigerian port authority. In alignment with findings and conclusion, the study recommended that;

- i. The Nigerian port authority should employ highly talented workers who can help drive the success of the organization as such will help boost the firm's sustainability.

- ii. The Nigerian port authority should make right investments in initiatives aimed at knowledge management as such will help enhance the firms fortune.
- iii. Nigerian port authority should organize relevant knowledge in the organization and involve them in brainstorming as such will help generate novel ideas to enhance the firm's sustainability.
- iv. The Nigerian port authority should ensure proper knowledge sharing practices as such will enhance the wealth of knowledge in the organization which is heared towards enhancing the sustainability of the organization.

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