

KNOWLEDGE INVESTMENT AND ACADEMIC STAFF PERFORMANCE OF NIGERIA TERTIARY INSTITUTIONS: IMPLICATION FOR POST COVID-19

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Abstract

The purpose of this research was to empirically examine the relationship between knowledge investment and academic staff performance of Nigeria tertiary institutions with emphasis on post Covid-19 effect. The study applied cross sectional survey design in structured questionnaire to collect data from 400 lecturers of public universities in Rivers. Spearman's Rank Correlation Coefficient tool was employed with the help of SPSS Version 21.0, to statistically analyzing data obtained from the field. Results revealed that knowledge investment has a positive and significant relationship with academic staff performance, however, Covid-19 moderates the extent of relationship between both variables by reducing the impact of the former on the latter. Consequently, the research concludes that though investment in knowledge-based infrastructures by tertiary institutions is a crucial tool in improving productivity of academic staff, however, consequences of the pandemic has affected effective learning and staff performance. The research recommends that Government and key stakeholders should focus more on investing in knowledge-based systems that equip academic staff in discharging their duties professionally, as this research has proven the possibility of enhancing academic staff performance through this means.

Keywords: Knowledge Investment, Covid-19, academic staff, innovative competence.

Introduction

Until January 2020, the world was relatively peaceful in contrast with unprecedented health crises that engulfed many nations across all spheres of human existence through out the year. It was on record that, say rarely, world leaders had to come together to form strategic alliance in order to combat a common enemy called 'Coronavirus, also know as Covid-19'. According to the World Health Organization (WHO, 2020), Corona viruses are a family of viruses that cause illnesses ranging from the common cold to more severe diseases such as Severe Acute Respiratory Syndrome (SARS) and the Middle East Respiratory Syndrome (MERS). These viruses were originally transmitted from animals to people, however, the outbreak of the novel Covid-19 was noted by health authorities as a new strain that had not been previously identified in humans upon which human-to-human transmission have been confirmed (Ajazeera, 2020).

In Nigeria, the COVID-19 pandemic has had varying effects on many sectors including education. Consequently, in order to curtail the spread of the virus, the Federal ministry of education temporarily suspended school activities

effective March 23rd. According to (UNESCO, 2020), almost 40 million learners have been affected by the nationwide school closures in the country. For a dilapidated education system, the Covid-19 pandemic presented unprecedented challenges on the government, students, and other key stakeholders, including the teaching and non-teaching staff. As stakeholders especially in the university institutions begin to ponder with these challenges, a fundamental question of how is or whether the Nigerian education system is designed to adapt rapidly to the changing world? Given the state of affairs amidst the pandemic today, the ability to ensure improvement in learning and academic staff performance will depend largely on knowledge investment by swiftly harness available technology, provide adequate infrastructure, and mobilize stakeholders to prepare alternative learning programs (Ajiboye, Aromolaran, Ayodeji & Okorafor, 2014).

Stakeholders in the academia and industries have recognized the importance of investing on not only tangible assets such as plants & equipment, machines, mechanical tools as well as on knowledge-based intangible capital such as innovative worker competencies through worker training (Nkpurukwe, Amangala & Wali, 2020). Knowledge investment consists of programmes that focus on creating future benefits such as employee training; skill-set development, and the overall development of human assets. Such investments according to Nwokoro (2015) is increasingly one of the crucial forms of institutional investment and a key contributor to academic and staff performance. According to Nkpurukwe et al. (2020), a widely accepted categorization of knowledge investment is digital information (software and databases); innovative property (patents, copyrights, designs, trademarks); and economic competencies (including brand equity, firm-specific human

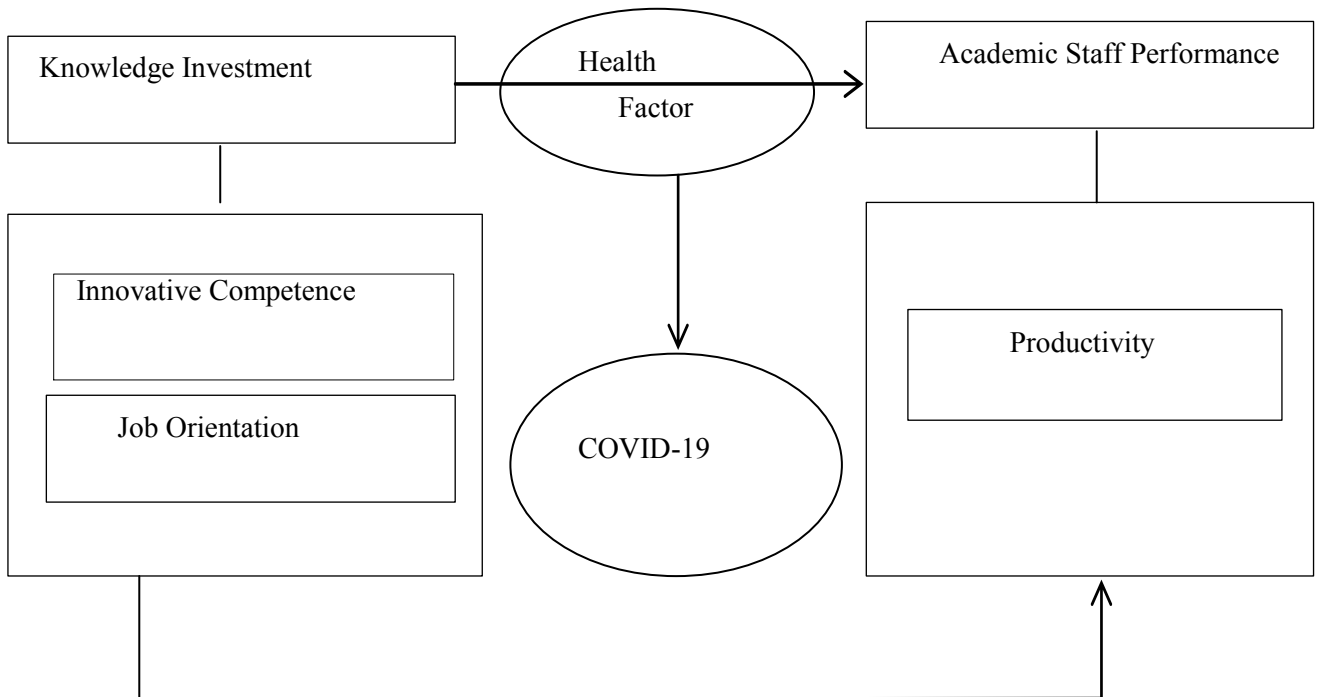
capital. They argued that networks of people and institutions, and organizational know-how that increases academic staff performance are also classifications of knowledge investment.

Studies have been previously undertaken in the area of knowledge investment in the aviation sector in particular (Nkpurukwe et al., 2020; Nwokoro 2015), and the transportation industry in general (Filani & Ikporukpo, 2017). The studies, while focusing on the knowledge economy, they adopted economic Competence, stakeholders' collaboration, and R&D as dimensions of knowledge investment, which was looked at as a key driver of economic and business performance. However, this study recognizes the effect of Covid-19 on various institutions of learning in Nigeria; particularly the public universities which lacks the necessary infrastructures in adopting alternative learning methods such as distance and online learning powered by electronic learning platforms such as Zoom, Microsoft teams, Google hangout (meet), Skype, Bamboo learning, google classroom, Docebo, WIZIQ, Adobe captivate, Elucidat, Blackboard learn amongst others. In the light of the above, this study adopted the framework of Nkpurukwe et al. (2020), to examine whether knowledge investment could enhance academic performance of university lecturers in Rivers State.

Operationalization of Variables and Conceptual Framework

The research is on knowledge investment and academic staff performance. The independent variable which is knowledge investment has innovative competence as dimensions. On the other hand, the dependent variable which is academic staff performance was measured with productivity.

Below is the conceptual framework for this study



Source: Adapted from Nkpurukwe, Ozah and Wali (2020).

Figure 1: Conceptual Framework

Theoretical Framework

It is crucial to state that the Resource-Based View (RBV) theory as propounded by Penrose in 1959; is our underpinning theory. Penrose (1959) opined that physical resources include land, machines and/or equipment together with human resources (worker skills and competencies), can make the firm out-pace competitors. The author stressed that organizations can utilize strategic resources internally in ways that set them ahead of competitors through empowering employees with skills that are extraordinarily hard to imitate or copy. From this point of view, there is a close relationship between the knowledge that workers in the organization acquire/utilize and the level of services obtained from those resources.

According to Makhija (2003), the RBV theory is centered more on internal mechanisms within the organization that involve human resources and competencies, where by management strategically apply these unique assets to improve the competitive position of the organization. In the words of Wiklund & Shepherd (2003) competitive advantage rarely have it's roots from industry dynamics, organizations acquire competitive advantage from the internal processes and accumulation and utilization of resources overtime. Invisible assets, like

employee knowledge, trust, reputation may not be transacted or easily replicated by competitors, as they are usually found in organization' sustainable competitive advantage and culture (Amit & Shoemaker, 1993).

In view of the above, this research understands that organizations that invest more in equipping their staff with relevant skills and knowledge in their respective fields may likely out-pace competitors who do not do so. In this sense, tertiary institutions could improve their academic and staff performance by investing on knowledge-based infrastructures that helps improve staff innovativeness especially in today's information-drive society we live in. It is therefore imperative to mention that the RBV is a suitable underpinning theory for this study.

Conceptualizing Knowledge Investment

The concept of knowledge investment has it's foundation in early 1990s across various profession/career such as public policy, information systems management, business administration, library science, information sciences, etc. The concept is increasingly gaining applause due to technology advancement, increased competition across divers emerging industries and innovations, to mention but a few.

Most countries in the world are shifting fully towards knowledge-based economies occasioned by information and communication technologies. Despite this usefulness, plethora of scholars are yet to come to terms with a unified definition of the concept. According to Mills & Smith (2018) knowledge investment involves making available platforms to systematically share timely information with relevant stakeholders, in ways that help organizations attain greater competitive advantage. The idea of knowledge investment in this regard, is a deliberate management action in ensuring that relevant functional area in the organization are made to be up to speed with new trends that calls for innovativeness in staying afloat and competitive. Inbaya and Palaniappan (2020) is of the view that knowledge management enables organizations to invest in knowledge systems that will successfully improve performance at work and create a competitive advantage. In addition, Nwokoro (2015) opined that knowledge investment consists of a range of programmes that helps in creating future benefits by focusing on employee training; skill set development, and the overall development of human assets. The author finally attributed the concept as a management decisions that are related to the process of acquiring, transferring, and sharing knowledge with all organization's people. The author further developed a framework involving innovative competence and economic knowledge as dimensions of knowledge investment. However, in this study, we used innovative competence and computerized information and dimensions of knowledge investment.

Academic Staff Performance

The concept of academic staff performance has long been explored even as no consensus has been realized in terms of its definition. According to Trost (2002). However, a few scholars have attempted to describe the concept in various ways. Similarly Ziegler (2005) relates academic performance with particularly effective action by a teaching staff which is consistently observed as a superior achievement in an education setting. More so, Ofoegbu & Alonge (2016) explained the concept from a tertiary institution's perspective. The authors' defined academic performance as effective teaching and learning that is anchored on developmental resources with a high impact community service, creativity, and innovativeness. The authors further opined that academic staff performance could be measured by

the acquisition of self-independent economic skills by graduates of universities. It was further argued that the concept relates to both practical and theoretical knowledge acquired in key professions and/or industries, including high moral discipline by both staff and students of tertiary institutions (Ofoegbu & Alonge, 2016).

In addition, Simon (2002) conceptualized academic performance from a societal stand point. The author proved this point through his work by examining strong link between academic staff performance and the quality of society. The author view academic staff performance as a function of excellence leadership on the part of the university management. Achieving both individual and organization excellence is a pathway through which the society and members therein accomplish their goals. Ericsson (2002) advocated for the inclusion of certain standards, and that academic performance should be positioned as a social movement through with societal values are upheld and communicated. According to Andy, Emmanuel & Obabuikwe (2020), it is important to see academic performance as a tool to helping the society in offering solution to problem with a view to enhancing societal well-being. In this research, academic staff performance is measured with productivity.

Knowledge Investment and Academic Staff Performance

Due to the paradigm shift in focus of most developed nations of the world from a traditional to knowledge-based economy, which has impacted on firm and individual levels of economic units. Because a good number of organizations have realized in importance of investing in knowledge-driven infrastructures, plethora of scholars have been directing resources towards this area of research. Obabuikwe et al (2020), in their study on knowledge investment and marketing performance found out that staff innovativeness which is a dimension of knowledge investment has a positive and very strong relationship with marketing performance on one hand; while computerized information possesses both positive and significant relationship with marketing performance on the other hand.

In addition, Wiklund & Shepherd (2003) in their study revealed that knowledge-based resources have a significant effect on the performance of

Small and Medium-scale Enterprises (SME's). They are of the view that investing in knowledge generating infrastructures helps improve the overall performance of the SME sub-industry. More so, Mills & Smith (2018) found out that knowledge management is critical to organization performance especially in a highly competitive industry. This is particularly important for organizations in emerging industries where technical expertise is required to stay competitive and survive even in the long-term. In view of the above postulates, we present the following hypotheses:

Ho1: Innovative competence has no significant relationship with productivity of academic staff performance in Nigeria tertiary institutions.

Ho2: Computerized information has no significant relationship with productivity of academic staff performance in Nigeria tertiary institutions.

Effect of Post Covid-19 pandemic on Knowledge Investment and Academic Staff Performance

The effects of the Covid-19 pandemic on higher education institutions can hardly be overemphasized. According to (UNESCO, 2020), almost 40 million learners have been affected by the nationwide school closures in Nigeria. For a dilapidated education system, the Covid-19 pandemic presented unprecedented challenges on the government, students, and other key stakeholders, including the teaching and non-teaching staff. In the bid to reduce the spread of the virus, many tertiary institutions have designed distance or online learning methods. However, going online is not that simple in a country where only a minor chunk of the population has access to the internet, and poor connectivity, exorbitant costs and frequent power interruptions are serious challenges WHO (2020). According to Adeoye, Adanikin & Adanikin, (2020), the Covid-19 pandemic has not only slow down the reopening of universities but also has affected various sources of funds for investing knowledge-based infrastructures that is crucial to improving staff productivity. They also opined that lack of these amenities brought about by the pandemic has affected the possibility of competing favorably. Ogunode (2020) argued that due to the inability of public universities to key in to various e-learning platforms as a result of systemic failure of public

policies towards public tertiary institutions. This will have a strong negative impact on both student and staff academic performance.

In addition, UNESCO (2020) also stated that the pandemic will have a negative impact on the expansion of public universities. Inbaya and Palaniappan, (2020), on a positive note argued that the threat of the virus and the approaches to overcome it may be catalytic for long-lasting changes in Nigeria higher education. In view of the above, we state the hypothesis below:

Ho3: Covid-19 does not moderate the relationship between knowledge investment and academic staff performance of Nigeria tertiary institutions.

Materials and Methods

The, quasi- experiential design was employed; however, the cross-sectional survey type of the above design was adopted. This involves the use of questionnaire in eliciting information from respondents. The population of this research consists of academic staff of public universities in Nigeria, while 2241 accessible population of academic staff were drawn from two public Universities in Port Harcourt, Rivers State and statistically trimmed to 400 sample size using Taro Yamen formula. It is however important to state that the research adopted the simple random sampling technique in administering the questionnaire instrument on selected sample elements. Basically, two main sources of data were used- primary and secondary sources. While the former was sourced with the help of questionnaire, the latter was obtained from journal articles, credible internet publication, textbooks, etc. More so, the research instrument was evaluated through expert checking for content therefore, a pilot study was conducted to pretest the questionnaire. The rationale for the pilot testing is to defect reliability in the design of the instrument and address any form of ambiguity as to restructure the instrument in line with observation before executing full work. To determine the reliability of the study instrument, Cronbach's Alpha tests were carried out. Lastly, the research adopted a combination of descriptive and inferential statistical tools in analyzing data. In terms of descriptive statistical, the research used charts, tables, averages (means and standard deviation), percentages, etc; on the other hand, inferential statistics such as Spearman's Rank

Correlation Coefficient was used in testing hypotheses. However all analyses were done with SPSS application (version 20.0).

Data Analysis and Findings

The researcher relied on data from questionnaires distributed to respondents. This section was devoted for data presentation and testing of hypotheses.

Table 1: Questionnaire Distribution and Retrieval

Questionnaire	Frequency	Percent (%)
Distributed	400	100
Retrieved	372	93
Not retrieved	28	7
Retrieved usable	364	91

Source: Survey Data, 2020

Table 1 above shows that a total 400 copies of questionnaire were distributed; however, 372 representing 93% were retrieved. More so, 28

copies were not retrieved, but 364 representing 91% were both retrieved and usable.

Table 2: Result of Test of Reliability

Variables	Cronbach's Alpha
Innovative Competencies	0.842
Computerized Information	0.801
Productivity	0.874
Covid-19	0.899

Source: SPSS Output, 2020

The table above shows the results of the reliability test. As can be noticed that since the various test results are more than 0.700 (70%) which happens to be the criterion for acceptance of the instrument. Hence, the research instrument is reliable.

Test of Hypotheses

Ho1: There is no significant relationship between innovative competence and productivity of lecturers in Nigeria tertiary institutions.

Table 3: Correlation analysis between innovative competence and productivity

		Correlations		
			Innovative Competence	Productivity
Spearman's rho	Innovative Competence	Correlation Coefficient	1.000	.811**
		Sig. (2-tailed)	.	.001
		N	364	364
	Productivity	Correlation Coefficient	.811**	1.000
		Sig. (2-tailed)	.001	.
		N	364	364

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

Source: Survey Data, 2020, SPSS Output.

Decision: The above table shows a Spearman Rank Correlation Coefficient of 0.811 and probability value of 0.001. Since the PV which is 0.001 < 0.01, we reject the null hypothesis and accept the alternate hypothesis. This result indicates that there is positive and significant relationship between innovative competence and

productivity of lecturers in Nigeria tertiary institutions.

Ho2: There is no significant relationship between computerized information and productivity of lecturers in Nigeria tertiary institutions.

Table 4: Correlation analysis between computerized information and productivity

		Computerized Information	Productivity
Spearman's rho	Computerized Information	Correlation Coefficient	1.000
		Sig. (2-tailed)	.001
		N	364
	Productivity	Correlation Coefficient	.829**
		Sig. (2-tailed)	.001
		N	364

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

Source: Field Survey Data, 2020, SPSS Output.

Decision: The above table shows a Spearman Rank Correlation Coefficient of 0.829 and probability value of 0.001. Since the PV which is $0.001 < 0.01$ we reject the null hypothesis and accept the alternate hypothesis. This result indicates that there is positive and significant relationship between computerized information

and productivity of lecturers in Nigeria tertiary institutions.

Ho3: Covid-19 does not moderate the relationship between knowledge investment and academic staff performance of lecturers in Nigeria tertiary institutions.

Table 5: Correlation analysis between Covid-19, knowledge investment and academic staff performance

		Knowledge Investment	Staff Performance
Spearman's rho	Knowledge Investment	Correlation Coefficient	1.000
		Sig. (2-tailed)	.001
		N	364
	Staff Performance	Correlation Coefficient	.819**
		Sig. (2-tailed)	.001
		N	364

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

Source: Survey Data, 2020, SPSS Output

Decision: The above table shows a Spearman Rank Correlation Coefficient of 0.819 and probability value of 0.001. Since the PV which is $0.001 < 0.01$ we reject the null hypothesis and accept the alternate hypothesis. This result indicates that covid-19 moderates the relationship between knowledge investment and academic staff performance of lecturers in Nigeria tertiary institutions.

Discussion on Findings

This section sought to discussion various findings as regards to data analysis and results. Hypothesis one (Ho1) aimed to examine the relationship between innovative competence and productivity of academic staff in Nigeria tertiary institutions.

The hypothesis was tested using Spearman's Rank Correlation Coefficient and result showed a correlation value of 0.811. This revealed a positive and significant relationship between innovative competence and productivity of academic staff in Nigeria tertiary institutions. Therefore the null hypothesis was rejected in favour of the alternate hypothesis. Also, hypothesis two (Ho2) aimed to examine the significant relationship between computerized information and productivity of academic staff in Nigeria tertiary institutions. The hypothesis was tested using Spearman's Rank Correlation Coefficient and result showed a correlation value of 0.829. Our analysis revealed a positive and significant relationship between computerized

information and productivity of academic staff in Nigeria tertiary institutions. Therefore, the null hypothesis was rejected in favor of the alternate hypothesis. The findings however corroborate with the findings of Nkpurukwe et al (2020), which revealed that staff innovativeness and computerized information have positive and significant relationship with marketing performance. In addition, Wiklund & Shepherd (2003) in their study revealed that knowledge-based resources have a significant effect on the performance of Small and Medium-scale Enterprises (SME's). They are of the view that investing in knowledge generating infrastructures helps improve the overall performance of the SME sub-industry. Hypothesis three (Ho3) aimed to examine the moderating effect of post Covid-19 on the relationship between knowledge investment and academic staff performance of lecturers in Nigeria tertiary institutions. The hypothesis was tested using Spearman's Rank Correlation Coefficient and result showed a significant value of 0.819. Our analysis revealed that post Covid-19 has a strong moderating influence on the relationship between knowledge investment and academic staff performance of lecturers in Nigeria tertiary institutions. Therefore the null hypothesis was rejected in favour of the alternate hypothesis. In line with the above finding; Adeoye, Adanikin & Adanikin, (2020), argued that the Covid-19 pandemic has not only slow down the reopening of universities but also has affected various sources of funds for investing knowledge-based infrastructures that is crucial to improving staff productivity. They also opined that lack of these amenities brought about by the pandemic has affected the possibility of competing favorably.

Conclusion and Managerial Implications

The outbreak of Covid-19 virtually affected the human race worldwide as confirmed by notable authorities. Specifically, it dealt a heavy blow to public tertiary institutions in Nigeria prompting government at all levels to start re-thinking decisions and programmes towards the educational sector in ways that might minimize the negative impact that came with the pandemic. It was revealed that though investment in knowledge-based infrastructures by tertiary institutions is a crucial tool in improving productivity of academic staff, however, consequences of the pandemic not only affected service delivery, but also, a general shift in focus to health and wellness. Innovative competence

was confirmed to be an important marketing tool that could be strategically deployed to outsmart competitors. More so, staff performance in universities could be enhanced through computerized information powered by knowledge acquisition and sharing. It is interesting to state that the pandemic crisis offers a unique turning point; an opportunity to learn, reshape, and build resilience into the educational system in general, and tertiary institutions in particular. University management has a unique opportunity to explore how this emerging reality could usher in a new service delivery architecture that incorporates information and communication technologies. Covid-19 has highlighted a critical gap in knowledge investment, contingency planning and emergency preparedness within the tertiary sub-sector. School authorities and other stakeholders must come together to address these issues amidst the pandemic because the effect could last for years. Government should focus more on investing in knowledge-based systems that equip academic staff in discharge their duties professionally, as this research has proven the possibility of enhancing academic performance through this means. Having address the problem identified earlier, this study has successfully solved pressing contemporary issues occasioned by the pandemic. This research has therefore contributed to existing thoughts in the area of knowledge investment and academic staff performance in tertiary institutions with emphasis on post Covid-19 effects.

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