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Organizational learning, organizational innovation and organizational performance: Empirical evidence among selected manufacturing companies in Lagos metropolis, Nigeria

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Abstract

Aim/purpose – The main purpose of this study is to examine the relationship between organizational learning, organizational innovation and organizational performance in Nigerian environment. The three hypotheses tested were consonant with the objectives of the study.

Design/methodology/approach – Descriptive survey research method was used, purposive sampling method was used to select participants for the study and questionnaire administration engaged as instrument to elicit information from the participants. Kendall's tau b correlation coefficient statistical technique adopted.

Findings – The study confirmed that organizational learning had a positive correlation with organizational innovation; organization innovation in turn had positive correlation with organizational performance and organizational learning also had positive correlation with organizational performances.

Research implications – The study looked at relationship between organizational learning, organizational innovation and organizational performance in relation to manufacturing industry in Nigeria.

Originality/value/contribution – The study used non-financial perspectives, product, process, technology and non-technological innovations to establish may be relationships exist between the three constructs.

Keywords: innovation, learning, manufacturing industry, organization, performance.

JEL Classification: O31, D80, L60, L20, P47.

1. Introduction

It had been proposed and proved by several researchers that the most important competitive advantage the company of the future would have is the ability of its managers to learn faster than the competitors so as to cope with the current external opportunities and threats, as such, organizations have to learn and acquire new knowledge and skills that will improve their existing and future performance (Calhoun & Douglas, 2015). The concept and practice of organizational learning and its effect on the overall performance of business entities had been a subject of enquiry for researchers in recent times with various results published. Organizational learning is an effective strategy for sustaining and improving a firm's competitive edge and performance and organizational innovation is enhanced through organizational learning which translate to knowledge management that contributes to organizational performance (Kuo, 2011; Maktabi & Khazaei, 2014; Salim & Sulaiman, 2011).

Worthy of note is that a lot of research papers had been generated in the area of organizational learning and most of it were devoted to measuring organizational learning as it were in different industries while some had sought out to measure or assess its effect or impact on other factors in the respective industries. Several results had therefore been reached in these studies. For some, the impact had been generally on organizational results including financial (Hung, Yang, Ya-Hui Lien, McLean, & Kuo, 2010; Imran, Rizvi, & Ali, 2011; Jiménez-Jiménez & Sanz-Valle, 2011; Frank, Kessler, Mitterer, & Weismeier-Sammer 2012; Ting, 2012). And for some others, organizational learning impacted on organization's innovation (Jiménez-Jiménez & Sanz-Valle 2011; Goh, Elliott, & Quon 2012); while for yet some others, organizational learning had positive effect on strategy effectiveness and strategic flexibility (Santos-Vijande, López-Sánchez, & Trespalacios, 2012); positive impact on project (Murray, 2003); positive impact on employees' satisfaction (Goh et al., 2012) and the results on human resources management (Kuo, 2011).

From these studies, it is evident that there is no agreement on the manner of measuring organizational performance in relation to organizational learning (Panayides, 2007; Goh et al., 2012). For example, some of the researchers employed the financial measures (return on investment or return on assets) while others employed the non-financial measures (development of organizational continuity, system thinking, corporate culture, leadership, organizational struc-

ture or strategy, productivity, market share, flexibility, adaptability, competitiveness, innovativeness, employee innovation, efficiency and job satisfaction, while others adopted a more comprehensive approach like the four models of organizational effectiveness (usefulness, system, internal processes and interpersonal relations) – a multidimensional approach by Quinn and Rohrbaugh's scale (1983) and later adopted by Jiménez-Jiménez & Sanz-Valle (2011); the interest group approach by Prieto & Revilla (2006) and the Dimensions of Learning Organization Questionnaire designed by Watkins & Marsick (1996). It is instructive to note that in spite of the different criteria of evaluating the effect of organizational learning, the central theme had been focused on conceptualization of learning models, evaluating tools and methods for improving the level of learning process in organization. The researchers in their various submissions concluded that organizational learning is prescribed as panacea for all problems of each organization.

Studies (e.g., Kuo, 2011; Salim & Sulaiman, 2011; Maktabi & Khazaei, 2014) had proved in their empirical study on the effect of organizational learning on innovation as well as the impact of innovation on company performance that organizational learning contributes to innovation capability, and that innovation is positively related to firm performance. Their investigation was done in the small and medium scale industry and the banking industry, respectively. The research works were carried out using several organizational units and the assessment of the relationship between organizational learning, organizational innovation and organizational performance were also measured using structural equation model and path analysis. This research is thus narrowed down to gain a more in-depth and closer cursory look into the phenomena and the measurement adopted for this study was correlation so as to identify whether there would be a varied result here in Nigeria.

This article, then, attempts to evaluate the relationship between organizational learning, organizational innovation and organizational performance. The study attempts to provide answers to the following research questions: is there any significant relationship between organizational learning and organizational innovation? Is there any significant relationship between organizational innovation and organizational performance? Or is there any significant relationship between organizational learning and organizational performance?

The remaining part of this paper is organized as follows: the review of existing literature that explains both theoretical and empirical underpins. The methodology section takes note of the sample, data collection procedure, the measurement of the variables of interest and the result. The concluding part presents the discussion of research findings, recommendations, knowledge contribution and suggestions for future studies.

2. Literature review

Organizational learning occurs when an organization responds to environmental changes, identify errors, correct them and act as impart agents (Argyris & Schön, 1978). Organizational learning is therefore described according to Garvin (2000) as a process of creating, transferring knowledge and attitude of the company that reflects learning outcomes of the company. According to Huber (1991), Tippins & Sohi (2003), organizational learning has following four components: Knowledge acquisition, knowledge distribution, organizational memory development and shared interpretation. An earlier work by Dodgson (1993) opinionated that learning thus occurs through knowledge acquisition from outside the organization as well as by the rearrangement of existing knowledge, the revision of previous knowledge structures, and the building and revision of theories.

However, organizational learning helps in gaining new knowledge and leads to innovation (Cohen & Levinthal, 1990). Garvin (2000) averred that an organization must develop those factors that help in introducing new ideas, product and services as compared to competitors thus contributing to innovation. According to Cefis & Marsili (2005), organizational learning seeks to introduce new products and services through innovations to survive in the highly competitive environment. Organizational learning strongly affects innovation (Zohoori, Mohseni, Samadi, & Attarnezhad, 2013). Quite a number of studies alluded to the fact that organizational learning enhances innovation and performance of the organization (Alegre & Chivab, 2008; Ussahawanitchakit, 2008; Qingmin, Helmut, & Juergen, 2012; Zhi-hong, 2015).

According to Organization for Economic Cooperation and Development [OECD] (2015), it is “the introduction of new or improved processes, products or services based on new scientific or technology knowledge and/or organizational know-how”. Trott (2008) was of the view that innovation in business can be related to new products or services, new production processes, new marketing techniques, and new organizational or managerial structures. Innovation may also involve technology, intellectual property, business, or physical activity (Sundbo, 2003). While Rouse (2013) described product innovation as the process or means generally adopted by organization’s for introducing new ideas, new products/commodities, new technology, workflows, new manufacturing methods, new services and new distribution and delivery; Gupta et al. (Gupta, Guha, & Krishnaswami, 2013) see process innovation on the other hand as the introduction of new procedures, policies, organizational forms and knowledge embodied in the distribution channels, products, applications, as well as customer expectations, preferences, and needs.

Schmidt & Rammer (2006) suggest that firms that tend to adopt both technological and non-technological innovation and their determinants are roughly the same, but the performance implications of adopting different types of innovation are more complex. The concept of organizational performance is complex and multi-dimensional. It includes quantitative and qualitative criteria (financial and non-financial) which are differently perceived and appreciated according to the views of stakeholders (Rhee, Park, & Lee, 2010). Despite the general consensus among scholars that a firm's performance is a multidimensional construct, one of the most extensively used measures is the financial (Gentry & Shen, 2010). Extant literatures reveal that to assess the financial aspects of organizational performance, researchers generally use either accounting based measures or stock market measures (Hult, Ketchen, Griffith, Chabowski, Hamman, & Dykes, 2008; Tsao & Lien, 2013; Likar, Kopa, & Fatul, 2014; Nawaz, Hassan, & Shaukat, 2014).

According to Harbour (2008), organizational performance is measured through the implementation of a raft of measures that represent the final result of the activity of the organization. Peterson, Gijsbers, & Wilks (2003) also defined organizational performance (OP) as the ability of an organization to use its resources efficiently and to produce outputs that are consistent with its objectives and relevant for its users. For Antony & Bhattacharyya (2010) OP is the measure used to assess and evaluate the organization success to prepare and deliver the value to its external and internal customers. In another study, de Waal & Sultan (2012) defined OP as the achievement of some of the financial criteria and other non-financial, during a specific period of time (e.g., five years) by focusing on the things that really interest to the organization.

However, with the rise of shareholders' activism in the late 1980s and early 1990s, organizations started adopting shareholder value maximization as a measure of financial performance (Useem, 1993). Gentry & Shen (2010) opined that the use of both financial and non-financial measure is the most appropriate and sound approach to measure organizational performance. In the same vein, both practitioners and academicians claim that firm performance should not be assessed solely based on the financial dimensions. Given this background, one can assume that the evaluation of organizational performance in contemporary business world is an on-going process and it is still subject to varied explanation based on the different interplay of factors and indices. Basically, the non-financial performance (NFP) metrics of organizational performance research work of Avcı, Kılınç, & Okumus (2010); Kaplan & Norton (2001); and Ryals & Knox (2005) defined and measured organizational performance

beyond a short-term evaluation of the financial perspective but through a focus on creating value activities in a long-term.

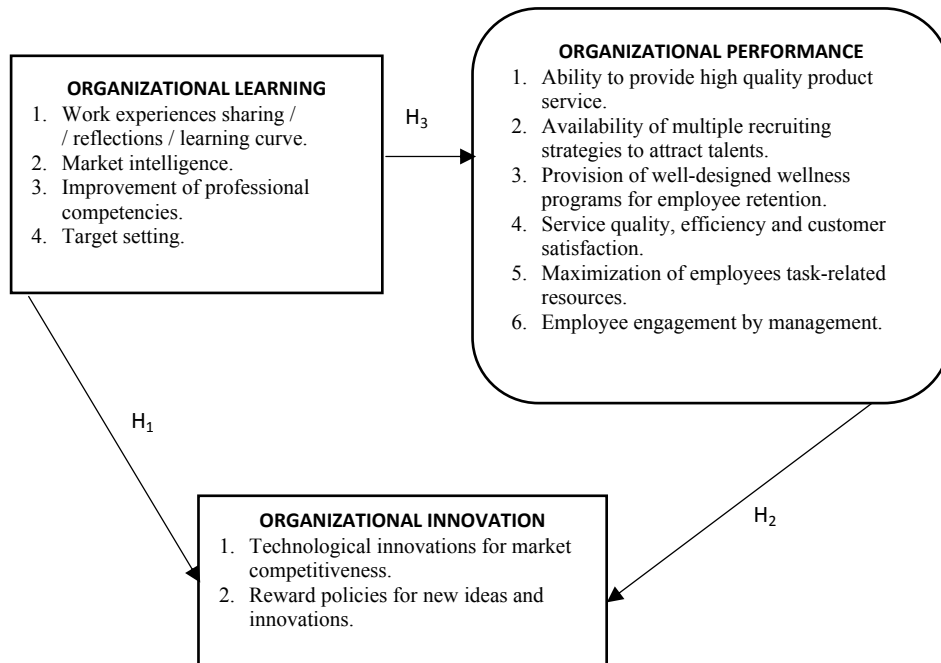
Based on the literature the research model was proposed (Figure 1) and the following hypotheses were development:

H₁: Organizational learning has no significant relationship with organizational innovation.

H₂: Organizational innovation has no significant relationship with organizational performance.

H₃: Organizational learning has no significant relationship with organizational performance.

Figure 1. The relationships between organizational learning, organizational innovation and organizational performance



Source: Adapted from: Maktabi & Khazaei (2014).

3. Research methodology

In a bid to achieving the research objective, a descriptive survey design was adopted. The choice of this survey method was because of the fact that it observed what happened to sample variables without any attempt to control them (Asika, 2008). More so, it helps in portraying an exact profile of persons or

events and thus establishes causal relationship between variables employed in the study (Robson, 2002; Saunders, Lewis, & Thornhill, 2009). Data gathering was conducted via the field survey within manufacturing firms with the support of structured questionnaire. The usage of this data collection tool was because of its appropriateness to the design of the research in term of being relatively cheap and economical, wider and more representative distribution of sample, adequacy of time for respondents to give well thought out answers and simplicity in administration (Cooper & Schindler, 2005; Kothari & Garg, 2016). The data source instrument further assisted the researchers to obtain responses through its completion by employing the Likert scale measurement of 'strongly agree', 'agree', 'neither agree nor disagree', 'disagree', and 'strongly disagree', with an attachment of a covering letter. Accordingly, the study adopted the 12-item questionnaire constructed by Kuo (2011) with modifications to elicit information from the participants. Consequently, the twelve (12) items took into account the following organizational learning (4-items), organizational innovation (2-items) and organizational performance (6-items).

The target population comprises members of staff within the surveyed manufacturing companies. The choice of these companies was as a result of their expertise, business volume, and market share index within the Lagos metropolis. The choice of Lagos, therefore, was because it houses large number of industrial and manufacturing companies and thus being the economic driver of the West African countries. The sampling units of 10 firms (comprising Alimosho, Amuwo-Odofin, and Ojo local government council areas) were chosen for questionnaire survey; out of which a sample size of 183 respondents was determined. Ultimately, with 200 copies of questionnaires distributed, 183 copies were found useful for analytical results, giving 91% response rate. This study employed a convenience sampling technique. This sampling technique was useful because it provided the researcher with the justification to make generalizations from the sample; and thus, helped selected the unit(s) to be observed on the basis of the researcher's knowledge or judgment of the population, its element and purpose of study (Babbie, 2005).

On the validity of the research, congruent and logical validity were adopted. While the former was carried out through variable measures from extant literature, the later was designed through the administration of a set of questionnaire draft to few selected experts within the chosen company and academia in the field of business administration and management. In the end, experts gave a thought out consideration on the instrument and came up with commendable suggestions that aided the researchers in being able to design the research instrument within the participants' comprehension. On the level of reliability,

Cronbach alpha coefficients were calculated for each construct and results from it shows thus that organizational learning was 0.792, organizational innovation 0.702 and organizational performance was 0.765; which were in consonance with the acceptable standard of questionnaire reliability in the study of Maktabi & Khazaei (2014).

4. Research findings

In an attempt to justify the relationships that is existing between organizational learning, organizational innovation and organizational performance, a Kendall's rank correlation coefficient technique was employed for data analysis. The commonly known Kendall's tau coefficient (τ) is a statistic used to measure the ordinal association between two measured quantities. A tau test is a non-parametric hypothesis test for statistical dependence based on the tau coefficient.

Kendall's tau b is a popular statistic for describing the strength of the monotonic relationship between two variables. It ranges between plus and minus one.

The test procedure is as follows: H_0 is the null hypothesis that τ is zero. H_1 represents the alternative hypothesis that the actual τ is non-zero. Choose the value z_α , based on the normal distribution, so that the probability of rejecting H_0 when H_0 is true is equal to a specified value, α .

Tables 1-3 present the results of examining relationships between organizational learning, organizational innovation and organizational performance.

Table 1. Correlation showing the relationship between organizational learning and organizational innovation

Correlations			Organizational learning	Organizational innovation
Kendall's tau_b	Organizational learning	Correlation coefficient	1.000	.836**
		Sig. (2-tailed)	.	.000
		N	183	183
	Organizational innovation	Correlation coefficient	.836**	1.000
		Sig. (2-tailed)	.000	.
		N	183	183

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

Interpretation: Using Kendall's tau b, the coefficient value of 0.836 shows that there is a positive relationship between organizational learning and organizational innovation

Decision: Since the result is significant at 0.05 level of significance (i.e., p-value of 0.000) generated by the result is less than 0.05 significance level of the study, therefore null hypothesis is rejected and alternative hypothesis is accepted. This indicates that organizational learning has significant relationship with organizational innovation.

Table 2. Correlation showing the relationship between organizational innovation and organizational performance

Correlations			Organizational innovation	Organizational performance
Kendall's tau_b	Organizational innovation	Correlation coefficient	1.000	.936**
		Sig. (2-tailed)	.	.000
		N	183	183
	Organizational performance	Correlation coefficient	.936**	1.000
		Sig. (2-tailed)	.000	.
		N	183	183

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

Interpretation: Using Kendall's tau b, the coefficient value of 0.936 shows that there is a positive relationship between organizational innovation and organizational performance

Decision: Since the result is significant at 0.05 level of significance (i.e., p-value of 0.000) generated by the result is less than 0.05 significance level of the study, therefore null hypothesis is rejected and alternative hypothesis is accepted. This indicates that organizational innovation has significant relationship with organizational performance.

Table 3. Correlation showing the relationship between organizational learning and organizational performance

Correlations			Organizational learning	Organizational performance
Kendall's tau_b	Organizational learning	Correlation coefficient	1.000	.827**
		Sig. (2-tailed)	.	.000
		N	183	183
	Organizational performance	Correlation coefficient	.827**	1.000
		Sig. (2-tailed)	.000	.
		N	183	183

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

Interpretation: Using Kendall's tau b, the coefficient value of 0.827 shows that there is a positive relationship between organizational learning and organizational performance

Decision: Since the result is significant at 0.05 level of significance (i.e., p-value of 0.000) generated by the result is less than 0.05 significance level of the study, therefore null hypothesis is rejected and alternative hypothesis is accepted. This indicates that organizational learning has significant relationship with organizational performance.

5. Discussion

The findings from the result above are supported with the inferences made with respect to existing studies. While Cefis & Marsili (2005) noted organizational learning as instrumental to creating innovations which help for sustenance and survival of business entity in a highly competitive milieu; Zohoori et al. (2013) viewed organizational learning as having strong connectivity with innovation in the attainment of organizational objectives. Gupta (Gupta et al., 2013) sees introduction of new procedures, policies, organizational forms and knowledge embodied in the distribution channels, products, and applications, as having strong implications on an organization in being able to meet customers' expectations, preferences, and needs. Garvin (2000) stipulated that a process of creating, transferring knowledge and attitude of the company have possible reflection on organizational performance.

6. Conclusions

The objective of the study was to examine the relationship between organizational learning, organizational innovation and organizational performance. It was specifically to determine whether there was a significant relationship between organizational learning and organizational innovation, organizational innovation and organizational performance and organizational learning and organizational performance. The findings showed that there was a positive correlation between organizational learning and organizational innovation, organizational innovation and organizational performance and organizational learning and organizational performance.

The study recommends that an organization committed to learning attempts to deeply understand its environment, which includes the customers, competitors, and emerging technology. Innovation also involves the desire to adopt new ideas. This means that a positive learning climate is valuable for firms that seek to outperform its competitors through various innovation processes.

Managers should therefore, create and promote the eagerness to learn among their employees so that they develop new skills and share existing knowledge. More so, in order to enhance organizational performance through innovation, managers should place values on technological innovations and should establish reward policies for new ideas and innovations proposed by employees. To this end, organizations should encourage employees to share work experiences or learning reflections and employees should actively explore the current market and related new product information and actively improve their professional competencies and should set work-related goals and try to accomplish them to enhance organizational performance directly and indirectly through organizational innovation.

The contribution of the study to the body of knowledge is that organizational learning and organizational innovation is a pivotal to the performance of organizations no matter the environmental location. The limitation of the study is that it covers only the manufacturing companies in Lagos metropolis of Nigeria. The study suggested for further studies a comparative study between manufacturing and service industry, public and private sector of the economy as well as a study within the academia in Nigeria.

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