



# IMPACT OF ORGANIZATIONAL CONTINUOUS LEARNING ON FIRM COMPETITIVENESS IN THE NIGERIAN CONSUMER GOODS AND OIL AND GAS INDUSTRIES

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**Abstract:** The main aim of this study is to examine the impact of organizational continuous learning on firm competitiveness in the Nigerian consumer goods and oil and gas industries. Organizational learning is measured in terms of staff training and consultancy/professional services, while firm competitiveness is measured by profitability or earnings per share. The study also considers the moderating influence of organizational culture on the relationship between organizational continuous learning and firm competitiveness. The sample comprises nine (9) listed companies (5 oil and gas firms and 4 consumer goods firms) in the Nigerian stock exchange. The data consist of 54 firm-year panel observations from 2015 to 2021. Three dynamic panel data methods: namely, random effects, fixed effects, and D-GMM, are employed for data analysis. The empirical results show that both staff training and consultancy/professional services exert no significant short-run effect on firm competitiveness. However, there is evidence that organizational culture, measured in terms of unobserved cross-sectional heterogeneity, moderates the relationship between organizational continuous learning and firm competitiveness. Based on these findings, we conclude that short-run firm profitability or competitive advantage does not depend on organizational continuous learning for firms in the Nigerian consumer goods and oil and gas industries. The main recommendation is that corporate managers, especially, those whose firms operate in the consumer goods and oil and gas industries, should focus more on the long-term benefits while evaluating the viability of any investment in organizational learning as means of acquiring distinctive competence towards competitive advantage. However, more emphasis should be placed on staff training and development. Also, it is the view of the study that corporate managers can improve their firms' profitability and competitiveness by developing a continuous learning culture as an integral part of their corporate level strategy and business model.

**Key words:** Organizational Continuous Learning, Staff Training, Consultancy, Competitiveness

## INTRODUCTION

### Background to the Study

Continuous learning at the organizational level is increasingly recognized by both scholars and organizational leaders as a critical factor for organizational effectiveness and success. According to London and Sessa (2006), continuous learning involves developing and expanding the group's capabilities in restructuring to meet changing environments, acquiring, and using new behaviours, skills, and knowledge, as well as becoming an increasingly high-performing system through feedback and reflection about its own actions and consequences. Organizations now design developmental programs which allow employees to continuously acquire new skills, knowledge, and behaviours. A critical aspect of organizational continuous learning and development programs relates to interest and active participation by employees.

One aspect of organizational continuous learning that has attracted considerable attention in the strategic management literature is training. According to Thang et al. (2010), organizations invest in training because of its performance-enhancing effects, especially

in the face of the increasingly rapid changes in the business competitive environment. Schinke and Wong (1977) argue that staff training leads to improvement in job attitude, increased positive staff and resident attitude, and increased knowledge of the behavioural technology. According to Olaniyan and Ojo (2008), staff training, which is essential for personnel development, determines the level of organizational productivity.

Another aspect of organizational continuous learning that equally attracted considerable attention in the strategic management literature is consultancy and professional services. According to Brandon-Jones et al. (2016), professional services are characterized by high customization, customer engagement, knowledge intensity, and low capital intensity. According to Mitchell (1994), professional services, which involve significant investments of money, time, and personnel with no guarantee of any successful outcome, are used to supplement limited personnel or in-house capabilities and to obtain an independent view on critical issues that may result in dispute. Professional services help individuals and firms to acquire knowledge and creativity which significantly affect the perceived service quality and the entire business relationship (Karantinou, & Hogg, 2001).

### Statement of the Problem

The issue of how business organizations achieve and maintain competitive advantage has continued to be a great concern for corporate managers, business owners, and scholars. This issue is particularly important because it is at the core of corporate strategy and basically defines the field of strategic management. According to the resource-based theory, organizations can achieve superior competitive position by possessing and controlling assets and capabilities that are valuable, distinctive, and rare. The question is: how can organizations acquire and maintain such distinctive and rare capabilities or resources needed for competitive advantage?

We argue that continuous learning through continuous investment in staff training and development as well as consultancy/professional services can lead to the development and control of distinctive and rare capabilities required for competitive advantage. This study seeks to validate this argument by examining the impact of organizational continuous learning (staff training and consultancy/professional services) on firm competitiveness using panel data collected from listed firms in the Nigerian consumer goods and oil and gas industries.

The remainder of this study is presented as follows: The next section contains the review of both the theoretical and empirical literature, which is followed by the methodology section, and then by the data analysis section. The last section contains the summary and conclusion.

### LITERATURE REVIEW

The resource-based theory emerged from the seminal work of Barney (1991). The main contention of the theory is that possession and control of valuable, inimitable, and rare organizational resources and strategic capabilities lead to competitive advantage. Competitive advantage can be viewed either objectively in terms of sustained increase in sales (or revenue), market share and profitability, or subjectively in terms of employee satisfaction and customer satisfaction. This implies that for a firm to lead its competitors in the market, it must adopt and implement policies and processes that create capabilities or resources that are valuable, rare, and highly distinctive. One of such processes is organizational continuous learning. According to Murray (2003), firm performance can be significantly improved by developing both personal and organizational level competencies, which require organizational learning. Hence, the resource-based model implies that a positive relationship between organizational continuous learning and competitive advantage. Storey (2002) employs the probit model to investigate the extent of the relationship between ETD (Education, Training, and Development) and firm performance in UK. The study considers firm performance in terms of return on capital employed, return on sales, cashflow and profitability. The analysis is based on survey data collected via telephone interview from 314 medium-sized companies. The empirical evidence reported in the study shows, among other things, that ETD factors and measures of performance correlate positively and significantly.

Fabling and Grimes (2010) investigate the impact of staff training and other human resource practices on firm performance using data obtained from New Zealand's Business Practice Survey. They find, among other things, that staff training has a causal influence on performance measures, especially for firms young and high-tech firms.

Kocoglu et al. (2011) examine the relationship between organizational learning and firm performance, focusing on the moderating role of innovation and TQM (total quality management). They consider four dimensions of organizational learning: namely, intraorganizational knowledge sharing, commitment to learning, open mindedness, and shared vision; two dimensions of firm performance: namely, market performance and employee satisfaction; and five dimensions of TQM: namely, leadership, participation, process management, continuous improvement, and customer orientation. The study is domiciled in Turkey and involves nine different industries: namely, manufacturing and machinery, software, chemical, service technologies, telecommunications, computer and electronics, communication, food, and material industries. Their data analysis is based on survey data collected through a structured question from 185 white collar employees selected from 87 firms. Their regression results show, amongst others, evidence that organizational learning, innovation, and total quality management all have a positive relationship with both market performance and employee satisfaction.

Palacios-Marqués et al. (2011) investigate the extent to which knowledge management affects the relationship between learning-based distinctive competencies and firm performance using a survey data collected from 193 hospitality firms in Spain. They measure learning-based distinctive competencies using four dimensions: namely, competencies development, innovation and learning culture, commitment of the managers to organizational learning, and organizational design focused on learning. They find that learning-based distinctive competencies have a strong explanatory power for firm performance, and that the relationship between learning-based distinctive competencies and firm performance is affected by knowledge management.

Soriano et al. (2014) argue that international business competencies created through holistic view, continuous learning, and information technology infrastructure lead to higher firm performance. They empirically tested this argument by employing the structural equation modeling based on survey data collected from 222 biotechnology and telecommunications industries. Their results confirm that continuous learning, holistic view, and information technology infrastructure all lead to international business competence.

Their results also provide empirical evidence that while international business competencies affect firm performance positively and significantly, its creation is mostly affected by continuous learning. Their findings, therefore, imply that continuous learning affect firm performance through international business competencies.

In a qualitative study, Panagiotakopoulos (2020) examines the impact of formal management training on firm performance in Greece using data collected through interviews from 100 respondents. They find that formal management training leads to enhanced performance.

Capelleras et al. (2021) employ the structural equation modeling to investigate the impact of employee training and other skill-enhancing HR practices on firm performance in Albanian tourism industry. Their investigation is based on data collected through online survey and face-to-face interview from 211 informants. They find, among other things, that HR training affects firm performance indirectly through innovativeness.

## RESEACH METHODOLOGY

### Sample and Data

Our sample consists of nine (9) firms in the consumer goods (NB, NESTLE, DSR and UNILEVER) and oil and gas (TOTAL, CONOIL, ETERNA, FORTE-ARDOVA, and JAPPAUL) industries that are listed on the Nigerian stock exchange. The firms are selected purposively based on availability of data on the study variables. The data were collected at yearly interval from secondary sources (annual reports of the individual firms) over a 6-year period: 2015 – 2020. Hence, our dataset has a panel structure, consisting of 54 firm-year panel observations. GRETLM statistical software is employed for data analysis.

### Measurement/Proxies

#### Dependent Variable

**Competitive Advantage:** Our proxy for competitive advantage is firm profitability, measured by earnings per share (EPS). EPS is calculated as follows:

$$EPS = \frac{\text{Profit After Tax}}{\text{Number of Ordinary Shares Outstanding}} \quad (1)$$

Higher profitability indicates higher competitive advantage.

#### Explanatory Variables

**Staff Training:** This is measured by staff training expense or costs. There is a positive relationship between staff training costs and organizational continuous learning as higher staff training cost indicates higher level of organizational learning.

**Consultancy/Professional Services:** This is proxied by consultancy/professional fees or costs. There is a positive relationship between fees paid to consultants for professional services and organizational continuous learning.

#### Moderating Variable:

**Organizational Culture:** This is not directly observable from firms' financial statement and annual reports; hence it is proxied by cross-sectional heterogeneity or unobserved firm-specific effects implicitly associated with panel datasets.

#### Control Variable

**Firm Size:** This is measured by the total number of employees in a given financial year.

### Model and Method of Analysis

Consistent with our theoretical framework, we specify the regression model for the relationship between organizational continuous learning and firm competitiveness as follows:

$$LEPS_{it} = \alpha + \phi_i + \beta_1 LEPS_{it-1} + \beta_2 LSTRAINC_{it} + \beta_3 LCPRFF_{it} + \beta_4 LSIZE_{it} + \epsilon_{it} \quad (1)$$

Where:

LEPS = log of earnings per share.

LSTRAINC = log of staff training cost scaled by total assets.

LCPRFF = log of consultancy/professional services fees scaled by total assets.

LSIZE = log of firm size.

For the model parameters,  $\alpha$  = the regression intercepts, which is constant both cross-sectionally and over time.  $\phi_i$  = cross-sectional heterogeneity or unobserved firm-specific effects, which varies across firms but not across time. This parameter also serves as the proxy for organizational culture. Further,  $\beta_1$  is the persistence coefficient which captures the impact of lagged earnings per share in the model, while  $\beta_2$  and  $\beta_3$  are the main regression parameters representing the effects of staff training and consultancy/professional services respectively. Finally, while  $\beta_4$  captures the impact of firm size,  $\epsilon_{it}$  is the error term.

For a robust empirical analysis, three single-equation dynamic panel data methods are employed: namely, Fixed Effects, Random Effects, and D-GMM (Differenced Generalized Method of Moment). These panel data methods are employed because of the large body of empirical evidence suggesting that they can be used to estimate unidirectional causal relationships within the panel data framework. Specifically, the fixed effects and random effects methods are attractive because they explicitly account for cross-sectional

heterogeneity that often characterize panel datasets. However, each method makes a different assumption regarding the heterogeneity parameter. The fixed effects method assumes that  $\phi_i$  is an important explanatory variable that also correlates with the organizational continuous learning variables, whereas the random effects method treats it as part of the error process. Hence, for random effects method,  $\phi_i$  is related to  $\epsilon_{it}$ , but uncorrelated with both  $\beta_2$  and  $\beta_3$ . Here, we follow the usual procedure by estimating the model using the two methods, and then apply the Hausman test to select the best performing method.

While both the fixed effects and random effects methods can capture the heterogeneity in our panel dataset, they cannot capture the endogeneity associated with the relationship between organizational continuous learning and competitive advantage. To capture the endogeneity problem, we employ the D-GMM model suggested by Arellano and Bond (1991).

## DATA ANALYSIS AND DISCUSSION

### Descriptive (Univariate) Analysis

Table 1 presents the pooled descriptive or summary statistics that reveal the distributional properties of our research data.

**Table 1: Descriptive Statistics**

Variable	Mean	Std Dev.	CV	SK	Kurt
EPS	40.64	103.22	2.53	3.11	11.11
TRAIN	446,423.96	628,512.3	1.40	1.38	3.49
PRFF	1345198.89	2648734.30	1.96	2.22	6.13
SIZE	1085	1142.8	1.05	0.89	2.39

Table 1 shows that over the review period (2015 – 2020), earnings per share for the nine (9) sampled firms averaged approximately ₦41, with a standard deviation of ₦103.22, which is very high. On the other hand, while average employment size stood at 1,085, the average staff training and consultancy/professional services costs stood at ₦446,423.96, and ₦1,345,198.89 respectively. The high standard deviations show that these variables recorded high variability both across firms and over time. The high variability of these variables is also confirmed by the coefficient of variation (CV), which is greater than 1 in all cases. This is expected given that some firms are both larger and more profitable than others. Further, the skewness coefficient is greater than 1 for all variables, while the coefficient of kurtosis is greater than 3 for most of the variables, except SIZE. This shows that none of the variables has a distribution that can be described as normal distribution, as their distributions are largely positively skewed with excess kurtosis.

### Panel Estimation Results

Table 2 shows the regression results for the dynamic relationship between organizational continuous learning and competitive advantage. Both the conventional panel (fixed and random effects) and the D-GMM results are reported.

**Table 2: Regression Results; p-value in parenthesis**

VARIABLE (A)	FEM (B)	REM (C)	D-GMM (D)
CONSTANT	1.5235 (0.7551)	-0.6816 (0.5002)	-
LEPS(-1)	0.1684 (0.2950)	0.8341 (0.0000)***	0.5334 (0.0917)*
LSTRAIN	0.3635 (0.0572)*	0.0895 (0.4427)	0.2944 (0.3445)
LCPRFF	-0.1299 (0.4136)	-0.0461 (0.6142)	-0.0186 (0.8398)
LSTRAIN + LCPRFF	0.2336 (0.3204)	0.0433 (0.7202)	0.2757 (0.4552)
SIZE	0.2629 (0.6402)	0.1958 (0.0902)*	0.1964 (0.8314)
HAUSMAN	-	16.4643 (0.0024)***	-
INSTRUMENTS			13
J-Statistic (Sargan Test)	-	-	11.6838 (0.2317)
AR(1)	-	-	-1.7219 (0.0851)
AR(2)	-	-	1.3171 (0.1878)

Source: GRETL Results Output based on Research Data

\*indicates significance at 10% level

\*indicates significance at 1% level

First, for model specification and diagnostic tests, the Hausman specification test ( $p$ -value = 0.0024), which compares the fixed effects and random effects results, is significant at the 1% level, hence, it clearly rejects the null hypothesis that unobserved firm-specific effects such as organizational culture and leadership do not matter for the relationship between organizational continuous learning and competitive advantage. This has validated the fixed effects assumption that unobserved firm-specific effects, not only, affect competitive advantage directly, but also, moderate the relationship between organizational continuous learning and competitive advantage. Hence, we reject the null hypothesis that organizational culture has no significant influence on the relationship between organizational continuous learning and competitive advantage. This result is expected given that our analysis involves firms that operate in two economic sectors (consumer goods and oil and gas sectors).

Further, the Sargan's test or J-statistic ( $p$ -value = 0.2317), which tests the plausibility of the GMM instruments, is not significant at all conventional levels, hence cannot reject the null hypothesis of no overidentifying restrictions. This implies that the 13 instruments used to estimate the dynamic relationship between organizational continuous learning and financial performance are all valid. Also, as expected for a well-behaved model, the Arellano-Bond AR tests show that the first order AR statistic is significant, while the second order statistic is not. This implies that the D-GMM model has no specification problem. Compared to the fixed effects model, the D-GMM model provides better estimates since it controls both the heterogeneity and the endogeneity issues associated with panel datasets. The fixed effects model controls only the heterogeneity problem.

Focusing on the D-GMM results in Column D, we can see that the coefficient on lagged earnings per share ( $\beta = 0.5334$ ,  $p$ -value = 0.0917) is positive and significant at the 10% level, indicating that profitability is weakly determined by its lagged value. Hence, our results show weak evidence of persistence in firm profitability. Also, the coefficient on LSIZE ( $\beta = 0.1964$ ,  $p$ -value = 0.8314) is positive but not statistically significant, indicating that firm size, measured by total number of employees, does not matter for the relationship between organizational continuous learning and firm profitability in the consumer goods and oil and gas industries in Nigeria.

#### Staff Training and Firm Profitability

Our first objective is to test the relationship between organizational continuous learning, measured by staff training, and firm profitability. The resource-based theory implies that organizational competence, which can be achieved through continuous learning, leads to improved profitability and competitive advantage (Barney, 1991; Murray, 2003). However, our result suggests that firm profitability is not a significant function of staff training. The coefficient on LSTRAIN is estimated at 0.2944 with a  $p$ -value of 0.3445, showing that staff training is positively but not significantly related to firm profitability. Hence, our data do not provide sufficient evidence to reject the hypothesis statement that continuous staff training is not a significant determinant of firm profitability. Although, the positive sign associated with this coefficient is consistent with the resource-based theory, its lack of significance, however, suggests that firms in the consumer goods and oil and gas industries attach little importance staff training. However, the estimated coefficient represents short-term effect since our analysis is based on differenced data. In other words, organizational continuous learning, measured by staff training, has no significant effect on firm profitability in the short run. This implies that the expected long-run benefit of staff training would only be appreciated if there is greater emphasis on organizational continuous learning as a means of achieving competitive advantage. This finding tends to be consistent with the theoretical model developed by Thang et al. (2010). This model shows that training does not affect organizational performance directly but through HR practices and outcomes. Our finding is also consistent with the finding by Capelleras et al. (2021) that HR training does not affect firm performance directly but through innovativeness. Our finding, however, disagrees with several previous studies including Palacios-Marqués et al. (2011), Soriano et al. (2014), and Storey (2002).

#### Professional Consultancy and Firm Profitability

Our second objective is to test the relationship between organizational continuous learning, measured by consultancy/professional services, and firm profitability. According to the resource-based, organizational competence, acquired through continuous learning, leads to increased profitability and competitive advantage (Barney, 1991; Murray, 2003). Contrary to this theory, our result shows a negative relationship between consultancy/professional services and firm profitability. The coefficient on LCPRFF is estimated at -0.0186 with a  $p$ -value of 0.8398, showing that consultancy/professional services, however, has a little and insignificant effect on firm profitability. Hence, our data do not provide evidence to reject the hypothesis that consultancy/professional services has a significant impact on firm profitability. This result suggests that consultancy/professional services do not significantly contribute to the profitability of firms in the consumer goods and oil and gas industries. Our analysis is based on differenced data; hence we interpret the negative relationship between the two variables as indicating the potential short-run deleterious effect associated with organizational knowledge acquired through consultancy/professional services. This implies that the expected benefit of organizational competence acquired through consultancy/professional services would only occur in the long run. However, the lack of significance of this relationship implies that the long-run effect of consultancy and professional services can only be appreciated if managers place greater emphasis on organizational continuous learning as a way of achieving competitive advantage. This finding, therefore, disagrees with Palacios-Marqués et al. (2011) and Soriano et al. (2014).

#### SUMMARY AND CONCLUSION

This study analyzes the relationship between organizational continuous learning and firm competitiveness in Nigeria using the dynamic panel framework. Specifically, the study analyzes the impact of staff training and consultancy/professional services costs on

firm profitability, measured by earnings per share. The analysis is based on panel data on nine (9) listed firms in the consumer goods and oil and gas industries from 2015 to 2020. The results are summarized as follows:

1. There is evidence that the Arellano-Bond single-equation panel D-GMM framework outperform both the fixed effects and random effects models. This model controls for both heterogeneity and endogeneity problems associated with the relationship between organizational continuous learning and firm profitability. However, the model is based on differenced data, hence our results only have short-run implications.
2. There is evidence that staff training cost has a positive but not statistically significant effect on firm profitability. Hence, the expected benefit of staff training would only occur in the long run. However, firms can fully appreciate this beneficial effect only if they strategically place greater emphasis on organizational continuous learning as a means of achieving competitive advantage.
3. There is evidence that consultancy/professional services cost has a negative but not statistically significant effect on firm profitability. Hence, there is tendency for organizational knowledge acquired through consultancy/professional services to reduce profitability in the short run.

Based on these results, we conclude that short run firm profitability or competitive advantage does not depend on organizational continuous learning for firms in the Nigerian consumer goods and oil and gas industries. Future studies can, therefore, explore the long-run dimension of the relationship between organizational continuous learning and firm profitability or competitive advantage using long run models such as pooled mean group or Panel ARDL model.

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