

IMPROVED FINANCIAL PERFORMANCE WITHOUT IMPROVED OPERATIONAL EFFICIENCY: THE CASE OF NIGERIAN FIRMS

OLANIYI EVANS

ABSTRACT

Is the financial performance of Nigerian companies really improving? If so, what about the operational efficiency of these firms? Though profits are on the rise, can these companies possibly be efficient, in spite of the problems inherent in the economy? In order to answer these questions, this study uses four different panel unit root tests to establish the stationarity of financial performance and operational efficiency in Nigeria, using one key performance variable (i.e. profit after tax) and three efficiency variables (i.e. return on assets ratio, asset turn ratio and portfolio activity & resilience) with a cross section of the 20 most quoted companies on the Nigerian Stock Exchange. The study shows that profit after tax is non-stationary while return on assets, portfolio activity & resilience and asset turn ratio are stationary. In other words, while financial performance (measured as profit after tax) is improving in Nigeria, operational efficiency (measured as return on assets, portfolio activity & resilience and asset turn ratio) is stagnant. What this means is that while corporate profits are on the rise, the companies are not operationally efficient.

DOI: 10.23762/FSO_VOL6_NO3_2

OLANIYI EVANS

e-mail: oevans@pau.edu.ng

KEY WORDS

Financial performance, operational efficiency, profit after tax, rate of return on assets, asset turn ratio, portfolio activity & resilience

School of Management
and Social Sciences,
Pan Atlantic University,
Lagos, Nigeria

Introduction

Professor Alos, in his 2000 article *Creating value under uncertainty: The Nigerian experience*, opined that the Nigerian business environment has been unstable and chaotic for several years. Alos (2000: 12-13) stated it thus: "In recent years, problems have been compounded by the increased

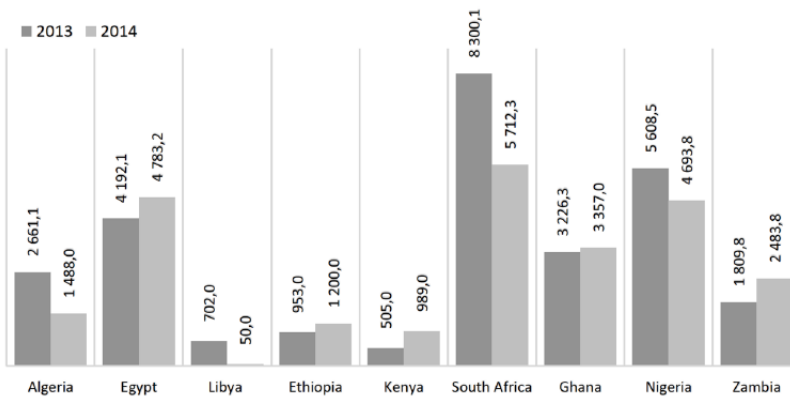
"cost of doing business" due, among other things, to the poor state of the nation's infrastructure... In the midst of this harsh economic environment, there are companies that have consistently beaten the odds, creating wealth for shareholders. Research into the basis of success of these superior

performers shows that these companies were able to identify opportunities and create value in a short period of time without losing focus on long-term strategy”.

An emerging market with ever-expanding communication, entertainment and financial sectors, Nigeria is the biggest economy in Africa, with an average decadal growth rate of 7%. With a vast population encompassing 20% of the Sub-Saharan African total, it is anticipated that Nigeria's population will overtake the 400 million people of the USA by 2050 (The Economist 2014). Considering the fact that Nigeria owns “abundant natural resources,

a low-cost labour pool, and potentially the largest domestic market in sub-Saharan Africa” (KPMG 2012: 17) and that Nigeria is now one of the “N-11”¹, and coupled with the decelerating European market, Nigeria offers fascinating investment opportunities. The country has therefore attracted the second highest share of FDI into sub-Saharan Africa and the lion's share of FDI inflow into West Africa between 2013 and 2014: of the \$12.8 billion in 2014 and \$14.2 billion in 2013 into the region, the country alone received 37% and 39% respectively (Figure 1).

Figure 1. FDI Inflows into Africa (\$ Millions)



Source: World Investment Report 2015.

However, like other sub-Saharan African economies, Nigeria faces a lengthy list of problems: pervasive corruption, inadequate power supply, poor infrastructure, an ineffective judicial system, arbitrary policy changes, restrictive trade policies, the belated passage of legislative reforms, an inefficient property registration system, and growing insecurity (Evans and Alenoghena 2015; Kelikume and Evans 2015; Albert 2016; Edomah et al. 2016; Nwaogwugwu and Evans 2016; Pierce 2016; Hope 2017; Evans and Kelikume 2018). In Nigeria, the

per capita national power supply is so low that dependence on fuel-powered generators can increase the cost of doing business to the tune of 40% in some sectors of the economy (World Economic Forum on Africa 2014). Poor energy resources and infrastructure force many companies to run their own power and access roads, adding to costs and undermining competitiveness. A trio of further issues, namely kidnaps-

¹ The Next 11 is the acronym for the next set of countries (Bangladesh, Philippines, Nigeria, Pakistan, Korea, Mexico, Turkey, Vietnam, Egypt, and Indonesia).

pings for ransom, violent crimes and terrorism, make security a serious concern as well (Oriola 2016; Aghedo 2017; Evans and Kelikume 2018; Nnam et al. 2018).

In spite of the problems inherent in the Nigerian economy, the corporate profits of companies such as Cadbury, Guinness, Julius Berger, Nestle, Nigerian Breweries, Total, Unilever, Lafarge Cement and Transcorp seem to be on the rise over the years (Figure 2). This gives rise to the overarching question that informs this study, which is “what is the nature of this financial performance?” Is financial performance really improving in Nigeria? If so, what about the efficiency of these corporations? Though profits are on the rise, can these companies possibly be efficient considering the above-mentioned socio-economic problems in the country? These are the questions which this study aims to answer.

In the literature, various authors with diverse backgrounds have studied financial performance and operational efficiency in advanced economies (e.g. Pineda et al. 2018; Prajogo et al. 2018), and emerging markets (e.g. Agyei-Mensah 2018; Oladimeji and Aina 2018). The literature to date focuses on factors that influence financial performance and operational efficiency. Little is known about the intrinsic nature of financial performance and operational efficiency, especially in an emerging market such as Nigeria where companies lay claim to increased corporate profits without considering operational efficiency. This study fills the gap which exists in the literature. To the best of the author’s knowledge, no study, either in emerging markets or developed economies, has ever paid attention to this issue. The remainder of the study is organised as follows: section 2 presents the literature review, while section 3 provides the methodology and data. Section 4 provides the empirical results, followed by the discussion and implica-

tions in section 5. Section 6 concludes the research.

1. Review of the literature

As proposed by Lewin (1930), organisation development theory aims to expand organisational structures and processes in order to accomplish more successful organisational change and performance. More recently, work on organisation development theory has expanded to focus on aligning organisations with their rapidly changing and complex environments (Anderson 2016; Smither et al. 2016; Bunker 2017). Organisational development is simply a process of continuous action, planning, implementation and evaluation, with the goal of improving financial performance and operational efficiency (Nagel 2016; Zadeh and Ghahremani 2016; Levy 2018).

The financial performance and operational efficiency of corporations has long been at the centre of academic debate and has received substantial attention (Okuda and Aiba 2016; Saranga and Nagpal 2016; Abreu et al. 2017; Grewatsch and Kleindienst 2017; Alberca and Parte 2018; Ramanathan 2018). This is primarily because operating efficiency is of interest to both managers, whose goal is to improve the performance of their firms, and policy makers, whose objective is to safeguard the strength of the corporate system. Financial performance is a measure of how well a firm can use its assets from its primary mode of business to generate returns (Gök and Peker 2017). This term is also used as a general measure of a firm’s overall financial health and eventually its continued existence.

On the other hand, operational efficiency is the ability of a firm to curtail costs and maximise resources so as to deliver quality products and services, subject to factors such as skilful workers, technological

progress, returns to scale, and the supply chain (Kalluru and Bhat 2009; Ndolo, 2015). Operational efficiency is the main driver of long-term solvency for any business (Ndolo, 2015). The concept of operational efficiency has become a concern as a result of the evolution of new technology, business processes and increased competition (Bhagavath 2009). Since efficient firms are cost-effective, improving operational efficiency affects profit margins. Operational efficiency is indispensable for sustainable financial performance (Sufian 2007). In fact, Werner and Moormann (2009) argued that profitable businesses operate with higher efficiency than their competitors. Also, Gillet et al. (2014) showed that changes in operational efficiency lead to changes in the financial performance of manufacturing firms.

Much has therefore been learned about financial performance and operational efficiency. Various authors with diverse backgrounds have studied the concepts in advanced economies (e.g.

Carroll 1979; Healy et al. 1992; Firer and Williams 2003; Adams et al. 2005; Kilic et al. Alpan 2015; Donatiello et al. 2016; Pineda et al. 2018; Prajogo et al. 2018), emerging markets (e.g. Kang and Shivdasani 1995; Klapper and Love 2004; Douma et al. 2006; Aras et al. 2010; Chen and Yu 2012; Abuzayed 2012; Claessens and Yurtoglu 2013; Radulovich et al. 2018) and in Nigeria (e.g. Sanda et al. 2005; Ehikioya 2009; Ngwakwe 2009; Uadiale 2010; Paul et al. 2011; Adediran and Alade 2013; Agyei-Mensah 2018; Oladimeji and Aina 2018).

However, the studies to date on financial performance and operating efficiency have inspired a greater focus on factors that influence these indicators. While this vast literature is certainly interesting, there are many areas that have been largely ignored. For instance, we know very little about the intrinsic nature of financial performance in

different economies, and also the ways in which these corporations are efficient, but many studies suggested there is reason to believe this could be quite significant (Quader 2013; Quader and Taylor 2014; Siebecker 2014; Hanousek et al. 2015). Thus, the field desperately needs a study that explores the nature of financial performance, and most importantly the nature of operational efficiency, especially in an emerging market such as Nigeria. This study fills that gap in the literature.

2. Methodology

2.1. Data

The data set was obtained from the Nigerian Stock Exchange Fact Book (2014). Based on the availability of consistent data for each company, a panel data of a cross-section of the 20 most quoted companies on the Nigerian Stock Exchange over the period of 2004-2013 was employed in this study. The sample of companies is comprised of Fortes, Cadbury Nig. Plc, Ashaka Cement, Conoil, Guinness Nig. Plc, Flour Mills, John Holt, Mobil Oil Nig. Plc, Julius Berger, Nestle Foods, Oando, Nigerian Breweries, PZ, Total Nig Plc, Texaco, UAC, Lafarge Cement, Unilever, Transnational Corporation and Dangote Sugar.

In order to answer the research questions, this study uses panel stationarity tests to examine if financial performance and operational efficiency are stationary in Nigeria in the fashion of studies such as Fleissig and Strauss (1999), Chang (2005), Chang et al. (2006), Tiwari et al. (2011) and Ying et al. (2014) who used stationarity tests to examine if GDP levels are stationary, and Buguk and Brorsen (2003), Narayan and Smyth (2004), Worthington and Higgs (2004) Ozdemir (2008), Hasanov (2009), and Lee et al. (2010) who used stationarity tests to examine the efficient 6 market hypothesis in different samples of countries. Additionally, consistent with

the literature on financial performance, this study uses one key performance variable (i.e., profit after tax) and three efficiency variables (i.e., return on assets ratio, asset turn ratio and portfolio activity and resilience) on a cross-section of the 20 most quoted companies on the Nigerian Stock Exchange, using the panel unit root tests such as Levin et al. (2002), Im et al. (2003), and two Fisher-type tests using ADF and PP tests (Maddala and Wu 1999; Choi 2001). The four panel unit root tests are necessary in order to see if our results will be robust under different unit root tests.

Profit after tax is the financial performance variable while Return on Assets, Portfolio Activity and Resilience and Asset Turn Ratio are the operational efficiency variables (see Ehikioya 2009; Ngwakwe 2009; Uadiale 2010; Adediran and Alade 2013; Agyei-Mensah 2018; Oladimeji and Aina 2018). Return on Assets is obtained by dividing the firm's profits by its total assets, while Asset Turn Ratio is derived by dividing the firm's sales revenue by the assets employed in the business. The third efficiency measure, Portfolio Activity & Resilience, is derived by dividing the percentage change in sales by the percentage change in GDP. While profit after tax is an established measure of financial performance, the three efficiency measures will serve as excellent metrics for assessing financial performance over the years.

2.2. Panel Unit Root Testing

This study employs four different types of panel unit root tests to test if financial performance and operational efficiency are stationary in Nigeria. The panel unit root tests are Levin et al. (2002), Im et al. (2003), and two Fisher-type tests using ADF and PP tests (Maddala and Wu 1999; Choi 2001).

The panel unit root tests are classified on the basis of restrictions on the autoregressive process across the series or the cross-sections. Consider the AR(1) process for panel data:

$$y_{it} = \rho_i y_{it-1} + X_{it} \delta_i + \varepsilon_{it} \quad (1)$$

Where $i = 1, 2, \dots, N$ series or cross-sections, are observed over periods

$$t = 1, 2, \dots, T_i.$$

X_{it} = exogenous variables (including any individual trends or fixed effects),

ρ_i = autoregressive coefficients,

ε_{it} = error terms (i.e. mutually independent idiosyncratic disturbance).

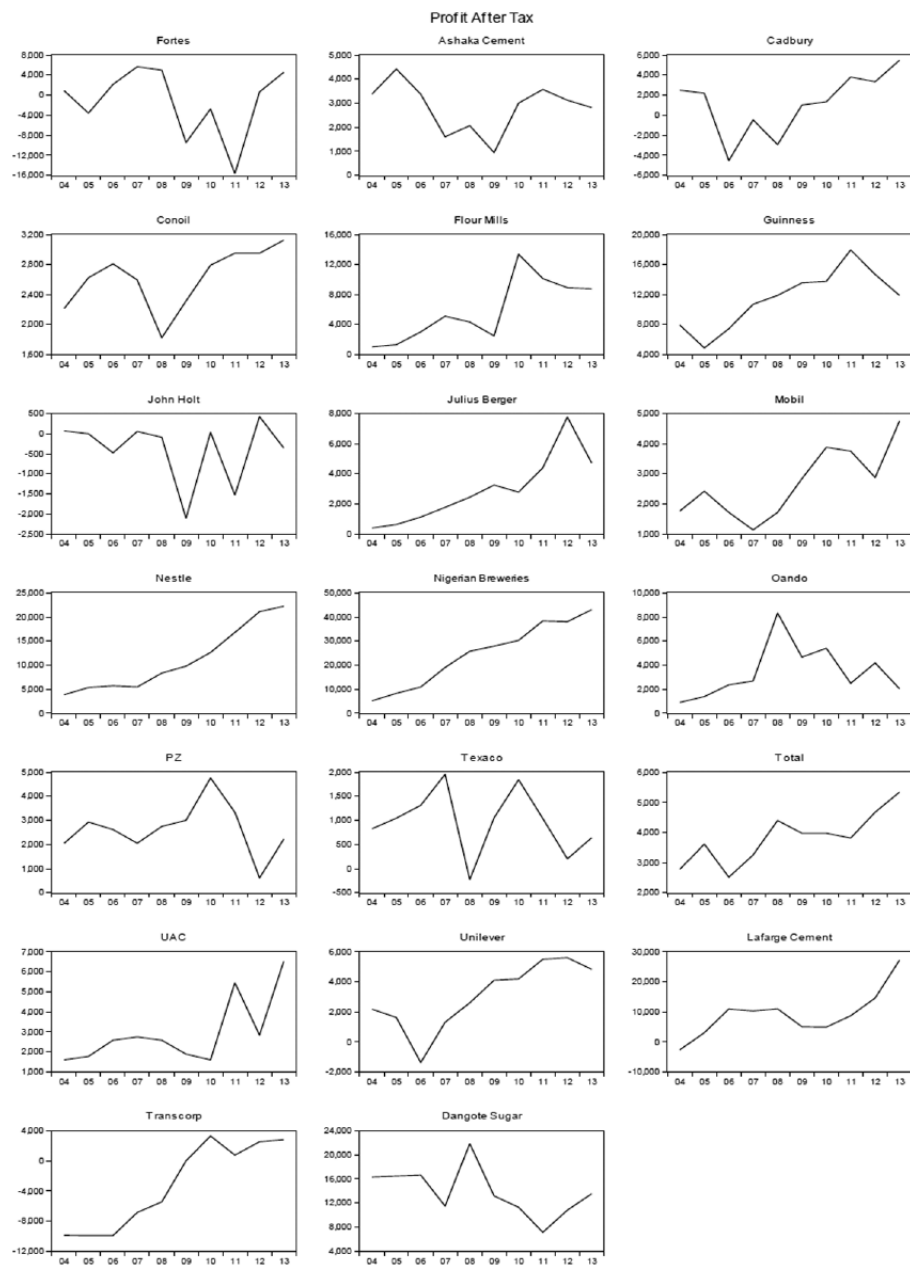
If $|\rho_i| < 1$, then y_i is stationary. Conversely, if $|\rho_i| = 1$, y_i has a unit root.

While the Levin, Lin, and Chu (LLC) test assumes that the AR structure is common across cross-sections such that $\rho_i = \rho$ for all, Im, Pesaran, and Shin (IPS), the two Fisher-ADF and Fisher-PP tests allow ρ_i to vary across cross-sections.

3. Empirical analysis

The trends of *Profit After Tax* for the 20 companies from 2004 to 2013 are shown in Figure 2. While the *Profit after Tax* of companies such as Cadbury, Guinness, Julius Berger, Nestle, Nigerian Breweries, Total, Unilever, Lafarge Cement and Transcorp is on the increase, those of Fortes, Ashaka Cement, Flour Mills, John Holt, Texaco, UAC and Dangote is volatile. For companies such as Oando and PZ, profits have declined.

Figure 2. Trend of profit after tax (2004-2013)



Source: Own elaboration.

The descriptive statistics for *Profit after Tax*, *Return on Assets*, *Portfolio Activity & Resilience* and *Asset Turn Ratio* series for the 20 companies are presented in Table 1. The standard deviation is a measure of the amount of variation of a set of data values. Among the efficiency parameters (i.e. *Return on Assets*, *Portfolio Activity & Resilience* and *Asset Turn Ratio*) for the 20 companies, *Portfolio Activity & Resilience*² is the most volatile, implying that the unpredictable nature of the Nigerian economy affects the bottom line of the companies. Kurtosis is a measure of the “peakedness”

of a distribution. For *Profit after Tax*, *Return On Assets*, *Portfolio Activity & Resilience* and *Asset Turn Ratio* series, the Kurtosis statistic is more than 3, meaning that the distributions are leptokurtic relative to the normal. Furthermore, the Jarque-Bera (J-B) test determines whether the series are normally distributed. For *Profit after Tax*, *Return on Assets*, *Portfolio Activity & Resilience* and *Asset Turn Ratio* series, the J-B statistic surpasses the 5% critical value of 5.99, thus rejecting the null of normal distribution.

Table 1. Descriptive statistics

	Profit After Tax	Return On Assets	Portfolio Activity & Resilience	Asset Turn Ratio
Mean	5023.37	0.11	2.06	-0.18
Median	2948.52	0.17	1.44	0.05
Maximum	43080.35	2.18	86.41	5.95
Minimum	-15619.86	-11.90	-15.83	-21.56
Std. Dev.	7686.23	0.96	7.26	2.69
Skewness	1.95958	-9.87	7.86	-7.33
Kurtosis	9.44	120.90	92.65	58.84
Jarque-Bera	474.27	119087.3	69044.61	27785.11
Probability	0.00	0.00	0.00	0.00

Source: Own elaboration.

The panel unit root tests on *Profit after Tax* for the 20 firms are as shown in Table 2. Using the automatic lag difference term (i.e., the Schwarz criterion for the lag differences) and the bandwidth selection (i.e., Newey-West automatic bandwidth selec-

tion and Bartlett kernel), the results for the panel unit root tests for *Profit after Tax* establish the presence of a unit root, as the LLC, IPS, and the two Fisher tests fail to reject the null hypothesis of the presence of a unit root.

² Note that Portfolio Activity and Resilience is derived by dividing the percentage change in sales by the percentage change in GDP

Table 2. The panel unit root tests for profit after tax

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-1.05	0.14	20	160
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	1.01	0.84	20	160
ADF - Fisher Chi-square	30.46	0.86	20	160
PP - Fisher Chi-square	42.35	0.36	20	180

Notes: ** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality. Newey-West automatic bandwidth selection and Bartlett kernel Balanced observations for each test

Source: Own elaboration.

The panel unit root tests for the efficiency variables (i.e. *Return on Assets*, *Asset Turn Ratio* and *Portfolio Activity & Resilience*) for the 20 firms are as shown in Table 3, 4 and 5. Using the automatic lag difference term (i.e. the Schwarz criterion for the lag differences) and the bandwidth selection (i.e. Newey-West automatic bandwidth selec-

tion and Bartlett kernel), the results for the panel unit root tests for *Return on Assets*, *Portfolio Activity & Resilience* and *Asset Turn Ratio* show the absence of a unit root, as the LLC, IPS, and the two Fisher tests reject the null hypothesis of the presence of a unit root.

Table 3. The panel unit root tests for return on assets

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-9.26	0.00	20	160
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-2.33	0.01	20	160
ADF - Fisher Chi-square	66.07	0.01	20	160
PP - Fisher Chi-square	79.51	0.00	20	180

Notes: ** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality. Newey-West automatic bandwidth selection and Bartlett kernel Balanced observations for each test

Source: Own elaboration.

Table 4. The panel unit root tests for portfolio activity & resilience

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-5.86	0.00	20	160
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-3.30	0.00	20	160
ADF - Fisher Chi-square	80.62	0.00	20	160
PP - Fisher Chi-square	162.24	0.00	20	180

Notes: ** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality. Newey-West automatic bandwidth selection and Bartlett kernel Balanced observations for each test

Source: Own elaboration.

Table 5. The panel unit root tests for asset turn ratio

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-5.39	0.0000	20	160
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-2.34	0.01	20	160
ADF - Fisher Chi-square	64.8	0.01	20	160
PP - Fisher Chi-square	73.50	0.00	20	180

Notes: ** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality. Newey-West automatic bandwidth selection and Bartlett kernel Balanced observations for each test

Source: Own elaboration.

4. Discussion and implications

The findings of this study that *Profit after Tax* is non-stationary, while *Return on Assets*, *Portfolio Activity & Resilience* and *Asset Turn Ratio* are stationary, are perplexing and may require some discussion. What this means is that while financial performance (measured as *Profit after Tax*) is increasing in Nigeria, operational efficiency (measured as *Return on Assets*, *Portfolio Activity & Resilience* and *Asset Turn Ratio*) is stagnant. This may be explained by the fact that the opportunities present of the Nigerian market on one hand, and the challenges on the other, have created a bipolar character of corporations in Nigeria: while corporate profits are on the increase, efficiency is stagnant.

Yet the findings of this study are not too far-fetched. Companies in Nigeria are operating in an unstable political and business environment characterised by the risks of inflation, currency devaluation, multiple taxation, repatriation, confiscation, expropriation, mandatory labour benefit legislation, campaigns against foreign goods, kidnapping, civil wars and terrorism (see Griffen 2005; Kelikume and Evans 2015; Nwaogwugwu and Evans 2016; Pierce 2016; Hope 2017; Evans and Kelikume 2018). Like other

sub-Saharan African economies, Nigeria faces a lengthy list of problems: pervasive corruption, inadequate power supply, poor infrastructure, an ineffective judicial system, arbitrary policy changes, restrictive trade policies, the belated passage of legislative reforms, an inefficient property registration system, and growing insecurity (Evans and Alenoghena 2015; Oriola 2016; Aghedo 2017; Evans and Kelikume 2018; Nnam et al. 2018).

These problems may be contributory to the stagnant operational efficiency in Nigeria. Some of the actions taken by the government in the form of regulatory, legal and political changes most often tend to decrease business efficiency. Ibeto (2011, as cited in Mark and Nwaiwu 2015: 3) posits that "regulatory changes have the potential to promote or inhibit market competition, social risks often have political bases and responses, and political mismanagement can turn natural or human-made events into catastrophes. Moreover, the political environment is often perceived to be outside of management's control, making it difficult to define, predict, and align with objectives." Given the complexity of these issues, it is no wonder that these companies are inefficient.

However, in spite of the problems inherent in the Nigerian market, the corporate profits of companies such as Cadbury, Guinness, Julius Berger, Nestle, Nigerian Breweries, Total, Unilever, Lafarge Cement and Transcorp seem to be on the rise over the years. It must be noted that for a lot of these companies in Nigeria, "it is an exciting, dynamic, high-octane growth market; for some others, often on the outside looking in, it seems chaotic, unstable, and uncertain... Nevertheless, the facts support the more positive perspective on Nigeria and its prospects as an investment destination" (World Economic Forum on Africa 2014: 4). Notwithstanding the challenges and the resultant inefficiencies, this study, consistent with Sheth (2011), Besley and Persson (2014), and Holtbrugge and Baron (2013), has established that the prospect of high corporate profits for firms seeking growth make emerging markets such as Nigeria an attractive investment destination.

Conclusions

The over-arching questions that inform this study are: What is the nature of the financial performance of firms in Nigeria? Is financial performance really improving? If so, what about the operational efficiency of these firms? Though profits are on the rise, can these companies possibly be efficient, considering the multifaceted problems in the unstable political and business environment? In order to answer these questions, this study tests the stationarity of financial performance and operational efficiency of firms in Nigeria, using one key performance variable (i.e. profit after tax) and three efficiency variables (i.e. return on assets ratio, asset turn ratio and portfolio activity & resilience) with a cross-section of the 20 most quoted companies on the Nigerian Stock Exchange and using the panel unit root tests such as Levin et al. (2002), Im et

al. (2003), and two Fisher-type tests using ADF and PP tests (Maddala and Wu 1999; Choi, 2001).

The study found that Profit after Tax is non-stationary while Return on Assets, Portfolio Activity & Resilience and Asset Turn Ratio are stationary. What this means is that while financial performance (measured as Profit after Tax) is increasing in Nigeria, operational efficiency (measured as Return on Assets, Portfolio Activity & Resilience and Asset Turn Ratio) is stagnant. While corporate profits are on the increase, efficiency is stagnant. The findings of this study are not too far-fetched. Considering the fact that Nigeria is the biggest economy in Africa, an emerging market with ever-expanding sectors, with high economic growth rate and now one of the "N-11", Nigeria offers fascinating investment opportunities for companies seeking profits. However, companies in Nigeria are operating in an unstable political and business environment characterised by the risks of inflation, currency devaluation, kidnapping, and terrorism. Some of the actions taken by the government in the form of regulatory, legal and political changes most often decrease operational efficiency. However, notwithstanding the challenges and the resultant inefficiencies, this study has established that the prospects of high corporate profits make emerging markets like Nigeria an attractive investment destination for firms seeking growth. In the midst of this unstable political and business environment, companies can beat the odds, make high profits and create wealth for shareholders. Business managers can identify opportunities and create value in a short time.

It must be noted, however, that if operational efficiency continues to be stagnant, it can affect financial performance. Companies operating in environments like Nigeria therefore need to discover efficiencies in

the system, in order to increase revenue and create competitive advantage. Managers must be innovative in implementing optimisation systems to increase the efficiency and profitability of all processes across their firms. Process optimisation can enable firms to predict outcomes from operational changes and choose the most efficient options. To achieve sustainable efficiencies in their operations, managers must be able to discern where processes can be tightened up, errors eliminated and political influences reduced. Through building a broad picture of operational processes and a complete picture of costs, firms can spot the patterns of the influence of the unstable political and business environment.

There are several areas worthy of future consideration. Future studies can explore the nature and character of financial performance and operational efficiency in other contexts. This study did not discern causation. Further studies can examine the relationship between financial performance and operational efficiency (whether negative or positive, linear or nonlinear). It would be difficult to determine the roles and significance of the political and business environment in corporate operations. However, international surveys can still be used to determine how various dimensions of the political and business environment may impact financial performance and operational efficiency.

References

- Abreu, C.G.S., de Souza, A.L.L., Câmara, M.K. (2017), Operational efficiency and market concentration: A comparative analysis of Brazilian air passenger transport companies, *Electronic Journal of Management System*, 12(1): 308-315.
- Abuzayed, B. (2012), Working capital management and firms' performance in emerging markets: The case of Jordan, *International Journal of Managerial Finance*, 8(2): 155-179.
- Adams, R.B., Almeida, H., Ferreira, D. (2005), Powerful CEOs and their impact on corporate performance, *Review of Financial Studies*, 18(4): 1403-1432.
- Adediran, S.A., Alade, S.O. (2013), Dividend policy and corporate performance in Nigeria, *American Journal of Social and Management Sciences*, 4(2): 71-77.
- Aghedo, I. (2017), The ubiquity of violent conflicts in Nigeria, *The Round Table*, 106(1): 97-99.
- Agyei-Mensah, B. K. (2018), Impact of corporate governance attributes and financial reporting lag on corporate financial performance, *African Journal of Economic and Management Studies*, 9(3): 349-366.
- Alberca, P., Parte, L. (2018), Operational efficiency evaluation of restaurant firms, *International Journal of Contemporary Hospitality Management*, 30(3): 1959-1977.
- Albert, A.T. (2016), Combating corruption in Nigeria and the constitutional issues arising: Are they facilitators or inhibitors?, *Journal of Financial Crime*, 23(4): 700-724.
- Alos, A.J. (2000), Creating value under uncertainty: The Nigerian experience, *Journal of African business*, 1(1): 9-24.
- Anderson, D.L. (2016), *Organization development: The process of leading organizational change*, Sage Publications.
- Aras, G., Aybars, A., Kutlu, O. (2010), Managing corporate performance: Investigating the relationship between corporate social responsibility and financial performance in emerging markets, *International Journal of productivity and Performance management*, 59(3): 229-254.
- Besley, T., Persson, T. (2014), Why do developing countries tax so little?, *The Journal of Economic Perspectives*, 28(4): 99-120.
- Bhagavath, V. (2009), Technical efficiency measurement by data envelopment analysis: An application in transportation model, *Alliance Journal of Business Research*, 60-72.

- Buguk, C., Brorsen, B. W. (2003), Testing weak-form market efficiency: Evidence from the Istanbul Stock Exchange, *International Review of Financial Analysis*, 12(5): 579-590.
- Bunker, B.B. (2017), Edith Whitfield Seashore's contribution to the field of organization development: Theory in action, in: D. Szabla, W. Pasmore, M. Barnes, A. Gipson (Eds.), *The Palgrave handbook of organizational change thinkers* (pp. 1-11), Cham: Palgrave Macmillan.
- Carroll, A.B. (1979), A three-dimensional conceptual model of corporate performance, *Academy of Management Review*, 4(4): 497-505.
- Chang, T. (2005), Is per capita real GDP stationary? Evidence from selected African countries based on more powerful nonlinear (logistic) unit root tests, *Economics Bulletin, AccessEcon*, 3(24): 1-9.
- Chang, T., Chang, H.L., Chu, H.P., Su, C. W. (2006), Is per capita real GDP stationary in African countries? Evidence from panel SURADF test, *Applied Economics Letters*, 13(15): 1003-1008.
- Chen, C.J., Yu, C.M.J. (2012), Managerial ownership, diversification, and firm performance: Evidence from an emerging market, *International Business Review*, 21(3): 518-534.
- Choi, I. (2001), Unit root tests for panel data, *Journal of international money and Finance*, 20(2): 249-272.
- Claessens, S., Yurtoglu, B.B. (2013), Corporate governance in emerging markets: A survey, *Emerging Markets Review*, 15:1-33.
- Donatiello, N., Larcker, D.F., Tayan, B. (2016), CEO pay, performance, and value sharing, *Stanford Closer Look Series: Topics, issues and controversies in corporate governance* no. CGRP-53, Corporate Governance Research Initiative, Rock Center for Corporate Governance.
- Douma, S., George, R., Kabir, R. (2006), Foreign and domestic ownership, business groups, and firm performance: Evidence from a large emerging market, *Strategic Management Journal*, 27(7): 637-657.
- Edomah, N., Foulds, C., Jones, A. (2016), Energy transitions in Nigeria: The evolution of energy infrastructure provision (1800-2015), *Energies*, 9(7): 484.
- Ehikioya, B.I. (2009), Corporate governance structure and firm performance in developing economies: Evidence from Nigeria. *Corporate Governance: The International Journal of Business in Society*, 9(3): 231-243.
- Evans, O., Alenoghena, R., (2015), Corruption effects on Nigeria: Aggregate and sectoral estimates using VAR, *Journal of Economic Financial Studies*, 3(02): 18-26.
- Evans, O., Kelikume, I. (2018), The effects of FDI, trade, aid, remittances and tourism on welfare under terrorism and militancy, *International Journal of Management, Economics and Social Sciences* (in press).
- Firer, S., Williams, S. (2003), Intellectual capital and traditional measures of corporate performance, *Journal of Intellectual Capital*, 4(3): 348-360.
- Fleissig, A.R., Strauss, J. (1999), Is OECD real per capita GDP trend or difference stationary? Evidence from panel unit root tests, *Journal of Macroeconomics*, 21(4): 673-690.
- Gök, O., Peker, S. (2017), Understanding the links among innovation performance, market performance and financial performance, *Review of Managerial Science*, 11(3): 605-631.
- Grewatsch, S., Kleindienst, I. (2017), When does it pay to be good? Moderators and mediators in the corporate sustainability–corporate financial performance relationship: A critical review, *Journal of Business Ethics*, 145(2): 383-416.
- Hanousek, J., Kocenda, E., Shamshur, A. (2015), DP10500 corporate efficiency in Europe, CEPR Discussion Paper No. DP10500, available at: <https://ssrn.com/abstract=2588412> (accessed 27 July 2018).
- Hasanov, M. (2009), Is South Korea's stock market efficient? Evidence from a nonlinear unit root test, *Applied Economics Letters*, 16(2): 163-167.

- Healy, P.M., Palepu, K. G., Ruback, R. S. (1992), Does corporate performance improve after mergers?. *Journal of Financial Economics*, 31(2): 135-175.
- Holtbrügge, D., Baron, A. (2013), Market entry strategies in emerging markets: An institutional study in the BRIC countries, *Thunderbird International Business Review*, 55(3): 237-252.
- Hope, K.R. (2017), Corruption in Nigeria, in: *Corruption and governance in Africa* (pp. 125-162), Cham: Palgrave Macmillan.
- Im, K.S., Pesaran, M. H., Shin, Y. (2003), Testing for unit roots in heterogeneous panels, *Journal of Econometrics*, 115(1): 53-74.
- Kalluru, S. Bhat, K. (2009), Determinants of cost efficiency of commercial banks in India, *ICFAI Journal of Bank Management*, 8(2): 32-50.
- Kang, J.K., Shivdasani, A. (1995), Firm performance, corporate governance, and top executive turnover in Japan, *Journal of Financial Economics*, 38(1): 29-58.
- Kelikume, I., Evans, O. (2015), Inflation targeting as a possible monetary framework for Nigeria, *The International Journal of Business and Finance Research*, 9(5): 71-81.
- Kilic, K., Ulusoy, G., Gunday, G., Alpkan, L. (2015), Innovativeness, operations priorities and corporate performance: An analysis based on a taxonomy of innovativeness, *Journal of Engineering and Technology Management*, 35: 115-133.
- Klapper, L.F., Love, I. (2004), Corporate governance, investor protection, and performance in emerging markets, *Journal of Corporate Finance*, 10(5): 703-728.
- KPMG (2012) Nigeria Country Profile, KPMG Services Proprietary Limited.
- Lee, C.C., Lee, J.D., Lee, C.C. (2010), Stock prices and the efficient market hypothesis: Evidence from a panel stationary test with structural breaks, *Japan and the World Economy*, 22(1): 49-58.
- Levin, A., Lin, C.F., Chu, C.S.J. (2002), Unit root tests in panel data: Asymptotic and finite-sample properties, *Journal of Econometrics*, 108(1): 1-24.
- Levy, M. (2018), Change management serving knowledge management and organizational development: Reflections and review, in: N. Baporikar (Ed.), *Global practices in knowledge management for societal and organizational development* (pp. 256-270), IGI Global.
- Lewin, K. (1930), Der Übergang von der aristotelischen zur galileischen Denkweise in Biologie und Psychologie, *Erkenntnis*, 1(1): 421-466.
- Maddala, G.S., Wu, S. (1999), A comparative study of unit root tests with panel data and a new simple test, *Oxford Bulletin of Economics and statistics*, 61(S1): 631-652.
- Mark, J., Nwaiwu, J. N. (2015), Impact of political environment on business performance of multinational companies in Nigeria, *African Research Review*, 9(3): 1-10.
- Nagel, R. (2016), Human resources strategy and change: Essentials of organizational development 73, *Handbook of Human Resources Management*, 1263.
- Narayan, P.K., Smyth, R. (2004), Is South Korea's stock market efficient?. *Applied Economics Letters*, 11(11): 707-710.
- Ngwakwe, C.C. (2009), Environmental responsibility and firm performance: Evidence from Nigeria, *International Journal of Humanities and Social Sciences*, 3(2): 97-103.
- Nnam, M.U., Arua, M. C., Otu, M. S. (2018), The use of women and children in suicide bombing by the Boko Haram terrorist Group in Nigeria, *Aggression and Violent Behavior*, 42: 35-42.
- Nwaogwugwu, I., Evans, O. (2016), A sectoral analysis of fiscal and monetary actions in Nigeria, *The Journal of Developing Areas*, 50(4): 211-230.
- Okuda, H., Aiba, D. (2016), Determinants of operational efficiency and total factor productivity change of major Cambodian financial institutions: A data envelopment analysis during 2006–13, *Emerging Markets Finance and Trade*, 52(6): 1455-1471.

- Oladimeji, O., Aina, O. O. (2018), Financial performance of locally owned construction firms in southwestern Nigeria, *Journal of Financial Management of Property and Construction*, 23(1): 112-128.
- Oriola, T.B. (2016), *Criminal resistance?: The politics of kidnapping oil workers*, New York: Routledge.
- Ozdemir, Z.A. (2008), Efficient market hypothesis: Evidence from a small open-economy, *Applied Economics*, 40(5): 633-641.
- Paul, A., Friday, O., Godwin, O. (2011), Board composition and corporate performance: An analysis of evidence from Nigeria, *Management*, 2(4): 64-73.
- Pierce, S. (2016), *Moral economies of corruption. State formation and political culture in Nigeria*, Durham: Duke University Press.
- Pineda, P.J.G., Liou, J.J., Hsu, C.C., Chuang, Y.C. (2018), An integrated MCDM model for improving airline operational and financial performance, *Journal of Air Transport Management*, 68: 103-117.
- Prajogo, D., Toy, J., Bhattacharya, A., Oke, A., Cheng, T.C.E. (2018), The relationships between information management, process management and operational performance: Internal and external contexts, *International Journal of Production Economics*, 199: 95-103.
- Quader, S. (2013), *Corporate efficiency, financial constraints and the role of the internal finance: A study of capital market imperfection* (Doctoral dissertation), University of Sheffield.
- Radulovich, L., Javalgi, R.R.G., Scherer, R.F. (2018), Intangible resources influencing the international performance of professional service SMEs in an emerging market: Evidence from India, *International Marketing Review*, 35(1): 113-135.
- Ramanathan, R. (2018), Understanding complexity: The curvilinear relationship between environmental performance and firm performance, *Journal of Business Ethics*, 149(2): 383-393.
- Sanda, A., Mikailu, A.S., Garba, T. (2005), Corporate governance mechanisms and firm financial performance in Nigeria (Vol. 149), Nairobi: African Economic Research Consortium.
- Saranga, H., Nagpal, R. (2016), Drivers of operational efficiency and its impact on market performance in the Indian Airline industry, *Journal of Air Transport Management*, 53: 165-176.
- Sheth, J.N. (2011), Impact of emerging markets on marketing: Rethinking existing perspectives and practices, *Journal of Marketing*, 75(4): 166-182.
- Siebeck, M.R. (2014), *Bridging troubled waters: Linking corporate efficiency and political legitimacy through a discourse theory of the firm*, Ohio State Law Journal, 75(1); U Denver Legal Studies Research Paper No. 14-53.
- Smither, R., Houston, J., McIntire, S. (2016), *Organization development: Strategies for changing environments*, New York: Routledge.
- Sufian, F. (2007), The efficiency of Islamic banking industry: A non-parametric analysis with non-discretionary input variable, *Islamic Economic Studies*, 14: 54-87.
- The Economist (2014), Nigeria: Africa's new number one, Apr 12th 2014, available at: <http://www.economist.com/news/leaders/21600685-nigerias-suddenly-super-sized-economy-indeed-wonder-so-are-its-still-huge?frsc=dg|a>. (accessed 20 November 2015).
- Tiwari, A., Shahbaz, M., Shabbir, M.S. (2011), Is per capita GDP non-linear stationary in SAARC countries?, *European Economic Letters*, 1(1): 1-5.
- Uadiale, O. M. (2010), The impact of board structure on corporate financial performance in Nigeria, *International Journal of Business and Management*, 5(10): 155.
- Werner, K. Moormann, J. (2009), Efficiency and profitability of European banks – how important is operational efficiency? Frankfurt School Working Paper Series.
- World Economic Forum on Africa (2014), *Africa by numbers: A focus on Nigeria*, Special Report of World Economic Forum on Africa.

- Worthington, A.C., Higgs, H. (2004), Random walks and market efficiency in European equity markets, *Global Journal of Finance and Economics*, 1(1): 59-78.
- Ying, Z., Dong, C.R., Chang, H.L., Su, C.W. (2014), Are Real GDP levels stationary in African countries?. *South African Journal of Economics*, 82(3): 392-401.
- Zadeh, L.K., Ghahremani, M. (2016), Factors affecting organizational development (case study: Welfare office of East Azerbaijan province), *Human Resource Management*, 3(5): 46-51.

Olaniyi Evans is a faculty member at Pan Atlantic University, Lagos, Nigeria. His research interests lie in public policy, economic modelling, financial inclusion, digital economy and dynamic stochastic general equilibrium (DSGE) modelling from an African economic perspective. His research has been published in leading journals including the *Journal of Developing Areas*, *Business Economics*, *Journal of Economic Studies*, *Digital Policy, Regulation and Governance*, *Tourism Economics*, among many others. He is an award-winning author whose works include "How to Get a First-Class Degree", "The Art of Research" and "iMathematics". He received his BSc (first-class) and MSc (distinctions) degrees in Economics from the University of Lagos where he is currently a PhD candidate.