"Governance cost and financial service efficiency in Nigeria"

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GOVERNANCE COST AND FINANCIAL SERVICE EFFICIENCY IN NIGERIA

Abstract

This study explored the influence of the governance cost on financial service efficiency in Nigeria. The recurrent collapse of reputable companies and banks due to agency problems have motivated this investigation. The study empirically sampled 40 financial service firms from the 50 firms registered on the stock market. The study adopted an ex-post-facto research design. Data was collected using secondary sources from the firms' annual reports to determine the influence the governance cost has on Nigeria's financial service efficiency for nine years (2012–2020). Also, the study utilized the Panel Tobit regression to test the hypothesis. The Principal Component Analysis (PCA) was used to ascertain the aggregate governance cost, and the proxies were directors' fees, auditors' fees, CEO compensation, and chairman fee. At the same time, financial service analysis was derived using the Input-oriented Data Envelopment Analysis (DEA) technique under the constant return to scale (CRS) assumption. Consequently, findings from the study show a significant and positive influence of governance costs on the efficiency of financial services. The study, therefore, concludes that the current governance cost of the sampled firms drives efficiency within the sampled firms, and increasing the governance cost, based on the reviews on corporate governance structures, will not harm the efficiency of financial services. However, the consistent increase over time will harm efficiency. Thus, the study recommends an internal balance on the pay structure within the financial services.

Keywords	corporate governance, performance efficiency, governance cost, efficiency frontiers, data envelopment analysis
JEL Classification	G30, G21, G38

INTRODUCTION

The utmost objective of any establishment is to create value, make a profit, harmonize, and efficiently satisfy various vital stakeholders' needs in a sustainable manner (Katsela & Browne, 2019). Most business establishments that operate on a large scale are owned collectively by shareholders and governed by the board of directors. The successful interaction between both parties will help reduce agency problems to the barest minimum while achieving an excellent corporate financial performance (Companies and Allied Matters Act CAP C20 LFN, 2020). However, the 2008 financial crisis that struck the American financial system had a multiplier effect and significant impact, resulting in a worldwide recession. These issues crippled the nation's economies; millions lost jobs and money, and various financial sectors were bankrupted. Furthermore, Handorf (2019) argued that the financial crisis was triggered by failed and weak corporate governance, which bolsters corporate governance's role in business stability across the globe with attention to the financial services system.

Hence, every sector needs to ensure a good governance structure that will help adapt to this peculiar era. Furthermore, good corporate governance and well-functioning capital markets are always important,

but perhaps even more critical now, both to support the recovery from the COVID-19 crisis and to further strengthen resilience to possible future shocks (OECD Corporate Governance Factbook, 2021). It is imperative to investigate and address the governance cost amidst financial service firms in the quest to efficiently maximize scarce resources, particularly in a sensitive era plagued by the repeated economic recession in the Nigerian economy and the global COVID-19 pandemic (Patel et al., 2018). Previous studies have considered the nexus between corporate governance and firm performance. Kaur (2018), Lei et al. (2019), Mukherjee et al. (2019), and Ntim, Lindop, et al. (2017) thought that corporate governance variables improve firm performance.

However, other scholars opined that corporate governance mechanisms negatively affect performance (Gennaro & Nietlispach, 2021; Aslam et al., 2019; Lei et al., 2019). The differences in countries, firms, econometrics techniques, and time frame could be responsible for the inconsistent findings. Furthermore, prior empirical works made use of traditional measures of performance. These conventional measures depict book-based and market-based performance. They used financial ratios such as Tobin's Q, return on assets (ROA), and return on equity (ROE). However, using these traditional measures has recently attracted broad criticisms by Afrifa and Adesina (2018) and Zoghlami (2021), respectively. Frontier efficiency methods will be an alternative approach to assessing financial sector performance, given the advances in econometric and mathematical programming techniques.

This study undertakes an in-depth analysis by introducing the corporate life cycle concept in examining governance cost on the sampled financial service efficiency. Management will likely influence governance costs, noting the firm life cycle. However, despite this mixed evidence in the empirical literature, the link between the cost of governance and firm efficiency has insufficient proof within a developing economy like Nigeria. Therefore, this study aims to fill this research gap.

1. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

This study investigates the impact of governance costs on financial service efficiency in Nigeria. Governance cost is a term that connotes the aggregate compensation and remuneration packages of top-level management such as the Chief Executive Officer (CEO) Compensation, Directors' Compensation, Chairman's and Auditors' Compensation, respectively. Consequently, the Chief Executive Officer (CEO) is the most advanced position in an organization nominated by the board of directors. The CEO is needed in every company to run the organization's daily activities. They serve as the intermediary between the board of directors and corporate management. Top executives believe that top executives receive excessive pay in previous years, and CEO compensation has gotten the populace's attention. It has become one of the issues focused on corporate governance (Ismail et al., 2014).

Prior studies on corporate governance were published to regulate the separation of management from the ownership of publicly quoted companies. However, many of these studies have concentrated on regulatory policies and the compliance status of companies such as Jizi and Nehme (2018), Zoghlami (2021), and Nguyen and Vo (2020). For instance, Zoghlami (2021) investigated the influence of the Chief Executive Officer (CEO) compensation on firm performance from a sample of 155 listed French companies. The major limitation of this study was the use of a single governance variable, the chief executive officer's compensation, and the performance measure explored the traditional measure of performance. In contrast, studies on the cost implication of corporate governance on financial service efficiency are scanty in the literature.

Furthermore, empirically evaluating the cost of governance by considering expenses incurred in complying with corporate governance codes represents a more appropriate unit of measurement with corporate performance variables than the stand-

ard corporate governance variables. Consequently, Jizi and Nehme (2018) and Chen and Keefe (2020) measured financial performance using the traditional approach of computing market-based ratios that do not reflect an efficient frontier. This study evaluates performance efficiency by applying a linear programming approach, employing the Data Envelopment Analysis by exploring salient input and output decision-making units as explored in the work of Alhassan and Boakye (2020).

Consequently, other gaps identified in the empirical review of literature include geographic variances, a short period of study, lack of consideration for other stimulating factors in the regression analysis, as evident in Aslam et al. (2019), Bhuyan et al. (2020) and Rasoava (2019), respectively. Consequently, the Principal Component Analysis (PCA) method applied in this study helps control multicollinearity amidst the constructs that seem absent in the works of Ali et al. (2020) and Bhuyan et al. (2020). The outcome of these works appears inconsistent, and this work will pay attention to these inconsistencies. This study further investigates financial service efficiency across the corporate life cycle, which prior studies did not explore.

Several theories motivate the interaction between corporate governance and firm's performance. This study opined that diverse stakeholder depends on the successful operations of the financial institution (Kakanda et al., 2017). The study recognizes the presence of the stakeholder theory underpinning this study. The idea connects the interaction between an organization and its environment. It is widely discussed amidst academia, especially from the management and governance perspectives. This theory is a bedrock for building business strategies (Farouk et al., 2019). The most identified claim of this theory is that any organization's success rests on the firm's ability to establish a symbiotic relationship with diverse stakeholders. This drive ultimately opposes the conventional view that strives for the success of any business in tandem with shareholders' wealth maximization only (Ntim, Soobaroyen, et al., 2017). This modality or thought was short-lived due to the industrial revolution, which transcended technological advancement and increased business complexity and interconnectivity with diverse investors (Hope & Kemebradikemor, 2019).

Furthermore, Harrison et al. (2015) identified a stakeholder as an individual or group influential in acts and deeds capable of altering organizational goals. This implies that aside from the provider of funds (shareholders), other agents and participants could influence the companies' actions and decisions. Similarly, Ofoegbu et al. (2018) opined that stakeholders are salient in achieving a sustainable business, and corporate managers must ensure that business strategies capture their expectations.

Furthermore, Zoghlami (2021) investigated the impact of the CEO's compensation on firm performance in French companies. Findings from the study depict that CEO compensation improved accounting-based performance but harmed the stock market value. Furthermore, the outcome had a good picture of administrative objectives. Still, investors do not appreciate a hike in compensation, and this reaction resonates with the agency theory that investors are frightened by executives' opportunist behaviors. Similarly, Bhuyan et al. (2020) and Rasoava (2019) explored the association between executive pay and firm performance, and the outcomes depict a favorable interaction. Similarly, Cui et al. (2021) investigated the sensitivity of executive compensation to firm performance in China, and the outcome depicts a positive association.

Consequently, Goh and Gupta (2016) and Uwuigbe et al. (2018) argue that remuneration can request directors' efforts, reward productivity, and ensure that the shareholders' parts comply. His findings reflect a connection between the director's salary and performance using shareholder return as its criterion. Furthermore, compensation is a means to structure the interest gap between shareholders and directors. Waliuddin et al. (2018) attested that director's remuneration improved performance, with a conclusion drawn that those organizations that pay better will perform better. Furthermore, Page (2018) examined a sample of UK firms and discovered a positive relationship between directors' remuneration and firm performance.

Hammami et al. (2020) examine the role of an auditor's salary perception on audit quality and delay. The findings contribute to a greater understanding of the audit employee-level factors that influence audit work outcomes. Furthermore, Olowookere

and Oladejo (2014) investigated the influence of remuneration and tenure on auditors' independence in Nigeria. The results show that pay was keen on the longevity and consistent audit quality. In the same vein, Moutinho et al. (2012) explored audit fees and performance and found that decreased audit fees will boost operational efficiency. This finding corroborates with the recent claims of Oladejo et al. (2020), reflecting the roles regulatory bodies play in the external audit qualities.

The following hypothesis stated in null form is tested using Tobit regression in section 4 of this study.

H_0:   *Governance cost has no significant influence on financial sector efficiency in Nigeria.*

2. MATERIALS AND METHODS

An ex-post-facto research design was adopted to examine the influence the governance cost has on the sampled financial services efficiency. This approach helps establish a causal effect among constructs, as in Umukoro et al. (2020). This study engaged a dynamic Panel Tobit regression because the performance efficiency scores range between 0 and 1. Forty (40) financial service firms were sampled from a total of fifty (50) spanning nine years (2012–2020). The sample was derived in line with the assumption of Roscoe et al. (1975). They proposed that a sample size greater than 30 and less than 500 was acceptable and that a minimum sample size of 40 is deemed sufficient for each group when samples are into subsamples. His postulation places a seal on the sample choice appropriateness.

Furthermore, this sector is any nation's financial hub, providing stability and fostering economic development in its countries. The entire population will not be considered because specific firms have inconsistent data within the study period. Secondly, these sub-sectors operate differently, which is a determining factor for sampling to ensure an appropriate selection mix of the sub-sectors. The choice for exploring 2012 as the base year was motivated by the time

listed companies in Nigeria fully embraced the International Financial Reporting Standards (IFRS).

2.1. Dependent variables (performance efficiency scores)

Performance efficiency reflects the dependent variable in this study. The objective of the efficiency analysis was to identify the best-performing decision-making units (DMUs). This study employs the Input-oriented Data Envelopment Analysis (DEA) technique under the constant return to scale (CRS) assumption. The input variables were a company's total assets, total equity, and total deposit accounted for annually, as evident in Achim et al. (2021) and Alhassan and Biekpe (2016), who opined that the financial service firm made use of these consistent construct. Whereas the output variables were net income, gross income, profit after tax, and loans and advances. DEA is preferred over stochastic frontier analysis because of its simplicity and flexibility (Bhatia & Tripathy, 2018). DEA is a linear programming-based technique employed for assessing the relative performance of a set of firms against the best-observed firm. A firm with a score of 1 is the most efficient, while a firm below 1 is inefficient. The study corroborates the work of Boakye (2018), as cited in Alhassan and Boakye (2020).

2.2. Independent variable (governance cost)

This study used several variables as proxies for governance cost on efficiency. Governance cost is a term that connotes the aggregate compensation and remuneration packages of top-level management such as the Chief Executive Officers' (CEO) Compensation, Directors' Compensation, Chairman and Auditors' Compensation as disclosed in the annual reports of the financial service under study. The study will use the total monetary packages disbursed to the top-level managers as expressed in the footnotes of the company's financial reports titled "Related party transaction." It is calculated by ascertaining the sum of their salaries, cash bonuses, benefits, and allowances, as evident in the work of Amore and Failla (2020) and Chan et al. (2020), respectively.

Table 1. Measurement for governance costs and performance efficiency

Variable	Item (Proxies)	Acronyms	Measurement
Explained	Performance Efficiency	PE	They are measured using Data Envelopment Analysis on three inputs (Total Assets, Total Equity, and Total Deposit) and Three outputs (Net Income, Gross earnings, loans, and advances)
Explanatory	Governance Cost	GC	Using the Principal Component Analysis
	CEO Compensation	CC	The compensation of the highest director
	Director Remuneration	DR	The total package of directors
	Chairman Pay	CP	The benefits and salary of the chairman annually
	Auditor Remuneration	AR	The annual benefits of audit services annually

2.3. Model specification

The developed econometric models help to explore the influence of the governance cost on financial service efficiency. This study adopts Alhassan and Biekpe's (2016) empirical model and Boakye (2018), respectively.

The model is firstly expressed in its implicit form:

$$y_{it} = \beta_0 + \beta_1 X_{it} + \varepsilon_{i,t}, \qquad (1)$$

where y_{it} is the dependent variable, X_{it} is the explanatory variable, and ε_{it} is the error term. Furthermore, the model is expressed in explicit form as follows:

Model 1

$$PE_{i,t} = \beta_0 + \beta_1 GC_{i,t} + \sum_{h=1}^{3} \delta_h W_{h,i,t-\tau} + \varepsilon_{i,t}, \qquad (2)$$

Model 2

$$PE_{i,t} = \beta_0 + \beta_1 GC_{i,t} + \beta_2 FC_{i,t} +$$
$$+\beta_3 GC_{i,t} \cdot FC_{i,t} + \sum_{h=1}^{3} \delta_h W_{h,i,t-\tau} + \varepsilon_{i,t}, \qquad (3)$$

where $PE_{i,t}$ = performance efficiency; $FC_{i,t}$ = Firm life cycle; $GC_{i,t}$ = Governance cost, and $GC_{i,t} \cdot FC_{i,t}$ = interaction variables. W is the vector of control variables (Market leverage, Firm age, and firm size); ε_{it} = Error term; t = year and i = firm.

3. RESULTS AND DISCUSSIONS

Table 2 represents the descriptive statistics dataset for the banking sector. The datasets are reported in billions of naira, indicating that the banks' average total assets (TASS) for the study period was N2,360 billion, with a maximum value of N8,680. The standard deviation value of 2010.0 is lower than the mean value, suggesting that the existing asset base for most banks lay around the mean value over the analysis period. The average deposit (TDEP) was N1,390 billion, with a standard deviation of 1420, slightly more significant than the mean value. This suggests that banks' deposit base is essentially more dispersed than the asset base. These factors (TASS and TDEP) are input variables of the efficiency analysis. The descriptive statistics indicate that their distributions are similar regarding the second and third moments. Given the output factors, Table 1 shows that gross earnings were N250 billion on average over the period, while average net interest income (NII) and total loans and advances (TLA) were N114 billion and N1030 billion, respectively. This shows that the banks received more deposits than advanced loans. This strategy is expected given the structure of regulations in the banking sector. It also shows that the share of interest income in gross earnings is less than 50 percent on average, suggesting that banks earn from other non-interest activities aside from interests on loans. This indicates the performance of traditional functions by banks in recent times. The banks are moving away from conventional fund activity intermediation to other modern aspects that have boosted the share of their non-interest income in recent periods. This is an exciting aspect and may portend significant implications for efficiency among the banks. The respective standard deviations for each input factor (GRE, NII, TLA) are significantly less than the mean values. This shows the level of similarity or stability output factors have among banks over the years.

Table 2. Descriptive statistics for banks

Variable	Mean	Median	Max.	Min.	SD	Skew	Kurt.	J−B	Prob.
TASS	2360.0	1670.0	8680.0	94.45	2010.0	1.25	3.93	32.03	0.00
TDEP	1390.0	806.0	6550.0	1.78	1420.0	1.58	5.06	64.21	0.00
GRE	250.0	181.0	765.0	30.72	183.0	1.03	3.16	19.23	0.00
NII	114.0	72.6	332.0	11.77	89.48	0.82	2.28	14.55	0.00
TLA	1030.0	743.0	3610.0	8.96	852.00	0.99	3.03	17.56	0.00
GOV_COST	1030.0	722.0	4070.0	1.08	1060.00	1.23	3.47	28.38	0.00
LEV	0.768	0.861	2.547	0.001	0.395	0.642	9.928	223.42	0.00
SIZE	9.203	9.222	9.939	7.975	0.414	−0.392	2.765	3.01	0.22
FAGE	48.25	32	126	1	33.035	0.972	2.960	17.02	0.00

Descriptive statistics for the variables of insurance companies are presented in Table 3. The companies' average total equity (TEQ) is N8,830 billion, with a corresponding standard deviation of 9710. The enormous standard deviation value suggests that the equity among the firms is not well spread. The positive skewness value of 1.51 indicates that much of the equity value for the insurance companies lie to the left of the reported mean value. Essentially, this suggests that many of the insurance companies in the sample have (TEQ) values that are much less than the mean value. Apparently, strong outliers to the right of the distribution influence the average outcome. Total asset (TASS) with a mean of 388.0 also has similar characteristics to TEQ. The skewness value shows strong positive outliers in the data set that have steadily over-inflated the mean value. Given that the two input variables (TEQ and TASS) exhibit similar characteristics in the second and third moments, there is confidence that the efficiency outcomes will be stable.

The summary of the distributions of data for variables on the investment companies is evident in Table 4. The input variables are total equity (TEQ) and total assets (TASS). The average total equity among the seven companies is N2,390 billion, with a slightly higher standard deviation of 2800.

The skewness value is sufficiently close to zero to indicate that the equity for the different companies in the sample is well spread around the mean value. The total asset also has similar characteristics, with a mean value of N3,730 billion and a standard deviation value of 4750. Again, both variables have identical features that will facilitate the estimation of the efficiency values.

Similarly, the output variables of gross earnings (GRE) and profit after tax (PAT) have similar characteristics in higher moment conditions. Average gross earnings are N391 billion, while average profit after tax is positive at N132 billion. The average governance cost for the investment companies is very high at N3,250, representing a vast proportion of the gross earnings. Along with the outcome from the banking sector data, there is evidence that firms in the financial services sector tend to incur colossal governance costs, especially when compared to earnings among the companies.

In Table 5, Analysis of Efficiency, the results of the efficiency estimations for the companies in the sample are presented and analyzed. The Data Envelopment Analysis (DEA) framework was adopted for the analysis, and the results show the efficiency levels of companies. The analysis was

Table 3. Descriptive statistics for Insurance firms

Variable	Mean	Median	Max.	Min.	SD	Skew	Kurt.	J−B	Prob.
TEQ	8830.0	7450.0	57500.0	−11900	9710.0	1.51	7.69	229.1	0
TASS	388.0	18.6	11300.0	1.71	1720.0	4.80	25.40	4381.1	0
GPREM	267.0	5.8	8390.0	0.20	1220.0	4.80	25.46	4398.0	0
NPREM	161.0	4.3	4720.0	0.05	728.0	4.72	24.35	4016.6	0
UPL	57.2	1.1	1750.0	−36.27	266.0	4.73	24.47	4059.6	0
GOV_COST	1.95	0.17	43.58	0.00	7.85	4.44	21.09	2995.5	0
LEV	0.74	0.59	5.38	0.00	0.73	3.91	20.29	2656.4	0
LOGFIZE	7.36	7.27	10.05	6.23	0.66	2.40	10.33	565.0	0
FAGE	37.32	33.00	98.00	6.00	18.26	1.23	5.05	75.7	0

Table 4. Descriptive statistics for investment companies

Variable	Mean	Median	Max.	Min.	SD	Skew	Kurt.	J–B	Prob.
TEQ	2390.0	10.55	6440.0	−3.44	2800.0	0.36	1.21	6.36	0.04
TASS	3730.0	65.76	13300.0	0.38	4570.0	0.65	1.89	4.98	0.08
GRE	391.0	8.92	1380.0	0	499.0	0.74	1.96	5.63	0.06
PAT	132.0	4.34	517.0	−4.30	170.0	0.87	2.37	5.80	0.05
GOV_COST	3250.0	0.11	21500.0	0	6520.0	1.64	4.03	20.23	0.00
LEV	1.460	0.495	8.88	0	2.30	2.16	6.37	51.21	0.00
SIZE	8.220	7.818	10.13	5.58	1.63	−0.18	1.56	3.77	0.15
FAGE	19.195	19	29	10	5.72	0.18	1.78	2.77	0.25

performed for each group of companies in the study – insurance firms, banks, and investment companies. It should be noted that the input-oriented efficiency scores are estimated with the Constant Returns to Scale (CRS) assumption. It is important to note that input-oriented efficiency measures address the question: "By how much can input quantities be proportionally reduced without altering the output quantities produced?" The scores of the CRS are taken in this study as the Technical Efficiency scores for the companies.

Table 5 reports the summary of the efficiency scores for all three sectors in this study to highlight the differences in the efficiency scores for investment companies and banks are, on average, higher than those of insurance companies. There could be different explanations for this outcome, although the level of development of the financial markets can play a significant role in this case. However, the distance between the overall sector efficiency and those of the inefficient firms is enormous for investment companies. The median score for banks is very high at 0.854 compared to the mean value of 0.774. This suggests that many banks are more efficient than the mean value indicates. In general, the banking sector appears to have an enormous mass of efficient banks than any of the sub-sectors in the analysis.

In Table 6, Analysis of Efficiencies (Annual Estimates), annual values of the efficiency scores for the three sectors are analyzed. Table 6 shows the number of efficient companies used in the analysis. For the insurance sector, there were four efficient companies in 2016 and 2019, while there was only one efficient company in three years. There is slight evidence that the benchmark or reference efficiency companies have improved over the years. There was no efficient bank in 2020, while three of the banks were efficient in only two years (2012 and 2014). In general, the reference banks in terms of efficiency appeared to have improved till 2017, but this has dropped since 2018. There was also no reference investment company in 2014, though the number of efficient investment companies appears to have improved.

Table 6. Number of efficient companies per year

Year	Insurance	Banks	Investment companies
2012	2 (9.5%)	3 (25%)	1 (16.7%)
2013	1 (4.2%)	1(8.3%)	2 (33.4%)
2014	1 (4.2%)	3(25%)	0
2015	1 (4.2%)	2 (16.7%)	1(16.7%)
2016	4 (19.0%)	2(16.7%)	3 (50%)
2017	2 (9.5%)	2(16.7%)	2(33.4%)
2018	3 (6.7%)	1(8.3%)	2(33.4%)
2019	4 (19.0%)	1(8.3%)	2(33.4%)
2020	–	0	2(33.4%)

Table 5. Descriptive statistics for the technical efficiency scores

Parameter	Insurance firms		Banks		Investment companies	
	All	Inefficient	All	Inefficient	All	Inefficient
OTE	0.515	0.464	0.811	0.774	0.868	0.231
SD	0.213	0.147	0.218	0.221	0.309	0.347
Minimum	0.118	0.118	0.380	0.380	0.168	0.015
Q1	0.236	0.236	0.739	0.739	0.967	
Median	0.522	0.520	0.910	0.854	0.985	0.043
Q3	0.688	0.522	0.926	0.926	1	
Max	–	0.693	–	0.989	–	0.832
Inefficiency	0.579	0.536	0.185	0.226	0.131	
N	21	19	12	10	7	4

Table 7. Tobit results for aggregate datasets

Theta	Coef.	t	P>t	Coef.	T	P>t	Coef.	t	P>t	Coef.	t	P>t
GCOST*FLC	−0.42	−2.17	0.03							0.016	5.29	0.00
GOV_COST	0.422	2.17	0.03				0.016	5.2	0.00			
FAGE				0.001	0.93	0.35	0.001	1.42	0.16	0.001	1.92	0.06
LEV				0.098	5.21	0.00	0.088	4.9	0.00	0.008	0.33	0.74
SIZE				−0.032	−2.18	0.03	−0.073	−4.61	0.00	−0.072	−4.72	0.00
_CONS	0.212	14.83	0.00	0.394	3.21	0.00	0.700	5.45	0.00	0.731	5.83	0.00
LR−Chi² (prob)	0.000			0.000			0.000			0.000		

Note: * and ** indicate significance at the 5 and 1 percent levels, respectively.

Table 7, Regression Analysis of Governance Cost and Efficiency, analyzes the estimated regression models that seek to explain how governance cost influences financial service efficiency for the financial sector in Nigeria using aggregate data from the insurance, banking, and investment firms. As the traditional case follows efficiency estimates, the estimation procedure follows a truncated or censored distribution framework using the Tobit estimation technique. As stated in the previous chapter, the application of Tobit ensures that any value in the datasets that exceed the efficiency level (of one) can be sufficiently accounted for. This means that the application of Tobit provides that any value in the datasets that exceed the efficiency level (of one) can be adequately accounted for.

Furthermore, to improve the robustness of the estimates from the Tobit regression, the study will estimate constructs using the Feasible Generalized Least Squares (FGLS) forecasts that account for heteroskedasticity arising from the estimated dependent variables (Adegboye, 2020). It evaluates whether the estimated coefficients are robust to different estimation procedures. In both cases, the estimations are performed for the combined critical variables (governance cost and firm life cycle), evident in the first column of the result tables. Then a stepwise procedure is adopted by including one critical variable and the control variables. The results are noticeable in the second to the fourth panels of Table 8.

3.1. Discussion of findings

For Hypothesis One, the Tobit result in Table 7 is employed by focusing on the coefficient of the GOV_COST coefficient. In the result, the coefficient is 0.422, while the t-value is 2.17 (p < 0.05). The p-value associated with the t-ratio of the coefficient is less than 0.05, indicating that the coefficient passes the significance test at the 5 percent level. Therefore, the null is rejected, implying that the governance cost exerts significant influences on financial sector efficiency in Nigeria. The coefficient of the variable is positive, and it can therefore be demonstrated that the governance cost has a significant positive impact on the efficiency of the financial sector in Nigeria. This is the general or aggregate outcome of the study, which indicates that, overall, governance cost has a significant and enhancing impact on financial sector efficiency. Therefore, the result shows that governance costs among financial services companies in Nigeria generally tend to enhance efficiency among the companies. Rising governance costs are useful for improving the efficiency of the companies. Essentially, there is evidence that governance costs

Table 8. FGLS results for aggregate datasets

Variable	Coeff.	t-Stat.	Prob.	Coeff.	t-Stat.	Prob.	Coeff.	t-Stat.	Prob.	Coeff.	t-Stat.	Prob.
GCOST*FLC	−0.411	−1.42	0.16							0.019	3.74	0.00
GOV_COST	0.412	1.42	0.16				0.020	3.71	0.00			
FAGE				0.012	1.90	0.06	0.018	3.02	0.00	0.020	3.44	0.00
LEV				0.117	7.71	0.00	0.124	8.26	0.00	0.062	2.86	0.00
SIZE				0.013	3.97	0.00	0.010	2.93	0.00	0.013	3.85	0.00
Adj. R−sq	0.129			0.154			0.182			0.045		
Breusch−Pagan (F−stat − prob)	0.262			0.382			0.277			0.206		

Note: * and ** indicate significance at the 5 and 1 percent levels, respectively.

are efficiency-enhancing mechanisms among the financial companies in Nigeria. This indirectly shows that investing in governance capacity tends to enhance efficiency among financial services companies in Nigeria. These findings are in line with those of Aggarwal and Ghosh (2015), Ndlovu et al. (2017), Jizi and Nehme (2018) Amewu and Alagidede (2019), Abdalkrim (2019), Ali et al. (2020), and Zoghlami (2021).

Furthermore, this study undertakes a more in-depth analysis by introducing the corporate life cycle concept in examining the impact of the governance cost on the sampled financial service efficiency. In the result, the coefficient t is –0.421, with a p-value associated with the t-ratio at 0.03. The coefficient is, therefore, significant at the 5 percent level, and the null hypothesis is rejected. On this basis, it is confirmed that the governance cost across the firm life cycle has a significant negative impact on the efficiency of Nigeria's financial sector. This resonates with the findings of Afrifa and Adesina (2018) and (Ojeka et al. 2019), who demonstrated the existence of an optimum remuneration level for top executives, beyond which the effects of such cost on the firm become less than desirable. Thus, this study has indicated that continued and persistent increases in the cost of governance over the life cycle will eventually hurt efficiency in the financial firms in Nigeria.

CONCLUSION AND RECOMMENDATION

This paper investigated the influence of governance costs on financial service efficiency. Nevertheless, drawing from the hypothesis tested, the findings of this work show that the aggregated proxies for governance cost positively influenced a company's efficiency. This connotes that increasing governance costs among financial companies will improve their performance efficiency. On the other hand, sustained and persistent increases in government expenditures may inhibit efficiency among these companies; this is evident when governance cost interacts with the firm life cycle. There is, therefore, a need to device an internal policy within the organization to attain efficiency-enhancing levels in the pay structure and corporate governance among financial services companies in Nigeria. The study's empirical analysis results provide adequate grounds for suggesting relevant recommendations in different dimensions. First, the study has shown that the governance cost positively affects the efficiency of financial services companies in Nigeria, suggesting that increasing the size or quality of corporate governance will boost efficiency among the firms. Thus, it is recommended that financial services firms strive to improve the share of budgetary provisions for corporate governance since such expenditures will mean an increase in the knowledge base, which will enhance the efficient use of scarce resources. However, the study has shown that continued and persistent increases in the cost of governance over the life cycle will eventually hurt the efficiency of financial services firms in Nigeria.

FURTHER STUDIES

The study focused on the efficiency of financial service firms, which cuts across commercial banks, insurance firms, and investment firms. However, other studies could explore the impact of the governance cost on the efficiency of non-financial sectors. Therefore, future studies could explore the comparative interactions across industries to determine which sector has high governance costs and evaluate their performance accordingly.

AUTHOR CONTRIBUTIONS

Conceptualization: Emmanuel Ozordi, Damilola Eluyela.
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