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# CHIEF EXECUTIVE OFFICER ATTRIBUTES AND THE VALUE OF THE FIRM: DOES FIRM SIZE PLAY A MODERATING ROLE?

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## ABSTRACT

This study seeks to (1) assess the relationship between CEO attributes and firm value, and (2) ascertain the moderating role of firm size in the relationship between CEO attributes and firm value, using a panel research design. This study identifies CEO tenure, CEO turnover, and CEO ownership as CEO attributes, Tobin's Q as a measure of firm value, and the natural logarithm of total assets as a measure of firm size. Data were sourced from the database of Machameratios for the period 2010 to 2019 and analyzed using fixed and random effects regression and structural equation modeling. First, the fixed and random effect result revealed that CEO tenure, turnover, and ownership negatively affect the value of the firm; however, the relationship was only significant for CEO tenure and ownership. Second, the structural equation modeling result showed that while firm size does not play a significant moderating role in the relationship between CEO tenure and turnover and firm value, a significant moderating (negative) effect was found for CEO ownership. The study recommends that since CEO turnover and tenure do not matter to the value of the firm, there is a need to ensure that a CEO's term in office is not lengthened beyond what is required by tenure legislation, i.e., it should not exceed 4 years. In addition, for larger firms, CEO shareholding should be adequately managed to positively affect the value of the firm.

**Contribution/Originality:** This study contributes to knowledge by establishing that regardless of the size of the firm, prolonged CEO tenure and higher levels of CEO turnover and ownership could decrease the value of a firm. However, an increase in firm value can be more apparent as a result of the moderating role of firm size. While the study confirms that firm size plays a moderating role in the relationship between CEO attributes and firm value, the study also fills the gap in the literature on the moderating effect of firm size in the relationship between CEO attributes and firm value in Nigeria and also extends the data till 2019.

## 1. INTRODUCTION

In organizational settings, chief executive officers (CEOs) occupy the peak of the hierarchy and are typically responsible for furthering the operations of the firm, from the formulation of visions and goals to drafting the organizational policies and strategies needed for firm growth. Due to their attributes, CEOs tend to dominate the board and the operations of a firm. CEO attributes are considered to be influential, hence affecting the value and performance of a firm (Liu, Fisher, & Chen, 2018; Nguyen, Rahman, & Zhao, 2018; Rehmana et al., 2021).

Empirical evidence on the relationship between CEO attributes and firm value is intermittent and incomplete, with numerous studies addressing only certain parts of the enigma. Nonetheless, studies on CEO attributes and firm value have taken a prominent position and have inspired a robust interest within the accounting literature. Although numerous empirical studies support the influence of diverse CEO attributes on firm value, the signs and magnitudes of the relationship reported in previous studies have been conflicting.

Most extant studies have assessed the ownership, tenure, educational background, and experiences of CEOs and their impacts on firm value and performance in developed countries (Ghardallou, Borgi, & Alkhalifah, 2020; Limbach, Schmid, & Scholz, 2016; Page, 2018; Pham & Pham, 2020; Rehmana et al., 2021). However, there is a dearth of studies in this area in the Nigerian context, particularly studies that consider the role firm size plays in the relationship between CEO attributes and the value of non-finance firms listed on the Nigerian Stock Exchange. Thus, this study attempts to address this gap in the literature.

This paper employs three CEO attributes, namely CEO turnover, CEO tenure, and CEO ownership, while firm value and firm size are assessed using Tobin's Q and the natural logarithm of total assets, respectively. In light of the above, this paper assesses the relationship between CEO attributes and firm value, as well as the moderating role of firm size, in non-finance firms listed on the Nigerian Stock Exchange.

## 2. REVIEW OF RELATED LITERATURE

### 2.1. The Concept of CEO Attributes

In recent years, CEO attributes have become a lively topic of debate among management, researchers, and governments in both developed and developing nations due to the dominant role CEOs play on the board. There is a widely accepted notion that lengthy CEO tenure, well-managed CEO ownership, and turnover all affect firm value because of the skills and expertise CEOs contribute to the effective and efficient functioning of their organization (Emenyi, Akpan, & Okon, 2020).

CEO attributes refer to inherent traits that distinguish one CEO from another; in the view of Hambrick and Quigley (2014), traits are the skills, competencies, abilities, and requisite expertise needed to function effectively and efficiently within an organization. Prior studies have identified diverse CEO attributes that affect firms' outcomes, which include but are not limited to the CEO's educational background, professional experience and expertise, tenure, ownership, and turnover (Bhabra, 2007; Desai & Dharmapala, 2009; Ghardallou et al., 2020; Hai-Chin & Luu, 2014; Rehmana et al., 2021). In this paper, we address selected CEO attributes that are in line with the Nigerian context. Specifically, the study considers CEO ownership, CEO tenure, and CEO turnover. First, CEO ownership is considered a good measure of power, given that it contributes to the agent-principal relationship theory in the ownership of the firm (Onali, Galiakhmetova, Molyneux, & Torluccio, 2016; Wu, Quan, & Xu, 2011; Zhang, Tang, & Lin, 2016). The literature reports conflicting relationships between CEO ownership and firm value.

Second, CEO tenure is another attribute that has been considered a factor that affects the value of a firm. The extant literature suggests that CEO tenure insignificantly affects firm value and that the relationship can be either positive or negative. Peni (2014) argued that CEOs with longer tenure make more meaningful contributions to firm value than short-tenured CEOs. In contrast, Nguyen (2017); Serra, Tres, and Ferreira (2016); Tsai, Hung, Kuo, and Kuo (2006) contended that a longer CEO tenure does not contribute to firm value.

Third, CEO turnover is an attribute that has not been widely investigated so far; however, it refers to the process of changing a CEO with an incoming one due to the termination of the appointment, retirement, resignation, inter-agency transfer, or mortality (Gayle, Golan, & Miller, 2015; Murphy & Zimmerman, 1993; Weisbach, 1988). The prior literature reveals that the turnover of the CEO plays an insignificant role in promoting the value of the firm (Blackwell, Dudney, & Farrell, 2007; Chikh & Filbien, 2011). Nonetheless, due to the mixed findings in the literature, it is vital to extend the study of this attribute to a new context (like Nigeria), since variations in business environments and practices exist.

### 2.2. Firm Value

One of the fundamental objectives driving most small, medium and large firms is to maximize wealth or value. The extent to which the wealth or value maximization objective is attained is measured by the value assigned to the firm. Modigliani and Miller (1961) advocated that the value of a firm is determined by the earnings and operating assets of the firm, which is conceivably the justification for estimating firm value using performance (earnings per share, return on equity, return on assets, return on capital employed, among others) and market share (Tobin's Q, share prices) measures (Bao & Bag, 1989; Beaver, Lambert, & Morse, 1980).

In the literature, market share is the most frequently employed measure of firm value; specifically, Tobin's Q is extensively used as a measure of firm value in the accounting literature (Bhabra, 2007; Desai & Dharmapala, 2009; Emenyi et al., 2020; Fahlenbrach, 2009; Ghardallou et al., 2020; Hai-Chin & Luu, 2014; Rehmana et al., 2021). In this study, we measure firm value using Tobin's Q, which is the ratio of the market value of a firm to the replacement costs (book value) of its assets. The extant literature reveals that well-managed CEO attributes significantly and positively affect firm value due to the varied experiences, skills, and qualities CEOs bring to the firm (Ghardallou et al., 2020; Graham, Harvey, & Puri, 2013). However, notwithstanding these widespread claims in the literature, prior studies (Limbach et al., 2016; Page, 2018; Pham & Pham, 2020; Rehmana et al., 2021; Sitthipongpanich & Polsiri, 2015) have found that CEO attributes negatively and significantly affect firm value. Whether this is so for Nigerian listed firms has not been deeply researched in the management literature. Given the scarcity of studies and the need to fill the literature gap, we thus hypothesize that:

H₀1: Chief executive officer (CEO) attributes have no significant effect on firm value.

### 2.3. Firm Size

There is considerable literature on the relationship between firm size and firm value in both developed and developing nations. The Graham et al. (2013) hypothesis advocates that larger firms have a higher firm value. Supporting the Graham et al. (2013) hypothesis, Mwangi and Murigu (2015) hypothesized that firm value is enhanced for larger firms due to their increased exposure to optimum investments in operating assets and better resources, which promote economies of scale compared to smaller firms. Remarkably, however, there are mixed research findings in this area; for instance, while Josson (2007) found a positive relationship between firm size and firm value, Rehmana et al. (2021); Pham and Pham (2020); Page (2018); Limbach et al. (2016); Banchuenvijit and Phuong (2012); Becker-Blease, Kaen, Etebari, and Baumann (2010) found a negative relationship between firm size and firm value. While we acknowledge that there are diverse constructs of firm size, this study measured firm size as the natural logarithm of total assets at fiscal year-end. Studies in this area have focused predominantly on the effects of CEO attributes, board structure, and CEO compensation on firm performance, value, and risk-taking (Ahmadi, Nakaa, & Bouri, 2018; Altuwaijri & Kalyanaraman, 2020; Hai-Chin & Luu, 2014; Hamori & Koyuncu, 2015; Harrison, Thurgood, Boivie, & Pfarrer, 2019; Khan, Gang, Fareed, & Yasmeen, 2020; Kokeno & Muturi, 2016; Page, 2018; Rehmana et al., 2021; Saidu, 2019). However, none have focused on the moderating role of firm size in the relationship between CEO attributes and firm value in Nigeria. Given the need to fill the literature gap, we thus hypothesize that:

H₀2: Firm size plays no moderating role in the relationship between CEO attributes and firm value

### 2.4. Theoretical Framework

This study is built on the agency paradigm advocated by Jensen and Meckling (1976). The agency paradigm states that ownership and control of a firm are vested in separate people (principal and agent); thus, there exists a conflict of interest between principal and agent (Aguilera, Filatotchev, Gospel, & Jackson, 2008). Williamson (1975) posited that the agent may seek to further its interests by making decisions that are not in the owners' interests.

The issue of whether the interests of both parties (principal and agent) are aligned in the same direction may give rise to agency conflict. What can often be observed is that once the agent (manager) has been compensated by way of elongated tenure and increased shareholdings, they tend to make decisions that have visible results. Noteworthy is the fact that shareholders and managers have diverse interests. While shareholders are interested in the maximization of the firm's value, managers are more focused on their gains, which leads to them performing their duties effectively and efficiently or otherwise.

## 2.5. Conceptual Model of the Study

Given the review of related literature, a conceptual model of the study was designed to assess the relationship between CEO attributes and firm value, moderated by firm size. Within this context, the independent variable is CEO attributes, the dependent variable is firm value, and the moderating variable is firm size.
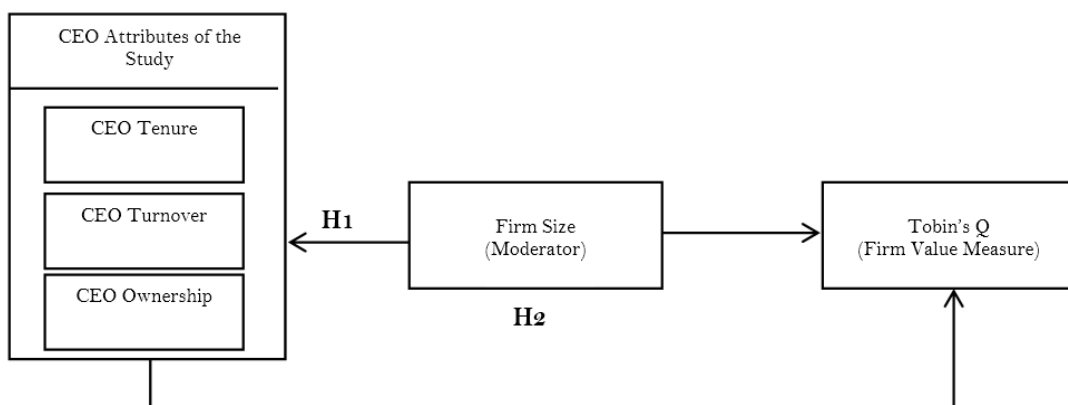


**Figure 1.** Conceptualized model by the researchers, (2021).

Figure 1 illustrates the moderating role of firm size (moderator) in the relationship between CEO attributes (CEO tenure, turnover, and ownership; independent variables) and firm value as measured by Tobin's Q (dependent variable).

## 3. RESEARCH METHOD

The study employed a panel data research design, which blends the attributes of longitudinal and cross-sectional research approaches. The data was obtained from a secondary source, the Machameratios database, for the period 2010-2019. The study population comprised all non-finance firms listed on the Nigeria Stock Exchange (NSE) as of 31st December 2020. As of 31st December 2020, there were about one hundred and twenty non-finance firms listed on the NSE. To achieve an adequate representation of the study population, the sample size was arrived at using the Taro-Yamane sample size determination formula.

Given the sample size determination formula, ninety-two (92) was obtained as the necessary sample size for the study. A purposive sampling technique was employed to select seventy-four (74) non-finance firms. The reason for purposive sampling was to select non-finance firms that had disclosed the required dataset needed for the study; hence the study sample comprises 74 non-finance firms. The study was carried out to assess the moderating effect of firm size on the relationship between CEO attributes and the value of a firm. Specifically, the CEO attributes were measured using three dimensions – CEO tenure, turnover, and ownership, while firm value was measured by Tobin's Q.

The obtained data were analyzed using descriptive (mean, standard deviation, minimum and maximum values, skewness, kurtosis, and Pearson correlation) and inferential (multiple regression and structural equation modeling) statistical tools. Thus, a disaggregated model of CEO attributes and firm value, moderated by firm size, was estimated as follows:

$$\text{TobQ= f (ceoten, ceoturn, ceoown)} \qquad\qquad (1)$$

$$\text{TobQ= f (ceoten, ceoturn, ceoown, fsize)} \qquad\qquad (2)$$

Equations 1-2 are the implicit models of the functional relationships between CEO attributes and firm value, moderated by firm size. Equations 1a-2a are the explicit models of the study:

$$TobQ_{it}= \alpha_0 + \beta_1 ceoten_{it} + \beta_2 ceoturn_{it} + \beta_3 ceoown_{it} + \mu_{it} \qquad\qquad (1a)$$

$$TobQ_{it}= \alpha_0 + \beta_1 ceoten_{it} + \beta_2 ceoturn_{it} + \beta_3 ceoown_{it} + \beta_4 fsize_{it} + \mu_{it} \qquad\qquad (2a)$$

Equation 1a was used to test the formulated hypothesis of whether a relationship exists between CEO attributes and firm value (fixed and random effect regression, together with the Hausman specification test), while Equation 2a assesses the moderating role of firm size in the relationship between CEO attributes and firm value (structural equation modeling - SEM).

Where $TobQ$ = Tobin's Q (a measure of firm value); $ceoten$ = chief executive officer's tenure; $ceoturn$ = chief executive officer's turnover; $ceoown$ = chief executive officer's ownership; $fsize$ = firm size; $it$ = individual companies at time t; $u$ = error term capturing other explanatory variables not included in the model; $\alpha_0$ = intercept of the regression; $\alpha_1$, $\alpha_2$ and $\alpha_3$, $\alpha_4$ = coefficients of the regression. A priori expectations are that the CEO characteristics will positively and significantly affect the value of the firm. The statistical analysis was carried out via STATA version 13.0. Table 1 presents the operationalization of the variables of the study.

**Table 1.** Operationalization of the variables.

| S/N | Variable | Measurement |
|---|---|---|
| 1. | CEO tenure (ceoten) | This is the measure of time the CEO tends to remain with a particular firm; one (1) for a tenure of 4 years and zero (0) if otherwise. |
| 2. | CEO turnover (ceoturn) | This is the rate at which a CEO changes their current job at the fiscal year-end; one (1) if the CEO leaves their current job after 4 years and zero (0) if otherwise. |
| 3. | CEO ownership (ceoown) | This is the proportion of the CEO's shareholding compared to the total shares available at the fiscal year-end. |
| 4. | Tobin's Q (TobQ) | This is the ratio of the market value of the firm to the replacement costs of its assets (percentage). |
| 5. | Firm size (fsize) | This is the natural logarithm of the total assets at the fiscal year-end. |

**Table 2.** Summary of descriptive statistics.

| Variable | Mean | Median | Std. Dev. | Min Value | Max. Value | Kurtosis | Skewness | Obs. |
|---|---|---|---|---|---|---|---|---|
| TobQ | 6.736 | 6.555 | 0.970 | 4.177 | 10.289 | 3.219 | 0.373 | 1038 |
| fsize | 6.956 | 6.882 | 0.829 | 4.964 | 9.229 | 2.690 | -0.327 | 1041 |
| ceoten | 0.581 | 1.000 | 0.494 | 0 | 1 | 1.107 | -0.327 | 1042 |
| ceoturn | 0.236 | 0 | 0.425 | 0 | 1 | 2.545 | 1.243 | 1042 |
| ceoown | 6.499 | 0.109 | 29.872 | 0 | 862.83 | 651.74 | 22.98 | 1039 |

## 4. RESULTS

The descriptive results in Table 2 show that the mean market value (Tobin's Q – $TobQ$) of the listed non-finance firms is 6.73; mean firm size ($fsize$) is 6.9556; mean CEO tenure ($ceoten$) is 0.58; CEO turnover ($ceoturn$), 0.23; and CEO ownership ($ceoown$), 6.49. The highest score of 862.83 for $ceoown$ was recorded by The Initiatives Plc. in 2014 and the lowest score for all CEO attributes of the study was zero (0); this is expected since $ceoten$ and $ceoturn$ are dummy variables while $ceoown$ (which is measured as a percentage) showed that some listed non-finance firms had 100% CEO shareholding.

Interestingly, $fsize$ had the highest mean value, followed by $TobQ$, $ceoown$, $ceoten$, and finally $ceoturn$. Moreover, the standard deviation values of $TobQ$, $fsize$, $ceoten$, and $ceoturn$ are clear indications that the variables are not too dispersed from each other and that the CEO attributes of the studied non-finance firms, particularly $ceoten$ and $ceoturn$, are similar. Again, the high dispersion of $ceoown$ (29.87) compared to the other CEO attributes is partly explained by the 100% shareholding of a few listed non-finance firms in some fiscal year-ends.

Furthermore, the panel data series for the CEO attribute *ceoten*, firm value (*TobQ*), and the moderator variable (*fsize*) displayed zero skewness while the CEO attributes *ceoturn* and *ceoown* displayed non-zero skewness; however, while *fsize* and *ceoten* are skewed to the left (negatively skewed), the other variables (*TobQ, ceoturn,* and *ceoown*) are skewed to the right (positively skewed). Notably, *TobQ* and *ceoown* are mesokurtic since they are greater than 3 while the other variables (*fsize, ceoten,* and *ceoturn*) are platykurtic since they are less than 3. This implies that *TobQ* and *ceoown* show steady or stable movements compared to the *fsize, ceoten,* and *ceoturn* of the listed non-finance firms and that, most likely, all the variables are normally distributed.

**Table 3.** Pearson correlation matrix.

| Variables | TobQ | fsize | ceoten | ceoturn | ceoown |
|-----------|------|-------|--------|---------|--------|
| TobQ | 1.000 | | | | |
| fsize | 0.084 | 1.000 | | | |
| ceoten | -0.104 | -0.054 | 1.000 | | |
| ceoturn | 0.042 | 0.027 | -0.636 | 1.000 | |
| ceoown | -0.204 | -0.159 | 0.022 | 0.008 | 1.000 |

The Pearson correlation results in Table 3 reveal that the relationship between firm value, the moderator variable, and the CEO attribute *ceoturn* (0.0424) is positive, whereas *ceoten* (-0.1036) and *ceoown* (-0.2042) are negatively related to firm value and the moderator variable. This result implies that although there is a positive relationship between CEO turnover, firm value, and firm size, there is a negative relationship between CEO tenure and ownership, firm value, and firm size.

Remarkably, the Pearson correlation coefficients did not exceed the maximum threshold of 0.8, as recommended by Gujarati (2003), cited in Okoro and Ekwueme (2021) and Okoro and Ihenyen (2020), indicating the nonexistence of multicollinearity among pairs of the study's independent variables. The nonexistence of multicollinearity in the empirical models of CEO attributes and firm value, moderated by firm size, is further confirmed by the results of the Variance Inflation Factor (VIF).

**Table 4.** VIF for independent variables.

| Variables | VIF | 1/VIF |
|-----------|-----|-------|
| ceoten | 1.68 | 0.594 |
| ceoturn | 1.68 | 0.596 |
| fsize | 1.03 | 0.972 |
| ceoown | 1.03 | 0.974 |
| Mean VIF | 1.35 | 0.627 |

The VIF result in Table 4 shows that mean VIF = 1.35, which is less than the recommended VIF benchmark of 10.0, suggesting the absence of multicollinearity in the empirical models of the study; thus, this provides evidence that the estimated models of CEO attributes and firm value, moderated by firm size, are without statistical bias.

**Table 5.** Breusch-Pagan and Cook-Weisberg results of variables.

| **Ho:** Constant Variance | **Variables:** Fitted values of TobQ |
|---------------------------|--------------------------------------|
| Chi2(4) = 10.06 | Prob. > Chi2 = 0.039 |

The Breusch-Pagan/Cook-Weisberg result in Table 5 shows that the CEO attributes, firm value, and moderator variable fit the estimated models well because it is statistically significant at the 0.05% level, a clear indication of the nonexistence of a heteroskedasticity problem in the estimated models of CEO attributes and firm value, moderated by firm size. The fixed and random effect results presented in Table 6 reveal that Prob.>chi2 (0.3945) is greater than 0.05%; this implies that the random effect result is more appropriate to use than the fixed effect result. The result of the RE, which is 0.0000 and less than 0.05%, showed that all the coefficients in the empirical model differ from zero, thus making the empirical model suitable. Specifically, the coefficient of CEO

tenure indicates that a unit increase in CEO tenure decreases the firm value by 0.2354672 (24%) and is statistically significant since the p-value (0.002) is less than 0.05%. This suggests that a prolonged CEO tenure is disadvantageous for listed non-finance firms in Nigeria.

**Table 6.** Fixed and random effect results (Model I).

| Variables | Fixed Effect (FE) | Random Effect (RE) |
|---|---|---|
| Constant | 6.939<br>(101.57)*<br>[0.000] | 6.933<br>(102.76)*<br>[0.000] |
| CEO Tenure (*ceoten*) | -0.247<br>(-3.14)*<br>[0.002] | -0.235<br>(-3.05)*<br>[0.002] |
| CEO Turnover (*ceoturn*) | -0.068<br>(-0.75)<br>[0.453] | -0.073<br>(-0.82)<br>[0.414] |
| CEO Ownership (*ceoown*) | -0.007<br>(-6.73)*<br>[0.000] | -0.007<br>(-6.65)*<br>[0.000] |
| F-stat. & Wald chi2(3, 1022) | 19.67 | 56.91 |
| Probability | 0.000 | 0.000 |
| R-Squared (within) | 0.055 | 0.055 |
| R-Squared (between) | 0.097 | 0.093 |
| R-Squared (overall) | 0.052 | 0.052 |
| Hausman Test | 0.395 > 0.05 ||
| Number of Groups | 13 | 13 |
| Number of Observations | 1038 | 1038 |

**Note:** Coefficients in bold face; t-values in ( ); p-values in [ ];*significant.

Similarly, a unit increase in CEO turnover will decrease the firm value by 0.073 (7.3%), although this is statistically insignificant. Nonetheless, it implies that if a CEO leaves a firm after 4 years or more, the firm value will not deteriorate, suggesting that listed non-finance firms in Nigeria should ensure that a CEO stays with a firm for 4 years. In addition, a unit increase in CEO ownership will decrease firm value by 0.007 (0.07%) and is significant. This implies that the proportion of the CEO shareholding to total shares available matters to the value of listed non-finance firms in Nigeria.

Furthermore, the $R^2$(overall) is 0.052 for RE, implying that CEO attributes (*ceoten, ceoturn,* and *ceoown)* explain about 5.22% of the variation in firm value (*TobQ*). Moreover, the Wald statistic is 56.91 with a prob. value of 0.000, suggesting a rejection of the null hypothesis and acceptance of the alternate hypothesis that CEO attributes have a significant influence on firm value, particularly in the context of listed non-finance firms in Nigeria.

**Table 7a.** Structural equation modeling results (Model II) - Fit indicators.

| Fit Indicator(s) | Coefficients | Remark |
|---|---|---|
| Goodness of Fit Statistics (GFI) | 0.970 | Significant |
| Adjusted Goodness of Fit Statistic (AGFI) | 0.950 | Significant |
| Comparative Fit Index (CFI) | 0.958 | Significant |
| Standardized Root Mean Square Residual (SRMR) | 0.014 | Significant |
| Root Mean Squared Error of Approximation (RMSEA) | 0.030 | Significant |

Table 7a presents the structural equation modeling (SEM) results of the moderating role of firm size in the relationship between CEO tenure and turnover and firm value. SEM was applied to establish the path relationships among the study variables (CEO attributes, firm value, and firm size). The results reveal that the model provides a perfect fit to the data with the goodness of fit statistic (*GFI*)=0.970, adjusted goodness of fit statistic (*AGFI*)=0.950, comparative fit index (*CFI*)=0.958, standardized root mean residual (S*RMR*)=0.143, and root mean squared error of approximation (*RMSEA*)=0.301. *GFI, AGFI,* and *CFI* surpass the recommended threshold of 0.90, and *RMSEA* (0.030) and *SRMR* (0.014) are less than the maximum threshold of 0.08. This implies that the approach used to

model the moderating role of firm size between CEO attributes and firm value fits appropriately; likewise, the path results for the moderating role of firm size between CEO attributes and firm value is presented below (see Figure 2):
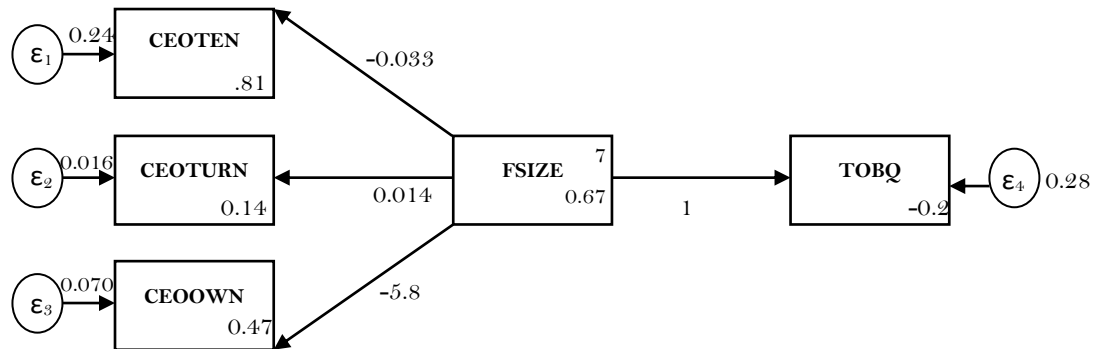


**Figure 2.** Results of the hypothesized model.

The pathway coefficients in Figure 2 show that firm size moderates the relationship between CEO ownership (*ceoown* = -5.8) and firm value (*TobQ*) and does not moderate the effects of CEO tenure (*ceoten* = -0.033) and CEO turnover (*ceoturn* = 0.014). The finding implies that while firm size and CEO ownership are vital in enhancing firm value, the opposite is the case for CEO turnover and tenure.

**Table 7b.** Test of models (Model II).

| Structural | Coef. | OIM Std. Err. | Z | P>/z/ | [95% Conf. Interval) | |
|---|---|---|---|---|---|---|
| ceoten & fsize | -0.033 | 0.019 | -1.75 | 0.080 | -0.069 | 0.004 |
| Constant | 0.809 | 0.131 | 6.19 | 0.000 | 0.553 | 1.065 |
| ceoturn & fsize | 0.014 | 0.016 | 0.88 | 0.379 | -0.017 | 0.046 |
| Constant | 0.138 | 0.112 | 1.22 | 0.224 | -0.084 | 0.357 |
| ceoown& fsize | -5.786 | 1.117 | -5.18 | 0.000 | -7.975 | -3.597 |
| Constant | 46.744 | 7.821 | 5.98 | 0.000 | 31.416 | 62.073 |
| TobQ & fsize | 0.997 | 0.199 | 50.15 | 0.000 | 0.956 | 1.036 |
| Constant | -0.196 | 0.139 | -1.41 | 0.160 | -0.468 | 0.071 |

**Note:** LR test of model vs. sat.:chi2(6)=569.12; Prob.>chi2=0.000.

Table 7b presents the test results of models involving the moderating role of firm size in the relationship between CEO tenure and turnover and firm value. The results for CEO tenure (*ceoten* and *fsize* = -1.75; p>/z/=0.080>0.05), and CEO turnover (*ceoturn* and *fsize* = 0.88; p>/z/=0.379> 0.05) are not supported, indicating that in non-finance firms, size does not moderate the relationship between CEO tenure and turnover and firm value. Moreover, the result for CEO ownership (*ceoown* and *fsize* =-5.18;p>/z/=0.000<0.05) showed that the size of non-finance firms does moderate the relationship between CEO ownership and firm value; however, this relationship is significant and negative.

**Table 7c.** Weights of standardized regression and t-values (Model II).

| Path | Standardized Regression Weight | Z-Value | Remark(s) |
|---|---|---|---|
| Direct Effect of the Integrative Model | | | |
| CEO tenure → Firm size (γ1) | 0.019 | -1.75 | Not supported |
| CEO turnover → Firm size(γ2) | 0.016 | 0.88 | Not supported |
| CEO ownership → Firm size (γ3) | 1.117 | -5.18 | Supported |
| Tobin's Q → Firm Size (γ4) | 0.019 | 50.15 | Supported |
| Indirect Effect of the Integrative Model | | | |
| CEO tenure → Firm size | | - | No path |
| CEO turnover → Firm size | | - | No path |
| CEO ownership → Firm size | | - | No path |
| Tobin's Q → Firm Size | | - | No path |

Table 7c presents the direct and indirect effects of the integrative empirical model of CEO attributes and firm value, moderated by firm size. The result supports the direct effect of the integrative model for CEO ownership, firm size, and firm value. Moreover, no direct effect was found in the case of CEO tenure or turnover. The implication is that firm size x CEO ownership will affect firm value, whereas CEO turnover x firm size, as well as CEO tenure x firm size, will not affect the value of the firm.

## 5. DISCUSSION

In strategic finance, organizations' most essential goals (whether they are small, medium, or large) are the maximization of shareholders' wealth, firm value, and performance, as well as maintaining sustainable practices, notwithstanding competition in their industry. It has been often expressed in the literature that larger firms and well-managed CEO attributes enhance the value of a firm (Ghardallou et al., 2020; Graham et al., 2013). Yet, while these views abound in the literature, there are also claims that CEO attributes negatively affect a firm's value and performance (Limbach et al., 2016; Page, 2018; Pham & Pham, 2020; Rehmana et al., 2021; Sitthipongpanich & Polsiri, 2015). Given the extant literature, this paper assessed the relationship between CEO attributes and firm value, as well as the structural effect of firm size in moderating the link between CEO attributes and firm value. Given the absence of previous studies on the subject, particularly in the Nigerian context, the study results are quite novel. Notably, the fixed and random effect results indicate that CEO attributes (CEO tenure, turnover, and ownership) negatively affect the value of a firm; however, the relationship was only significant for CEO tenure and ownership. The negative relationship between CEO tenure and the value of the firm is inconsistent with the view that a prolonged CEO tenure promotes firm value due to the increase in their expertise and skills. This finding conforms with the results of Page (2018), Limbach et al. (2016), and Sitthipongpanich and Polsiri (2015), who found a significant and negative effect of CEO attributes on firm value.

Furthermore, the structural equation modeling result on the moderating role of firm size in the relationship between CEO attributes and firm value provides further insight and makes a novel contribution to the management literature. The study found that while firm size does not play a significant moderating role in the relationship between CEO tenure and turnover and firm value, a moderating and significant (negative) effect was found for CEO ownership; implying that when CEO ownership (i.e. CEO shareholding to total assets) in larger firms is not adequately allocated and efficiently managed, the firm value may be negatively affected. The CEO ownership and firm size hypothesis of Graham et al. (2013) that CEO ownership in larger firms has a positive effect on firm value could not be confirmed by this study. Overall, the study findings revealed that firm size plays a moderating role in the relationship between CEO attributes and firm value, particularly in the case of non-finance firms listed on the Nigeria Stock Exchange.

## 6. CONCLUSION AND RECOMMENDATIONS

In this paper, we examined the moderating effect of firm size on the relationship between CEO attributes and the value of non-finance firms listed on the Nigeria Stock Exchange. Given the SEM result, the study established that firm size plays a moderating role in the relationship between the CEO characteristic of CEO ownership and firm value while no moderating effect was found for CEO turnover or tenure. Given the findings, the study recommended that since CEO turnover and tenure do not matter to the value of a firm, there is a need to ensure that a CEO's term in office is not lengthened beyond what is required by tenure legislation, i.e., it should not exceed 4 years. In addition, for larger firms, CEO shareholding should be adequately managed to positively affect the value of the firm.

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