

Performance of Firm and Board Attributes Nexus: Using Hausman Test Analysis

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Abstract

With the rise of corporate failures and the conflict of interest arising from shareholders and the management, there have been growing concerns in corporate governance (CG). It is there is possibility of the board of director in CG is to oversee the management as well as the firm performance and to make the management accountable to shareholders. Hence this research examines the connection between firms' performance and board features using board size, board independence in addition to board age as a proxy for board characteristics and turnover as a proxy for firm performance. A sample size of 16 consumer goods firms out of a population of 20 consumer goods firms listed in the NSE from 2016 to 2019 was used using a judgmental sampling technique. Secondary data employed was taken out from the sampled firms' annual reports. Hausman test analysis was used to select the appropriate regression model, which is the fixed effect regression model that was utilized to analyse the connection between firms' performance in addition to board characteristics. It is found that firm performance and board independence of the consumer services goods companies in Nigeria are significantly related. The results also confirmed that firm performance and board size of the consumer services goods companies in Nigeria are significantly related. The result indicates firm performance and board education of the consumer services goods companies in Nigeria are not significantly related. Consequently, overall the study concluded that firms' performance and board characteristics are related. Also, board characteristics increase board performance which will lead to increase in firms' performances, there by maximizing profit and ensuring efficiency. The study concluded that a company with good board characteristics would help to ensure the maximization of both the shareholders and stakeholders wealth. Hence a proper board characteristic helps to solve the problem of both agency theory and stakeholders' theory.

Keywords: board characteristics, firms' performance, national stock exchange

1. Introduction

Board characteristics refer to features that can be used to measure the effectiveness and efficiency of corporate boards that are tasked with the overall management of the firm. It is important to ensure good management system which is necessary for good financial performance and have been widely recognized as an essential CG mechanism for attaining success in an organization. Effective board characteristics will help to ensure that shareholders and stakeholders would be able to keep an eye on the deeds of the pinnacle tier administration. Extant literature demonstrates that good corporate governance advance performance of firms while some extant literature demonstrates a contrary association, whereas some extant literature demonstrates no significant link between the variables (Ghabayen, 2012). Citing Roberts, McNulty and Stiles (2005), Olabisi, Kajola, Oladejo, Ojeaga and Abass (2018) also agreed.

The vast number of extant literature examined financial performance correlation with board characteristics due to the importance of corporate governance (Assenga, Aly & Hussainey, 2018; Eluyela et al., 2019a). Nevertheless, the conclusion of most of these extant literatures cannot be used to generalize for Nigeria which is one developing country while most of the extant literature is on developed countries which corporate governance cultures and corporate governance structures are different from that of developing countries. This study is novel in that it used consumer goods firms listed in the Nigeria stock exchange to examine if firms' performance is related to the board

characteristics. It means to the paramount understanding of the researchers, studies that used consumer goods firms listed in the NSE in this subject are scarce. This is one gap in the literature this study seeks to cover.

In addition, some extant literature demonstrates that the performance of firms and the board characteristics are positively related, and some extant literature demonstrates that firms' performance and the board characteristics are negatively related. Hence the connection amid firms' performance as well as the board characteristics is yet to be well-known due to the mixed results of extant literature (Bathula, 2008; Ghabayen, 2012). It is for these reasons that the connection amid the performances of firms in addition to the board characteristics continues to be subject to continuous research and is always drawing huge attention from researchers. This research seeks to cover the dearth in the literature by investigating the connection amid the performance of firms and the board characteristics with the use of Hausman Test analysis empirically. Turnover is used as a measurement of firm performance while board education, board size as well as board independence were used as board characteristics.

2. Literature Review and Hypotheses Development

The concept of board characteristics can be seen as a general term; there is no widely used definition (Carcello, Hollingsworth, Klein & Neal, 2006). Board characteristics refer to features of corporate boards that are tasked with the overall management of the firm. The success or collapse of firms is associated with the role acted by the management and firm governance as a process (Eluyela et al., 2019b). In this review, the features of the board of directors that were examined in addition to this consist of board size, board education and board independence.

2.1 Board Size

Companies have directors, in addition to the collective figure of companies' directors is regarded as the board of directors. The numeric figure of all the companies' directors combined is referred to as the board size, and most of the time, they are divided into non-executive directors and executive directors. Yermack (1996), according to Abiola and Lawal (2016) concurred. Klein (1998) and Pfeffer (1972) opined that the performance of companies is enhanced by large board size, but Yermack (1996) is of the opinion that time is wasted and decision making are slow down by large board size hence the performance of companies is hindered by large board size. Also, according to Ebrahim, Abdullah, Faudziah (2012) concurred. Based on the view of this extant literature, this study tested the first null hypothesis as given below:

H₁: Firm performance and board size of the consumer services goods companies in Nigeria are not significantly related

2.2 Board Independence

Akpan and Amran (2014:82) cited Fama and Jensen (1983) and assert that. Also, they cited Kamardin and Haron (2011) and opined that. According to Akpan and Amran (2014:82) citing (Fama, 1980) opined that. Another researcher in this school of thoughts is Heravia, Saat, Karbhari and Nassir (2011). Daidj (2017:95) opined that. The firm executive' actions are scrutinized by part of the daily operation of the company, and neither are they employed by the company. Still, they have a say in the company' development of the strategy. These non-executive directors are referred to as independent director (Clifford & Evan, 1997). They have no connection with the company apart from directorship. Based on the view of these extant literatures, this study tested the second null hypothesis as given below:

H₂: firm performance and board independence of the consumer services goods companies in Nigeria are not significantly related.

2.3 Board of Education

According to Akpan and Amran (2014:82) concurred. These studies include Haniffa & Cooke (2002), Yermack (2006) as well as Ujunwa (2012). Based on the view of these extant literatures, this study did not differentiate between academics qualifications; this study tested the third null hypothesis as given below:

H₃: Firm performance and board education of the consumer services goods companies in Nigeria are not significantly related.

2.4 Firms' Performance

There are many measure use for firms' performance in the extant literature on the connection amid firms' performance in addition to board features and include Tobin's Q, ROE (returns on equity), ROA (returns on assets), profit before interest and tax and turnover to mention but a few (Marinova, Plantenga & Remery, 2010; Durmadi, 2011; Minguéz-Vera & Martín, 2011; Akpan & Amran, 2014; Otekunrin, Iyoha, Uwuigbe & Uwuigbe, 2017; Otekunrin, Nwanji, Agba, Olowookere, Fakile, Lawal, Ajayi & Falaye, 2018; Otekunrin, Nwanji, Egbide, Fakile,

Lawal, Ajayi, Falaye & Eluyela, 2018; Otekunrin, Olowookere, Agba, Fakile, Eluyela, Ajiboye, & Adama, 2019). However, other firms' performance measures mentioned are somehow derived from turnover, but there is a dearth of literature that used turnover and this study gives to this body of knowledge via employing consumer goods firms listed in the NSE to examine if firms' performance is related to the board characteristics using turnover as a proxy of firm performance

2.5 Theoretical Underpinnig

Stakeholder's theory: The first person to define stakeholder's theory was organizational theorist Ian Mitroff in his book, which was published in 1983 in the California management review by philosopher and management of business administration. Stakeholders' theory is of the view that organisation should consider the interest of all persons, businesses, government and communities impacted by the organisation operations and not just the interest of the shareholders alone should be valued. This is because the organisation is interconnected with all of them. As stated in Olabisi, Kajola, Oladejo, Ojeaga and Abass (2018:11). The Stakeholder theory, unlike the agency and the stewardship theories, advocates the satisfaction of all parties that have a stake in the business rather than the owners alone. Olabisi, Kajola, Oladejo, Ojeaga and Abass (2018:11) cited Freeman (2004). In conclusion, Olabisi, Kajola, Oladejo, Ojeaga and Abass (2018:11) cited Khan and Javid (2011). This is the reason; this study adopted.

Agency Theory: This involves agent as well as the principal (who are the owner of the firm). The agent represents the principal daily in business transactions because that is the reason why they are employed (Ozordi et al., 2020). Agency theory as postulated in extant study which is premised on the assumption, that there is a separation in management of an organization as well as its ownership. The theory labels the owners of a firm as its principals and the management as its agent. In relation to this study, agents include the management as well as the board of directors while the principals are the shareholders (Daily, Dalton & Canella, 2003; Yermack, 1996) Owners' interests are likely to be compromised if agents make the most of their egoistic goals at the disadvantage of firm performance. The agents cannot be dependable, and therefore, there is a need for supervision of the executive managers by the board of directors to protect owners' interest. The agency problem arrives when there is goal incongruence between the objectives of the principal and his agent, and it becomes virtually impossible for the principal to keep track of what the agent is up to (Eluyela et al., 2018a; 2018b). Hence the board of directors is there to scrutinize the actions of the management. This is the reason; this study adopted the stakeholder theory

2.6 Empirical Framework

Empirical studies using different countries has a connection Yermack (1996) that used United States industrial firms, that used Finland small private firms, Conyon and Peck (1998) that used Netherlands, Denmark, Italy, United Kingdom and France, Hermalin and Weisback (2003), Bonn, Yoshikawa and Phan (2004) that used Japanese firms, Lasfer (2004) that used United Kingdom firms to mention just but a few while Bonn, Yoshikawa and Phan (2004) that used Australian firms and Okiro (2006) that used Kenyan listed firms found no connection between board size and performance. According to Akpan and Amran (2014:82), These studies include Haniffa and Cooke (2002), Yermack (2006) as well as Ujunwa (2012) that use quoted firms in Nigeria to mention but a few. Empirical connection between firms' performance and board size include Fama (1980), Hermalin & Weisbach (1988), Fama and Jensen (1983), Heravia, Saat, Karbhari and Nassir (2011) as well as Kamardin (2011).

3. Materials and Methods

The connection between firm performance as well as characteristics of the BOD of the consumer services goods companies in Nigeria 2012 to 2018 was examined in this study using descriptive research design in line with (Otekunrin et al., 2019a; 2019b; 2018). Sample size of 16 (80%) consumer goods firms out of a population of 20 (100%) consumer goods firms listed in the NSE were used due to the availability of data using a judgmental sampling technique (Umukoro et al., 2020). The sample size of 80% is supported by Law (2012) that presumes that 30% of the population could fairly represent the population. Secondary sampled firms' (Adebayo et al., 2020; Eluyela et al., 2020). Analysis is select as appropriate regression, which is the fixed effect regression model.

3.1 Model Specification

The independent variables here are board characteristics and firm performance, while the dependent variable is consumer goods. The model used for the study is adopted from the work of Uwuigbe and Olayinka (2012).

$$\text{TURN}_{it} = \beta_0 + \beta_1 \text{BE}_{it} + \beta_2 \text{BS}_{it} + \beta_3 \text{BI}_{it} + \beta_4 \text{CEO}_{it} + \beta_5 \text{Fage} + \beta_5 \text{Fsize} + e$$

Where; BE= board education, BS= board size, BI = board independence, CEO = CEO duality Fage= firm' age, Fsize = firm' size.

4. Results and Discussion

Table 1. Descriptive statistics

	TURN	BE	BS	BI	CEO	FAGE	FSIZE
Mean	92642292	0.198095	10.63810	6.752381	63.37516	48.26667	7.960566
Median	53710991	0.200000	11.00000	7.000000	64.28571	50.00000	7.967554
Maximum	9.03E+08	0.500000	17.00000	13.00000	87.50000	88.00000	9.765412
Minimum	967784.0	0.000000	4.000000	1.000000	25.00000	8.000000	6.508940
Std.Dev.	1.59E+08	0.119277	3.135172	2.405047	13.48552	19.08043	0.663099
Skewness	3.585682	0.719960	0.079898	0.230901	-0.437018	-0.283642	0.462947
Kurtosis	16.47242	3.401944	2.287292	2.543954	2.866582	2.823152	3.422748
Jarque-Bera	1019.088	9.777804	2.334011	1.842916	3.420103	1.544748	4.532486
Probability	0.000000	0.007530	0.311298	0.397938	0.180856	0.461915	0.103701
Sum	9.73E+09	20.80000	1117.000	709.0000	6654.391	5068.000	835.8594
SumSq.Dev.	2.64E+18	1.479619	1022.248	601.5619	18913.35	37862.53	45.72881
Observations	105	105	105	105	105	105	105

Table 1 is a descriptive statics summary of the study. The positive result indicates that the variables skewed to the right. The standard board size is 10.63810 directors, ranging from a least of 4 directors to 17 directors. The minimum of directors that have professional qualification is 0 while the maximum is 5 directors out of 17 directors which thereby imply that they have expert knowledge in financial accounting or financial reporting. The maximum numbers of 13 are independent directors on board out of total 17 directors with an average of 6 directors which then implies that with such quantity of directors on board, the performance of the firms would be fostered and improves firm performance. The minimum and maximum values of CEO duality limit from 25 to 87.5; the average value is 63.37. Firm age has an standard of 48 years ranging from a least of 8 years to a highest of 88 years. The firm size has ranges from a least of 6.50 to a highest of 9.76, with a standard of 7.96.

Table 2. HT

TS	C-S.S	C-S.d	Prob.
C-schance	21.037046	6	0.0018

Table 2 indicates that the Hausman test. With a probability value of 0.0018 which is less than 5%, it means the FE model is the appropriate model, and the FE Panel Data Regression is given below

Table 3. FixedeffectPDR

V	C	S.E	t-S	P.
C	-4.07E+08	2.70E+08	-1.510992	0.1345
BE	34785248	1.90E+08	0.182883	0.8553
BS	-30042420	12339255	-2.434703	0.0170
BI	40539009	19850134	2.042254	0.0443

CEO	-4707085.	1956185.	-2.406258	0.0183
FAGE	5170902.	3759866.	1.375289	0.1727
FSIZE	73809386	25178508	2.931444	0.0043
EffectsSpecification				
C-sf				
R-s	0.839449			
Adj. R-s	0.801222			
F-statistic	21.95984	Durbin-Watson stat		1.270235
P (F-s)	0.000000			

Table 3 is the result of Fixed Effect Panel Data Regression to show the turnover and the independent variables (board characteristic proxied by education) are related or not related. 84% (R-squared) variation in the turnover is described jointly via characteristic proxied by as well education. Nevertheless, variables not factored into the study account for 16%. Prob (F-statistic) of 0.000000 is less than 5%, and this indicates a linear connection (firm' proxied by turnover) as well as the (board' characteristic proxied by board size, board independence and board education). Durbin-Watson stat. of 1.270235 indicates low auto-serial correlation.

The first null hypothesis state that firm' performance and board size of the consumer services goods companies in Nigeria are not significantly related. Findings from Table 1 support the alternate hypothesis claim that firm performance and board size of the consumer services are significantly related. This is proved in the prob. value of (0.0170) which is lesser than (0.05) level of significance. The outcome suggests that board size have a significant positive connection on the performance of the sampled consumer services goods company in Nigeria. The study rejects the null hypothesis that says that as firm performance and board size of the consumer services goods companies in Nigeria are not significantly related and accept the alternative hypothesis that says that firm performance and board size of the consumer services goods companies in Nigeria are significantly related. Akpan and Amran (2014), Uwuigbe and Fakile (2012), as well as Hanoku (2008), also provide the same result.

The second null hypothesis states that firm' performance and board independence of the consumer services goods companies in Nigeria are not significantly related. Result based on the Table 1 support the alternate hypothesis that firm performance and board independence of the consumer services goods firms are significantly related. This is proved in the prob. value of (0.0443) which is lesser than (0.05) level of significance. The outcome suggests that board independence have a momentous positive relationship on the performance of the sampled consumer services goods company in Nigeria. The study rejects the null hypothesis that says that as firm performance and board independence of the consumer services firms are not significantly connected and accept the alternative hypothesis that says that firm performance and board independence of the consumer services goods companies in Nigeria are significantly related. Akpan and Amran (2014) differ in their study result but still recommended board independence to Nigeria government as well as regulatory authorities.

The third null hypothesis state that: firm' performance and board education of the consumer services goods companies in Nigeria are not significantly related. Result from Table 1 sustains the null hypothesis. This is proved in the prob. value of (0.8553) which is elevated than (0.05) level of significance. The outcome suggests that board education have an insignificant positive relationship on the performance of the sampled services company. The study accepts the null hypothesis that says that as firm performance and board education of the consumer services goods companies in Nigeria are not significantly related and reject the alternative hypothesis that says that firm performance and board education of the consumer services goods companies in Nigeria are significantly related. Akpan and Amran (2014) differ in their study result. The control construct (CEO and FSIZE) illustrate a significant effect on the performance of sampled purchaser services. This is justified by the prob. value of (0.0183) for CEO variable and (0.0043) for FSIZE variable is greater than (0.05).

5. Conclusion

This study concluded that board size as well as board independence have a vital connection with performance proxied by turnover. However, board education does not have a vital connection with performance of listed consumer services firms. When certain board features like board independence, board education, the board size, CEO

duality can increase their level of performance, it will lead to increased performances in the firm thereby maximizing profit and ensuring efficiency. The results have shown that various board characteristics performance is very crucial in having increased profitability in the firm. Hence a proper board characteristic helps to solve the problem of both agency theory and stakeholders' theory. It has been concluded that a company with good board characteristics will help to ensure the maximization of both the shareholders and stakeholders wealth. This study is limited in the following ways which provide suggestions for further study. First, the study data comprise of listed consumer services firm only. Secondly, the method of data analysis used in the study is panel data regression technique. Subsequent studies can consider the impact of board characteristics on firm performance of other listed companies apart from those in consumer goods. Also, further studies can examine the impact of board features on firm performance both in the long and short run by making use of any co-integration techniques.

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Conflict of Interest

There is no conflicting interest in this study, as any source does not fund it.

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