EFFECT OF DIRECTOR’S TUNNELLING ON PERFORMANCE OF QUOTED MANUFACTURING COMPANIES IN NIGERIA

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Abstract

The study examined the effect of directors tunnelling on performance of quoted manufacturing companies in Nigeria. The study has four specific objectives to achieve, four research questions that guided the study and four null hypotheses were formulated. The study used ex-post factor research design. Fifteen (15) firms were selected from the Nigeria Stock Exchange (NSE). The data used were secondary data and were drawn from 2008 to 2017. The secondary data collected were analysed using descriptive statistics, correlation and regression analysis. The data used in this study were sourced from the firm’s annual report and Nigerian Stock Exchange fact book. This study applied ex post facto research design. The data collected were analysed using Ordinary Least Square Method. The results show that only Director’s equity holding is negative and has significant effect on performance of quoted manufacturing companies in Nigeria. Board of director’s pay and Chairman’s pay are negative, and Dividend payment to directors is positive and has insignificant effect on performance of quoted manufacturing companies in Nigeria. The study, therefore among others recommends that due to the negative effect director’s equity holding has on performance of manufacturing companies in Nigeria, the study therefore recommends that a lower director’s equity holding may lead to higher performance for manufacturing companies in Nigeria.

INTRODUCTION

1.1 Background to the study

Expropriation is an action taken by controlling shareholders with the intention to benefit through either legal or illegal methods (Faccio, Lang, and Young, 2001) When the flow of benefits that is enjoyed by the controlling shareholders is clearly perceptible, it can be identified as moving in one of two directions: from the subsidiary to the parent company or from the parent company to its subsidiary. Johnson et al. (2000) argue that the term of tunnelling refers to the expropriation activity conducted by the controlling shareholders of a company in the lower level (e.g., subsidiary) to the higher level (parent company).

The exploitation of minority shareholders by controlling shareholders has attracted the attention of researchers. For instance, Shleifer and Vishny (1986) find that when the majority shareholders control the company, the agency problem is no longer about the conflict of interest between management and shareholders but about how to prevent controlling shareholders from exploiting minority shareholders. Johnson et al. (2000) invented the term “tunnelling” to describe the asset appropriation conducted by large shareholders who legally or illegally transfer assets and profits for themselves. Tunnelling is not only detrimental to the interests of minority shareholders but also seriously precludes the development of the capital market (Johnson et al., 2000; Wurgler, 2000; Bertrand et al., 2002).
The cases of expropriation or asset tunnelling by controlling shareholders have been highlighted by a vast body of literature. There is considerable empirical evidence that demonstrate the level of resources abused by majority shareholders. However, other than this empirical evidence, little systematic evidence is directly available regarding specific transactions, such as what in particular causes expropriation. Virtually all seminal studies only attempt to measure the phenomenon of indirect expropriation (for instance, Bertrand, Mehta, & Mullainathan, 2002; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2000a; 2000b; 2002; Claessens, Djankov, Fan, & Lang, 2002; Faccio, Lang, & Young, 2001), and almost all of them offer mixed evidence that minority shareholders lose value due to the actions of the specific expropriation (Bae, Kang & Kim, 2002).

1.2 Statement of the Problems

In companies with concentrated ownership, controlling shareholders can expropriate wealth from minority shareholders in many ways. For example, they can extract cash by selling assets, goods, or services to the company through self-dealing transactions, they can obtain loans on preferential terms, they can transfer assets from the listed company to other companies under their control, or they can dilute the interests of minority shareholders by acquiring additional shares at a preferential price (Johnson, La Porta, Lopez-de-Silanes and Shleifer, 2000). However, despite considerable anecdotal evidence, there is little direct systematic evidence on the specific transactions through which expropriation actually occurs. Most of the academic literature has attempted to measure expropriation indirectly (for example, Bertrand, Mehta, and Mullainathan, 2002; La Porta, Lopez-de-Silanes, Shleifer and Vishny, (LLSV), 2000a, 2002; Claessens, Djankov, Fan, and Lang, 2002; or Faccio, Lang and Young, 2001). Moreover, the literature also offers mixed evidence that minority shareholders lose value as a result of specific expropriation actions (Bae, Kang, and Kim, 2002). Directors’ tunneling has attracted much attention from economists in the past two decades yet most academic work on directors’ tunnelling has been concentrated on a few developed countries such as the U.S., U.K and China, mainly due to data availability.

To the best of our knowledge, no study has been conducted on the effect of directors tunnelling on the performance of quoted manufacturing companies in Nigeria. The above issues created gap in the literature, which this study seek to fill. This study therefore investigates the effect of directors tunnelling on the performance of quoted manufacturing companies in Nigeria.

1.3 Objectives of the Study

The main objective of the study is to examine the effect of directors tunnelling on performance of quoted companies in Nigeria. The specific objectives of the study will include, to:

1. Investigate the effect of director’s pay on the performance of quoted companies in Nigeria.
2. Determine the extent to which the Chairman’s payment affects the performance of quoted companies in Nigeria.
3. Evaluate the effect of director’s equity holding on the performance of quoted companies in Nigeria.
4. Ascertain the effect of dividend payment to directors on the performance of quoted companies in Nigeria.

1.4 Research Questions

The study find answers to the following research questions.
1. To what extent does director’s pay affects the performance of quoted companies in Nigeria?
2. How does Chairman’s payment affect the performance of quoted companies in Nigeria?
3. How does director’s equity holding affect the performance of quoted companies in Nigeria?
4. To what extent does dividend payment to directors affects the performance of quoted companies in Nigeria?

1.5 Research Hypotheses

1. Board of director’s pay does not have significant effects on the performance of quoted companies in Nigeria.
2. Chairman’s pay does not have significant effects on the performance of quoted companies in Nigeria.
3. Director’s equity holding has no significant effects on performance of quoted companies in Nigeria.
4. Dividend payment to directors has no significant effect on the performance of quoted companies in Nigeria.

REVIEW OF RELATED LITERATURE

2.1 Conceptual Framework

2.1.1 Concept of Directors Tunnelling

The term of tunnelling refers to the expropriation activity conducted by the controlling shareholders of a company in the lower level (e.g., subsidiary) to the higher level (parent company) (Johnson et al., 2000). According to them the term "tunnelling" describe the asset appropriation conducted by large shareholders who legally or illegally transfer assets and profits for themselves. Johnson et al. (2000) list several methods by which tunnelling is achieved: transferring growth opportunities belonging to listed company to themselves or their subsidiaries; transferring profits via intra-group transactions from listed companies to other subsidiaries they own or control; using assets or capital belonging to the listed company or using them as collateral or guarantees for their financing activities; and capital operations aimed at diluting the interests of other shareholders.

According to Henemana & Schwab (1972), tunnelling was first used in this way in the Czech Republic during the first half of the 1990s, when several large, previously privatized banks and factories unexpectedly went bankrupt. It was discovered later that the managements of these companies were deliberately transferring company property and real estate into their own private businesses, sometimes in offshore locations. The term later became a common label for this kind of criminal activity among Czechs and Slovaks. The transfers of firm resources were accomplished through huge loans that were issued without any expectation of repayment, massive overpayment for outsourced services, or simply by selling corporations real estate for a fraction of its market price. The main conditions enabling such a fraud are weak law against conflict of interest, non-existent legal liability of managers for leading their employer towards bankruptcy, and incompetence of financial authorities.

Directors’ tunnelling is the transfer of company resources out of its shareholders. This may come in two ways, a controlling shareholder can transfer resources using the CEO (which he is instrumental in appointing) from the firm for his own benefit through self-dealings transaction. Such transaction include theft or fraud which is illegal, also assets sales and contracts such as transfer pricing advantageous to the controlling shareholder, excessive executive compensation, loan guarantees, and
expropriation of corporate opportunities. Secondly, the controlling shareholder can increase his share in the firm without transferring any assets through dilutive share issues, right issue, and minority freeze out insider trading, creeping acquisition or other financial transactions that discriminate the minority shareholder. In addition to tunnelling assets, profits, or corporate opportunities, the controlling shareholder can expropriate minority shareholders through financial transactions, such as diluting their stakes through a closed subscription to new shares.

2.1.2 Company Performance

Performance can be explored from two points of view: financial and organizational (the two being interconnected); a company’s performance can be measured based on variables that involve productivity, returns, growth or even customer satisfaction (Tudose, 2015).

Financial performance plays a large role in measuring the success of business companies. Evaluating the company’s performance has three dimensions: the companies’ productivity, profitability and market premium (Omondi & Muturi, 2013). To this end, there are a plethora of measures of financial performance; such as return on assets (ROA), return on investment (ROI), return on equity (ROE), and operation profit margin (OPM). ROA, which was developed by Dupont (1919), is the most common measure used as a proxy for financial performance (Mishra, Wilson, and Williams, 2009); and this will be considered in this study.

2.2 Theoretical Framework

2.2.1 Agency Theory

Agency theory (Fama and Jensen, 1983), the dominant theory in accounting and audit (Kevin & Leigh, 2003) suggests contractual mechanisms such as corporate governance are put in place to monitor management to address the separation in ownership and control. Under the agency view, management are viewed as self-interested actors who behave opportunistically, favouring their own interests over those they represent even if these actions are detrimental to owners (Jensen and Meckling, 1976).

Thus, two mechanisms are identified to curb this behaviour: contractual mechanisms to align management goals with the principal; and information systems introduced to reduce information asymmetry between owners and management which can also restrict opportunistic behaviour through the realization by management that they cannot deceive the monitors (Kevin & Leigh, 2003). The agency perspective considers independence from management and expertise as the primary and central attributes of a monitor (Kevin & Leigh, 2003).

2.3 Empirical Review

Nurazi, Santi and Usman (2015) investigate the relationships between corporate governance variables and tunnelling activities in Indonesia. Using 2216 firm-year observations from 2005 to 2012, they find that several corporate governance variables contribute to explaining the phenomenon of tunnelling in Indonesia. The data reveal that approximately 276 firms had experienced expropriation in the form of tunnelling, particularly expropriation from majority to minority shareholders, which can be identified through the related party transaction. They find that firms with family and state ownership tend to experience tunnelling. This result is consistently revealed when we separate the data into eight industries. We document that the SINGLE ownership variable, which depicts family ownership, the STATE ownership variable, and the LEVERAGE variable have a positive influence
on TUNNELING. In contrast, the institutional (INST) ownership variable has a negative influence on TUNNELING. However, BOARD_SIZE, OUTSIDERS, GROUP ownership, and BIG FIVE auditor variables have no significant effect on TUNNELLING activities.

Qian and Zhao (2011) examined the effects of strengthening shareholder rights on tunnelling in China. Their difference-indifferences estimations show that firms adopting cumulative voting experience a significant decrease in tunnelling activities by controlling shareholders relative to firms that do not follow this voting mechanism. However, this result goes away when we introduce an instrument variable that is free from any manipulations to the difference-in-differences estimations. Therefore, our results imply that a ‘self-selection’ by firms committed to improve governance, rather than the governance mandate, can explain the drop in tunnelling activities in estimations without the instrument variable. Overall, our paper suggests that in emerging markets characterized by entrenched controlling shareholders and weak institutions, laws and regulations aimed at improving a specific aspect of governance are not likely to be effective.

Guohua, Charles and Heng (2008) examine tunnelling in China, using inter corporate loans as measure of tunnelling. The study made use of selected listed firms in Shanghai Stock Exchange between 1996 and 2006. The data collected were analysed using panel regression approach. They document the use of inter-corporate loans by controlling shareholders to extract funds from Chinese listed firms. Using accounting information from public sources, they show how tens of billions of RMB were siphoned from hundreds of companies during the 1996 to 2006 period. Specifically, they show the nature and extent of these abuses, evaluate their economic consequences, explore their cross-sectional determinants, and report on the extensive efforts by auditors and regulators that eventually contained this practice. Collectively, their findings shed light on the nature and severity of the tunnelling problem in China, and the ongoing challenges associated with regulatory reform in the country. The finding also reveals that the director’s incentives to tunnel firm resources diminish as controlling shareholder ownership increase.

Bae, Kang and Kim (2002) use evidence from mergers by Korean business groups to show that controlling shareholders tend to make acquisitions that enhance the value of other firms in the group, to the detriment of minority shareholders. In this study, the main analyses involve a comparison of the price paid in intra group deals to the price paid in a control sample. The key finding is that a firm’s ownership structure has a predictable directional effect on firm value, a fact that is consist with insiders’ expropriation of minority shareholders. The existence of tunnelling is inferred from the market valuation of a firm’s equity, or changes in market value during a particular time period (i.e., the Asian crises). In this sense, the evidence is relatively indirect and the ability to conduct detailed analyses of tunnelling behaviour is quite limited.

Thomas (2007) study executive tunnelling and executive compensation design using selected listed firms in the United State of America between 2000 and 2005. They study was based on ex post facto design. Thomas develop new model in which resource diversion, director compensation and corporate performance are simultaneously and endogenously determined. The finding reveals that director’s compensation directly reduces directors tunnelling tendency.

Chena, Wanga and Lin (2014) explore the role of the network centrality of independent directors in restraining tunnelling behaviour by controlling shareholders in the Chinese capital market. Our empirical evidence shows that tunnelling behaviour by controlling shareholders is negatively related to the network centrality of independent directors and that this relationship is stronger when non-operating fund occupation is used as the measure of tunnelling. The results of our study show that
board networks can help independent directors to restrain tunnelling behaviour by large shareholders, which plays a positive role in corporate governance.

Ridwan, Fitri and Berto (2015) studied directors tunnelling using firms quoted in Indonesia Stock Exchange. The study examines the relationship between corporate governance variables and tunnelling activities using 2216 listed firms between 2005 and 2012. The study was based on longitudinal design and made used of board size, outsider’s directors, group and big five ownership were used as independent variable. The data were analysed using multiple regressions. The finding reveals that firms with family and state ownership experience more tunnelling activities than others. The study also finds that family, state and leverage ownership structure has positive effect on tunnelling.

Klien (2004) studied ownership structure and director tunnelling. The study used 346 S & P 500 firms in USA between 1992 and 1993. The study was based on ex post facto research design and used cross sectional data. Abnormal accrual was used as measure for directors tunnelling. The study finds that firms with majority independent director to minority independent director structure experience large increase in abnormal accrual than other with minority independent director.

Yu-hsin (2010) study the relationship between weak independent directors, strong controlling shareholder and director tunnelling in Taiwan. The study used primary data and was based on survey design, the data were collected using questionnaire from sample of directors and majority shareholders in Taiwan firm. The data were analysed using analysis of variance. The finding reveals that independent director maintain close relationship with controlling shareholder, hence their independency is not guarantee. It also reveals that controlling shareholder can tunnel resources without constrain from independent director. Kun and Xing (2012) examine controlling shareholder tunnelling and executive compensation, using quoted firms from China. The study used 6,670 listed non-financial firms in China between 1999 and 2005. The study was based on cross sectional regression using levels specification and changes specification to examine the relationship between executive compensation and firm performance. The study finds that if directors incentives scheme are adopted, controlling shareholders who obtain private benefit from companies will have less incentive to do so.

Hyungseok and Woochan (2015) examine executive compensation when a firm is a business group member. The studies used a sample of Chaebol firm in Korea composite stock price index during 2002-2011 fiscal years. The study was based on ex post facto design. It used industry stock return, return on assets, firm size, stock option, change in ROA as independent variable while related party transaction as dependent variable. The finding reveals that director’s cash compensation in a group is positively linked to corporate resource tunnelling from one member to another. It also find strong link between cash compensation and stock performance.

Fried, Kamar and Yafeh (2018) examined the effect of minority veto rights on controller tunnelling in Israel. To assess these rights’ efficacy, they exploit a 2011 regulatory reform in Israel that gave the minority the ability to veto pay packages of controllers and their relatives (“controller executives”). They find that the reform curbed the pay of controller executives and led some controller executives to quit their jobs, or work for free, in circumstances suggesting their pay would not have received approval. These findings suggest that minority veto rights can help curb controller tunnelling. Takao and Cheryl (2005) examine executive compensation, firm performance and corporate governance in China. The study used all listed firms in Shanghai Stock Exchange between 1998 and 2002. The study used panel data of five years and was based on ex post facto. The findings reveal that, executive
compensation positively affects sales growth. Government ownership negatively affects director compensation.

Jiang, Lee and Yue (2008) document the use of inter-corporate loans by controlling shareholders to extract funds from Chinese listed firms. Using accounting information from public sources, they show how tens of billions of RMB were siphoned from hundreds of companies during the 1996 to 2006 period. Specifically, we show the nature and extent of these abuses, evaluate their economic consequences, explore their cross-sectional determinants, and report on the extensive efforts by auditors and regulators that eventually contained this practice. Collectively, our findings shed light on the nature and severity of the tunnelling problem in China, and the on-going challenges associated with regulatory reform in the country. Dwinanto (2010) examine the effect of insider director on tunnelling activities using 395 firms listed in Indonesia stock exchange in 2009. The study was based on cross sectional design. The finding reveals that firms with high level of insider director are highly prone to resource tunnelling than firms with lower insider director.

Wenqian, Georidakopoulos, Ioannis and Konstantinos (2011) Using a panel of Chinese commercial banks over the 2001-2009 period and explores the relationship between executive pay and performance, as well as, the comparison of pay-performance sensitivity between managers and directors. Several methods were employed to estimate the relation, with control variables of size and ownership, based on alternative measures of performance. Our analyses revealed that the performance of non-performing loan ratios and ROE have significant effect on director’s compensation. On the contrary, no relation between bank performance and managers compensation was found, and neither any impact of compensation changes on performance. Moreover, according to our results the state control ownership can lower the pay-performance sensitivity. As a conclusion, this research supports that government regulations on bank performance rating and executive compensation are necessary.

METHODOLOGY

3.1 Research Design

The study adopted ex post facto research design. The reason for this is because the data used were already existed and the study made no attempt to manipulate its nature or value.

3.2 Population of the Study

The population of this study consist of the total number of quoted manufacturing companies in the Nigerian Stock Exchange (NSE). The population size of manufacturing companies quoted on the Nigerian Stock Exchange amounted to 73.

3.3 Sample size and Sampling Techniques

Sample of fifteen (15) companies were purposively selected based on availability of the required data, and the firms selected are PZ Cussons Nigeria, Uniliver Nigeria plc., Guinness Nigeria Plc., International Breweries Plc., Nigerian Breweries Plc., Cadbury plc., Northern Nigeria Flour Mill, Flour Mills of Nigeria, Honey Well Flour Mill, Vita Foam plc., Lives Stock Feed, Dangote Sugar plc., Morrison Industries, Union Dicon Salt and Nestle Nigeria plc.

3.4 Method of Data Analysis
The secondary data collected were analysed using descriptive statistics, correlation and regression analysis. The descriptive statistics were used to evaluate the characteristics of the data such as Mean, maximum, minimum, and standard deviation and also checks for normality of the data. The correlation analysis was used to evaluate the relationship between the variables and to check for multicollinearity. The ordinary regression analysis were be used to evaluate the effect of the independent variables on the dependent variable. It reveals the degree of influence and effect the independent variables has on the dependent variable.

3.5 Variable Description/measurement

The study used a panel data collected from the quoted manufacturing companies in Nigeria within the period covering 2010 – 2017. The variables and their proxy were operationalized as follow:

<table>
<thead>
<tr>
<th>Variables</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm performance</td>
<td>Return on assets (ROA) = net profit / total asset (Chena, Wanga and Lin, 2014)</td>
</tr>
<tr>
<td>Director’s pay (DIPAY)</td>
<td>Director’s pay / operating expenses (Chena, Wanga and Lin, 2014)</td>
</tr>
<tr>
<td>Chairman’s pay (CHPAY)</td>
<td>Chairman’s pay / Staff cost (Chena, Wanga and Lin, 2014)</td>
</tr>
<tr>
<td>Director’s equity holding (DIEQH)</td>
<td>Director’s equity holding / total equity (Kun and Xing, 2012)</td>
</tr>
<tr>
<td>Dividend paid (DIVP)</td>
<td>Dividend paid / Director Share ownership (Kun and Xing, 2012)</td>
</tr>
</tbody>
</table>

3.6 Model Specification

The model for the study was premised on the main objective and anchored on the sub-objective. The model was adopted from the work of Nurazi, Santi and Usman (2015) and modified to suite the independents variables used in this study.

The Nurazi, Santi and Usman (2015) model is as follows:

$$\text{TUNNELING} = \alpha + \beta_{1}\text{SINGLE}_{i,t} + \beta_{2}\text{MULTI}_{i,t} + \beta_{3}\text{BOARD\_SIZE}_{i,t} + \beta_{4}\text{OUTSIDERS}_{i,t} + \beta_{5}\text{SHARES}_{i,t} + \beta_{6}\text{BIGFIVE}_{i,t} + \beta_{7}\text{STATE}_{i,t} + \beta_{8}\text{GROUP}_{i,t} + \beta_{9}\text{INST}_{i,t} + \beta_{10}\text{SALES} + \beta_{11}\text{LEVERAGE}_{i,t} + \varepsilon$$

The model for the study is anchored on the objective. Therefore, the above model was adopted and modified as follows:

$$\text{ROA}_{it} = \beta_{0} + \beta_{1}\text{DIPAY}_{it} + \beta_{2}\text{CHPAY}_{it} + \beta_{3}\text{DIEQH}_{it} + \beta_{4}\text{DIVP}_{it} + \eta_{i} + \varepsilon$$

This can be econometrically express as

$$\text{ROA}_{it} = \beta_{0} + \beta_{1}\text{DIPAY}_{it} + \beta_{2}\text{CHPAY}_{it} + \beta_{3}\text{DIEQH}_{it} + \beta_{4}\text{DIVP}_{it} + \eta_{i} + \varepsilon$$
Where,

ROA = Return on assets

DIPAY = Director’s pay

CHPAY = Chairman’s pay

DIEQH = Director’s equity holding

DIVP = Dividend paid

\( \Upsilon \) = the error term

\( \beta_0 \) = the intercept

\( \beta_1-\beta_4 \) = the independent variable coefficients

**PRESENTATION AND DATA ANALYSIS**

The summary of the analysis result and its corresponding interpretations are presented below. 4.1 Descriptive Statistics

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>ROA</th>
<th>DIPAY</th>
<th>CHPAY</th>
<th>DIEQH</th>
<th>DIVP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.358250</td>
<td>0.166650</td>
<td>0.337675</td>
<td>0.339783</td>
<td>0.063583</td>
</tr>
<tr>
<td>Median</td>
<td>0.310000</td>
<td>0.142000</td>
<td>0.300000</td>
<td>0.350000</td>
<td>0.070000</td>
</tr>
<tr>
<td>Maximum</td>
<td>0.950000</td>
<td>0.491000</td>
<td>0.890000</td>
<td>0.510000</td>
<td>0.140000</td>
</tr>
<tr>
<td>Minimum</td>
<td>0.150000</td>
<td>0.070000</td>
<td>0.100000</td>
<td>0.180000</td>
<td>0.010000</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.179662</td>
<td>0.071023</td>
<td>0.172959</td>
<td>0.070049</td>
<td>0.032534</td>
</tr>
<tr>
<td>Skewness</td>
<td>1.638868</td>
<td>2.216505</td>
<td>1.720654</td>
<td>0.566950</td>
<td>-0.294687</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>5.135549</td>
<td>9.396233</td>
<td>5.816604</td>
<td>2.920506</td>
<td>2.181785</td>
</tr>
<tr>
<td>Jarque-Bera</td>
<td>76.52062</td>
<td>302.8169</td>
<td>98.87930</td>
<td>6.460236</td>
<td>5.084184</td>
</tr>
<tr>
<td>Probability</td>
<td>0.000000</td>
<td>0.000000</td>
<td>0.000000</td>
<td>0.039553</td>
<td>0.078702</td>
</tr>
<tr>
<td>Sum</td>
<td>42.990000</td>
<td>19.998000</td>
<td>40.52100</td>
<td>40.77400</td>
<td>7.630000</td>
</tr>
<tr>
<td>Sum Sq. Dev.</td>
<td>3.841132</td>
<td>0.600261</td>
<td>3.559874</td>
<td>0.583920</td>
<td>0.125959</td>
</tr>
<tr>
<td>Observations</td>
<td>120</td>
<td>120</td>
<td>120</td>
<td>120</td>
<td>120</td>
</tr>
</tbody>
</table>

**Source:** Researcher summary of descriptive statistics (2018)
The result provides some insight into the nature of the selected firms’ data used for the study. Firstly, it was observed that over the period under review, the sampled companies have positive average return on assets (ROA) of 0.358250, and this means that the selected firms have a positive return on assets (performance) in the period of the study. The table also reveals a positive average value of 0.166650 for DIPAY, 0.337675 for CHPAY, 0.339783 for DIEQH and 0.063583 for DIVP for the selected firms used in the study. These values mean that within the period under review, quoted firms meet up to 36% of return on assets on the average within the period under review. The maximum value of DIPAY is 0.491000 and its minimum value is 0.070000, maximum value for CHPAY is 0.890000 and its minimum value is 0.100000; maximum value for DIEQH is 0.510000 and its minimum value is 0.180000, maximum value for DIPAY is 0.140000 and its minimum value is 0.010000. The large differences between the maximum and minimum value shows that the firm’s data used for the study are homogeneous.

4.2 Correlation Analysis

Table 4.2: Correlation Analysis

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>ROA</th>
<th>DIPAY</th>
<th>CHPAY</th>
<th>DIEQH</th>
<th>DIVP</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>1.000000</td>
<td>-0.030836</td>
<td>-0.168801</td>
<td>-0.211123</td>
<td>0.077278</td>
</tr>
<tr>
<td>DIPAY</td>
<td>-0.030836</td>
<td>1.000000</td>
<td>0.143765</td>
<td>-0.072148</td>
<td>0.090775</td>
</tr>
<tr>
<td>CHPAY</td>
<td>-0.168801</td>
<td>0.143765</td>
<td>1.000000</td>
<td>0.133970</td>
<td>-0.090215</td>
</tr>
<tr>
<td>DIEQH</td>
<td>-0.211123</td>
<td>-0.072148</td>
<td>0.133970</td>
<td>1.000000</td>
<td>-0.057584</td>
</tr>
<tr>
<td>DIVP</td>
<td>0.077278</td>
<td>0.090775</td>
<td>-0.090215</td>
<td>-0.057584</td>
<td>1.000000</td>
</tr>
</tbody>
</table>

Source: Researcher summary of correlation analysis (2018)

The findings from the correlation matrix table (table 4.2 above) shows that return on assets (ROA) has a negatively associated with DIPAY (-0.030836), CHPAY (-0.168801) and DIEQH (-0.211123); and positively associated with DIVP (0.077278). DIPAY has a strong positive association with CHPAY (0.143765) and DIVP (0.090775), and also has a negative association with DIEQH (-0.072148). CHPAY is positively associated with DIEQH (0.133970) and negatively associated with DIVP (-0.090215). DIEQH is negatively associated with DIVP (-0.057584). In checking for multicolinearity, the study observed that no two explanatory variables were perfectly correlated.

4.3 Regression Analysis

Table 4.3: Return on Assets (ROA) Model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.565487</td>
<td>0.098488</td>
<td>5.741661</td>
<td>0.0000</td>
</tr>
<tr>
<td>DIPAY</td>
<td>-0.077603</td>
<td>0.232269</td>
<td>-0.334106</td>
<td>0.7389</td>
</tr>
<tr>
<td>CHPAY</td>
<td>-0.138682</td>
<td>0.095964</td>
<td>-1.445137</td>
<td>0.1511</td>
</tr>
<tr>
<td>DIEQH</td>
<td>-0.492879</td>
<td>0.234113</td>
<td>-2.105303</td>
<td>0.0374</td>
</tr>
<tr>
<td>DIVP</td>
<td>0.314503</td>
<td>0.502173</td>
<td>0.626283</td>
<td>0.5324</td>
</tr>
</tbody>
</table>

R-squared 0.768455  Mean dependent var 0.358250
Adjusted R-squared 0.756053  S.D. dependent var 0.179662
S.E. of regression 0.176394  Akaike info criterion -0.591425
Sum squared resid 3.578188  Schwarz criterion -0.475279
From our result, the R-squared ($R^2$) is 77% in ROA Model. This showed that our model displayed a good fit because the $R^2$ is closer to 100%, these explanatory variables can impact up to 77% out of the expected 100%, leaving the remaining 23% which would be accounted for by other variables outside the models as captured by the error term.

The calculated value of the f-statistics is 2.112707 and its probabilities are 0.038678 which is less than 0.05. We therefore accept and state that there is a significance relationship between the variables. This means that the parameter estimates are statistically significant in explaining the relationship in the dependent variable.

It is observed from table 4.3 above that only DIEQH were statistically significant at 5% with its value as -2.105303. This implies that they have contributed significantly to corporate performance at the rate of 5% level of significant. The remaining variables (DIPAY, CHPAY and DIVP with its values as -0.334106, -1.445137 and 0.626283 respectively) are not statistically significant at 5%.

Our model is free from the problem of autocorrelation because the Durbin-Watson value is 1.875587 which is approximated as 2 (that Means, the absence of autocorrelation in the model used for the analysis).

The a’priori criteria revealed that DIPAY has negative sign and its values are -0.334106. In the Model, this implies that decrease in DIPAY decreases the corporate performance by 33%, this conforms to our theoretical expectation. CHPAY has negative sign and its values are -1.445137. In the Model, this implies that decrease in CHPAY decreases the corporate performance by 145%. DIEQH has negative sign in the Model and its values are -2.105303. This implies that decrease in DIEQH decreases the corporate performance by 211%, and DIVP has positive sign in the Model and its values are 0.626283. This implies that increase in DIVP increases the corporate performance by 63%.

### 4.4 Hypotheses Testing

**H01:** Board of director’s pay does not have significant effects on the performance of quoted companies in Nigeria.

From the result of our test in table 4.3 above, we found out that the value of our t-test for DIPAY is -0.334106 with a probability of 0.7389. This probability value is greater than the desired level of significant of 0.05. We accept the null and reject the alternative hypothesis, which says that board of director’s pay does not have significant effects on the performance of quoted manufacturing companies in Nigeria. Thus, board of director’s pay is negative and has insignificant effect on performance of quoted manufacturing companies in Nigeria at 5% level of significant. This means that decrease in the board of director’s pay will has no effect on performance of quoted manufacturing companies in Nigeria.

**H02:** Chairman’s pay does not have significant effects on the performance of quoted companies in Nigeria.
In the result of our test in the table 4.3 above, we found out that the value of our t-statistics for CHPAY is -1.445137 with a probability of 0.1511. This probability value is greater than the desired level of significance of 0.05. We therefore, reject the alternative and accept the null hypothesis, which says that chairman’s pay does not have significant effects on the performance of quoted manufacturing companies in Nigeria. Thus, chairman’s pay is negative, but does not have any significant effect on performance of quoted manufacturing companies in Nigeria at 5% level of significant. This means that decrease in the chairman’s pay will has no effect on performance of quoted manufacturing companies in Nigeria.

**Ho3:** Director’s equity holding has no significant effects on performance of quoted companies in Nigeria.

Drawing inference from table 4.3 above, we found out that the computed value, t-value for DIEQH is -2.105303, while its probability is 0.0374. Since its probability value is less than the desired level of significance of 0.05. We therefore, reject the null and accept the alternative hypothesis, which says that director’s equity holding has significant effects on performance of quoted manufacturing companies in Nigeria. Thus, director’s equity holding is negative and has significant effect on performance of quoted manufacturing companies in Nigeria at 5% level of significant. This means that decrease in the director’s equity holding will has negative effect on performance of quoted manufacturing companies in Nigeria.

**Ho4:** Dividend payment to directors has no significant effect on the performance of quoted companies in Nigeria.

From table 4.3 above, we found out that the computed value, t-value for DIVP is 0.626283, while its probability is 0.5324. Since its probability value is greater than 5% level of significant, we therefore reject the alternative and accept the null hypothesis, which says that dividend payment to directors has no significant effect on the performance of quoted manufacturing companies in Nigeria. Thus, dividend payment to directors is positive, and has insignificant effect on performance of quoted manufacturing companies in Nigeria at 5% level of significant. This means that increase in the dividend payment to directors will has no effect on performance of quoted manufacturing companies in Nigeria.

**SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS**

5.1 Summary of Findings

The study examined the effect of directors tunnelling on performance of quoted manufacturing companies in Nigeria, and the following were found at the 5% level of significant:

I. Board of director’s pay is negative and has insignificant effect on performance of quoted manufacturing companies in Nigeria.

II. Chairman’s pay is negative, but does not have any significant effect on performance of quoted manufacturing companies in Nigeria.

III. Director’s equity holding is negative and has significant effect on performance of quoted manufacturing companies in Nigeria.

IV. Dividend payment to directors is positive, and has insignificant effect on performance of quoted manufacturing companies in Nigeria.

5.2 Conclusion
Based on the result, the study concluded that director’s equity holding has negative relationship with ROA which is statistically significant at 5% level. Thus, the study rejects the null hypothesis and accepts the alternate hypothesis. On the board of director’s pay and chairman’s pay, the analysis reveals that both board of director’s pay and chairman’s pay has negative relationship with ROA which are statistical insignificant at 5% level. Thus, they have no statistical significant effect on performance of manufacturing companies in Nigeria; while dividend payment to directors has positive relationship with ROA, it is also statistical insignificant at 5% level. This confirms with the study of Cheung, Rau and Stouraitis (2003) which revealed that the focal variable director’s equity holding designed to capture the effect of directors tunnelling by a company on its performance is significantly strong and negative and impacts on the profitability of corporate firms in Hong Kong. It therefore concludes that, director’s equity holding has a negative effect on the performance (measured by ROA) of manufacturing companies in Nigeria.

5.3 Recommendations

Based on the results and conclusions, the following recommendations were made:

I. Due to the negative relationship board of director’s pay has with performance of manufacturing companies in Nigeria, Management and controlling of board of director’s pay is therefore an important factor to be considered in enhancing or boosting the performance of manufacturers in Nigeria. It is therefore necessary that adequate management and controlling of board of director’s pay should be pursued by the shareholders of the manufacturing companies in Nigeria. This can be achieved by specifying the terms and conditions of the board of director’s pay in the annual general meeting of the shareholders.

II. Due to the negative relationship chairman’s pay has with performance of manufacturing companies in Nigeria, like in the board of director’s pay, we therefore suggest that proper control should be emphasized on the chairman’s pay by the shareholders of manufacturing companies in order to prevent fraud.

III. Due to the negative effect director’s equity holding has on performance of manufacturing companies in Nigeria, the study therefore recommends that a lower director’s equity holding may lead to higher performance for manufacturing companies in Nigeria.

IV. Due to the insignificant effect dividend payment to directors has on the level of performance of manufacturing companies in Nigeria. The managers should considered dividend payment to directors as one of factors that enhance or boost the performance of manufacturers in Nigeria, but much attention should be paid to director’s equity holding due to its significant effect.

References


