

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The strength of any economy depends on the vibrancy of its manufacturing sector. The manufacturing sector constitutes a component of the economy and serves as an avenue for increasing productivity by converting raw materials into finished goods, import replacement and export expansion. This leads to increase in foreign exchange earning capacity thereby raising the level of employment amongst other things. Manufacturing firms came into being and became dominant during the 18th-19th century with the occurrence of technological and socioeconomic transformations in the Western countries and spread to all parts of the world including Nigeria (Charles, 2012).

Manufacturing firms in Nigeria, which ought to be the nucleus of the economy, have been experiencing a decline in productivity rate and in employment generation, a cause which could be attributable to inadequate electricity supply, poor infrastructure, excessive dependence on imports for consumption and capital goods (Gbosi, 2007). These have resulted to high exchange rate of the naira and neglect of the agricultural sector, high interest rate and charges (Ogbole, 2010; Okemini & Uranta, 2008; Anyanwu, 2007; Onoh, 2007). Subsidies on production and produce were falling causing companies to collapse while some others (Dunlop Nigeria Plc and Michelin Nigeria Plc) relocated their factories abroad to take advantage of the incentives available to them such as tax holiday, free lands, adequate power supply, good roads network and security. The resultant effect of this to the economy are low standards of living amongst Nigerians, reduction in gross domestic product, high unemployment rate with its attendant effects on social vices such as kidnapping and other criminal activities.

Manufacturing firms that remain in business in order to keep the trust of their shareholders, look for ways to boost firm's revenue generation and enhance performance through the minimization of tax payments. The motivation for this action is that tax payments constitute a significant percentage liability of firms which on the average, form one third of the firms cash outflow and hence, affects the firm's overall profit after tax outlay. Manufacturing firms therefore, through their attributes and strategies such as thin capitalization, research and development, capital intensity, age and size, look for every possible means to reduce, postpone or avoid tax payments which can be legal or illegal. The legal means to reduce tax is called tax aggressiveness while the illegal means is known as tax evasion. The consequence of tax evasion makes it an unappealing option for firms (Kawor & Kportorgbi, 2014; Murphy, 2004). When organizations pay less tax legally it invariably boost their profit after tax and performance as a successful company is the one that is properly attuned to its tax environment. Consequently, any reduction of taxes paid contributes to an increase of earnings disclosed in the financial statements, taking into account that the main purpose of firms' activities is creating value to shareholders. Therefore, actions to minimize the tax burden are in line with such an objective.

The methods of tax aggressiveness by companies in developed economies tend to be well documented. According to Nwaobia and Jayeoba, (2016), this method revolves around; transfer pricing which involves the setting of prices for transactions between companies that are part of the same multinational companies; Corporate debt-equity which involves inter-company loans given from entities in lower-tax countries to subsidiary companies in higher-tax countries thereby reducing the taxable profit in the higher-tax country; Conduit where a corporation channels money through a country so benefiting from a favourable tax rate; shifting income from higher-tax to lower-tax countries; Profit shifting strategy which is achieved by limiting

operational activities (and related income) in the higher-tax state, by moving them to a subsidiaries located in a lower-tax state, thin capitalization which represents the proportionate relationships between debt and equity and determines the measure of claims of the holders in the earnings and assets of the company (Nwaobia & Jayeoba, 2016).

A debt instrument generates interest income to the lender and results in interest expense for the borrower and the tax system allows interest on loan to be deducted, the use of debt in financing a business has a tax advantage. Also, the assets of a company are financed either by the owners' equity debt or complementarities of equity and debt. Where a company borrows money to purchase an asset, such a loan attracts interests which are allowed as an expense in the income statement. Also the acquisition of qualifying capital expenditure enjoys capital allowance from tax authorities, thereby reducing the total amount of tax paid to the government.

Predicated on these, the study is set to examine the effects of tax aggressiveness (thin capitalization, research and development, capital intensity, age and size of a firm) on the financial performance of manufacturing firms in Nigeria.

1.2 Statement of the Problem

Taxes, enhances firms' performance; therefore any reduction of taxes paid contributes to the earnings disclosed in the financial statement. This is in support of the main purpose of firms' activities which is creating value for shareholders; therefore, actions taken to minimize the tax burdens are in line with that objective. The focus of previous researchers were to satisfy the general objectives of variables that can reduce tax paid to government legally without looking at its effect on the firms' performance. Studies of Boussadi and Hamed (2015), Ribeiro, Cerqueira and Brandao (2015), Jalan, Kale and Meneghetti (2013), Utkir (2012), Harrington and Smith (2012), Mohamed and Ines (2012), Martani, Anwar and Fitriasaki (2011) confirm this as they

focused on the determinants of tax aggressiveness without examining the effect of tax aggressiveness on the performance of those firms.

In addition, instant literatures on tax aggressiveness recorded mixed findings. While, the proponents of tax aggressiveness like, Anouar and Houria (2017), Terry Laksham and Oktay (2016), Ezugwo and Akudo (2014), Fichman and Levinthal (1999); Baron (1994) documented a positive sign on tax aggressiveness which could lead to a boost in shareholders' wealth. Managers were therefore encouraged to understand and maximize the opportunity within the tax system and policy to reduce taxes paid to the government.

On the other hand, the opponents of tax aggressiveness - Ozgulbas, Koynncugil and Yilmaz (2006), Mata and Portugal (2004), Haltiwanger, Lane and Speletser (1999) recorded negative association on tax aggressiveness indicating that the efforts made on tax reduction was rather retrospective to the growth of a firm. From, the preceding analysis, it becomes necessary to conclude that the debate for or against tax aggressiveness is far from being settled since there are no overwhelming support(s) to justify its adoption or otherwise. As a result, it is imperative to further investigate the determinants of tax aggressiveness and how those determinants relate with the financial performance of manufacturing firms in Nigeria.

Also, from available records there seems to exist paucity of empirical works on this issue in Nigeria, except for the studies of Adebisi and Gbegi (2013), Fatoki (2013), Fagbemi, Olayinka Abdurafiu (2013), Nwachukwu (2006), Owolabi (2004) who made use of primary data with its attendant high subjectivity and respondent bias. Their studies also focused on the determinants of tax aggressiveness which is merely descriptive thereby ignoring its empirical influence on firms' financial performance.

This research, therefore merit empirical investigation on the determinants of tax aggressiveness, and how these determinants can explain the financial performance of manufacturing firms' in Nigeria.

1.3 Research Questions

The following question are asked which the researcher seeks to find answers to

- i. How does thin capitalization affect the profit before tax of manufacturing firms in Nigeria?
- ii. To what extent does capital intensity influence the profit before tax of manufacturing firms in Nigeria?
- iii. What is the effect of research and development on the profit before tax of manufacturing firms in Nigeria?
- iv. Does the size of a firm affect the profit before tax of manufacturing firms in Nigeria?
- v. What is the effect of firms age on the profit before tax of manufacturing firms in Nigeria?
- vi. To what extent does effective tax rate affect the profit before tax of manufacturing firms in Nigeria?

1.4 Objectives of the Study

The broad objective of this study is to examine the effect of tax aggressiveness on the financial performance of manufacturing firms in Nigeria. Specifically the study seeks to;

- i. examine the effect of thin capitalization on profit before tax of manufacturing firms in Nigeria
- ii. assess the effect of capital intensity on profit before tax of manufacturing firms in Nigeria
- iii. evaluate the effect of research and development on profit before tax of manufacturing firms in Nigeria

- iv. determine the effect of Firm size on profit before tax of manufacturing firms in Nigeria
- v. ascertain the effect of Firms age on profit before tax of manufacturing firms in Nigeria
- vi. establish the effect of effective tax rate on profit before tax of manufacturing firms in Nigeria

1.5 Research Hypotheses

This study is guided by the following null hypotheses.

- i. Thin capitalization does not have significant effect on profit before tax of manufacturing firms in Nigeria
- ii. Capital intensity does not have significant influence on profit before tax of manufacturing firms in Nigeria
- iii. Research and development has no significant effect on profit before tax of manufacturing firms in Nigeria
- iv. The size of a firm does not have significant effect on profit before tax of manufacturing firms in Nigeria
- v. The age of a firms does not have significant effect on profit before tax of manufacturing firms in Nigeria
- vi. Effective tax rate does not have significant effect on profit before tax of manufacturing firms of manufacturing firms in Nigeria

1.6 Significance of Study

The study is beneficial to the following stakeholders:

- i. Business Owners- a study of this nature will help business owners who seek avenues to eliminate unnecessary and avoidable cost with the aim of optimizing profits. Through tax aggressiveness, companies have the right to order their tax affairs in such a way that tax is minimized so long as such actions are within the ambit of the law.

ii. Policy makers- at same time knowledge of tax aggressiveness strategies will help policy makers to curb its excesses by ensuring that profits are taxed where relevant economic activities for value creation are performed and each jurisdiction earns its fair share of profit irrespective of the loopholes in our domestic laws.

iii. Researchers- Our study will be useful to tax researchers interested in studying the drivers of tax aggressiveness. This research therefore adds to the extant literatures by providing evidence of what affects and influences the performance of manufacturing firms through tax aggressiveness

iv. The public- companies do not operate in a vacuum. Therefore the environment where they operate could be facing challenges as a result of the noise, air pollution and other environmental challenges. It is therefore expected that business owners consider the impact of their activities to the immediate environment. This brings in the concept of tax morality which connotes standards of good or bad behaviour, fairness and honest. Good revenue generated from these companies could be used to alleviate the environmental challenges faced by the public. Therefore tax is seen as a means of giving back to the society and a collective modality for improving the society. Where it is discovered that companies have gone beyond tax planning by being deceitful in their tax planning it could result to social unrest to the environment where the companies operates which could lead to reputational cost to the company.

1.7 Scope of the Study

The study investigates the effect of tax aggressiveness on the financial performance of manufacturing firms in Nigeria. To do this, we obtained data from the annual report of manufacturing companies in the Conglomerates, Natural Resources, Industrial goods, Consumer

goods, Healthcare and Agricultural sectors listed in the Nigeria Stock Exchange, for a period of ten years 2008 through 2017.

1.8 Limitation of the Study

Constraint to this study arose from the difficulty encountered by the researcher in obtaining data for the respective years captured in the study especially year 2017. However this was taken care of by a little waiting until the 2017 data were all released and collated as well.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Conceptual Reviews

2.1.2 Determinants of Tax Aggressiveness

Tax aggressiveness is as old as taxation itself as whenever authorities decide to levy taxes, individuals and organisations try to avoid paying them. This became popular through globalization as the range of opportunities to circumvent taxation while simultaneously reducing the risk of being detected grew. This leans credence to the judgement delivered by Learned judge Hand, in 1947 in the case of *Commissioner v Newman*, when he opted that there is nothing sinister in arranging ones affairs so as to keep taxes as low as possible (Kawor & Kportorgbi, 2014). Hoffman (1961) stated that it is a necessity for firms to understand the prevailing tax laws and apply the laws in a manner that ensures that firms minimize their tax exposure since it makes no economic sense to pay more tax than what the law demands. It is therefore an integral part of financial planning decisions that offer the tax manager and the company an opportunity to mitigate the companies' tax liability and improve on the financial performance of the firm.

Tax aggressiveness is therefore, strategies adopted by firms within the ambit of the law to reduce the firms' explicit tax liability. Hanlon and Heitzman, (2010) note that tax-reducing device transfers interest from the government to shareholders to maximize shareholders' value. Therefore, some level of tax avoidance is desirable as it benefits the shareholders and management as well. If a firm pays less tax through legitimate tax saving strategies, shareholders benefit as well as management when incentives are properly aligned (Slemrod, 2004). Thus, the terms such as tax management; tax planning; tax sheltering; and tax avoidance are interchangeably used with tax aggressiveness (Lanis & Richardson, 2011; Tang & Firth, 2011;

Minnick & Noga, 2010; Chen, 2010). Tax aggressiveness is a reduction of the present value of tax payments or a strategy of minimizing taxes through legal means by exploring, the complexities, technicalities and loopholes in the tax laws. Taxpayers take advantage of the provisions of the tax laws to reduce their explicit corporate tax liabilities such as arranging to take income in the form of lightly taxed capital gains or untaxed fringe benefits rather than as fully taxed wages and salaries (Annuar, Salihu, & Obid, 2014; Dowling, 2013; Rego, 2003; Kirchler & Maciejovsky, 2001). Is therefore, the legal utilization of the tax regime to ones' own advantage, to reduce the amount of tax that is payable by means that are within the law (Pasternak and Rico, 2008).

Otusanya, (2011) noted that tax aggressiveness is not an unlawful practice which has the effect of reducing the government revenues needed for the provision of infrastructures, and for public services and public utilities. It is a practice of using the legal exploitation of the tax system to ones' advantage to reduce the amount of tax that is payable by ways that are within the law while making a full disclosure of the material information to the tax authorities (Desai & Dharmapala, 2006). Desai and Dharmapala (2009) furthered that tax aggressiveness is a transfer of value from the state to shareholders. This involves strategies designed to create information asymmetry between tax authorities and the firm so as to prevent the detection from tax authorities. It represents a continuum of tax planning strategies, encompassing activities that are perfectly legal and more aggressive transactions that fall into the grey area (Wang, 2010).

In the same manner, Kasipillai, Aripin and Amran (2003) explained that tax aggressiveness denotes the taxpayers conscious creativity to arrange his tax affairs in a proper manner based on law and regulation (any provision not violated) so as to reduce his tax bill, and this is (or should be) acceptable in view of the tax administrator. James and Alley (2004);

Soyode and Kajola, (2006) opined that, it is a process whereby an individual plans his or her finances so as to apply all exemptions and deductions provided by tax laws to reduce taxable income. Therefore is a perfectly a legal approach to handling taxes, although sometimes avoidance practices can stray into the realm of being abusive, at which point people may cross the line into tax evasion (Saratu, 2015).

According to Seyi (2003), tax can be avoided in Nigeria, where a capital expenditure is incurred with the purpose of claiming capital allowance and a foreign investment is made with the aim of being exempted from income tax. It is any activity that reduces tax paid given the level of earnings. Tax aggressiveness involves any transaction that has any effect on the firm's tax burden. This includes real activities which have tax benefits, lobbying activities aimed at reducing a firm's tax burden, and activities undertaken solely for the purpose of avoiding taxes (Guo, 2014). If successfully deployed, tax aggressiveness strategy would transfer wealth from the state or government to shareholders. Therefore, it should result in relatively low taxes payable (that is, low Effective Tax Rates), and higher after-tax cash flows, which will show up in analysts' financial reports and ultimately, stock prices (Chena, Cheokb, & Rasiahc, 2016). Effective tax avoidance seeks to minimize taxes but only to the extent that such planning maximizes after-tax returns (Scholes, Wolfson, Erickson, Maydew, & Shevlin, 2009).

Swenson (1999) observed that the stock market perceives low-tax paying firms that pay lower taxes as being better at controlling costs. This stands to reason that all activities in a firm that reduce the tax liability are known as tax aggressiveness. Tax aggressiveness is a continuum for tax planning strategies. At one end of the continuum is tax planning strategies that lead to a reduction of lower explicit taxes, which are legal, such as lobbying for a lower tax rate or investment in municipal bonds. At the other end of the continuum is tax planning strategies that

lead to a high reduction of explicit taxes, which are not considered legal, such as tax evasion, tax noncompliance. Thus, a tax planning strategy can be anywhere in the continuum, depending on the amount of the reduction of explicit tax liability.

Entities have different stakeholders with different interests in the company. Where for some groups, a certain tax planning activity would be at one end of the continuum, it can be at the other end of the continuum for a different interest group. Hence, shareholders might prefer tax aggressiveness because it leads to a lower cost of debt (Lim, 2011), whereas governmental bodies might want companies to comply with the tax regulations and prefer no tax aggressiveness activities (Freedman, 2008). Also, the conflicts of interest between managers and shareholders create opportunities for managerial diversions which discount the value of firms (Desai & Dharmapala, 2006).

Further, if shareholder wealth is maximized, tax avoidance can nevertheless have both adverse firm and macro-level effects (Hanlon & Heitzman, 2010; Robinson, Sikes, & Weaver, 2010; Hanlon & Slemrod, 2009). At the firm level, tax avoidance diminishes the firm's discharge of its social irresponsibility (Erle, 2008). At the macro-level, tax avoidance represents the loss of resources to the government that can finance the provision of public goods (Sikka, 2010).

Therefore, tax aggressiveness represents and serves a two faced opposing purposes; it is a serious loss of revenue to the governments of many developed and developing economies as well as a contribution to the profit after tax of the company. Tax aggressiveness has been a prevalent issue since the foundation of tax legislation and distributive in every society where taxes are levied. This is more endemic among corporate taxpayers given the scale of the company income tax. The motivation for this action is that taxes take away greater proportion of the firms pre-tax earnings and therefore reduce their distributive profit and while increasing the firms tax liability.

Income tax is paid by the company to the government thereby transferring wealth from the company to the government. The payment of income tax is a cost for the firm and the owner itself, the benefit of which may not be commensurate to what the government would do for the corporation. Tax payment becomes one of the internal part of a cost incurred by the company based on the income made by the organization. This payment throws a lot of a must financial burden on the company which cannot be ignored as it is a statutory obligation such a company owes to the government for the development of her country.

Companies therefore find every possible legal means of reducing this mandatory expense. The motivations to reduce tax advice and therefore avoid paying higher taxes are reasonable since about one third of the firms profit can potentially be taken away by the government. Scholes and Wolfson, note that a successful company is the one that is properly attuned to its tax environment. The traditional thinking is that firms that derive maximum benefit from tax planning perform better than those that do not plan their taxes (O'Connor, 2008). From the empirical perspective, tax planning is positively associated with firms' performance. For instance, Chen, Chen, Chen and Shelvin (2010), Desai and Hines (2002) reported positive association between tax planning savings and firm performance. The case is that tax represents cost of doing business, and any action that has the potential of minimizing tax cost reflects in higher firm performance. This argument presupposes that tax planning cost and risk does not exceed the savings from the planning. Companies can consciously reduce tax legally through their attributes and strategies such as acquisition of qualifying capital expenditure, research & development, capital intensity, age and thin capitalization.

2.1.3 Implications of Tax Aggressiveness

Tax aggressiveness involves cost, though the cost is a continuum. A cost for someone could be a benefit for someone else. To the shareholders, tax aggressiveness reduces the expected bankruptcy costs, lowers the default risk, and increases the financial slack; therefore, cost of debt decreases (Lim, 2011). Furthermore, there is more cash saved, leading to an increase in cash flow. An increased cash flow leads to opportunities for investments for the firm, which in turn leads to increased firm value, so the shareholders' wealth increases. Every benefit comes with a cost. If a firm engages in illegal tax avoidance, tax authorities might detect it after the audit and apply a fee or a penalty (Chen, Chen, & Cheng, 2009).

However, it is not the amount of the fee that hurts the company the most, but the reputational costs that comes with it. According to Annuar, Salihu, and Obid, (2014), there are two kinds of reputational costs. The first is related to the fact that a firm operates in an environment; when a firm engages in tax aggressiveness, the organizational legitimacy of the firm is questioned by the public. Mainly, the question arises whether the firm contributes to the economic well-being of the society. Another potential reputational cost is related to the decline of the share prices caused by a firm engaging in tax aggressiveness.

Hanlon and Slemrod (2009) studied whether news about corporate tax aggressiveness has a negative effect on stock prices. The results suggest that when a company is involved in tax shelters, on average, the company's share price declines. This is as a result of the complexity and ambiguity of tax avoidance which can shelter managers who engage in various forms of managerial rent extraction such as earnings manipulation and insider transactions which would reduce after-tax cash flows (Desai & Dharmapala, 2009; Desai, Dyck, & Zingales, 2007). For instance, Enron made use of structured financing transactions to evade tax, leading to government prosecution and its collapse. Beyond that, firms also need to shoulder the combined

tax aggressiveness costs, which include direct tax planning, compliance and non-tax costs. Lee, Dobiyski, and Minton (2015) suggest that if shareholders cannot fully understand the cost-benefit calculus, tax aggressiveness activities could actually reduce firm value. Desai and Dharmapala (2009) found no significant relationship between tax aggressiveness and firm value, but a positive relationship for firms with dominant institutional ownership. Firms operating in the retail sector have the strongest negative effect on stock price. The reason for this could be the consumer/tax payer backlash. Desai, Dyck, and Zingales (2007) found that companies in Russia that have increased tax enforcements have an increased market value.

Other costs involving tax avoidance are political costs. The firm can be exposed to these costs through high profits or political actions by external parties. As a result, firms will tend to shift profits from the current period to future periods. This could be accomplished by several actions, such as government lobbying, social responsibility campaigns, and the selection of certain accounting procedures. In the word of Mills, Nutter, and Schwab (2013), higher corporate tax aggressiveness leads to higher political costs. Higher effective tax rates lead to contractors that are highly sensitive to political costs. Shareholders might therefore benefit from tax aggressiveness, because it leads to a higher income as shareholders would like to comply with tax regulations, because the costs associated with tax avoidance might be higher than the benefits.

2.1.4 Thin Capitalization

How a company chooses its financing resources is important due to different fiscal treatment of different means of funding. A firm may essentially decide between debt financing and equity financing. If a firm decides on equity financing, although it can be a cheaper alternative, it has a cost associated through the remuneration of investors, which is payment of

dividends. Dividends are not deductible for tax purposes. The deductibility of interest expense leads firms to prefer debt financing rather than equity financing. As pointed out by Ribeiro (2015); Kraft (2014), firms' financing decisions may also contribute to the alignment of shareholders and managers' interests.

Managers of firms with higher levels of leverage are subject to the discipline of financing agreements imposed by creditors through the inclusion of limiting clauses. These restrictions reduce the leeway available to take decisions that are not value maximizing only for the purpose of extracting private benefits. This stands to reason that more leveraged firms exhibit lower effective tax rates. Kraft (2014), Richardson and Lanis (2007) find a significant negative relationship between leverage, used as a proxy for capital structure, and effective tax rates.

2.1.5 Age

This is the number of years a firm has stayed in operation. The General saying of the older the merrier plays in here. Age goes with maturity and is believed that when a company stays long. The company tends to understand better the business environment better and also the tax laws from which they can take advantage of, scholars' theoretical models take firm size and firm age as representing the same fundamental concept. For instance, Greiner (1972) presents his stages of growth model of organizational change in growing firms, in which size is linearly related to age. The relationship between firm age and survival has also been investigated by many researchers with conflicting findings (Bartelsman, 2005; Mata and Portugal, 2004). Stinchcombe, (1965) coined the term liability of newness to describe how young organizations face higher risks of failure.

Fichman and Levinthal, (1991) referred young age as the liability of adolescence to explain why firms face an initial 'honeymoon' period in which they are buffered from sudden

exit by their initial stock of resources. Still others have identified liabilities of senescence and obsolescence according to which older firms are expected to face higher exit hazards once other influences (such as firm size) are controlled for (Barron, 1994; Stam and Wennberg, 2009; Haltiwanger, Lane & Spletzer, 1999; Bellone, Musso, Nesta & Quere, 2008).

2.1.6 Capital Intensity

In line with firms' financing decisions, investment decisions are also a characteristic that can influence effective tax rates. As pointed out by Hanlon and Heitzman, (2010) managers' investment decisions can be to some extent constrained by corporate taxes due to the uncertainty of tax payments and deductions that have to be incorporated in the calculation of an investment's present value. As well as the deductibility of interest expense, depreciations and amortizations are an important slice of firms' costs. Therefore, firms that are more capital intensive benefit more from depreciations deductibility. This is even more important since an asset economic life is usually longer than the depreciation period (Richardson & Lanis, 2007). Due to the existence of different depreciation methods, more capital-intensive firms can easily manage taxes by accelerating or deferring depreciation expense and, consequently, they can take advantage from temporary book differences.

2.1.7 Research and Development

Research and development (R&D) expenses are another aspect related to firms' investment decisions which contribute to lower effective tax rates. There are many fiscal incentives through multiple jurisdictions that promote the investment in R&D. Research and development programs are conditional on tax rates and credit incentives (Hanlon & Heitzman, 2010). Research and development (R&D) is the effort a firm put in toward the innovation, introduction and improvement of its products and procedures. It is a series of investigative

activities to improve existing products and procedures or to lead to the development of new products and procedures. R&D is different from most activities performed by a corporation in the process of operation. The research and development is typically not performed with the expectation or goal of immediate profit. Instead, it is focused on long-term profitability for a company. The tax system in Nigeria encourages firm to embark on research & development by allowing the cost incurred to be deducted. It can therefore be said that investments in R&D helps to reduce the amount taxed.

2.1.8 Firm Size

The size of a company can be measured through its total asset. The logarithm of total asset is known as firm size. The direction of the relationship between firms' size and ETRs cannot be predicted. This has received considerable attention in the literature and has provoked dynamic discuss. Some scholars documents that larger firms are more likely to exploit economies of scale and enjoy higher negotiation power over their clients and suppliers (Serrasqueiro & Nunes, 2008). In addition, they face less difficulty in getting access to credit for investment, have broader pools of qualified human capital, and may achieve greater strategic diversification and associated to higher effective tax rates (Yang & Chen, 2009).

This can be explained by the political cost theory. According to this theory, effective tax rates are a proxy for political cost for the reason that taxes paid are a means of wealth transfer from firms to other social groups. Effective tax rates are also a proxy for firms' success; therefore, if larger firms are more successful than smaller firms they will be exposed to more political scrutiny. As larger firms are subject to higher scrutiny from tax authorities they have reluctance to reduce effective tax rates. Consequently, larger firms are expected to have a higher taxation burden when compared with firms which have a smaller size since taxes paid represent

political costs which shall be borne by firms (Kraft, 2014; Vieira, 2013; Rego, 2003; Zimmerman, 1983)

Also, it is argued that since larger firms have more power and more resources to manage taxes it is expected that they have lower ETRs (Siegfried, 1972). Consistent with this perspective, Dyreng (2008); Richardson and Lanis, (2007) find a negative relation between size and ETR. In addition, Gupta and Newberry (1997) show that firms' size and ETR are not associated when its relationship is observed over time. When analysing UK firms, Holland (1998) also find mixed relations between size and ETR depending on the firms' industry classification. On the other hand, small firms exhibit certain characteristics which can counter balance the handicaps attributed to their smallness as they suffer less from the agency problem and are characterized by more flexible non-hierarchical structures, which may be the appropriate organizational forms in changing business environments (Yang and Chen 2009). Existing empirical evidence has not been unambiguous, lending support to both a positive and a negative impact of firm size on performance.

2.1.9 Financial Performance

Firm's success is explained by its performance over a certain period of time. Measurement of performance can offer significant invaluable information to allow management monitoring of performance, report progress, improve motivation and communication and pinpoint problems (Waggoner, Neely & Kennerley, 1999). Accordingly, it is to the firms' best interest to evaluate its performance. Nevertheless, this is a management area characterized by lack of consistency as to what constitutes organizational performance. Researchers have extended efforts to determine measures for the concept of performance as a crucial notion. Finding a measurement for the performance of the firm enables the comparison of performances

over different time periods. Nevertheless, no specific measurement with the ability to measure every performance aspect has been proposed to date (Snow & Hrebiniak, 1980). However, related literatures measures performance using any of these three indicators namely: return on equity, return on asset and profit before tax.

2.1.10 Return on Equity

Return on equity indicates to know how well management is employing the investors' capital invested in the company. It reveals how much profit a company earned in comparison to the total amount of shareholder equity found on the statement of financial position. Since equity represents the owners' interest in the business. Their investment is fully at risk compared to other sources of funds supporting the firm. This is so because shareholders are the last in line if the going gets rough. So, equity capital tends to be the most expensive source of funds, carrying the largest risk premium of all funding options. Its deployment is critical to the success, even the survival, of the firm. Therefore capital allocation or deployment is the most important executive decision facing the leadership of any organization. By measuring how much earnings a company can generate from equity, ROE offers a gauge of profit-generating efficiency. Firms that do a good job of making profit from their operations typically have a competitive advantage, a feature that normally translates into superior returns for investors. The relationship between the company's profit and the investor's return makes ROE a particularly valuable metric to examine.

ROE offers a useful signal of financial success since it might indicate whether the company is growing profits without pouring new equity capital into the business. A steadily increasing ROE is a hint that management is giving shareholders more for their money, which is represented by shareholders' equity. ROE is calculated by taking the profit after tax given year

and dividing it by the book value of equity (ordinary shares) at the beginning of the year. Average equity can also be used. Equity would consist of issued ordinary share capital, plus the share premium and reserves. The ROE can therefore be improved by improving profitability, by using assets more efficiently and by increasing financial leverage.

Although ROE has some appeal because it links the income statement (earnings) to the statement of financial position, it has some flaws as a measure of performance. Wet de and Toit, (2007), note that one of the flaws of ROE is that the firm earnings can be manipulated legally within the framework of Generally Accepted Accounting Practice (GAAP) through changes in accounting policy. The second flaw is that ROE is calculated after the cost of debt, but before taking into account the cost of own capital. ROE increases with more financial gearing, as long as the returns earned on the borrowed funds exceed the cost of the borrowings. The danger inherent in increasing the financial gearing beyond a certain level is that the increased financial risk may cause the value of the company and the share price to fall. Pursuing a higher ROE may lead to wealth destruction, which is not in line with the economic principles of shareholder value creation. Rappaport (1986) pointed out that the second component of ROE, namely asset turnover, is affected by inflation in such a way that it may increase even when assets are not utilized better. He reasons that sales immediately reflect the impact of inflation, whereas the book value of assets, which is a mixture of new and older assets, does not adapt as quickly to the effects of inflation.

2.1.11 Return on Asset

Return on asset (ROA), gauges the operating and financial performance of a firm (Klapper & Love, 2002). It measures how much profit firms assets generates as it tells one, how

the percentage of every naira invested in the business was returned as profit. The total assets figure shows how many naira are being utilized in the business to generate profit. Therefore, Return on assets (ROA) is a financial ratio that shows the percentage of profit a company earns in relation to its overall resources. It is commonly defined as net income divided by total assets. Net income is derived from the income statement of the company and is the profit after taxes. The assets are read from the statement of financial position and include cash and cash-equivalent items such as receivables, inventories, land, capital equipment as depreciated, and the value of intellectual property such as patents.

Companies that have been acquired may also have a category called good will representing the extra money paid for the company over and above its actual book value at the time of acquisition. Because assets will tend to have swings over time, an average of assets over the period to be measured should be used. Unlike other profitability ratios, such as return on equity (ROE), ROA measurements include all of a business's assets; those which arise out of liabilities to creditors as well capital paid in by investors. Total assets are used rather than net assets. Thus, for instance, the cash holdings of a company have been borrowed and are thus balanced by a liability. Similarly, the company's receivables are definitely an asset but are balanced by its payables, a liability. For this reason, ROA is usually of less interest to shareholders than some other financial ratios; stockholders are more interested in return on their input. But the inclusion of all assets, whether derived from debt or equity, is of more interest to management which wants to assess the use of all money put to work. ROA is used internally by companies to track asset-use over time, to monitor the company's performance in light of industry performance, and to look at different operations or divisions by comparing them one to

the other. For this to be accomplished effectively, accounting systems must be in place to allocate assets accurately to different operations.

ROA can signal both effective use of assets as well as under-capitalization. If the ROA begins to grow in relation to the industry as a whole, and management cannot pinpoint the unique efficiencies that produce the profitability, the favorable signal may be negative: investment in new equipment may be overdue. The measurement is such that the higher the ROA, the effective is the use of assets to the advantage of shareholders (Haniffa & Huduib, 2006). Higher ROA reflects the company's effective use of its assets in serving the economic interests of its shareholders (Ibrahim & AbdulSamad, 2011). According to Mashayekhi and Bazazb (2008), Hutchinson and Gul (2004) accounting-based performance measures present the management actions outcome and are hence preferred over market-based measures. As a result, a company showing a positive performance through ROA, indicates its achievement of prior planned high performance (Nuryanah & Islam, 2011). Contrastingly, a negative performance indicates failure of the planned high performance which requires revision of plans to enhance short-term performance. The negative performance results in investors' (local and foreign) loss.

2.1.12 Profit before Tax

Profit before tax (PBT) is a measure that looks at a company profits before the company pays corporate income tax. It deducts all expenses from revenue including interest expenses and operating expenses except for income tax. Profit before tax combines all of the company's profits before tax, including operating, non-operating, continuing operations and non-continuing operations. PBT exists because tax expense constantly changes and helps an investor to have a good idea of the changes in the firms' profits yearly. PBT includes all income earned regardless

of the source. This includes sales, commissions, service revenue, interest and rent received. All expenses are subsequently deducted except for corporate income tax. PBT provides the internal management and external users of financial data with a company's operating performance. The elimination of income tax expense from the PBT allows for a greater comparison of the operations of two or more firms regardless of how the taxation policies define their net profit. Therefore by excluding income tax, PBT minimizes one additional variable that may hold different indicators which influence the way financial data reads. This is because one firm may receive substantial tax benefits that will positively influence the net income of one entity, while an entity under unfavorable taxation policies will be negatively influenced.

Also, taxation differences may also exist heavily between companies as the age, capital utilization and geographical location will play factors in how much income tax a business must pay. PBT eliminates any influence a taxation jurisdiction which may have on a company's financial information. When profitability is measured based on profit before tax it is expected that more profitable firms have higher earnings and, consequently, pay more taxes. This point of view is the one most evident in the literature. A positive association between firms profitability and Effective tax rate (ETR) was found by Armstrong (2012), Minick and Noga (2010), Richardson and Lanis (2007), Gupta and Newberry (1997). As pointed out by Rego (2003) more profitable firms have lower costs associated to managing taxes because they have more resources to invest in tax planning activities that contribute to lower effective tax rates. Furthermore, firms with higher profit before tax have more incentives to reduce their taxation burden and, consequently, to decrease ETRs. PBT is a performance measurement which emphasizes the general operations of a business and therefore a sensitive indicator with aptitude to influence effective tax rate, hence the choice of PBT as a proxy for performance in this study.

2.2 Theoretical Framework

Theories evolved to explain the concept of tax aggressiveness. For the purpose of these study four theories are used each addressing the explanatory variables used in the study. The theories are; the Hoffman's tax planning theory (1961), the Agency theory of tax avoidance by Jensen and Meckling (1976), the political cost theory by Watts and Zimmerman (1978), and the effective tax theory of Scholes and Wolfson (1992).

2.2.1 Agency Theory

Agency theory developed by Jensen and Meckling (1976) documented that due to the growth in corporation, separation between owners and managers became expedient where managers were allowed to run the affairs of the corporation and report to the owners of the business. It is argued that the agent does not always act and perform its duties in the best interests of owners. Due to the asymmetric information between agent and principals, tax avoidance activities, in this case, can be used as a tool to facilitate the opportunistic behaviour of managers which at the end increases costs borne by the owners (Yuan, McIver, & Burrow, 2017, Dhaliwal et al. 2011).

Managers might conceal rent extractions through tax aggressiveness. This will create agency costs, and therefore, investors could impose a price discount on the share price of the corporation. Tax aggressiveness as part of tax planning can be differentiated from tax evasion, that in contrast to tax evasion, tax avoidance is conducted without violating the prevailing laws and regulations. Nevertheless, tax avoidance is such controversial activities as while a company as a taxpayer may have right to reduce the tax burden in accordance with the law, but such action is deliberately arranged and planned to minimise tax payable which at the end can be defined as illegal acts as conflicting with the law spirit (Prebble and Prebble 2010; Avi-Yonah 2008). The implication of this is that the company would be penalized and could also affect the reputation of

the firm leading to a decrease in firm value, which in turn decreases the shareholders' return on investments (Hanlon & Heitzman, 2010). This means that the company bears the costs which also include reputational costs (Hanlon & Slemrod, 2009). The company falling reputation and decreasing stock prices are caused by investors' negative perceptions of the company, as it indicates the existence of a rent extraction action by corporate managers that can harm shareholders (Desai & Dharmapala, 2006).

Hanlon and Slemrod (2009) pointed that when news comes out regarding tax avoidance, the stock price of that firm declines. This negative effect is stronger in the retail sector because investors are afraid consumers will have a negative reaction to this issue, which will lead to a reduction in the firm's profitability, ultimately hurting the firm's reputation. Reputational costs are not the only costs associated with tax avoidance. Other costs are political costs and marginal costs. The marginal costs are potential costs, such as penalties and fines imposed by the tax authorities (Chen, Chen, Cheng, & Shevlin, 2010).

Jensen and Meckling emphasized on the inability of the tax savings through tax planning strategies to transform into enhancement of after tax return due to agency problem of managerial opportunism or resource diversion, as the complex tax avoidance transactions can provide management with the tools, masks, and justifications for opportunistic managerial behaviours, such as earnings manipulations, related party transactions, and other resource-diverting activities thus, tax savings may not actually result to increase on firms' after tax rate of return (Desai & Dharmapala, 2009).

2.2.2 Political Power Theory

Political power theory developed by Watts and Zimmerman (1978) asserted that larger firms have economic and political power advantage over the small firms. Larger firms effectively utilize their economic and political power to lessen their tax liability being able to engage in

aggressive tax planning due to their broad resources. Watts and Zimmerman (1978) further note that large firms are opportunistic in manipulating the political principles for the enhancement of their after tax returns.

2.2.3 Tax Planning Theory

Hoffman tax planning theory (1961) seeks to divert cash, which would ordinarily flow to tax authorities, to the corporate entities. Tax planning activities are desirable to the extent that they reduce taxable income to the barest minimum, without sacrificing accounting income. The theory is premised on the fact that firms tax liability is based on taxable income rather than accounting income. The idea is thus to intensify activities that reduce taxable income but has no indirect relationship on accounting profit. The theory thus recognized a positive association between firm tax planning activity and firm performance.

Hoffman (1961) also recognized the role of tax cost in the tax planning activities. The theory thus provided that the positive association between tax planning and corporate performance is on a basic assumption that tax benefits from the tax planning exceed tax cost. The scope of the Hoffman's tax planning theory does not address the dynamics of tax planning and market performance. As capital markets develop and the separation of ownership and control of corporate bodies become well-spread, the need for a comprehensive tax planning theory becomes expedient.

Accordingly, Hoffmann (1961) noted that since taxation are mostly based on business or accounting concepts, thus a firm can modify such activities towards the attainment of reduction in tax liability. Hoffmann identified some ambiguity and loopholes in tax laws due to unclear intentions of the legislators and concluded that successful tax schemes work with the legal

concepts and precise wording of the statute and complying with these concepts very precisely as it relates to individual firm tends to be advantageous to firms in form of tax savings.

2.2.4 Effective Tax Theory

The theory of effective tax rate developed by Scholes and Wolfson (1992) in which this work is anchored on relies on the basic concepts and methods of modern contract theory. The wholistic nature of the effective tax theory makes it more embracing for our study. The effective tax theory unlike other theories that centers basically on the explicit benefit of tax aggressiveness, incorporates the explicit benefit with its negative implicit implication if not properly managed. Therefore, firms are advised to consider the transactions of all parties which comprise both the explicit and implicit values as firms' trade-off tax savings against non-tax costs in their choice of investment. The theory states that, in the presence of perfect markets, the objectives of the traditional and effective tax planning frameworks are almost identical. However, where uncertainty and information asymmetry exist, objectives will begin to differ. The core objective of effective tax planning theory is the maximisation of total after-tax benefits, requiring consideration of the forms of costs and constraints related to achieving this goal.

Scholes and Wolfson argue that the optimal scale for effective tax planning under conditions of uncertainty and information asymmetry in incomplete markets is based on three key considerations: the tax implications for all parties associated with the transaction; the implications of implicit taxes; and the impact of non-tax costs on total costs of tax planning. Effective tax planning must consider the transactions of all parties. Thus, the appropriate goal of tax planning should not be tax minimisation *per se*, rather the optimisation of total tax burdens including those passed on to/saved from other parties. Corporations are encouraged to trade-off tax savings against non-tax costs in their choices of investment, financing, and compensation.

Firstly, all contracting parties to the transaction and their reactions should be taken into account during the tax planning process. From a contract perspective, these include employers, employees, customers and the tax authorities. Therefore effective tax planning involves trade-offs of the benefits received by all transactional parties to achieve their long term goals.

Secondly, effective tax planning requires consideration not just of explicit taxes the tax burden for the enterprise as regulated by tax law and paid directly to the tax authorities but also implicit taxes when making investment and financing transactions. Implicit taxes are an actual burden, although not paid to tax authorities under the tax law. Instead implicit taxes take the form of reduced rates of return associated with the firm's inability to capture explicit tax savings (Callihan & White 1999).

Thirdly, effective tax planning requires all costs, including non-tax costs, be considered. Explicit tax savings do not necessarily provide the best (or the most feasible) solution in effective tax planning, because tax is just one of many operating costs. Tax planning may lead to an increase in other transactional costs, called non-tax costs. Thus tax planners should first trade-off tax savings and non-tax costs. For instance, financial reporting costs are typical non-tax costs faced by listed companies, which magnify the decrease of profits in the financial statements during tax planning. The earnings per share decrease associated with a reported decline in profit in the financial statements may cause a fall in share prices, and thus in the firm's value, increasing the costs associated with capital market financing and increasing merger and acquisition risk.

A decline in reported profits may also affect managers' compensation and other interests, potentially causing inconsistencies between managers' interests and those of shareholders and so increasing agency costs. Also, under conditions of information asymmetry, various stakeholders

may make decisions based on the company's external financial reports. For instance, management may give up substantial savings on tax because of the impact on accounting profits, believing that while tax planning may increase cash flow, stock prices are affected by accounting profit disclosures rather than cash flows. Therefore corporate tax aggressiveness, though may lead to reduced tax liability but if not properly followed could lead to even a higher potential cost which may outweigh the expected benefits to the shareholders.

These four theories are relevant to this study, the agency point of view signed that a firm might utilize all the strategies in reducing its tax burden but the savings not transformed into corporate financial benefit due to agency problem. The agency theory is of the declaration that managers with their personal interest in conflict with the global interest of the entity might divert such savings to other investment for personal gains. For Hoffmans theory 1961, a firm which maximizes the loopholes in the corporate tax laws and which maintain an optimal gearing thus having tax shield on the deductible interest tends to lessen its tax burden and increases its after tax returns. The political cost theory held that larger firms tends to be more matured and possesses expansive resources thus have the capacity of engaging professionals in the formulations and implementations of their corporate strategies with tax liability inclusive. The effective tax rate submitted that all cost should be considered both implicit and explicit cost. Firms should there for look a proper management of the two costs. Therefore tax aggressiveness, though may lead to reduced tax liability but if not properly followed could lead to even a higher potential cost which may outweigh the expected benefits to the shareholders of tax aggressiveness. Based on these theories, Capital intensity (Captin), effective tax rate (ETR), thin capitalization (Thincap), Age, Firm Size (SIZE) and Research and development (R&D), are

selected as the predictive variable on financial performance represented with profit before tax for this study.

2.3 Empirical Studies

Abubakar, Sulaiman and Haruna, (2018) examined the effect of firms age on the financial Performance of listed Insurance Companies in Nigeria. They made use of the ex-post facto research design. Their study covered a period of ten years 2007 through 2016. The results of the study revealed that Age has significant negative impact on financial performance of insurance companies in Nigeria. They recommended that companies are to convert significant part of their cash and cash equivalent into productive assets that can improve their financial performance.

Ratnawati, Azhari, Freddy, and Wahyuni, (2018) investigated the impact of institutional ownership and firm's size on firm value using tax avoidance as a moderating variable. The work was carried out in Indonesia with a sample of 66 manufacturing firms between the period 2012 to 2014. The study found that firm size has significant positive effect on performance and also a positive influence on tax aggressiveness. Rania, Susetyo, and Fuadahc, (2018) investigated the effect of corporate characteristics on tax avoidance moderated by earnings management. Taking a sample of 49 manufacturing companies, they found that profitability and size of the firm have a significant negative effect on tax avoidance, whereas the leverage has a significant positive effect on tax avoidance.

Kim and Chang (2017) observed that firms with greater operating cash flow may be more involved in R&D intensity (RNDS) and provide tax reduction related to investment in that it can instantaneously exempt expense whereas its benefit is typically realized over a long term. An additional amount in R&D also entails tax exemption from an investment. Kim and Chang conjectured that firms with high R&D intensity are less likely to conduct tax avoidance if there are tax incentives related to R&D intensity. R&D intensity (RNDS) raise corporate tax avoidance

due to the tax reduction means inherited in investment expense. The study used sample data from 2011 to 2013 extracted from the firms listed on the Korea Stock Exchange including the firms subjected to external audit. The study made use of 50 firms listed on the Korea Stock Exchange using the generalised least square method. The study find out that R&D intensity (RNDS), and sales growth (GS) both have a positive impact on corporate tax avoidance and concluded that main difference between the high and low tax avoidance groups lies in R&D intensity and sales growth.

Kim and Chang (2017) opinioned that, it is plausible that since Tax Act endows tax incentives to stimulate firm investment, firm asset composition influence tax avoidance. Firms with depreciable assets have increased depreciation expense and can implement non-liability tax reduction effected through depreciation expense and tax exemption from an investment. Thus, higher capital intensity (PPE) may lead to lower tax avoidance tendency due to depreciation expense and tax exemption. Yet high capital intensity can increase depreciation expense and the firm can make attempts to manipulate by decreasing the useful life of the asset, choosing the depreciation method, categorizing the expenditure. This leads to a high possibility of committing tax avoidance. Furthermore, high capital intensity (PPE) entailing more discretion in determining depreciation expense leads to corporate tax avoidance. Since firms with high capital intensity (PPE) have various means to reduce tax, they are less likely to conduct tax avoidance. The study used sample data from 2011 to 2013 extracted from the firms listed on the Korea Stock Exchange including the firms subjected to external audit. The study find that Capital intensity has a positive impact on corporate tax aggressiveness.

In the same vein Anouar, and Houria (2017) examined the significant relationship that exists between tax avoidance and firm size. The study made use of 45 publicly-listed Moroccan

corporate groups, over 2011–2015 periods. The study indicates that firm size is one of the variables used by corporate groups to reduce their tax liabilities. Multiple regression model were employed. The study documented that generally, large corporations engage in more commercial activities and financial transactions than small ones, providing them with significant opportunities to significantly reduce corporate taxes. The large corporate groups tend to operate between group subsidiaries (leasing and financing transactions). They can also take advantage of the possibilities of tax arbitrage between different tax jurisdictions. They further stated that multinational groups prefer to finance their subsidiaries with debt or equity transfers, these transfers are motivated by the possibilities of tax arbitrage between the zones for purely tax purposes. Therefore tax considerations have made debt financing, the preferential form of financing in areas with high taxation.

Akanksha. and Costanza, (2017) examined debt, bankruptcy risk, and corporate tax Aggressiveness. The study developed a simple two-date, single period model to capture the manager's choice of the optimal level of tax aggressiveness in the presence of debt. The model predicts that higher levels of debt reduce the level of sheltering. The model also predicts that the level of sheltering is lower when the manager's personal costs in bankruptcy are greater and when the risk of being caught sheltering is higher. The model also derives the parameter restrictions under which higher ownership in the firm attenuates the manager's incentives to shelter higher income from taxes and predicts that the negative relation between sheltering and debt becomes less negative as the managers alignment incentives increase. Sample consists of all U.S. firms, excluding financial firms and utilities (SIC codes 4900 – 4999 and 6000 – 6999, respectively), listed in Compustat for the period 1986 – 2012. Data on compensation of Executives and on institutional ownership were obtained from CDA/Spectrum.

Bambang, Yudha, and Abim, (2017) examined the influence of profitability, leverage, firm size and capital intensity towards tax avoidance in Indonesia. 156 manufacturing companies were used for the period 2013-2015. It was found out that firm size have a positive influence on effective tax rate.

Clement, Olayemi, Olufemi and Segun (2017) examined the direction of causality between firm size and profitability for 63 listed non-financial Nigerian firms for the period 1998–2010, using an innovative econometric methodology of a dynamic panel generalized method of moments to resolve the problem of endogeneity inherent in the relationship. The results established a bidirectional relationship between firm size and profitability of firms in Nigeria. While firm size positively Granger-causes profitability, profitability, on the other hand, negatively Granger-causes firm size. The study rebutted the popular assumption that causation only runs from firm size to profitability and not vice versa. They concluded that profitability might be a vital tool to make firms grow faster if well managed as the economies of scale could also be induced.

Anouar and Houria (2017) investigated the relationship that exists between tax avoidance and firm profitability, the study made use of 45 publicly-listed Moroccan corporate groups, over 2010–2013 periods. The study made use of the ordinary least squares (OLS). The study indicates that the profitability of a firm is one of the variables used by corporate groups to reduce their tax liabilities. The study stated that corporate profitability is the main determinant of a corporate group's performance and further documents that firms with high profitability are most likely to engage in tax avoidance practices in order to reduce their tax liabilities. In addition, the study found a positive relationship between profitability and effective tax rates.

Terry, Lakshmanan, and Oktay (2016) evaluated whether aggregate corporate tax avoidance giving rise to country-level corporate cash tax savings is associated with future economic growth. It argued that aggregate corporate tax avoidance is more likely to affect future economic growth in situations where the private sector and government are differentially efficient in investing funds for future economic growth. Employing data from 63 countries over the 1995-2011 period, they find that aggregate corporate tax avoidance is positively associated with future economic growth, measured as either GDP per capital growth or employment growth. This finding is robust to a battery of sensitivity analyses and is further supported by a positive relationship between firm-level corporate tax avoidance and future firm-level investment. In cross-sectional tests, the positive relationship between aggregate corporate tax avoidance and economic growth appears to be driven by countries with higher levels of government corruption and with higher levels of corporate tax planning as opposed to government granted tax incentives. Finally they documented that country-level equity market returns are positively associated with aggregate corporate tax avoidance consistent with investors anticipating the future economic growth due to aggregate corporate tax avoidance.

Namryoung, and Charles (2016) tested a simple model of international tax shifting, to know whether multinational firms' abilities to engage in tax arbitrage are functions of the benefits and costs of doing so in country specifics. They made of large database of publicly traded firms of over 200 countries and hand-collect tax rates for all subsidiaries for such firms. They find that firms' effective tax rates are lower if the countries in which they operate vary significantly in their statutory rates and that when firms' effective rates are higher, the more countries they operate in and the more subsidiaries they have.

According to Ilaboya, Izevbekhai and Ohiokha (2016), research and Development intensity is measured by dividing research and development expenses by total sales from business activities of an organization. Research and Development investment leads firms to generate innovations that increase firm's profits. Firms will usually invest these profits in projects following such innovations to enhance their value. Increased tax credit will lead to an increase in R & D expenditure, and this will, therefore, increase the firm's profitability and valuations. They note that the effect of increased tax credit will persist in the short run and reduce in the long-run because of the growth in R & D expenditure occasioned by increased tax credit which will lead to a shift in the profitability distribution of firms in the economy. A positive relationship was seen between research and development and firm value as, firms that invest in R & D will generate innovations that will increase their profitability and secondly, the profits derived from R & D innovations are invested in physical capital to produce output, and this will also increase firm value. The study reported that the interaction of R & D expenditure and physical investment yields a positive relationship with firm value. However, the increase in the R & D tax subsidy leads to an overall increase in R & D expenditure, yet it will yield a smaller increase in the success rate of innovations.

This could result in a negative relationship between R & D and firm value because, the benefits derived from the increased R & D tax subsidy over the long-run becomes smaller than the immediate short-run effect, the reason being that, the increased R & D expenditures changes the profitability, distribution, and therefore R & D expenditures, of firms in the economy. A negative relationship also exists between R & D and firm value because of uncertainties bedeviling the innovation process. This means that when a firm fails to invest when it ought to because of uncertainties in the economy, its returns will be negative and hence, it will affect the

value of the firm. The study submitted an insignificant relationship between R & D and firm value.

Ilaboya, Izevbekhai and Ohiokha (2016) examined the influence of capital intensity on tax aggressiveness as capital intensity is the cash invested in property, plants, and equipment of a business entity. The study made use of Ordinary least square method with a sample size of 70 firms for a period of 10 years from 2004 to 2014. The more capital invested, the more the firm is said to be capital intense, and this will affect the firm's value positively. They document that a positive relationship exists between capital intensity and tax aggressiveness.

Yetty, Eka, and Eneng. (2016) investigated whether thin capitalization can have significant effect on tax avoidance. The population of their study was limited to manufacturing firms listed on Indonesian Stock exchange for period 2010-2014. By purposive sampling, 108 samples are selected. The study made use of secondary data such as Annual Report Financial Statements that are published during the observation year. The multiple linear regression equation was used. It was discovered that Leverage does not have a significant effect on tax avoidance. Hsieh (2012) used data from the Taiwan Economic Journal data base, which lists companies in the two largest stock markets in China, the Shanghai Security Exchange, and the Shenzhen Security Exchange. Data was collected from 1998 through 2001. ETR was defined as tax expenses less deferred tax expense divided by profit before interest and tax paid. Variables included leverage (total liabilities divided by total assets), capital intensity (net fixed assets divided by total assets) return on assets (pre-tax profits divided by total assets) and firm size (total assets). They found that firm size is not an indicator of lower ETR, and that ETR is sensitive to return on assets (pre-tax profits divided by total assets), capital intensity (net fixed

assets divided by total assets), inventory intensity (inventory divided by total assets), and leverage (total liabilities divided by total assets).

Alexander, Anna, and Martin. (2016) examines the relationship between executives' inside debt holdings and corporate tax risk. The study finds that executive inside debt holdings are negatively related to tax risk. Further, this relation becomes stronger at higher levels of tax risk. It was also seen that the relation between insider debt and tax risk is stronger for firms that are not facing liquidity constraints and among well-governed firms. Gran, Roman and Sidney, (2013) analyzed the influence of corporate tax aggressiveness on corporate debt policy (the debt-substitution effect) and the influence of outside directors on both debt and the debt substitution effect. Based on a sample of 6967 firm-year observations over the 2001–2010 period, with a sample size of 697. It was found that tax aggressiveness is negatively correlated with debt. Also a negative correlation between debt and the proportion of outside directors on the board was observed.

Almendros, and Sogorb-Mira, (2016) explored the role of taxes in explaining companies' financing decisions. They tested whether the corporate tax shields explanation of capital structure is applicable to firms listed on the Spanish stock exchange over the period 2007–2013, using regression analysis. Taxes are found to be economically and statistically significant determinants of capital structure. The result suggest that marginal tax rates affect the debt policies of Spanish listed companies, and the existence of non-debt tax shields constitutes an alternative to the use of debt as a tax shelter. Consistent with theoretical expectations, a stronger relation was seen between debt and taxation in less levered firms.

Amiram, Bauer, and Frank (2016) work on tax avoidance at public corporations relied on the elimination of imputation systems by European countries in different years. Under an imputation system, lowering corporate tax payments does not increase the cash flows available to shareholders after dividend taxes, but it does so after their elimination. They employed a difference-in-difference model with fixed effects and found that the average firm affected by the change reduces its cash effective tax rate by 17% relative to the eliminating group's average statutory tax rate. This results suggest that public corporations in countries that eliminate an imputation system increase corporate tax avoidance by at least 5.5 percent of pre-tax income, which is consistent with investor-level taxes incentivizing managers to engage in corporate tax avoidance. This increase in corporate tax avoidance is 17 percent of the average statutory corporate tax rate for countries that eliminate imputation systems. The study suggested lower corporate tax avoidance as that will be benefit in an imputation system and could have positive important policy implications

Alexander and Jacob (2016) examined the relation between executives' inside debt holdings and corporate tax risk. They recorded that executive inside debt holdings are negatively related to tax risk. This relation becomes stronger at higher levels of tax risk. Also, they found that the relation between insider debt and tax risk is stronger for firms that are not facing liquidity constraints and among well-governed firms. This means that institutional ownership and inside debt compensation are substitutes in reducing tax risk.

Ricardo (2016) examined transfer pricing aggressiveness and financial derivatives practices. A sample of 117 publicly listed U.K. multinational enterprises were used. The period of study was over 2006-2014. Hypothesis formulated was tested using the regression model. It was noted that derivatives are to be significantly associated with transfer pricing aggressiveness

behaviors. He further stated that interest rates and foreign exchange rates volatility have a positive contribution on magnifying international transfer pricing aggressiveness. The findings suggested that the multinationality of MNCs also exhibits a significant impact on entities tax governance.

Ofuan and Ohiokha, (2016) investigated the relationship between company age, company size and profitability. The study population consisted of the universe of companies (202) listed on the Nigerian Stock Exchange Market as at December 2014. A sample of 30 firms was scientifically selected for the study. The analysis was carried out using archival data from 2006 to 2012, comprising of 210 observations. The study finds a significant positive relationship between firm size and profitability. Aloy, and Velnampy (2014) explored the effects of firm size on profitability of quoted manufacturing firms in Sri Lanka. The data consisted of fifteen 15 companies which were active in Colombo Stock Exchange (CSE) between the years 2008 to 2012. The study revealed that firm size and profitability of listed manufacturing firms have a positive relationship.

Uwuigbe, Uwuigbe, Adeyemo, and Ogunbajo (2016) examined the effect of corporate attributes on the profitability of companies by employing the annual reports of thirty selected companies listed on the Nigerian Stock Exchange (NSE) for a period of 5 years (2007-2011). They used Ordinary Least Square (OLS) regression to test for the effects of the selected corporate attributes on profitability. They tested for the relationship between firm age and return on assets using Pearson's product moment correlation coefficient. The result showed that firm age has a positive statistically significant relationship with profitability measured by return on assets. They therefore observed that older firms perform better than younger ones. Their finding supports the argument that, older firms are likely to perform better than younger firms because

they are more experienced, have enjoyed the benefits of learning, are not prone to the liabilities of inventiveness, and can therefore enjoy superior profitability.

Ilaboya, and Ohiokha, (2016) investigated the effect of firm age on Profitability Dynamics using a test of Learning by Doing and Structural Inertia Hypotheses with a population of 202 companies listed on the Nigerian Stock Exchange. A sample of 30 firms were selected for the study and analyzed for the period 2006 to 2012. The study made use of panel data regression analysis. The study finds a significant positive relationship between firm age and profitability. They documented that the significant positive relationship between company age and profitability was as a result of confirmation of the learning by doing hypothesis. They further recommended that management should strive to increase the scale of operation of businesses as that would enhance improved reputation and attractiveness.

Ghouei and Mondy (2015) documented that thin capitalization as a firm characteristic reflects the company's ability to repay debts, especially long-term ones. The study made use of the Multiple Linear Regression of 102 listed companies. The study concluded that tax benefits are considered as one of the factors that influence the financing strategy. To achieve a certain level of debt, management manipulates financial statements; and as a result, the high level of debt creates the interest tax advantage for these companies. The study also shows that higher levels of debt combat agency problems and show a positive relationship between financial leverage and tax aggressiveness.

Jost, Heckemeyer, and Christoph, (2015) examined the effect of tax planning on Research and development (R&D). Data from a confidential survey taken in 2012 of top financial and tax managers of large multinational companies were used, this represents 8% of business Research & Development spending in the Organization for Economic Cooperation

Development (OECD) and find supporting evidence that in R&D intensive multinational firms, the tax department operates more as a controller than as a manager. Therefore, tax departments of R&D intensive firms make less tax planning effort, are less ambitious to minimize the tax burden of the firm, are later involved in the decision-making process of a new investment project, but are more likely to have a veto right in the decision on a new investment project as compared to less R&D intensive firms. Conditional on R&D intensity, the level of intangible assets in the firm is associated with more tax planning efforts and ambitions.

Ribeiro, Cerqueira, and Brandão (2015) investigated the effect of capital intensity on tax aggressiveness from 2010-2013 using Generalised Least Squares (GLS) cross-section weights and a population size of 704 firms. The study documents that Research and development (R&D) expenses are another aspect related to firms' investment decisions which contribute to lower effective tax rates. The study documented that there are many fiscal incentives through multiple jurisdictions that promote the investment in R&D. Research and development programs are conditional on tax rates and credit incentives. Consequently R&D expenses have a negative and significant impact on ETR.

Idris and Bala (2015) carried out a study on the effect of firm specific characteristics on profitability of listed Foods and Beverage companies in Nigeria. Out of 21 population of the study nine firms were sampled using OLS regression for a period of 7 years from 2007-2013. Their finding revealed that firm specific characteristics have both positive and negative significant effects on profitability measured by stock market returns. They therefore, recommended that firms should pay more attention to those factors that are peculiar to their industry environment.

Kim, McGuire, Savoy, and Wilson (2015) find that Research and Development (R&D) tax credit provides an example of the costs of operating in the wrong tax clientele it further examined the stock price reaction to the R&D tax credit's enactment for firms that compete for R&D factor inputs and customers, but that are unable to receive tax credits because of low marginal tax rates. The study states that because the pre-tax returns to R&D investments are bid down by the competition for the explicit tax benefits offered by the tax credit that the tax subsidy created by the R&D tax credit only benefits firms that can use the credit. The study finds a significant negative market reaction to the credit's enactment for the low marginal tax rate firms and concludes the implicit tax costs for the firms unable to use the credit are substantial. The sample used included all firms with available data in the COMPUSTAT industrial annual files from 1990 through 2011.

Chung, Goh, Lee, and Shevlin, (2015) investigated the association between corporate tax aggressiveness and managerial rent extraction in the form of insider trading profitability. The period of study was from 1995-2010. It was noted that financial and stock performance data was primarily collected from I/B/E/S, Compustat, and CRSP in computing tax aggressiveness. They further stated that the hypothesized intervening variables and the control variables were formulated using the regression analysis. It was noted that a sample size used in the regression analyses was 30,197 firm-year observations for the 18-year sample period. It was documented that, on average, insider purchase profitability, but not sale profitability, is significantly higher in more tax aggressive firms. They further stated that the positive association between tax aggressiveness and insider purchase profitability is attenuated for firms with more effective monitoring and for firms with better information environments. The findings suggested that tax aggressiveness is significantly associated with greater insider sale volume in the fiscal year prior

to a stock price crash. It was recommended that there are many ways in which managers can extract rent from shareholders, such as investing in pet projects, engaging in perks consumption, shirking and slack performance.

Ribeiro, et al (2015) investigated the effect of capital intensity on tax aggressiveness from 2010-2013 using Generalised Least Squares (GLS) cross-section weights and a population size of 504 firms. Along with firms' financing decisions, investment decisions are also a characteristic that can influence effective tax rates, Managers investment decisions can be to some extent constrained by corporate taxes due to the uncertainty of tax payments and deductions that have to be incorporated in the calculation of an investment's present value. As well as the deductibility of interest expense, depreciations and amortizations are an important slice of firms' costs. Therefore, firms that are more capital intensive benefit more from depreciations deductibility. This is even more important since an asset economic life is usually longer than the depreciation period. The study documents that due to the existence of different depreciation methods, more capital-intensive firms can easier manage taxes by accelerating or deferring depreciation expense and, consequently, they can take advantage from temporary book differences.

Herbert and Overseh (2015) documented that the, variable capital intensity (*CAPINT*) is the quotient between property, plant and equipment and total assets. The association between ETR and *CAPINT* is also ambiguous. The most widely obtained result is a negative correlation with tax avoidance, which leads to the assumption that a high level of property, plant and equipment causes a tax reduction in ETR due to the deductibility of high depreciations regarding international tax planning strategies, higher capital intensity might also indicate less mobility of taxable income. The study therefore find a negative effect of capital intensity on the ETR DIFF.

Chung, Goh, Lee and Shevlin (2015) investigated the association between corporate tax aggressiveness and managerial rent extraction in the form of insider trading profitability. The period of study was from 1995-2010. The financial and stock performance data were primarily collected from I/B/E/S, Compustat, and CRSP in computing tax aggressiveness. The hypothesized intervening variables and the control variables were formulated using the regression analysis. Using a sample size of 30,197 firm-year observations for 18-year sample period. The study find that on the average, insider purchase profitability, but not sale profitability, is significantly higher in more tax aggressive firms. They further stated that the positive association between tax aggressiveness and insider purchase profitability is attenuated for firms with more effective monitoring and for firms with better information environments. The findings suggested that tax aggressiveness is significantly associated with greater insider sale volume in the fiscal year prior to a stock price crash. It was recommended that there are many ways in which managers can extract rent from shareholders, such as investing in pet projects, engaging in perks consumption, shirking and slack performance.

Saratu, (2015) investigated on the impact of competition on tax avoidance activities among Nigerian Deposit Money Banks. They made use of data obtained from the financial statement of 15 banks operating on the Nigerian Stock Exchange for a period of 10 years. Hypothesis was analyzed using the panel regression model. It was noted that competition has a positive and in-significant impact on tax avoidance. He further stated that competition exists among the Nigerian Deposit Money Banks and this competitive tendency does not influence tax avoidance. The findings suggested that while effective tax rate and managerial efficiency are negatively related, effective tax rate and non-performing loans showed a positive and insignificant relationship. It was further recommended that the environment in the banking sector

should be further enhanced through favorable banking policies to encourage competition among the banks and by doing this tax revenue will increase for the government and this increase in revenue would help the Federal Government undertake more economic infrastructural developments.

Sharon, Urooj and Andrew (2015) documented mixed evidence on the implications of tax avoidance on firm value as measured by Tobin's q or stock price reactions. The study investigated the association between tax avoidance and firm fundamentals (leverage, profitability, and asset utilization), using DuPont analysis. The study complemented the du-Pont analysis by examining whether there was a cross-sectional variation in the association between tax avoidance and future performance. The study documented that averagely, there is an unambiguous negative association between tax avoidance and future performance; the negative association between tax avoidance and future performance is the result of poor operating asset and operating liability utilization and efficiency, not lower operating profitability. According to the study tax avoidance unambiguously lowers future pre-tax accounting rates of return (that is, return on equity, return on net operating assets, and return on operating assets), largely due to inefficient utilization of operating assets and operating liabilities.

Ana, Anthonio, and Elisio (2015) investigated the effect of firm characteristics on tax aggressiveness from 2010-2013 using Generalised Least Squares (GLS) cross-section weights and a population size of 704 firms. The study observed that firm characteristics have influence on ETR's. Larger and more profitable firms have higher ETR's. The study documents that larger firms are associated to higher effective tax rates. According to the political theory ETRs are a proxy for political costs for the reason that taxes paid are a mean of wealth transfer from firms to other social groups. ETRs are also a proxy for firm's success, therefore, if larger firms are more

successful than smaller firms those will be exposed to more political scrutiny. As large firms are subject to higher scrutiny from tax authorities they have reluctance to reduce effective tax rates. Consequently larger firms to have higher taxation burden when compared with firms which have a smaller dimension since taxes paid represent political cost which shall be borne by firms.

Ghouei, and Mondì (2015) examined the relationship between firm size and tax aggressiveness. The study made use of the Multiple Linear Regression along with the generalised panel of integrated data. The result reveals that there is a positive relationship between firm size and tax aggressiveness. The period of the study was 1999-2011 using 102 listed companies.

Finke, Fuest, Nusser, and Spengel (2014) investigated tax policy measures to reduce corporate tax avoidance. Data was analyzed using OECD Statistics. The period of study was from 2006-2012. Samples of 12 countries were used. It was discovered that Most countries have introduced limitations on interest deductions during the last two decades, albeit usually on a unilateral basis, so that these measures may easily lead to double taxation of corporate income. The study suggested that to avoid double taxation of interest and royalty income, these regulations need to be modified to reclassify non-deductible interest or royalty payments in the source country as deemed dividends in the residence country of the recipient and also that countries could choose broader reform options and change the tax rules for all interest and royalty payments.

Ying, Michael, XiaominGai, and Debra, (2014) examined the effect of effective tax rate (ETR) on Chinese companies, taking into consideration percentage of foreign investment. It was noted that Chinese publicly listed companies from the China Stock Market & Accounting Research Database (CSMAR) were used. The period of study was 2010 through 2015. Hypothesis was formulated and tested using cross-sectional analysis. The findings suggested that

Overall Cash ETR exceeds Overall GAAP ETR by a substantial margin, which was considered to be a negative or unexpected result, since companies are not using tax laws to reduce their cash tax payments. It was further stated that international ownership is a significant factor in reducing all ETR items. They further discovered that all ETR items increase with size. Bigger firms have higher tax rates. The findings also noted that Wholesale & retail industry has the highest tax rates and is a significant tax hiking factor in every category.

Ghaffar, and Khan (2014), study was carried out to know the impact of research and development budget on the performance of the firms. The study documented that, research and development is an increasingly important concept in order to have success in this era. Firm performance was measured through the ratios of return on assets, return on equity and the earnings per share of the firms. Pharmaceutical industry of Pakistan constituted the population of the study. Secondary data were employed in the study and the study finds out that research and development have a positive relationship. And that firm performance will be increased if there is an increase in research and development budget. The study further recommends that; there should be increase in awareness regarding research and development, more spending should be done on research and development activities, some sort of benefits should be given for encouragement to the firms who have contributed towards research.

Ayaydin, and Karaaslan (2014) work presented a model of endogenous firm performance with research and development (R&D) investment as one of the main mechanisms of firm performance. Return on assets was used as a measure of financial performance. Capital structure, liquidity and efficiency were the factors used for determining firm performance. Manufacturing firms registered on Istanbul Stock Market (BIST) were classified according to the sectoral approach. The level of R&D intensity served as a criterion of classification of economic sectors

into high-technology, medium high-technology, medium low-technology and low-technology industries. The study evidences a positive effect of R&D intensity on the firm performance by using GMM system estimators for a sample of 145 manufacturing firms registered BIST for the 2008–2013 periods.

Hasan and Ibrahim (2014) investigated the effect of research and development investment on firm's financial performance. It was noted that there is a positive effect of R&D intensity on the firm performance. A sample of 145 manufacturing firms registered for the 2008–2013 periods were used. Hypothesis was formulated using panel data. A positive effect was documented on R&D intensity and firm financial performance. The findings suggested that a positive relationship between such R&D intensity and financial performance is consistent with the punctuated equilibrium framework. They further suggested that R&D has been regarded as a significant factor in enhancing the specialization patterns of a company's competitive advantage internationally and helps in the maintenance or improvement of existing products, creation of new products and innovation of the production processes of companies thereby improving firm's financial performance. They recommended that R&D intensity, the investment in knowledge generation and innovation makes a strong contribution to financial performance.

Kubick, Lockhart, and Robinson (2014) investigates whether the inside debt of the chief executive officer (CEO) or chief financial officer (CFO) is associated with reduced corporate tax avoidance. A large sample of public companies from 2006 to 2010 was used in the study. Consistent with the conjecture that inside debt mitigates risky behaviour for executives with a high level of financial sophistication, the study documents that the level of inside debt for the CFO, but not CEO, is associated with reduced tax avoidance. The study documented that inside debt held by executives in the form of deferred compensation and unfunded pensions mitigates

agency problems within the firm by altering the risk preferences of managers. The study further reveals that the relation is stronger for firms with greater default likelihood. The results of the study suggest that inside debt held by the CFO mitigates tax avoidance.

IftexharHasan, Chun-Keung, and Hao (2014) examined the effect of corporate tax aggressiveness on the cost of bank loans. It was noted that a sample of 16,824 loan-facilities for 3,896 unique borrowing firms for the period 1985-2009 were used. Hypothesis was formulated and tested using the baseline regression model. It was further stated that firms with higher tax avoidance incur higher bank loan cost after controlling for firm and loan characteristics. The findings suggested that banks perceive tax avoidance as inducing significant risks, and they consequently penalize firms with greater tax avoidance and higher loan spreads. They further discovered that banks perceive tax avoidance activities as engendering significant risks and accordingly banks charge higher loan spreads when lending to firms with greater tax avoidance. It was concluded that firms with greater tax avoidance incur more stringent collateral/covenant requirements in bank loan contracting; they face significantly higher yield spreads when issuing public bonds; and they prefer bank loans over public bonds when seeking debt financing. They further documented positive relation between tax avoidance and bank loan spread which is particularly pronounced in firms with higher information risk and higher agency risk. It was recommended that since debt capital particularly bank loans, is an important funding source for U.S. corporations, debt costs associated with avoidance-induced risks could moderate a firm's incentive to engage in tax avoidance.

Ezugwu and Akubo (2014) work examined the analysis of the effect of high corporate tax rate on the profitability of corporate organizations in Nigeria using the down-stream oil sector of the economy as the population comprising forty-five (45) corporate organizations, that pay

their corporate taxes, as obtained from Federal Inland Revenue Service, Lagos office. They made use of purposive sampling which was based on the premise that, all the corporate organizations in Nigeria differ in sizes and profits and therefore, may serve as a good representative of the whole corporate organizations in Nigeria. The study depicts a direct positive relationship between Corporate Tax Rate and Realised Profit. This suggests that high Corporate Tax Rate will impact negatively on realized profit. A contradiction to rational expectation portends that the companies under observation must have envisaged and factor in the implications of Corporate Tax Rate while transacting in goods and services.

Elody, (2014), investigated the influence of leverage on firm performance and predicted a positive relationship of leverage on firm performance based on both the free cash flow hypothesis and the monitoring hypothesis. This effect was tested on both a “normal” sample and on both an overinvestment and a small firms subsample. The distinction was made in order to be able to compare the effect of leverage of “normal” firms to firms that are more vulnerable to over investment and firms that are relatively smaller. The results of the study revealed an insignificant, negative effect of leverage on firm performance in the entire sample.

Guo (2014) examined the relation between firm’s cost of equity and corporate tax avoidance using three measures that capture less extreme forms of corporate tax avoidance: book-tax differences, permanent book-tax differences, and long-run cash effective tax rates. The study found that less aggressive forms of corporate tax avoidance significantly reduces a firm’s cost of equity. This is stronger to firms with better outside monitoring, (ii) firms that likely realize higher marginal benefits from tax savings, and (iii) firms with better information quality.

Fagbemi, Olayinka and Abdurafiu (2013) examined the ethics of tax evasion in Nigeria. The study made use of survey research design. Sampling frame was used for selection of

respondents' areas. Simple random sampling was also used in selecting the location of respondents based in Lagos Nigeria. The data collected were analysed using descriptive and inferential statistics. In order to evaluate the hypotheses formulated, statistical test for population means was made use of. They found that tax evasion is ethical however is not accepted. It was also found that the level of tax evasion when government is corrupt is significantly higher than when it relates to other views expressed on government discrimination, unjust treatment and tax affordability. This gives justification to the respondents' opinion that corruption in the government, unfair treatment of citizens and unfavourable tax system spurs entities to evade tax. They recommended that government responsiveness towards accountability; human right treatment and optimal tax rate plays significant role in the payment of taxes.

Dogan (2013) studied the effect of firm size on profitability of 200 companies listed at the Istanbul Stock Exchange using data from the year 2008 to 2011 by using multiple regressions model. Control variables were used in his study such as liquidity which was measured by total current assets over total current liabilities, leverage measured as total debt over total assets as well as firm age measured by number of years in operations. He found that firm size and liquidity are positively related to profitability as measured by ROA, while leverage and firm age were negatively related to profitability measured by ROA.

Yazdanfar (2013) examined profitability determinants among micro firms using Swedish data of a sample of 12,530 micro firms from four different industries; healthcare, transport, metal and retail trade industries having approximately 87,000 observations from data collected from the year 2006 to 2007. The researcher employed the OLS multiple regression analysis and correlation in the analysis of the collected data. He found a significant and negative relationship

between firm age and firm profitability. This explains that explains that younger firms were more profitable than older firms.

Fatoki (2013) work on tax effects of tax avoidance and tax evasion on Nigeria economic development made use of a survey research design. Responses were obtained through the use of questionnaire administered to 150 Nigerians. He found out that tax evasion and avoidance have adversely affected economic growth and development in Nigeria; that lack of good governance and unpatriotic act of tax payer, is the basis for which tax evasion and tax avoidance activities is perpetrated. The study therefore recommends that the government should embrace and promote good governance so as to encourage voluntary compliance of tax liability by the tax payers.

Adebisi and Gbegi (2013) study tax avoidance in Nigeria made of three hundred and five (305) employees of Federal Inland Revenue Service Abuja. The Analysis of Variance (ANOVA) was used to test the hypotheses formulated. They found a direct and positive relationship between tax avoidance and tax administration in Nigeria. Hence recommended that tax officials should be constantly trained and retrained on the job, a deliberate and more aggressive public enlightenment campaign should be embarked upon by government. Also, that enlightenment and adequate utilization of tax revenue on public goods would discourage tax avoidance and tax evasion, high tax rates encourage tax avoidance and tax evasion in Nigeria.

Hsu, Chen, Chen, and Wang (2013) investigated the relationship between R&D investment, patent filings and financial success for firms. The study states that, firms which have high degrees of R&D investment and large numbers of patents are referred to as “high innovation energy corporations. A sample of 588 samples were obtained from 2000 to 2011 of Taiwanese high-tech companies from industries including semiconductor manufacturing (136 samples), display panel manufacturers (65 samples), computer and computer peripheral

manufacturers (219 samples), telecommunications and information technology firms (85 samples), and other electronics manufacturers (83 samples) The study made use of multiple linear regression method for its analysis. Findings of the study indicated that the lag between R&D expense and benefit, and the lead periods for patents (that is the duration of the application process) significantly affect stock returns. It documented that R&D expenses increase operating costs which, in turn, decreases operating income despite increased net sales.

Pourali, Samadi and Karkani (2013) work documented that, many companies are faced with financial distress and bankruptcy, during the global financial crisis in recent years and that there are two main factors that explains a firm's financial distress. A firm's financial leverage was recognized as one of the main factors that explains a firm's financial distress. The second main factor is capital intensity, measured by total fixed assets scaled by total assets. The study focused on the relationship between capital intensity and a firm's financial distress. The study was carried out on companies listed in Tehran Stock Exchange during the period 2007-2011 and a sample of 32 companies were selected. The degree of financial distress was measured by modified Altman's Z-Score. The findings of the study suggest a negative significant relationship between capital intensity and degree of financial.

Pourali, Karkani, and Rafinia (2013) investigated the kind of relationship that exists between capital intensity and firms' financial distress. According to the study, when firms fail to commit their financial obligations and in fact cannot repay their debts, they face a financial distress as capital intensity causes a decrease in the financial distress because the capital intensity is considered as an operational leverage which reduces operational costs by allocating much expense to fixed assets. In other words, since the firm has already distributed significant expenses among fixed assets, it uses these assets in the long term without any additional expense

and consequently, the firm can completely reduce operational costs. On the other hand, the capital intensity which increases financial distress can exist when it causes many fluctuations in the expenses because decreased fixed expenses will not change according to the sale's level. The increase in the capital intensity can cause expenses to have a reduced amount of debts or debts to be reduced more intensely, because fixed assets are increased and act as additional sub factors in financial debts. This in turn can decrease the amount of the intensive effect on financial distress. The sample of the study comprised of companies listed in Tehran Stock Exchange (Iran's Capital market) during the period 2007-2011. The degree of financial distress was measured by modified Altman's Z-Score. The findings suggest a negative significant relationship between capital intensity and degree of financial distress (modified Altman's Z-Score).

Akanksha, Jayant, and Costanza. (2013) studied the impact of thin capitalization on tax aggressiveness. In the light of the intense debate on the value implications of tax aggressiveness and agency problems, they developed a simple two-date, single period model to capture the manager's choice of the optimal level of tax aggressiveness in the presence of debt. Higher ownership in the firm attenuates the manager's incentives to shelter higher income from taxes, as also the personal diversionary gains out of sheltered income. In addition, the existence of only few states of the world in which the benefits of tax avoidance can be realized (they assumed that the manager loses all benefits of tax avoidance in the bankrupt state) is expected to exacerbate tax aggressiveness. However, aggressive tax sheltering in the presence of debt increases the likelihood of bankruptcy, which is personally costly to the manager. This, in addition to higher monitoring of the firm's affairs by debt-holders is expected to deter tax aggressiveness. This creates an interesting trade-off. Since leverage could both mitigate/ exacerbate tax aggressiveness, they left the direction of its impact on their empirical results.

They tested their predictions from the model on a panel of U.S. Main sample which consists of 66,198 firm-years (9,648 unique firms), over the period 1986-2012. Consistent with the model's predictions, they discovered that leverage deters tax aggressiveness. It was also evident that though leverage reduces tax aggressiveness in absolute value, it exacerbates it when the latter is measured as a proportion of the firm's pre-tax book income. This is consistent with the hypothesis that leverage may actually cause the manager to avoid more taxes in the non-bankrupt states of the world, when the perceived benefits there from are positive.

Therefore, while they choose to shelter less in dollar terms to avoid bankruptcy, they end up sheltering higher proportions of the corporation's income to serve personal objectives. In their second set of tests, they discovered that tax aggressiveness reduces firm value. The relationship is weakened in the presence of leverage, consistent with agency problems in the corporate tax avoidance decision. This also highlights the role of leverage as an alternate corporate governance mechanism in checking tax aggressiveness. The cross-sectional tests revealed that for firms with high institutional ownership, the relationship between leverage and tax aggressiveness is weaker.

Edwards, Schwab, and Shevlincarlifonia (2013) examined financial constraints and the incentive for tax planning. The period of study was from 1987 to 2011. A sample of 44,328 firm were used. Hypothesis was formulated and tested using the multi-linear regression model. It was discovered that In the case of a tax planning strategy that defers tax payments, the firm is effectively receiving an interest-free loan from the government for the duration of the deferral period. They further stated that In the case of a tax planning strategy that permanently avoids tax payments, there are no principal or interest payments if the tax authority does not challenge the position and repayment of principle, interest, and penalties if the tax authority successfully challenges the position. They noted that Viewing tax planning as a source of financing, in

conjunction with standard theories in finance, supports the prediction that managers will rely more heavily on generating funds via tax planning when those funds represent the cheapest source of financing available to the firm. The findings suggested that firms facing financial constraints exhibit lower cash effective tax rates. It was further recommended that Financial constraints likely rearrange the rank ordering of this cost of capital; external funds (both debt and equity) can become more costly, thereby causing managers to reevaluate possible internal sources of funds given the record high level of the federal deficit and current economic conditions, therefore it is important to understand the interplay between macroeconomic forces and firm-level tax avoidance behavior as legislators look for ways to reduce the federal deficit.

Ibrahim, Annuar, and Obid (2013) investigated the the determinants of corporate tax aggressiveness in a concentrated ownership setting. They employed theoretical approach in identifying the potential benefits and cost of corporate tax aggressiveness. They find out that family, government and foreign ownership have positive relationship with tax aggressiveness. Kimberly, (2013) reviewed existing theory and empirical evidence concerning corporate tax incidence. Taking, a comprehensive series of analyses of multiple data sources on labour market outcomes and corporate taxation. His result showed a substantial uncertainty regarding what fraction of the corporate tax burden falls on labour, it also recorded no robust evidence that corporate tax burdens have large depressing effects on wages.

Daniel and Tilahun (2012) understudied the impact of firm age on performance of insurance companies in Ethiopia. Return on total assets was used as a key indicator of company's profitability age of company represented the explanatory variable. They sampled nine insurance companies listed on the Ethiopian Stock Exchange within the period of 2005-2010. Their result

revealed that age has a significant and positively related with return on total assets. Also, Ethiopia, Yuvaraj and Abate (2013) examined the effects of firm specific factors (age of company, size of company, volume of capital, leverage ratio, liquidity ratio, growth and tangibility of assets) on profitability measured by Return on Assets. The sample of the study included nine of the listed insurance companies for a period of nine years (2003-2011). The regression results showed that the age of companies does not have any significant effect with profitability.

Okta and Shauki (2012) discussed tax aggressiveness, and thin capitalization in a setting of developing country during a transition period related to the changes in corporate income tax. A quantitative approach using ordinary least square (OLS) and logistic regression were used for the purpose of data analysis. The study made use of Indonesian listed manufacturing companies as the sample. Data collected for were taken from OSIRIS database. Total number of sample is equal to 96 companies or 288 panel data (within 3 consecutive years). The independent variable was leverage policy, while tax aggressiveness was the dependent variable. It was discovered that increasing debt financing of leverage policy triggers decreasing level of aggressiveness.

Hartadinata and Shauki (2012) investigated the appropriate relationship between thin capitalization and aggressiveness of tax using evidence from Indonesia. Aggressive tax policy occurs as tax payment is seen to be a burden for companies. Ordinary least square (OLS) and logistic regression were used for the purpose of data analysis; the study made use of 222 Indonesian listed manufacturing companies as the sample from 2008-2010. A negative association was found between leverage and ETR. Hsieh (2012) in his determinants of tax aggressiveness employed data from the Taiwan Economic Journal data base and made of listed companies in the two largest stock markets in China, the Shanghai Security Exchange, and the

Shenzhen Security Exchange. Data were collected from 1998 through 2001. Hsieh found that firm size was not an indicator of lower ETR and that ETR was sensitive to capital intensity (net fixed assets divided by total assets), return on assets (pre-tax profits divided by total assets), leverage (total liabilities divided by total asset) and inventory intensity (inventory divided by total assets),.

Rufus and Ayam, (2012) in the course of investigating the impact of expensed R & D and/or capitalized R & D on firm performance, records that, despite the huge sum of money that is being spent on research and development (R & D) on yearly basis by firms, very few empirical studies exist to shed more lights about the effects of this practice on firm performance. The study documents that, the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB) in their publication of International Accounting Standard (IAS) 38, requires that expenditures incurred during R & D should either be expensed in the statement of comprehensive income or capitalized as an intangible asset in the statement of financial position provided certain criteria are fulfilled. Data were collected from the audited financial statements of firms listed on the London Stock Exchange as well as from the website of the stock market.

They used two sampling techniques; that is stratified sampling and random sampling. Stratified sampling technique was used to stratify the companies into various industries while random sampling was used to randomly select firms that are engaged in R & D from each of these industries. The sample consisting of 52 firms given a total of 260 observations for a period of 5 years from 2007 to 2011 and quantitative research approach was used for the study. Expensed R & D and capitalized R & D were obtained by taking the averages of statement of comprehensive income R & D to Revenue and statement of financial position R & D to revenue

respectively. Firm performance was measured using accounting-based indicators which were Return on Asset (ROA), Return on Capital Employed (ROCE), Dividend Yield (DY), and Dividend Cover (DC), Earnings per Share (EPS), Price Earnings Ratio (PE) and Capital Gearing Ratio (CGR).

The results of the study show that expensed R & D has a significant positive impact on DC, a significant negative impact on EPS, positively correlated with CGR with no significant impact and negatively correlated with ROA, ROCE, DY and PE but had no significant impact. It documented that the capitalized R & D has a significant negative impact on ROA, ROCE and EPS, positively correlated with CGR but have no significant impact and negatively correlated with DY, DC and PE.

Gamlath and Rathirane (2012) submitted that capital intensity indicates how much money is invested to produce one rupee of sales revenue. Business tangible properties or tangible assets are real things that a company has such as buildings or equipment. Capital intensity and tangibility has the vital role in the firms' financial performance. They explored the impact of capital intensity and tangibility on the firms' financial performance in the Colombo Stock Exchange (CSE). Capital intensity was represented by the capital intensity ratio which is calculated by dividing the Total assets by the sales and the Tangibility is represented by the Total Debt Ratio and Debt to Equity Ratio. The financial performance of the firm represented by the Profit Margin (PM), Return on Assets (ROA) and Return on Capital Employed (ROCE). The findings of the study revealed that there is a significant relationship between the Capital Intensity and tangibility and the financial performance. This means that as the firm's capital intensity and tangibility increases it will significantly increase firm's financial performance and future

stability, and the financial managers always act to increase firm's value in order to maximize the shareholders wealth.

Lanis and Richardson, (2012) study used capital intensity (CAPINT) as a control variable given that previous researches show that physical plant and equipment makes a corporation much more visible to the public and to the community at large. Thus, capital intensive corporations disclose more CSR information than non-capital intensive corporations. The study measured CAPINT as net property, plant and equipment divided by total assets. The study made use of OLS to test the formulated hypothesis. Of the 40 corporations listed on the Australian Stock Exchange (ASX), 20 were considered to be tax aggressive, as they were accused of such aggressiveness during the 2001-2006 period. The empirical results of the study documents a positive and statistically significant association between corporate tax aggressiveness and CSR disclosures, thereby confirming legitimacy theory in context of corporate tax aggressiveness.

Utkir, (2012) in his work, "The relationship of corporate tax avoidance, cost of debt and institutional ownership" examined whether there is any relationship between corporate tax avoidance and the cost of debt, and whether the level of institutional ownership moderates this relationship, with two hypotheses tests on sample of 110 listed firms in the main board of Bursa Malaysia during the year 2005 – 2009. In the study, secondary data were collected from Thomson Reuters Data Stream and the annual reports of the companies, listed in Bursa Malaysia's main board, in the sample. The initial sample consists 862 companies; the total of 4310 firm-year observations comprising of financial and insurance companies, banks, and real estate companies. For testing the two hypothesis formulated, the study used regression model derived from Desai and Dharmapala (2009) and Lim's (2011) models. The study find no significant effect of institutional ownership on this relationship, meaning that the level of

institutional ownership does not impact on the relationship between tax avoidance and the cost of debt, regardless whether the level institutional ownership is high or low.

Armstrong, Blouin, Jagolinzer, and Larker, (2012) understudied relationship between corporate governance, incentives, and tax avoidance. To capture the relationship quantile percentile regression was employed. They found out that no relation between various corporate governance mechanisms and tax avoidance at the conditional mean and median of the tax avoidance distribution. Through quantile regression they observed a positive relation between board independence and financial sophistication for low levels of tax avoidance, but a negative relation for high levels of tax avoidance. This indicates that governance attributes have a stronger relation with more extreme levels of tax avoidance, which are more likely to be symptomatic of over- and under-investment by managers.

Akhtar (2012) studied the relationship between financial leverage and financial performance of fuel and energy sector in Pakistan. Using the sample of 20 listed companies from fuel and energy sector from 2000-2005. Financial performance was taken as dependent variable and measured by ten key indicators: return on assets, return on equity, dividend cover ratio, and dividend ratio to equity, net profit margin, earning per share before tax, earning per share after tax, sales as % of total assets, earning per share before tax growth sales growth. Taking financial leverage as independent variables and measured by debt equity ratio and gearing ratio. Results indicate that financial leverage has positive relationship with financial performance. The companies that engage with fuel and energy sector enhance their performance and growth of economy if the optimal capital structure is improved.

Banchuenvijit, and Phuong, (2012) examined the effects of employee compensation, firm age, firm size, capital intensity and export factor on financial performance of listed companies on

Vietnam stock markets. The study showed that employee compensation is an endogenous regressor. The linear instrumental variable regression method is used in the study. The research finds that, by directly affecting employee compensation, the variables total assets, net sales, owners' equity and number of employees may have indirect effects on firm performance. The study also find a significant evidences that ROA is positively related to employee compensation, firm age and export factor but negatively related to total assets; ROE is positively related to net sales while it is negatively related to employee compensation, export factor and capital intensity; ROS is positively related to employee compensation but negatively related to net sales.

Badertscher, Katz, and Rego (2012) investigated whether private equity (PE) firms influence the extent and types of tax avoidance at portfolio firms as an additional source of economic value. Using a sample of 2970 private companies in India. They document that PE-backed portfolio firms engage in significantly more nonconforming tax planning and have lower marginal tax rates than other private firms. They also find additional tax savings for PE-backed portfolio firms that are either majority-owned or owned by large PE firms, consistent with PE ownership stake, expertise, and resources serving as important factors in the tax practices of portfolio firms. They concluded that PE firms view tax planning as an additional source of economic value in their portfolio firms, where the benefits outweigh any potential reputational costs associated with corporate tax avoidance.

Abdullah, Ayoib, and Khaled (2012) study investigated the relations between agency cost variables (firm size, leverage and auditor type) and the firm performance of 392 listed companies in the Saudi Stock Exchange (Tadawul) during 2007- 2010. The study identified two measurements of the firm performance: (1) ROA and (2) ROE. Using the multiple regression, the

results of the study showed the likelihood that firm performance (ROA) is significantly affected firm size. On the other hand, leverage and auditor type have no influence on the firm performance.

Atif and Qaisar (2012) investigated the moderating effect of firm size in the relationship of firm growth and firm financial performance. Fifty non-financial firms concerning to different sectors were used to get the data for year 2012. The data was collected from the financial statements of the companies, listed in Karachi stock Exchange, for year 2012. Findings shows that firm size has a positive significance on the firm performance. Rego, and Wilson, (2012) study examined equity risk incentives can determine corporate tax aggressiveness. They found that larger equity risk incentives are associated with greater tax risk and the magnitude of this effect is economically significant. They concluded that equity risk incentives are a significant determinant of corporate tax aggressiveness.

Banchuenvijit (2012) studied factors affecting performances of the firms operating in Vietnam. A positive relation was found between total sales and profitability of the firms but on the contrary, a negative relation was found between profitability and total assets. Velnampy and Nimalathan (2010) studied the relationship between firm size and profitability of all the branches of Bank of Ceylon and Commercial Bank in Sri Lanka over the period of 10 years from 1997 to 2006. They observed that there was a positive relationship between firm size and profitability in Commercial Bank, but there was no relationship between firm size and profitability in Bank of Ceylon.

Wu, Wang, Luo, and Gillis, (2012) investigated the effect of state ownership tax status and size effect on effective tax rate in china. The size effect of ETR was investigated by focusing on the relationship between firms and the government. They found that, when firms do not enjoy

a preferential tax status, firm size is positively associated with effective tax rates for privately controlled firms and negatively associated for state-controlled firms. They also noted that political cost theory explains the relationship between size and effective tax rate for privately controlled firms, whereas political power theory explains this relationship for state-controlled firms. They concluded that there is no significant relationship between size tax burdens for firms that already enjoy a preferential tax status.

Rufus, (2012) investigated the impact of expensed R & D and/or capitalized R & D on firm performance. Data was collected from the audited financial statements of firms listed at the London Stock Exchange as well as from the website of this stock market. Two sampling techniques were used; namely stratified sampling and random sampling. 52 firms were used for a period of 5 years from 2007 to 2011. He found that R & D has a significant positive impact on Dividend Cover, a significant negative impact on Earnings Per Share. He further went on to say that the relationship between current R & D and firm's performance can only be solid if management implements and utilizes better control measures of R & D expenditures within the firm. The findings suggested that the overall effect of R & D on firm's performance will largely depend on top management ability in terms of putting in place effective and efficient control measures for managing the R & D expenses. Hence, the total profitability that a firm should earn from a successful R & D program should be greater than the total R & D expenditures, if not, then it would be better if the R & D program is closed off or reviewed.

Hashem, and Mehdi (2011) on Corporate Debt Financing and Earnings Quality investigated the relationship between debt financing and earnings quality and the results show that there is a significant relationship between two variables. For the second hypothesis, we investigated the relationship between low levels of debt financing and earnings quality. The

results hypothesis show that there is a positive and significant relationship between the two variables. This stands to reason that debt can have a positive influence on earnings quality because managers are likely to use their accounting discretion to provide private information about the firms' future prospects to lower financing costs.

Lee (2010) study examined the effect of capital intensity on a firm's value performance in the U.S. restaurant industry. The study documented that, among several industry characteristics, capital intensity plays an important explanatory role for the restaurant industry. A restaurant needs physical buildings, equipment, fixtures, and furniture all ready at the launch of a business; these require considerable capital expenditures. The study performed a pooled regression analysis to examine the effect of capital intensity on firm value. The study made use of two data sources to examine the effect of capital intensity on a firm's value performance in the us restaurant industry. The study documented that capital intensity has a negative effect on U.S. restaurant firms' value performance.

Seoki and Lee (2010) examined the effect of Capital Intensity on Firm Performance. It was noted that publicly traded U.S. restaurant companies beginning in 2000 were used and the hypothesis was formulated and tested using pooled regression analysis. The period of study was from 2000 to 2008 with a sample size of 524. The study found a negative effect of capital intensity on firm's value performance. The study documents that franchising plays a significant role in relating capital intensity measurement and a firm's value performance; that Franchising strategies benefit chain restaurant companies by providing stable income, thus reducing business risk; that investors and analysts consider restaurant firms' capital intensity as one of their evaluation tools or factors for determining investment portfolio.

Chong, and Vilaivan (2010) documented that the scale dependence in firm growth (smaller firms grow faster) is systematically reflected in the size distribution. They documented that the equilibrium firm size distribution affect tax in a cross-country context. The finding shows empirical association between firm growth and corporate tax aggressiveness is positive (negative), with notable differences in the response of manufacturing firms and that of the others. Sari, and Martani (2010) examined Ownership characteristics, corporate Governance, and tax aggressiveness in Indonesian. This was conducted for manufacturing firms which registered in Indonesian Stock Exchange for year 2005-2008. The study found no significant association between family ownership, corporate governance and tax aggressiveness. They also saw that corporate governance relative has negative relation with tax aggressiveness and the link between family ownership and tax aggressiveness is mediated by corporate governance, which mediating effect is negative.

Heshmati, Johansson, and Bjuggren (2010) analyzed the effects of ETRs on the size distribution of Swedish firms from 1973 – 2002. Time and industry effects were considered. They found that ETRs differ by firm size, industry and over time. Smaller firms had a higher ETR than larger firms, and there was inequality in mean and variance of ETRs between industrial sectors. They conclude that ETRs affect the size distribution of firms as well as the composition of industries, and that the Swedish tax system favours capital-intensive sectors and firms. Hsieh (2012) used data from the Taiwan Economic Journal data base, which lists companies in the two largest stock markets in China, the Shanghai Security Exchange, and the Shenzhen Security Exchange. Data was collected from 1998 through 2001. They found that firm size is not an indicator of lower ETR, and that ETR is sensitive to return on assets (pre-tax profits divided by total assets), capital intensity (net fixed assets divided by total assets),

inventory intensity (inventory divided by total assets), and leverage (total liabilities divided by total assets).

Becker and fuest, (2010) studied the effects of firm size on profitability in the firms operating in manufacturing sector in USA using the data of years 1987 to 2002. Results of the study showed that negative and statistically significant relations exist between the total assets, total sales and number of employees of the firms and their profitability. Velnampy (2005) pointed a study on investment appraisal and profitability of toddy bottling project in Sri Lanka which found that the management of the project failed to attain the budgetary results, even though the Net Present Value (NPV), Internal Rate of Return (IRR) and benefit cost ratio showed the project as commendable.

Dyreng et al. (2008) developed a measure of long-run tax avoidance based on firms' cash effective tax rates. They find that 22 percent of their 437 sample firms were able to sustain a cash effective tax rate of less than 20 percent over a ten year period. They also examine the characteristics and attributes of those successful long-run tax avoiding firms. Their findings indicate that firms that have a lower long-run effective tax rate are generally large, more profitable, incorporated in a tax haven, highly leveraged, having a lot of fixed assets and intangible assets, and reporting large special items. They also find that successful tax avoiding firms tend to be firms in certain industries such as oil and gas extraction, insurance, and real estate.

Liu and Cao (2007) studied the determinants of ETR for 425 listed companies in China's stock market for the seven-year period between 1998–2004. They considered firm size, thin capitalization, asset mix, profitability, ownership structure, and over-employment. They found that firm size and capital intensity have no significant effect on ETR, leverage has a negative

impact, and ETR tends to be smaller for firms with over-employment of labour. This seems to be caused by government to promote employment. ETR was defined as $(\text{Tax expense} - \text{deferred tax provision}) / \text{EBIT}$. They also found that the larger the share of ownership by the largest shareholder, the larger the ETR.

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Velampy (2006) also studied the financial position of the companies and the relationship between financial position and profitability with the sample of 25 public quoted companies in Sri Lanka through the use of Altman original bankruptcy forecasting model. According to him, out of 25 companies only 4 companies were in the danger of going bankrupt in the near future. Moreover, he also found that in deciding the financial position of the quoted companies, earning/total assets ratio, market value of total equity/book value of debt ratio and sales/total assets in times were the most significant ratios.

Ozgulbas, Koyuncugil, and Yilmaz, (2006) studied the effects of firm size on performance over the firms operating in Istanbul Stock Exchange between the years of 2000 to 2005. As a result of their study, they have found that big scale firms have a higher performance as compared to small scale firms. In a similar fashion, Jonsson (2007) studied the relation between profitability and size of the firms operating in Iceland. Results of the analysis showed

that bigger firms have higher profitability as compared to smaller firms. Size-profit relationship for the firms functioning in the financial services sector was tested by Amaton and Burson (2007). They tested both linear and cubic form of the relationship. Even though a negative influence of firm size on profitability was revealed with the linear specification in firm size, evidence of a cubic relationship was detected between return on assets and firm size.

Desai, and Dharmapala, (2006) examined the links between corporate tax avoidance, the growth of high powered incentives for managers, and the structure of corporate governance. Hypothesis was formulated using cross-sectional analysis. The period of study was from 1993-2002. It was noted that higher-powered incentives are associated with lower levels of tax sheltering for the typical firm, in a manner that is consistent with technological complementarities between sheltering and diversion. The findings noted that for the full sample of firms, increases in incentive compensation tend to reduce the level of tax sheltering, suggesting a complementary relationship between diversions and sheltering. They further stated that incentive compensation appears to be a significant determinant of tax avoidance activity. They further recommended that financial innovations, the integration of capital markets, and an increasingly complicated corporate tax code provide more opportunities for firms to capitalize on differences in tax rates, tax preferences, and tax status in more and more elaborate ways.

Dyreg, Hanlon, Edward and Maydew (2005) study documented that property, plant and equipment is included in the analysis for two reasons. First, capital intensive firms potentially have more avenues for tax planning. These avenues include decisions of whether an asset is purchased or leased, timing of purchases and dispositions of assets. Second, to the extent fixed assets are purchased at a greater rate than they are disposed, book-tax differences will arise due to favourable depreciation rates for tax purposes. The study measures property plant and

equipment as the average level of property plant and equipment over the sample period. The study made use of a 10 year period from 1994 to 2004 with a population size of 437 firms and a sample size of 96 firms. They concluded that property plant and equipment is negatively associated with tax aggressiveness.

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Owolabi (2004) in study on tax noted that Nigeria loses billions of dollars in tax revenues every year due to unreformed tax regimes and ineffective tax legislation that have aided tax avoidance and tax evasion by wealthy individuals, and local and multinational corporations (MNCs). He observed that despite the relevant laws and regulatory policies in place, such as the Companies Act of 1968, the Institute of Chartered Accountants of Nigeria (ICAN) Act of 1965, the Association of National Accountants of Nigeria (ANAN) Act of 1993, Anti-money Laundering (Prohibition) Act of 2004, and the Economic and Financial Crime Commission Act of 2004. The accountants and auditors in Nigeria have chosen the path of selling various schemes of tax aggressiveness to wealthy individuals, local and multinational corporations, and have also aided these companies in looting the treasury and siphoning the looted funds to private accounts

abroad. As a consequence, the country is enveloped with acute shortage of revenues to finance infrastructure, essential public services and critical development programmes geared to foster wealth redistribution. Owolabi advised that that Nigeria should restructure its tax systems, by putting in place effective tax legislation, which criminalizes tax aggressiveness, tax evasion, illegal capital flight and other trans-organized financial crimes.

Also, Graham, (2003) worked on tax Shelters and Corporate Debt Policy. A sample of 43 tax shelter cases for the period of 1975-2000 were used, using regression analysis to investigate the magnitude of tax shelter activity and whether participating in a shelter is related to corporate debt policy. The results suggest that corporations substitute away from debt when using tax shelters. Seven years before they engage in sheltering activity, shelter firms have mean debt ratios of about 25 percent, roughly equivalent to match firm debt ratios. By the year of the sheltering activity, shelter firm debt ratios have fallen to approximately 18 percent while matched firm debt ratios have not fallen. These results help explain why some firms appear to be under-levered when tax-sheltering activity is ignored, and also why corporate tax payments have fallen so precipitously in recent years.

Parcharidis and Varsakelis (2002) examined whether investments in R&D, innovation and new technologies are intangible factors of business performance. The study made use of panel data analysis using data from industrial and computer companies listed in the Athens Stock Exchange (Greece), for the period 1995-2000. The population size consists of 143 companies and the sample size was 36 companies industrial and computer companies listed on the Athens Stock Exchange. The study finds that although the R&D investments have a negative influence on profitability for the year of the investment, they can show strong positive relation after two years.

Olhoft (1999) obtained data from Compustat for the years 1990 through 1997 for both U.S. multinational and U.S. domestic corporations. He examined the variables that affect firms who are most successful in avoiding income taxation, resulting in lower ETR (defined as the ratio of current income tax expense to pre-tax accounting income). Holding income constant, larger firms by total net sales pay more tax per dollar of income than smaller firms do. However, firms with greater income pay a lower percentage of tax than do firms with less income. The study find that higher income is associated with income tax avoidance while larger firm size is not. Multinational firms have a much stronger negative relationship between income and ETRs

Lubatkin and Chatterjee (1994) tested the relationship between diversity strategy and the risk of security companies of America and New York in the period of 1970-1984 with a sample of 246 companies and they included the capital intensity variable as a control variable in the equation which influenced the risk, and concluded that there was a negative relationship between the capital intensity and the firm's risk. Lowe (1994) noted that the capital intensity was related to the low profitability risk and it facilitated the increase in debts. The study documented that there was a relationship between high capital intensity and the increase of debts.

Brealey and Myers (1984), and Shapiro and Titman (1989) believed that the capital intensity which is often measured by fixed assets divided by total assets or total sales indicates the operational leverage, and a larger capital intensity has a tendency toward increasing the firm's risks which originates from the notion that the firm with a higher level of fixed assets naturally experiences more fixed expenses and in proportion to these expenses, the firm's expenses from the sale's level have not changed which means that when the demand has fluctuations, profitability of capital firms has more fluctuations compared to firms which use less capitals . The capital intensity may have a negative relationship with the firm's risk so that the

capital intensity becomes a representative for the firm's ability to minimize the expenses and consequently a supporter for the firm's cash flows against environmental uncertainty. In addition, another point of view proposes that capital intensity may have an improving role in the financial situation of the firm since capital firms keep a larger proportion of fixed assets compared to their opposite firms which can be used as an assurance that decreases the distress.

2.3.6 Summary of related literatures

s/n	Authors	Year	Sample	Market	Period	Industry	Research method	Findings
1	Abubakar, Sulaiman and Haruna	2018	50	Nigeria	2007-2016	Various	Ex-Post Facto	The study revealed that age has significant negative impact on financial performance in insurance companies in Nigeria
2	Akanksha, and Costanza,	2017	73,515	1986-2012	U.S	Various	Least square methodology and quasi experiment	The model predicts that higher levels of debt reduce the level of sheltering. The model also predicts that the level of sheltering is lower when the manager's personal costs in bankruptcy are greater and when the risk of being caught sheltering is higher.
3	Kim, and Chang	2017	50 firms	Korea	2011-2013	Manufacturing	Quazi-experimental	R&D intensity (RNDS), and sales growth (GS) both have a positive impact on corporate tax avoidance, confirming the previous studies. The main

									difference between the high and low tax avoidance groups lies in R&D intensity and sales growth.
4	Jeong Ho Kim, Chae Chang	2017	50 firms	Korea	2100-2013	Small and Medium Scale enterprises	Survey		The findings from the study offer policy insight with regards to subsidizing SME. At the same time, the financial traits from the result can be considered as meaningful factors when evaluating SME value. Capital intensity has a positive impact on corporate tax avoidance, confirming the previous studies.
5	Clement, Olayemi, and Olufemi,	2017	63	Nigeria	1998-2010	Financial	Innovative econometric methodology		The results establish a bidirectional relationship between firm size and profitability of firms in Nigeria.
6	Mohammed Alshetwi	2017	329 firms	Saudi Arabia	2013 - 2015	Various Firms	Survey		Neither board independence nor board size is linked to firm performance.
7	Abdul Badmus	2017	Nigeria	2000-2009	Chemicals and Paints	Manufacturing	Ex-post facto		that firms in the sector should be more of equity

					firms			financed than debt by sourcing more of equity in their finance ratio and avoiding too much debts.
8	Marwa Anis, Amon Chizema, Xiahui Lui and Hadia Fakhreldin	2017	70 firms	Egypt	2005-2010	Private Companies	Survey	ownership has other positive contributions to organizations
8	Alexander and Jacob	2016	2876	Columbia	2007-2012	Various	Cross-sectional	Executive inside debt holdings are negatively related to tax risk. It was also seen that the relation between insider debt and tax risk is stronger for firms that are not facing liquidity constraint
9	Yetty, Eka, and Eneng	2016	108	Indonesia	2010-2014	Manufacturing firms	Cross-sectional	Leverage does not have a significant effect on tax avoidance.
	Uwuigbe, Uwuigbe, Adeyemo and Ogunbajo	2016	30	Nigeria	2007-2011	Various	Ex-post-Facto	The result showed that firm age has a positive statistical significant relationship with performance. They also opined that older firms are likely to perform better than younger firms because they are more experienced
10	Anouar, & Houria	2016	57	Morocco	2010–2014	various	multiple regression	The study indicates that highly indebted

							model.	firms are likely to take advantage of the main characteristics of debt-capital in order to avoid a significant corporate tax burden.
11	Almendros, and Sogorb-Mira.	2016		2007-2013	SPANI SH	Various	Regression Analysis	It was found that firms with greater amounts of non-debt tax shields have lower levels of debt, substituting debt tax shields for other tax allowances such as depreciation expenses.
12	Alexander and Jacob	2016	2,876	2007-2013	Germany	Various	Quantile Regression	It was found that executive inside debt holdings are negatively related to tax risk
13	Ilaboya, Izevbekha and Ohiokha	2016	70 firms	Nigeria	2004-2014	Ordinary least square regression		the study observed that the relationship between R & D and firm value was vague. This vagueness reduces the extent of generalisation and thus creates a methodological shortcoming which future research can resolve. Hence, the study proposes an insignificant relationship

								between R & D and firm value.
15	Ricardo Santos	2016	117	UK	2006-2014	Regression model	multinationality of MNCs also exhibits a significant impact on entities tax governance.	In the future, transfer pricing aggressiveness researches could take into consideration different aspects, capable to contribute for the extent and sophistication of the theme
16	Edwards, Schwab, and Shevlin	2016	44,328	California	1987-2011	Multilinear regression model	Firms facing financial constraints exhibit lower cash effective tax rates.	it is important to understand the interplay between macroeconomic forces and firm-level tax avoidance behavior as legislators look for ways to reduce the federal deficit
17	Maziar Ghasemi and Nazrul Hisyam Ab Razak.	2016	267 companies	Malaysia	2010-2013	moment's regressions	board size and executive ratio have a positive impact on the firm profitability	Executives know about the firm's operation and they also commonly have sufficient experiences about their firm's business, therefore they can provide first-hand and on-time information to other members of the board.
18	Karina	2016	60	Netherl	2010-	linear	other factors	managers should

	Veklenko			ands	2014	regressio n analysis	also influence performance	examine existing board directors and seek to enlarge its independency over internally determined period of time
19	Terry, Lakshman an, & Oktay.	2016	63	Across countri es	1995- 2011	Various	a battery of sensitivity analyse	they find that aggregate corporate tax avoidance is positively associated with future economic growth, measured as either GDP per capita growth or employment growth.
20	Namryou ng, & Charles	2016		world- wide market capitali zation, from 87 countri es	1989- 2007	.various	Regression and Correlation analysis	The results were interpreted in light of three limitations. First, structural changes in any one country's tax laws are not considered. Second, since much of the data is from financial statements, individual country accounting rules may have had an impact on the results. Finally, although our model specifies that multinational tax avoidance is affected by relative penalty rates across countries, we could find no reliable description of such penalties across

								counties, and thus our estimates implicitly assume penalty structures are equivalent across countries.
21	Anouar & Houria	2016	45	Morocco	2010-2013	publicly-listed Moroccan corporate groups	ordinary least squares (OLS)	the study documents that firms with high profitability are most likely to engage in tax avoidance practices in order to reduce their tax liabilities.
22	Yetty, Eka, & Eneng.	2016	108	Indonesian	2010-2014	Manufacturing	multiple linear regression equation	Institutional Ownership has a significant effect on tax avoidance
23	Ulupui	2016	56	Indonesia	2011-2014	Various	Regression analysis	Ownership structure has a negative influence on tax aggressiveness
24	Muhammad, Ayoib, and, Noor	2016	101	Nigeria	2010-2014	Various	multiple regression analysis	financial expertise are attributes/qualifications or experience acquired by a person before becoming a board member of a company
25	Ghouei, and Mondri	2015	102			Various	Multiple Linear Regression	The study shows that higher levels of debt combat agency problems and show a positive relationship

								between financial leverage and tax aggressiveness.
26	Idris and Bala	2015	9	Nigeria	2007-2013	Food and Beverages	Survey	Findings revealed that firm specific characteristics have both positive and negative significant effects on profitability measured by stock market returns
27	Ribeiro, Cerqueira, and Brandão	2015	704 firms		2010-2013		Generalised least square method	The study documents that, both capital intensity and R&D expense, have a negative and significant impact on ETR.
28	Kim, McGuire, Savoy, and Wilson	2015			1990-2011		Ordinary least square methods	The study finds a significant negative market reaction to the credit's enactment for the low marginal tax rate firms and concludes the implicit tax costs for the firms unable to use the credit are substantial
29	Ribeiro, Cerqueira, and Brandão	2015	704 firms		2010-2013		Generalised least square method	The study documents that due to the existence of different depreciation methods, more capital-intensive firms can easier manage taxes by accelerating or

								deferring depreciation expense and, consequently, they can take advantage from temporary book differences.
30	Tanja Herbert	2015	21 firms		2007-2012	Ordinary least square regression		the study expects a negative effect of capital intensity on the ETR DIFF
31	Saratu Lassa Jim-Suleiman	2015	15	Nigeria	10 years	Panel regression model	competition has a positive and an insignificant impact on tax avoidance.	environment in the banking sector should be further enhanced through favorable banking policies
32	Kritika Vikas Choudhary	2015	319 companies	Malaysia	2012-2013.	regression analysis	larger board size had a positive impact on performance	ROA is relatively more for companies with large board size (statistically not significant). While ROE and Tobin's Q is large for companies with small board size.
33	Aminu Bebeji1, Aisha Mohammed and	2015	5 banks	Nigeria	9 years	OLS	Board size has significant negative impact on the	banks should have adequate board size to complexity of the

	Muhammad Tanko						performance of banks in Nigeria	organization's operations the scale and
34	Anthony Kyereboah-Coleman and Nicholas Biekpe	2015	16 non-financial listed firms	Cape town	1990 – 2001	Panel data	small companies have relatively few directors on their board	Smaller board sizes should be adopted by firms in other to improve realization of accounting numbers.
35	Abdul Basyith, Fitriya Fauzi, and Muhammad Idris	2015	100	Indonesia	2010-2014	Balance panel	apart from independent commissioner and audit committee, all variables have a significant impact on firm performance	government through capital market regulatory body should strengthen the legal, judicial and tax systems, enforcing financial discipline, fostering well-regulated securities markets, building professional capacity and transparency as external sources of discipline/control for the corporate sector.
36	Thi Phuong Vy LE	2015	100	Vietnam	2001-2012	OLS	Firms with different ownership type may not be equal with respect to access to capital sources.	one of the greatest concerns of managers is to retain or increase their control because it provides them with discretion in making decisions or accessing their private benefits.

37	Sharon. Urooj. & Anderw.	2015	200		2010-1014	Various	DuPont analysis.	They documented that tax avoidance unambiguously lowers future pretax accounting rates of return (i.e., return on equity, return on net operating assets, and return on operating assets), largely due to inefficient utilization of operating assets and operating liabilities.
38	Ribeiro, Cerqueira, & Elísio.	2015	704	London	2010-2013	Non-financial firms	Generalised Least Square (GLS)	The study concluded that specifically, when profitability is measured based on pre-tax income it is expected that more profitable firms have higher earnings and, consequently, pay more taxes. A positive association between firms profitability and ETR was found.
39	Ghouei, & Mondri	2015	102		1999-2013	Various	Multiple Linear Regression along with the generalised panel of integrated data.	The result reveals that there is a positive relationship between firm size and tax aggressiveness.

40	Ana, Antonio, & Elisio	2015	704		2010-2013	various	Generalised Least Squares (GLS) cross-section weights	study documents that larger firms are associated to higher effective tax rates.
41	Masanori	2015	39,976	Japan	1994-2012	Various	unique panel data	The result showed that private companies are more tax aggressive than public companies among subsidiaries.
42	Ahmed, & Mounira	2015	39	Tunisia	2006-2009	Various	Regression analysis	Managerial concentration has a significant effect on tax aggressiveness
43	Timothy	2015	500	U.S.	2012-2013	Various	Regression analysis	Firms with higher ownership structure has less tax aggressiveness
44	Jost, Heckeme yer and Christoph	2015	47 Respondents	Across Firms	2011-2014	Multinational	Survey	Tax department of Researched development makes less make less effort on tax planning and that the tax department operates more as a controller than a manager
45	Ying	2015	229	China	2006-2012	Various	Regression analysis	increase in managerial cash compensation tend to reduce the level of tax aggressiveness in a manner consistent with the optimal contracting view, which contribute to our overall

								understanding of the role of incentive compensation that plays in motivating Managers' efforts
46	Sung Gon Chung, Beng Wee Goh, Bee Jimmy Lee; and Terry Shevlin	2015	45,502	Singapore	1995-2010	Regression analysis	tax aggressiveness is significantly associated with greater insider sale volume in the fiscal year prior to a stock price crash.	that there are many ways in which managers can extract rent from shareholders
47	Kubick, Lockhart, and Robinson	2014			2006 - 2010	Various	The OLS regression model	the level of inside debt for the CFO, but not CEO, is associated with reduced tax avoidance.
48	Mosota	2014	61	Kenya	2008-2013	Public sector	Leverage ratio has a negative impact on the financial performance of the companies.	The study suggests that similar studies should be done on other firms/companies that are not listed in the NSE. This might help the tax authority in increasing the revenue collection to the central government. There is need for further

								studies to carry out similar tests for a longer time period of time. This will help in observing the companies and the relationship between tax avoidance and profitability.
49	Kale	2014	U.S	2008-2013	Non-financial	Linear regression model	The estimation results revealed that there is a significant negative relationship between leverage and firm performance as measured by return on assets.	Lastly there are many factors that affects firm performance that are not included in this study, apart from internal firm characteristics there are also external market factors and macro-economic factors that affect firms' profitability.
50	Aqsa and Ghulam	2014	Parkistan	2006-2007	Oil Sector	Quantitative Analysis	The analysis of this study shows that financial leverage positively affects the firm financial performance	
51	Aloy and Velnampy	2014	Sri-Lanka	2008-2012	Manufacturing	Correlation and Regression	There is no indicative relationship between firm size and profitability of listed	In future studies the effects of firm size on profitability may be analyzed by differentiating by sector.

							manufacturing firms.		
52	Iftekharsan, Chun-Keung (Stan) Hoi, Qiang Wu, and Hao Zhang.	2014	16,824	China	1985-2009	baseline regression model	banks perceive tax avoidance as inducing significant risks, and they consequently penalize firms with greater tax avoidance with higher loan spreads	debt associated with avoidance-induced risks moderate a firm's incentive to engage in tax avoidance.	costs with could a firm's to tax
53	Katharina Finke, Clemens Fuest, Hannah Nusser, and Christoph Spengel	2014	12	Europe	2006-2012	OECD.Statistics	To avoid double taxation of the interest and royalty income, these regulations need to be modified to reclassify non-deductible interest or royalty payments in the source country	countries could choose broader reform options and change the tax rules for all interest and royalty payments	could broader and tax rules interest and royalty payments
54	Maria Malik, Difang Wan, Muhammad Ishfaq	2014	14 listed commercial banks	Pakistan	2008-2012	Moments regression	large board size can enhance the bank performance	Private banks are quite smart as compared to the state-owned banks as they have larger board sizes and	they are quite smart as compared to the state-owned banks as they have larger board sizes and

	Ahmad, Muhammad Akram Naseem, and Ramiz Ur Rehman,							encourage transparency, innovation, and accountability to enhance their performance.
55	Aymen Ammari, Mohamed Kadria, and Abderrazak Ellouze	2014	40 companies	Tunisia	2002-2009	Panel data	Findings of this literature are often inconclusive.	Larger size of a board can be a disadvantage in term of planning, work coordination, decision making and holding regular meetings and a firm's prior performance does not significantly affect its board structure.
56	Zuriawati Zakaria, Noorfaiz Purhanudin, and Yamuna Rani Palanimaly	2014	73 companies	Malaysia	2005-2010	panel random effects model.	the larger the size of the board, the higher will be the performance of the firm	Firms should not fully depend on independent directors to reduce the agency problem.
57	Ezugwu & Akubo	2014	41	Nigeria	Nil	Banking	Taro Yamane sampling technique and (ANOVA) was used to analyse	The burden of high corporate tax falls on the corporate organisations as it affects their liquidity, but the incidence of high corporate tax rate falls on the customers and suppliers through forward and backward shifting

								of prices all things being equal.
58	Kelvin & Lillian	2014	3,286	Nigeria	1993-2011	Various	ordinary least squares baseline regression.	To provide evidence on causality, they exploited the unexpected closure of local banks as exogenous liquidity shocks to show that firms' external financial constraints affect their tax avoidance strategies and that the use of negative words also statistically provides incremental information into firms' aggressive tax planning activities beyond traditional accounting variables or even the commonly-used ETRs.
59	Yangyang, Rui, Henock, & Leon	2014	34,221	U.S	1993–2010	Various	calculates stock liquidity using intra-day data from the Trade and Quote database (TAQ)	firms with higher stock liquidity engage less in extreme (i.e., either overly aggressive or overly conservative) tax avoidance.
60	Appolos, & Olajumok	2014	11	Nigeria	2001-2014	Manufacturing firms	regression analysis	tax planning strategies of Industry and firm

	e							size have positive effects on firms' liquidity.
61	Chen, & Zolotoy	2014	378	US	1993-2010	Various	quantile regression	the study documents that stock liquidity is positively (negatively) associated with the lower (upper) tail of the tax avoidance distribution, the effect of stock liquidity on both tails of tax avoidance distribution is stronger for firms with high levels of business uncertainty
62	Richardson	2014	200	Australia	2006-2010	Various	Ordinary least squares regression model	the study found that liquidity is significantly positively related with tax avoidance.
63	Ezugwu, & Akubo	2014	45	Nigeria	2005-2012	down-stream oil sector	Regression analysis	The study depicts a direct positive relationship between Corporate Tax Rate and Realised Profit.
64	Guodong, Ron, & Michael	2014	1,2224	China	2007-2010	various	Regression Analysis	Additionally we tentatively support the influence of ownership/control on corporate tax

								avoidance in China, with state-controlled companies evidencing lower levels of the book tax gap.
65	Ibrahim, & Siti	2014	100	Malasia	2005-2010	Various	Regression analysis	Ownership structure has a significant negative to the tax aggressive
66	Mark, Guanmin, & Mark	2014	72	Nigeria	1999 - 2012	Various	cross-sectional variation analysis model.	It was noted that there is a positive association between tax rates and state owned enterprise manager promotions
67	Aimen Ghaffar, Waseem Ahmed Khan	2014			Pakistan			The study finds out that research and development have a positive relationship. And that firm performance will be increased if there is an increase in research and development budget.
68	Hasan Ayaydin, İbrahim Karaaslan	2014	145 manufaturing firms	2008-2013	Turkey			The study evidences a positive effect of R&D intensity on the firm performance
69	Pietro,	2014	10111	Mexico	2008-	Various	ordinary least	It was further

	Diana, and Miguel				2011		squares (OLS) regression	indicated that in their setting auditor network centrality is more important in determining clients' levels of tax avoidance than auditor industry specialization or contagion of tax strategies
70	Hasan and İbrahim	2014	145	turkey	2008- 2013	panel data	positive effect of R&D intensity on the firm financial performance	positive effect of R&D intensity on the firm financial performance
71	Akanksha, Jayant and Costanza	2013	66,198	USA	1986- 2012	Various	Panel analysis	It was also evident that though leverage reduces tax aggressiveness in absolute value, it exacerbates it when the latter is measured as a proportion of the firm's pre-tax book income.
72	Fagbemi, Olayinka and Abdurafu	2013	5	Nigeria	2011	Automob ile	Survey	Level of tax evasion when government is corrupt is significantly higher than when it relates to other views expressed on government

73	Gran,Rom z, and Sidney	2013	697	2001-2010	Australia	Various	Regression Analysis	discrimination and tax affordability The finding showed that tax aggressiveness is negatively correlated with debt. We also observe a negative correlation between debt and the proportion of outside directors on the board, and find that outside directors magnify the debt-substitution effect.
74	Pourali, Samadi, and Karkani	2013	32 companies	2007-2011			multiple linear regression	The findings of the study suggest a negative significant relationship between capital intensity and degree of financial
75	Hsu, Chen, and Wang	2013	588 companies	2000-2011	Taiwan		Multiple linear regression	The empirical results of the study indicate that higher R&D expenses increase operating costs which, in turn, decreases operating income despite increased net sales.
76	Ibrahim,H airul,and siti	2013	66		Tunisia	2002-2009	Various	Cross sectional analysis – there is a link between earnings management and tax aggressiveness
78	Kimberly	2013	675		US	2007-2010	Various	fixed effect regressions analysis the presence of independent financial expert

								directors on the audit committee is not associated with firms' levels of tax avoidance
79	Andrew and Mary Margaret	2013	520	US	1993-2008	Various	Cross sectional analysis	– It does not provide shareholder benefits under full imputation systems, but does provide managers, who engage in corporate tax avoidance, larger cash holdings to exploit for their own private benefits
80	Adebisi and Gbegi	2013	305 employees of FIRS	Nigeria	2010-2010	FIRS	Survey	The researcher used the Analysis of variance (ANOVA) to test the hypothesis formulated and the findings revealed that a direct and positive relationship between tax avoidance and tax administration in Nigeria
81	Dogan	2013	200	Istanbul Stock Market	2008-2011	Manufacturing	Quasi-experimental	It was found that firm sizes and liquidity are positively related to profitability as measured by ROA, while leverage and firm age were negatively related to profitability measured by ROA
82	Yuvaraj and Abate	2013	9	India	2003-2011	Various	Ex-post facto	The effect of firm specific factor such as age does not

83	Yazandfar	2013	12,530	Swedish	2006-2007	Various	Quasi-experimental	have any significant effect with profitability The researcher found that a significant and negative relationship between firm age and firm profitability. It means that younger firms were more profitable than older firms
84	Fatoki	2013	150	Nigeria	One year	Managers	Survey	That tax avoidance and evasion have adversely affected economic growth and development in Nigeria and that lack of good governance is the basis for which tax evasion and avoidance activities is perpetrated
85	Dan	2013	224	US	1993-2008	Various	Cross sectional analysis	– Finds out that firms in countries with imputation systems have lower tax avoidance than other firms.
86	Hsieh	2012		China	1998-2001	various	Regression Analysis	They found that firm size is not an indicator of lower ETR, and that ETR is sensitive to return on assets (pre-tax profits divided by total assets), capital intensity (net fixed assets divided by total assets),

								inventory intensity (inventory divided by total assets), and leverage (total liabilities divided by total assets).
87	Okta and Shauki	2012	96	Indonesian	2005-2011	Various	Quasi-experimental	Result shows that increasing debt financing leverage policy triggers decreasing level of tax aggressiveness
88	Daniel and Tilahun	2012	9	Ethiopia	2005-2010	Manufacturing	Experimental	That age has a significant and positively related with return on assets
89	Hartadinata, and Shauki.	2012	222	Indonesia	2008-2010	manufacturing companies	ordinary least square and logistic regression	increasing debt financing triggers decreasing level of aggressiveness meaning that creditor participation is important and needed in monitoring company's capital structure.
90	Akhtar	2012	20	Pakistan	2000-2005	Fuel & Energy	Quazi-experimental	The result indicated that leverage has a positive relationship with financial performance in the fuel & energy sector
91	Utkir	2012	862	Malaysia	2005-2009	Financial sector	Regression model	It was recommended that future research should investigate the effect of tax avoidance on stock price in both firm level and corporate level future research

								could concentrate on the relationship among corporate tax avoidance, institutional ownership, and corporate transparency.
92	Lanis and Richardson	2007	40 companies listed on the Australian stock exchange	Australia	2001-2006	Ordinary least square regression model		The empirical results of the study documents that a positive and statistically significant association between corporate tax aggressiveness and CSR disclosures, thereby confirming legitimacy theory in context of corporate tax aggressiveness.
93	Atif, and Qaisar	2012	50	Karachi	Various	Regression	firm size has moderating effect between the relationship of firm growth and firm performance	The same study may be done by using other proxies e.g. sale for growth, total assets for firm size and return on equity for firm performance and some other variables may be used as control variables.
94	Abdullah, Ayoib, and Khaled	2012	392	Saudi Arabia	Public companies	Multiple Regression	the results of this study showed that the likelihood a	Further research should replicate this model to determine its validity in different contexts

							firm performance (ROA) is significantly affected increases with the firm size.	of GCC countries, in different time periods, and with different sample size.
95	Luzhen and Chen	2012	20	China	2008-2010	simple statistics analysis and regression analysis	Institution owned firms are higher valuation-high-risk oriented and government owned firms are more low-profitability low-risk oriented	Effect of owner identity on firm performance exists and varies among different types of owner, because the different owner has its own preference on firm strategic goals and varies in incentive and capability to deal with agency problems.
96	Hsieh	2012		China	1998-2001	Various	regression analysis	They found that firm size is not an indicator of lower ETR, and that ETR is sensitive to return on assets (pre-tax profits divided by total assets), capital intensity (net fixed assets divided by total assets), inventory intensity (inventory divided by total assets), and leverage (total liabilities divided by total assets).

97	Brad, Sharon, & Sonja	2012	2,970		1978-2010	Privately equity Firms		corporate tax avoidance is increasing in the separation of ownership and control
98	Wu, Wang, Luo, & Gillis.	2012		China	1998-2006	Various	Regression Analysis	They found that privately controlled firms have a higher ETR than state-controlled firms.
99	Gamlath and Rathirane	2012	13 companies	2007-2011	Sri Lanka			The findings of the study revealed that there is a significant relationship between the Capital Intensity and tangibility and the financial performance. This means that the firm's capital intensity and tangibility increases it will significantly affect to increasing firm's financial performance and future stability, and the financial managers always act to increase firm's value in order to maximize the shareholders wealth.
100	Rufus and Ayam	2012	52 firms	2007-2011	England	quantitative		The results of the study show that

						research approach		expensed R & D has a significant positive impact on DC, a significant negative impact on EPS, positively correlated with CGR with no significant impact and negatively correlated with ROA, ROCE, DY and PE but had no significant impact. As concerns capitalized R & D, the results reveal that capitalized R & D has a significant negative impact on ROA, ROCE and EPS, positively correlated with CGR but have no significant impact and negatively correlated with DY, DC and PE as well though no significant impact was found.
101	Armstrong, Blouin, Jagolinzer, and Larker	2012	6345	Colorado	2007-2010	Various	Quantile Regression	Independent boards are positively associated with tax aggressiveness
102	Rego and Wilson	2012	410	US	2006-2009	Various	Ordinary least square	Find no evidence that aggressive tax strategies allow managers to extract rents from firms

103	Rufus	2012	52		2007-2011	stratified sampling and random sampling	the overall effect of R & D on firm's performance will largely depend on top management ability in terms of putting in place effective and efficient control measures for managing the R & D expenses	with respect to the impact of expensed and/or capitalized R & D on firm's performance is that expensed R & D has a significant positive impact on DC, a significant negative impact on EPS
104	Hashem, and Mehdi	2011	81	2006-2009	tehran	Various	Multiple regression analysis	It was recommended researchers use other models of earnings quality like Jones, Dechiw and Dechow, etc. in future studies. Also researchers can use other aspects of debt (e.g. ratio of debt to equity or ratio of interest to income).
105	Gartner	2011	1298	Arizona	1992-2004	Various	Ordinary least squares	There is a significant positive relation between after-tax incentives and total CEO compensation

106	Heshmati, Johansson, & Bjuggren.	2010		Sweden	1973-2002	various	regression analysis	ETRs affect the size distribution of firms as well as the composition of industries.
107	Sari and Martini	2010	160	Indonesian	2005-2008	Manufacturing	ANOVA analysis and regression test using panel data model.	This study has given an early description that family firm in Indonesia tend to have higher tax aggressiveness than non-family firm.
108	Seoki Lee	2010	524 companies	2000-2008	U.S.A	Pooled regression method	findings revealed that investors and analysts consider restaurant firms' capital intensity as one of their evaluation tools or factors for determining investment portfolio	The study documented that capital intensity has a negative effect on U.S. restaurant firms' value performance.
109	Dyreng et al.	2008	437		10 years	Oil and Gas Industries		Their findings indicate that firms that have a lower long-run effective tax rate are generally large, more profitable, incorporated in a tax haven, highly leveraged, having a lot of fixed assets and intangible assets, and reporting large

								special items.
110	Liu, & Cao.	2007	425	China	1998-2004	Various		They found that firm size and capital intensity have no significant effect on ETR
114	Burak, Ulrike, and Geoffrey	2006	288	13678	1988-2001	Various	Regression analysis	Find out that financial experts significantly affect corporate decisions, but mainly in the interest of their own institutions
115	Desai, and Dharmapala	2006			1993-2002	cross-sectional analysis	the full sample of firms, increases in incentive compensation tend to reduce the level of tax sheltering, suggesting a complementary relationship between diversions and sheltering	Financial innovations, the integration of capital markets, and an increasingly complicated corporate tax code provide more opportunities for firms to capitalize on differences in tax rates, tax preferences, and tax status in more and more elaborate ways. An increase in equity-based incentives actually lead to a reduction in the level of tax avoidance.
116	Dyreng, Hanlon, Edward and Maydew	2005	96 firms		1994-2004	Generalized least square method		Although aggregating over ten years will mitigate a great portion of these temporary

								differences, the study nevertheless expects the change in the level of property plant and equipment to be associated negatively with tax avoidance. The study measures property plant and equipment as the average level of property plant and equipment over the sample period (PP&E in 1994/Assets in 1994 + PP&E in 2004/Assets in 2004)/2)
117	Owolabi	2004	Respondent from professional bodies	Nigeria	2002-2003	Multi-national	Survey	It showed in spite of the relevant laws and regulatory policies in place, accountants, auditors in Nigeria choose the path of selling various schemes of tax aggressiveness to wealthy corporations
118	Graham	2003	43	1975-2000	UK	Various	Expost-facto	That corporations substitute away from debt when using tax shelters
119	Parcharidi and Varsakelis	2002	36 companies	1995-2000	Greece			The study finds that although the R&D investments have a negative influence on profitability for the year of the investment, they can show strong

								positive relation after two years.
120	Olhoft	1999		U.S.	1990-1997	Various	Quazi-Experimental	Higher income is associated with income tax avoidance, larger firm size is not.
121	Lubatkim and Chatterjee	1994	246	US	1970-1984	Various	Expost-Facto	The relationship between diversity strategy and the risk of security companies of America was tested using 246 companies and findings revealed that there was negative relationship between capital intensity and the firms risk

2.3.7 Gap in Related Literature

The studies done on the effect of tax aggressiveness on firm performance were more of foreign based leaving Nigeria unexplored as the few that existed were not robust since they basically looked at the determinants of tax aggressiveness instead of its bottom line effect on firm performance. Therefore, there is a research gap which our study seeks to research address

Also the theories used to explain tax aggressiveness in this study such as the agency point of view signed that a firm might utilize all the strategies in reducing its tax burden but the savings not transformed into corporate financial benefit due to agency problem. The agency theory is of the declaration that managers with their personal interest in conflict with the global interest of the entity might divert such savings to other investment for personal gains.

For Hoffmans theory, who documented that firms which maximizes the loopholes in the corporate tax laws and which maintain an optimal gearing thus having tax shield on the deductible interest tends to lessen its tax burden and increases its after tax returns. While, the political cost theory which held that larger firms tend to be more matured and possesses expansive resources thus have the capacity of engaging professionals in the formulations and implementations of their corporate strategies with tax liability inclusive while the effective tax rate which submitted that all cost should be considered both implicit and explicit cost.

Studies on these theories that dominate the effect of tax aggressiveness on firm performance found mixed results and do not agree with each other which implies that more works be done. This therefore, offers a research problem and where our study seeks to explore.

CHAPTER THREE

METHODOLOGY

3.1 Research Design

The researcher employed the ex-post facto research design. The justification for adopting this design is that requisite data were not manipulated but sourced from secondary materials with a view of gaining deeper information and obtaining good knowledge about the study. Asika (2006) document that ex-post facto research design is a systematic empirical study in which the researcher does not in any way control or manipulates the independent variable because the situation for the study already exists. Our study made use of six variables, five of which are independent and the other dependent. The researcher seeks to find out if the five independent variables (firm size, thin capitalization, Age, capital intensity, ETR) have any significant relationship on the dependent variable (profit before tax). Hence, the researchers choice for ex-post facto research design.

3.2 Population of the Study

The totality of the fifty seven manufacturing firms, quoted on the Nigerian Stock Exchange from 2008 to 2017 constitutes the population of our study. Therefore, the study employed the census approach. However, fifty out of the fifty seven firms, were adopted as the population of the study; this is because information from seven firms was unavailable hence incomplete as at the period of this study. Singh and Masuku (2014) documented that census approach is used for a small population. Glenn (1992), table for sample size $\pm 5\%$ precision levels where confidence level is 95% and $P = 0.5$ imply that a population is small when the number is less than hundred (100). Census approach refers to the quantitative research method, in which

all the members of the population are counted. It is a well-organized procedure of gathering, recording and analyzing information regarding all members of the population. Census approach eliminates sampling error as it provides data on all the individuals in the population. Manufacturing firms were selected as a result of its dominant roles it plays in an economy through conversion of raw material into finished goods.

3.3 Sample Size and Sampling Technique

Based on the fact that the population size is within manageable limit, the entire population was used in the study rather than resolving to sample size.

3.4 Source of Data

The study made use of secondary data. Data were generated from the audited annual reports of our sampled companies for the years 2008 to 2017. Annual report and accounts of a company remain a regularly produced statutory document (CAMA, 2004) that evokes an important or valid construction of a company social imagery.

3.5 Method of Data Analysis

Data were analyzed in three-phase procedural steps: pre-estimation, estimation and post estimation. Pre-estimation test is the use of descriptive statistics in order to understand the nature of the data. Gujarati, (2010) notes that descriptive statistic helps to know the normality distribution of our data through their averages and *Jarque-Bera* values. The estimation test is the correlation matrix and variance inflation factor tests to check for the existence or otherwise of auto correlation among the explanatory variables.

The post estimation test is used to determine the stationarity of the series and also to predict the existence of long-run relationship between the dependent variable and the explanatory variables, the study carried out panel unit root tests and panel co-integration tests using Levin, Lin & Chu

test and Im, Pesaran and Shin W-stat, based on the stationarity of the series. The Hausman test was applied to determine the appropriate estimator between fixed and random effect. Random Fixed effect estimator was most appropriate in the model. The panel regression model was adopted for the data analysis and was used to estimate the relationship between thin capitalization, capital intensity, age, firm size, research and development and profit before tax.

3.6. Model Specification

The model for this study adapts that of Kawor and Kportorgbi (2014), which examined the effect of tax planning on firms' market performance. Kawor and Kportorgbi model is presented below; $Tobins\ q_{it} = \alpha_{it} + 1(Tax\ savings)_{it} + 2(S\ growth)_{it} + 3(F\ size)_{it} + 4(f\ Lev)_{it} + 5(Age)_{it} + \epsilon_{it}$

Tobins q was used as a proxy for market performance, tax savings as proxy for tax planning while sales growth, leverage, Age were used as mediating variables. Our study modified the model as follows

$$PBT_{it} = \beta_i + \beta_1 FSIZE_{it} + \beta_2 THINCAP_{it} + \beta_3 CAPINT_{it} + \beta_4 AGE_{it} + \beta_5 RD_{it} + \beta_6 ETR_{it} + \mu_{it} \dots \dots \dots (3.1)$$

PBT = Profit Before Tax as proxy for performance

ETR = Effective tax ratio as proxy for tax Aggressiveness.

FSIZE= Firm Size the natural logarithm of Total Asset

THINCAP= Thin Capitalization

CAPINT= Capital Intensity

AGE = the current age of the firm

R&D = Research and Development

β_i = intercept

β_1, \dots, β_5 = coefficients

u = error term and

t = time dimension of the variant

3.7 Measurement of Variables

s/n	Variable	Measurement
1	Financial Performance	Profit before tax of the company
2	Thin Capitalization	Long term debt divided by shareholders equity
3	Capital intensity	Property plant and equipment divided by total asset
4	Age	The current age of the firm
5	R&D	Proxied with dummy where we recorded 2 for companies that said the cost that was incurred, 1 for companies engaged in R&D but did not expressly said the amount and 0 for companies that did not embark on R&D for the years under study
6	ETR	Pre-tax expense divided by pre-tax income

3.6.1 Dynamic Model Fixed Effect (FE) and Random Effect (RE)

Fixed Effect (FE) (Dynamic Model)

The fixed effect (FE) specification for the above models can be presented in the following format:

$$\frac{YE_{it}}{EP_{it}} = \pi_k X_{it} + \beta \sum Z_{it} + y_{it-1} + \alpha_{i,t} + v + \mu_t \text{-----} (3.2)$$

and

$$\frac{Y_{it}}{L_{it}} = \pi_k X_{it} + \beta \sum Z_{it} + y_{it-1} + \alpha_{i,t} + v + \mu_t \text{-----} (3.3)$$

where,

y_{it-1} = lagged dependent variables,

- $\alpha_{i,t}$ = company and period specific effects,
- v = over all constant that accounts for seasonal and cyclical effects.
- μ_{it} = idiosyncratic error (mean 0 and variance σ^2).

The subscript i represents the number of companies ($i = 1, 2 \dots 50$), and t represents the number of years ($t = 1, 2 \dots, 10$).

Random Effect (RE) (Dynamic Model)

Following from the fixed effect (FE), the random effect (RE) can be built in the same manner, as presented in the following format:

$$\frac{YE_{it}}{EP_{it}} = \pi_k X_{it} + \beta \sum Z_{it} + y_{it-1} + \gamma_{it} + \alpha_{i,t} + v + \mu_t \text{ ----- (3.4)}$$

and

$$\frac{Y_{it}}{L_{it}} = \pi_k X_{it} + \beta \sum Z_{it} + y_{it-1} + \gamma_{it} + \alpha_{i,t} + v + \mu_t \text{ ----- (3.5)}$$

where,

- y_{it-1} = lagged dependent variables,
- $\alpha_{i,t}$ = company and period specific effects,
- γ_i = company random effects,
- v = over all constant that accounts for seasonal and cyclical effects.
- μ_{it} = idiosyncratic error (mean 0 and variance σ^2).

3.7 Im, Pesaran and Shin Panel Unit Root Test

The Im, Pesaran and Shin (2003) panel unit root test hereafter called IPS test was used to ascertain the stationarity of the model variables. This test is used when μ_{it} is serially correlated and the correlation properties vary across sections. When the assumption of iid of μ_{it} is relaxed,

$\mu_{it} = \sum_{j=1}^p \phi_{ij} \mu_{it-j} + \varepsilon_{it}$, then the general form of the unit root model in panel data is given as:

$$Y_{it} = \rho Y_{it-1} + \sum_{j=1}^p \phi_{ij} \Delta Y_{it-j} + \gamma Z_{it} + \varepsilon_{it} \text{ ----- (3.6)}$$

The null hypothesis is defined as:

$H_o : \rho_i = 1$ for all i , whereas the alternative is given as $H_a : |\rho_i| < 1$, for at least one i .

This test relies on the autoregressive properties of each cross section, being the final result of the IPS test based on an average of the individual ADF statistics.

The IPS t-bar statistic is the average of the average of the individual ADF statistics, that is

$\bar{t} = \frac{1}{N} \sum_{i=1}^p t_{\rho}$, where t_{ρ} is the individual t-statistics for testing for testing H_0 in the equation above

The order of augmentation used for the ADF test in each cross-section can be chosen based on a information criteria such as the Akaike Information Criterion (AIC) or the Schwarz Information Criterion (BIC).

The decision rule is to reject H_0 if t-value is greater than the critical value in absolute terms at chosen level of significance.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

4.1 Data Presentation

The analysis of the data collected in terms of the statistical characterization and econometric evaluation is presented here. Preliminary estimations such as the descriptive statistics, Unit Roots test and Hausman test results are discussed. Thereafter, multivariate regression estimation is conducted and interpreted. These provide the necessary apparatus with which to test the hypotheses formulated in the study. The results are presented and interpreted below.

Table 4.2 Descriptive Statistic

	<i>PBT</i>	<i>L(AGE)</i>	<i>CAPINT</i>	<i>ETR</i>	<i>RD</i>	<i>FS</i>	<i>THINCAP</i>
<i>Mean</i>	6.366287	3.443352	0.451212	0.306465	0.751503	16.92874	0.508941
<i>Median</i>	6.203600	3.610918	0.456500	0.278050	1.000000	16.13826	0.527850
<i>Maximum</i>	10.76500	4.532599	1.399700	2.450700	2.000000	27.52663	0.999400
<i>Minimum</i>	3.063000	0.000000	0.000100	0.000200	0.000000	7.855545	0.000400
<i>Std. Dev.</i>	1.394077	0.721729	0.267153	0.266327	0.528669	3.768840	0.295777
<i>Skewness</i>	0.600477	-1.293946	0.037881	1.923294	-0.171144	0.537285	-0.122061
<i>Kurtosis</i>	3.074074	4.883115	2.277854	11.23646	2.679393	3.260034	1.839201
<i>Jarque-Bera</i>	30.10174	213.4022	10.98405	1721.573	4.573120	25.46498	29.31355
<i>Probability</i>	0.000000	0.000000	0.004119	0.000000	0.101615	0.000003	0.000000
<i>Observations</i>	500	500	500	500	500	500	500

Source: Researchers Compilation 2018

Where PBT = Profit before tax

L(AGE) = Log of Age

CAPINT = Capital Intensity

ETR	= Effective Tax rate
RD	= Research and Development
FS	= Firm size
THINCAP	= Thin Capitalization

Table 4.2 presents the result for the descriptive statistics for the variables. As observed, PBT has a mean value of 6.366287, while CAPINT, ETR, RD, FS, THINCAP and AGE have mean values of 0.451212, 0.306465, 0.751503, 16.92874, 0.508941 and 3.443352 respectively. The Jacque-Bera statistic of all the variables alongside their p-value indicates that the data satisfies normality.

4.3 Unit Roots Test Result

Most time series data tend to contain infinite variances that are not mean-reverting and lie on the unit circle. It is, however, observed that results estimated from such series are usually resulting in spurious regression that makes little or no economic sense. Thus the Im, Pesaran & Shin Test and Levin, Lin & Chu Test panel unit roots test were employed to test for the time series properties of model variables. The null hypothesis is that the variable under investigation has a common unit root process against the alternative that it does not. The decision rule is to reject the null hypothesis if the probability value Levin, Lin and Chu t-statistics is less than or equal to 0.05 level of significance. These results are presented in table 4. I below:

Table 4.3: Summary of Im, Pesaran & Shin Test and Levin, Lin & Chu Test panel unit roots test results of the Series

Variables	Im, Pesaran & Shin Test	Remarks	Levin, Lin & Chu Test	Remarks
PBT	-4.49238***	I(0)	-20.1488***	I(0)
CAPINT	-4.61738***	I(0)	-9.70590***	I(0)
ETR	-3.03097***	I(0)	-4.9116***	I(0)
FS	-6.38226***	I(0)	-17.2542***	I(0)

THINCAP	-5.41285***	I(0)	-11.7753***	I(0)
AGE	-318.966***	I(0)	-36.4916***	I(0)

Note: ***/**/*, indicates significance at 1%, 5% & 10% respectively.

Source: Author's Computation Using Eviews 10+

The results of table 4.1 the result of the table above show that all variables were stationary at in level form since their probability values of LLC are less than 0.05; thereby indicating that all variables were integrated of order zero, I(0). The necessary condition for testing for cointegration is that all the model variables be integrated of the same order. Since the variables are integrated of the same order, we cannot test for cointegration but estimate the panel regression based on the order of integration of the model variables.

4.4 Hausman Test

The Hausman specification test (1978) was conducted to determine whether either fixed or random effect model is suitable for the study. Fixed effect model is applied to dominate for omitted variables that are constant over time but vary between observations. While the Random effect model is used when some omitted variables is constant between observations but vary over time. From the table 5 below, the chi-square statistic value (90.070253) with a probability value of 0.0000 suggests that the Random effect model is appropriate, thereby we accept the null hypothesis.

H₀: Random effect model is appropriate

H₁: Fixed effect model is appropriate

Table 4.4: Hausman's Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	90.070253	7	0.0000

Variable	Fixed	Random	Var(Diff.)	Prob.
LOG(AGE)	-0.088812	0.013132	0.021495	0.4868
CAPINT	-0.102156	0.025784	0.008989	0.1772
ETR	-0.503836	-0.585259	0.002955	0.1342
RD	0.040180	0.099632	0.002563	0.2403
LOG(FS)	0.087359	0.083962	0.000296	0.8435
LPBT(-1)	0.388356	0.695349	0.001128	0.0000
THINCAP	0.007398	-0.019167	0.002361	0.5846

Source: Author's Computation Using Eviews 10+

4.5 Regression results

Dependent Variable: PBT				
Method: Panel EGLS (Cross-section random effects)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(AGE)	0.013132	0.036128	0.36348	0.7164
CAPINT	0.025784	0.099411	0.259373	0.7955
ETR	-0.585259	0.098508	-5.941262	0.0000
RD	0.099632	0.0503	1.980762	0.0482
FS	0.083962	0.010835	7.749104	0.0000
THINCAP	-0.019167	0.08845	-0.216698	0.8285
AR(1)	0.695349	0.02872	24.21126	0.0000
C	0.583802	0.189999	3.072664	0.0023
R-squared	0.822423	Mean dependent var		6.377186
Adjusted R-squared	0.819592	S.D. dependent var		1.381556
S.E. of regression	0.586809	Sum squared resid		151.1674
F-statistic	290.4528	Durbin-Watson stat		2.204824
Prob(F-statistic)	0.0000			

Source: Researchers compilation 2018

Table 4.5 above, shows the result for the random fixed effects Panel estimation based on the Hausman test. Evaluating the model, it is observed that the R^2 is 0.822 which implies that the model explains about 82.22% of systematic changes in firm performance with an adjusted value of 81.9%. The F-stat value is used to test for the goodness of fit of the model and it serves as a test of the joint statistical significance of all the variables examined together and also tests the existence of a significant linear relationship between the dependent and independent variables. A significant F-test indicates that the model is able to explain what actually the practice in reality is and that the model can be relied upon to make possible forecasting and prediction about how the independent variables will affect the dependent variable. The decision rule is to accept the F-stat as significant if the probability value is less than 0.05 otherwise it is rejected. The F-stat (290.45) and p-value (0.00) support the hypothesis of a significant linear relationship at 5% level while the Durbin Watson statistics D of 2.2 indicates the absence of serial correlation of the residuals in the model. The Durbin Watson statistics is used to test for the existence of first order serial correlation between successive units of the error term (Gujarati 2003). As a rule of thumb, if the Durbin Watson statistics is close to 2, we reject the presence of first order serial correlations and hence the regression coefficients will not be biased. Evaluating the performance of the explanatory variables were estimated and their elasticities were also examined in terms of % changes.

We find that Thin capitalization is negative (-0.0191) and insignificant ($p = 0.828$) at 5% level which suggest that firms with more thin capitalization will have lower performance. Specifically a 1% increase in thin capitalization will decrease the PBT by 0.0191% which is insignificant. Firm size is positive (0.000) and significant at 5% level indicating that firms with more assets will have a higher performance. Specifically a 1% increase in the size of the firm

will enhance the PBT with by 8.3%. RD is positive (0.099) and significant ($p=0.048$) at 5% level which suggest that more research and development may tend to have higher performance. Specifically a 1% increase in research and development will increase the PBT by 9.9%. Capital intensity is positive (0.025) though not significant ($p=0.795$). Age is positive (0.013) though not significant ($p=0.716$). Effective tax rate is negative (-0.585) and also significant (0.000) at 5% which suggest that the higher the ETR the lower the performance of the manufacturing firm in Nigeria.

4.6 Test of Hypotheses

In accepting or rejecting our null hypothesis the p-values of the t-statistic were used. The study adopted 5% level of significance. As p-values in excess of 5% were considered not significant.

H₀₁: Thin capitalization does not have significant effect on profit before tax.

From table 4.5 above, the result of regression shows that coefficient of thin capitalization as negative and insignificant with a probability value of 0.8392 exceeding the 5% significance threshold. Hence, we do not reject the null hypothesis and conclude that thin capitalization does not have significant effect on profit before tax.

H₀₂: Capital intensity does not have significant effect on profit before tax.

According to the result of this study in table 4.5 above; capital intensity and profit before tax is positive and insignificant with a p-value of 0.7955 exceeding the 5% significance threshold. Hence, we do not reject the null hypothesis but conclude that capital intensity does not have significant effect on profit before tax.

H₀₃: Research & development does not have significant effect on profit before tax.

From table 4.5 above, a positive and significant relationship was observed between research & development and profit before tax, with a p-value of 0.0482 which is significant at 5% level. Hence, we fail to accept the null hypothesis and conclude that research and development has a significant effect on profit before tax.

H₀₄: Firm size does not have significant effect on profit before tax.

As shown in table 4.5 above, firm size is positive and significant with profit before tax, since its p-value of 0.0000 which is significant at all levels. Hence, we reject the null hypothesis and declare that the size of a firm has a significant effect on tax aggressiveness in Nigeria.

H₀₅: Age of a firm does not have significant effect on profit before tax.

Also as indicated in table 4.5 above, firm age is positive and not significant with profit before tax, since its p-value of 0.1764 exceeds 5% significant level. Therefore, we accept the null hypothesis and conclude that age of firm has no significant effect on the profit before tax of manufacturing firms.

H₀₆: Effective tax rate does not significant effect on profit before tax.

From table 4.5 above, tax aggressiveness is negative and significant with profit before tax, with a p-value of 0.0000 which is significant at 5% level of significance. Hence, we reject the null hypothesis and conclude that tax aggressiveness has a significant effect on profit before tax of manufacturing firms in Nigeria.

4.4. Discussion of Result

Six explanatory variables were taken into account namely; R&D (Research and Development), CAPINT (Capital Intensity), ETR (Tax aggressiveness), THINCAP (Thin Capitalization), AGE (Firm Age) and FS (Firm Size) in order to examine their effect on the

performance of manufacturing firms quoted in the Nigeria stock exchange. Our random-effect model suggests a positive and insignificant relationship exist between firm age and profit before tax with coefficient of 0.7164 and a p-value of 0.1764 which exceeds the 5% acceptance level of the null Hence we accept the null hypothesis affirm that the older a company becomes the higher company's performance grows holding other factors constant.

This aligns with the report of Fichman and Levinthal (1991), Barron (1994) who document that the age of a firm is positively skewed to its productivity. However the study disagrees with the works of Haltiwanger, Lane and Speletser (1999), Mata and Portugal (2004) who coined the term liability of newness to describe how young organization face higher risks of failure and are usually buffered from risk of sudden exit. Similarly, capital intensity also indicates a positive but insignificant relationship with profit before tax. However, a negative and significant relationship was observed between effective tax rate and profit before tax. This implies that increase in tax aggressiveness will lead to decrease in firm performance by 5.8% this disagrees with the works of Anouar and Houria (2017), Ezugwo and Akudo (2014), and Terry, Lakshmanan and Oktay (2016) who recorded that higher tax aggressiveness leads to higher performance. However the study agrees with works of Sharon Urroj and Andrew (2015).

Ideally tax aggressiveness should have a positive relation with firm performance. The negative relationship seen in this study could be that manufacturing firms in Nigerian have not been able to utilize the loopholes entrenched in the Nigerian tax laws effectively. Furthermore, a positive and significant relationship was observed from Research & Development to profit before tax with coefficients of 0.083 and p-value of 0.000. This is in concordance with works of Ghaffar and Klan (2014), Rufus and Ayam (2012) who underscored that R&D has a positive relationship with profit before tax. However it disagreed with work of Hsu, Chen and wang

(2013) who document that R&D expenses increases operating costs which in turn decreases profit before tax despite the increased net sales.

Thin capitalization documented a negative and insignificant relationship with profit before tax. This could be that majority of the firms are majorly equity financed consequently unable to enjoy the benefits of tax guard on debt interest. Also Firm Size with coefficient of 0.09 and p-value 0.048 signs a positive and significant effect with profit before tax implying that a unit increase in firm size would lead to increase in performance by 4.8%. This concurs with study of Atif and Qaisar (2012), Banchuenvijit (2012) who all recorded a positive and significant relationship between firm size to performance. However, Ozgulbas, Koyuncugil and Yilmaz, (2006) recorded a negative relationship between firm size and performance.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

5.1 Summary of Findings

1. Thin capitalization does not have significant effect on profit before tax of manufacturing firms in Nigeria.
2. Firm size has a positive and significant effect on profit before tax of manufacturing firms in Nigeria.
3. Research and development has a positive and significant effect on profit before tax of manufacturing firms in Nigeria.
4. Capital intensity does not have significant effect on profit before tax of manufacturing firms in Nigeria.
5. The age of a firm does not have significant effect profit before tax of manufacturing firms in Nigeria.
6. Effective tax rate has a negative and significant effect on profit before tax of manufacturing firms in Nigeria.

5.2. Conclusion

Taxes are viewed as an enhancing component of bottom line firms' performance; therefore any reduction of taxes paid contributes to an increase of earnings disclosed in the financial statement. This is in support to the main purpose of firms' activity which is creating value to shareholders, actions to minimize the tax burdens are in line with that objective. The focuses of previous researchers were to satisfy the general objectives of firms on variables that can reduce tax paid to government legally. The studies focused on the determinants of tax aggressiveness without really looking at the end product of tax aggressiveness which is enhancing the firms performance.

Our study looked at the dimension of tax aggressiveness and how these dimensions can influence performance. The dimensions include thin capitalization which is the ratio of debt to total asset. Manufacturing firms make use of debt financing in their capital structures to get tax benefits and to increase profitability of the firm. The purpose of using debt is that it attracts interest rate which is an allowable expense to tax authorities thereby reducing the amount of tax paid. Research and development; the effort a firm put in toward the innovation, introduction and improvement of its products and procedures. It is a series of investigative activities to improve existing products and procedures or to lead to the development of new products and procedures. Capital intensity; the amount of money invested in order to get one naira worth of output. The more capital applied to produce one unit, the more capital intense the firm is said to be. Manufacturing sector is considered to be more capital intensive and increasing the capital intensity results in improved quality of production.

Age; the number of years a firm has stayed in operation. The General saying of the older the merrier plays in here. Age goes with maturity and is believed that when a company stays long, the company tends to understand better the business environment and also the tax laws from which they can take advantage of. Firm size measured as the natural log of total assets. We investigated the influence of these on firm performance and it was found that Firm size, research and development have a positive and significant effect on profit before tax in Nigeria while thin capitalization, age and capital intensity have a positive insignificant effect on firm performance. From these findings we made recommendations

5.3. Recommendations

Tax aggressiveness represents and serves a two faced opposing purposes; it is a loss of revenue to the governments of many developed and developing economies as well as a

contribution to the profit after tax of the company. Tax aggressiveness has been a prevalent issue since the foundation of tax legislation and distributive in every society where taxes are levied. Recently it has become more endemic among corporate taxpayers given the scale of the company income tax.

The motivation for this action is that taxes take away greater proportion of the firms' pre-tax earnings and therefore reduce their distributive profit and while increasing the firms' tax liability. Income tax is paid by the company to the government thereby transferring wealth from the company to the government. The payment of income tax is a cost for the firm and the owner itself, the benefit of which may not be commensurate to what the government would do for the corporation. Tax payment becomes one of the internal parts of a cost incurred by the company based on the income made by the organization without directly receiving the residual benefit.

This payment throws a lot of a must financial burden on the company which cannot be ignored as it is a statutory obligation such a company owes to the government for development of her country. Companies therefore find every possible legal means of reducing this mandatory expense as a successful company is the one that is properly attuned to its tax environment. However this means can be interpreted by tax authorities as evasion which becomes a criminal offence with its attendant cost both implicit and explicit. The explicit cost is the amount of the fee the company pays while the implicit cost is the reputational cost. There are two kinds of reputational costs. The first is related to the fact that a firm operates in an environment; therefore when the firm engages in tax aggressiveness, the organizational legitimacy of the firm is questioned by the public. Another potential reputational cost is related to the decline of the share prices caused by a firm engaging in tax aggressiveness. The reputational cost if not properly managed could transcend into eventual closer of the firm leaving the shareholders at a loss.

From the foregoing we could see that though tax aggressiveness has a positive effect on the performance of manufacturing companies in Nigeria, it is not always in the best interest of the two parties; shareholders and the statutory authority. Companies which fail to remit tax face the risk of tax penalty and closure. The federal government at same time loses revenue through tax aggressiveness which could have a negative effect on the economic growth of the country.

i. It is clear that while companies look for ways to circumvent taxes, the relevant authorities look for ways to bring them to book. This leads to revenue loss both on the part of the tax payer and the authority which is definitely not in the interest of the economy. It is therefore recommended that companies should be aggressive in improving their financial performance through aggressive marketing, diversification of their products and improving in her corporate social responsibility.

ii. Renegotiation with the national assembly through the tax authorities towards striking an optimum level of taxes since high level of taxes might lead to necessary default hence the national government not being able to achieve its revenue budgeted target. When there is an optimum level of taxes charged possibly a reduction of the company income tax rate, it will lead to; a reduction of a firms' tax burden, therefore, the leakages on tax revenue due from tax aggressiveness would become unmotivated as companies will be encouraged to pay her taxes without policing.

iii. Government after striking an optimum level of tax is encourage to apply the economic deterrence theory and increase the deterrence measure as well spread their strategies of catching companies that evaded tax. The deterrence theory by Allingham and Sandmo (1972) states that taxpayer's behavior is influenced by factors such as the tax rate determining the benefits of evasion, and the probability of detection and Penalties for fraud which determine the costs. This

implies that if detection is likely and penalties are severe, companies will out of fear pay their tax as at when due. Therefore, if the upshot of committing a crime outweighs the benefit of the crime itself, companies will be deterred from evading or under paying their tax since the fear of getting caught, or the high probability of severity, certainty, and celerity of detection can be an effective strategy to induce truthful behavior from companies.

iv. On the other hand government is hereby encouraged to be seen existing as the existence of government spending inspires individuals to observe the prevailing tax regulations. This is only believable if the government provides manufacturing companies with the enabling infrastructural facilities. Government is therefore encouraged to discreetly use taxpayers' money since the manner the government uses the money brings varied degrees of compliance as taxpayers are largely concerned with what they directly get in from the government in return for their tax obligations in the nature of communal goods and amenities. For instance government utilizes the state income in providing infrastructural facilities such as electricity, security, health and good road, it is prospective that the intensity of tax aggressiveness will reduce. In contrast, if companies recognize that government spends much on elephant project which is unprofitable to the taxpayer, there will be the tendency to hold the inkling of being evilly coerced and attempt to increase tax aggressiveness. This connotes that the level of companies' tax aggressiveness has to do with firms' perception of government responsibility to their well being which is a symbolic causality effect.

v. Manufacturing companies rely heavily on equity financing because it is seen as a cheaper alternative. This is a limitation to its capacity expansion and resource control. They also do not realize that there is cost associated with equity financing which is the remuneration of investors and the devolution of firms' right. For manufacturing firms to withstand the time and tide

associated with the Nigerian economy and with withstand its oscillations, they need to borrow and invest to expand their business branch network. Debt financing also helps to reduce the devolution of the right of the firm while enjoying the deductibility of interest expense on the loan similar to the dividend payment on equity financing.

vi. We are also of the opinion that manufacturing firms should invest more on capital allowable goods. The deductibility of interest expense, depreciations and amortizations are an important slice of firms' costs. Therefore, firms that are more capital intensive benefit more from depreciation deductibility. This is even more important since an asset economic life is usually longer than the depreciation period. Due to the existence of different depreciation methods, more capital-intensive firms can easily manage taxes by accelerating or deferring depreciation expense.

vii. Nigeria manufacturing companies are encouraged to embark on research and development. R & D is a series of investigative activities to improve existing products and procedures or to lead to the development of new products and procedures. The research and development is typically not performed with the expectation or goal of immediate profit. Instead, it is focused on long-term profitability for a company. Through research and development better ways of managing organizations resources in order to reduce costs are discovered. Research and development (R&D) expenses are also another aspect related to firms' investment decisions which contribute to effective tax rates and helps to boost credit incentives. The tax system in Nigeria encourages firm to embark on research development by allowing the cost incurred to be deducted. It can therefore be said that investments in R&D helps to reduce the amount taxed. Manufacturing companies are therefore encouraged to take advantage of this window in the Nigeria tax system to invest in research and development.

viii. Also, from the result of our study, a change in the size of a firm results to increase by 8% of the profit before. Therefore as the total assets of a firm increases, profit before tax tends to increase by 8%. Manufacturing firms are therefore encouraged to take advantage of their total asset for a higher yield in their profitability. This is in consonance to assertion of the political power theory and Hoffmans' tax planning theory which documented that large firms has the aptitude to manage their tax liability compared to small firms

5.4 Contribution to Knowledge

This study contributes to knowledge in following ways. Firstly the study looked beyond the predictors of tax aggressiveness determinants to its explicit implication on the performance of manufacturing firms in Nigeria. We were also able to discover that manufacturing firms in Nigeria have not been able to utilize the opportunities entrenched in the tax system hence the negative association between tax aggressiveness and performance which contravenes the general result of prior studies

Our study also contributes to knowledge by adapting a model ($PBT_{it} = \beta_0 + \beta_1 FSIZE_{it} + \beta_2 THINCAP_{it} + \beta_3 CAPIN_{it} + \beta_4 AGE_{it} + \beta_5 RD_{it} + \beta_6 ETR_{it} + \mu_{it}$) that captured effective tax rate as part of the independent variables explaining or otherwise the dependent variable. Unlike other studies that used effective tax as the dependent variable ($ETR_{it} = \beta_0 + \beta_1 SIZ_{it} + \beta_2 LEV_{it} + \beta_3 CAPIN_{it} + \beta_4 ROA_{it} + \beta_5 SIC_{it} + \epsilon_{it}$) when it was supposed to be among the independent variable communicating to the dependent variable.

Additionally our study contributed to knowledge by making use of the census approach which captures the entire population of the study thereby reducing if not completely eliminating sampling error and producing the desired level of precision. This is distinct from previous studies that made use of sampling techniques which is not devoid of sampling error.

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Appendix 1

COMPANY	YEAR	AGE	RD	PBT	ETR	TA	CAPINT	THINCAP
Lafarge_Plc	2008	58	1	7.0336	0.5352	40,608,000,000	0.4168	0.7116
Lafarge_Plc	2009	57	1	6.9655	0.4527	17,422,052,000	0.9996	0.2442
Lafarge_Plc	2010	56	1	7.0197	0.5335	17,668,945,000	0.7022	0.4563
Lafarge_Plc	2011	55	1	7.0156	0.165	152,414,784,000	0.8357	0.5733
Lafarge_Plc	2012	54	1	7.3256	0.3096	151,655,617,000	0.8392	0.4635
Lafarge_Plc	2013	53	1	7.4564	0.0202	159,866,917,000	0.7702	0.4246
Lafarge_Plc	2014	52	1	7.5099	0.1234	343,627,588,000	0.3497	0.1324
Lafarge_Plc	2015	51	1	7.4902	0.035	381,272,953,000	0.3101	0.1652
Lafarge_Plc	2016	50	1	7.3358	0.0411	537,598,212,000	0.2132	0.5807
Lafarge_Plc	2017	49	1	7.2867	0.3166	61,616,994,000	0.4753	0.3272
Thomas_Plc	2008	69	1	3.063	0.7534	608,018,000	0.6613	0.6854
Thomas_Plc	2009	68	1	3.512	0.3005	585,298,000	0.7113	0.4483
Thomas_Plc	2010	67	1	4.3706	0.142	555,666,000	0.0438	0.9678
Thomas_Plc	2011	66	1	4.5528	0.1561	641,595,000	0.6209	0.6853
Thomas_Plc	2012	65	1	4.4624	0.0424	672,495,000	0.5839	0.4483
Thomas_Plc	2013	64	1	4.4374	0.7483	639,172,000	0.7576	0.9678
Thomas_Plc	2014	63	1	4.5487	0.3643	644,626,000	0.7389	0.6856
Thomas_Plc	2015	62	1	4.2505	0.0229	609,334,000	0.7576	0.5683
Thomas_Plc	2016	61	1	7.8361	0.0307	522,082,000	0.8484	0.9678
Thomas_Plc	2017	60	1	7.6422	0.0434	490,405,000	0.8625	0.8893
Morrison_Plc	2008	64	1	5.875	0.0318	3,501,371,000	0.8131	0.3794
Morrison_Plc	2009	63	1	5.4774	0.298	3,771,906,000	0.8012	0.3217
Morrison_Plc	2010	62	1	5.5812	0.2806	3,157,980,000	0.0792	0.1819
Morrison_Plc	2011	61	1	5.5896	0.2541	4,197,469,000	0.8251	0.1888
Morrison_Plc	2012	60	1	3.8024	0.6826	586,090,000	0.6665	0.3475
Morrison_Plc	2013	59	1	4.1492	0.5649	526,215,000	0.6239	0.2745
Morrison_Plc	2014	58	1	4.8998	0.3735	4,917,116,000	0.7161	0.2872
Morrison_Plc	2015	57	1	5.5228	0.0448	4,164,585,000	0.7998	0.5523
Morrison_Plc	2016	56	1	5.02	0.2495	412,896,000	0.8414	0.8778
Morrison_Plc	2017	55	1	5.2942	0.0798	543,340,000	0.6237	0.4116
FTN_Plc	2008	26	1	5.3631	0.1503	3,195,045,000	0.6405	0.2876
FTN_Plc	2009	25	1	6.4671	0.0118	3,481,419,000	0.5592	0.4571
FTN_Plc	2010	24	0	4.1508	2.4507	4,350,090,000	0.6647	0.8478
FTN_Plc	2011	23	1	5.4448	0.1245	4,575,933,000	0.7146	0.9181
FTN_Plc	2012	22	0	5.5697	0.0934	4,389,402,000	0.7867	0.2162
FTN_Plc	2013	21	1	5.4003	0.138	4,553,277,000	0.7234	0.8693
FTN_Plc	2014	19	0	5.7344	0.0639	4,421,423,000	0.7195	0.6888
FTN_Plc	2015	18	1	5.2214	0.2083	4,738,610,000	0.6437	0.3679
FTN_Plc	2016	17	0	5.3592	0.1517	5,276,690,000	0.7358	0.4195

FTN_Plc	2017	16	0	6.6193	0.0084	5,004,460,000	0.7453	0.3606
Meyer_Plc	2008	57	1	6.4855	0.6685	1,121,201,000	0.0094	0.2536
Meyer_Plc	2009	56	1	6.973	0.0253	86,396,118,000	0.0001	0.0931
Meyer_Plc	2010	55	1	6.4234	0.0364	67,164,030,000	0.0001	0.8002
Meyer_Plc	2011	54	1	4.4453	0.9403	2,728,698,000	0.0007	0.0181
Meyer_Plc	2012	53	1	4.4009	0.075	2,581,419,000	0.0007	0.4464
Meyer_Plc	2013	52	1	4.6329	0.096	2,627,559,000	0.0007	0.8193
Meyer_Plc	2014	51	1	4.5537	0.022	2,462,578,000	0.6909	0.7921
Meyer_Plc	2015	50	1	4.6557	0.1679	1,908,153,000	0.0009	0.4565
Meyer_Plc	2016	49	1	5.3474	0.0151	950,978,000	0.0017	0.7142
Meyer_Plc	2017	48	1	5.4328	0.0112	1,917,776,000	0.0008	0.5546
Nascon_Plc	2008	44	1	6.2782	0.3158	3,848,961,000	0.5035	0.9036
Nascon_Plc	2009	43	1	6.407	0.2782	4,361,532,000	0.6667	0.4671
Nascon_Plc	2010	42	1	6.3135	0.1992	7,509,792,000	0.3403	0.5204
Nascon_Plc	2011	41	1	6.4967	0.2979	10,046,942,000	0.3292	0.0138
Nascon_Plc	2012	40	1	6.606	0.3146	10,689,542,000	0.3408	0.5484
Nascon_Plc	2013	39	1	6.6062	0.3315	11,431,167,000	0.5029	0.8674
Nascon_Plc	2014	38	1	6.4558	0.3464	12,555,885,000	0.5323	0.6371
Nascon_Plc	2015	37	1	6.4797	0.3022	16,294,826,000	0.4148	0.0331
Nascon_Plc	2016	36	1	6.5461	0.3132	24,603,267,000	0.5796	0.0291
Nascon_Plc	2017	35	1	6.8981	0.3244	30,123,247,000	0.3127	0.0317
Nigerian_Plc	2008	38	0	7.6204	0.5259	145,130,000,000	0.0567	0.7775
Nigerian_Plc	2009	37	0	7.9704	0.3204	174,051,000,000	0.2476	0.6382
Nigerian_Plc	2010	36	1	8.0425	0.3208	1,967,413,000	0.7117	0.5652
Nigerian_Plc	2011	35	1	8.0924	0.2876	2,168,413,000	0.5742	0.4344
Nigerian_Plc	2012	34	0	7.9832	0.3354	2,167,153,000	0.5516	0.1986
Nigerian_Plc	2013	33	0	8.0707	0.3714	2,203,388,000	0.5205	0.9387
Nigerian_Plc	2014	32	0	8.0479	0.2284	3,084,021,000	0.3575	0.8965
Nigerian_Plc	2015	31	1	8.0869	0.3912	5,022,544,000	0.2103	0.1015
Nigerian_Plc	2016	30	1	8.2479	0.2457	4,539,683,000	0.2224	0.9504
Nigerian_Plc	2017	29	1	7.8315	0.3359	5,826,000,000	0.3241	0.8187
Berger_Plc	2008	34	1	5.42	0.5757	124,839,000	0.6755	0.9147
Berger_Plc	2009	35	1	5.4953	0.4027	272,231,000	0.8912	0.6754
Berger_Plc	2010	36	1	5.7097	0.1553	249,333,000	0.2197	0.9234
Berger_Plc	2011	37	1	5.6062	0.3389	2,675,035,000	0.4016	0.0547
Berger_Plc	2012	38	1	5.454	0.325	2,928,838,000	0.3976	0.0395
Berger_Plc	2013	39	1	5.5516	0.2942	3,620,598,000	0.3883	0.9206
Berger_Plc	2014	40	1	5.3966	0.403	3,640,145,000	0.2415	0.4798
Berger_Plc	2015	41	1	5.7522	0.4156	38,950,870,000	0.2686	0.5057
Berger_Plc	2016	42	0	5.4342	0.1757	4,102,265,000	0.4551	0.5753
Berger_Plc	2017	43	1	5.611	0.1171	769,917,000	0.1463	0.9245

Nothern_Plc	2008	46	1	4.8484	0.1837	2,358,347,000	0.2395	0.0503
Nothern_Plc	2009	45	0	5.7002	0.7211	1,886,350,000	0.1689	0.3644
Nothern_Plc	2010	44	0	5.7421	0.3377	1,620,038,000	0.2188	0.4081
Nothern_Plc	2011	43	0	5.7707	0.2276	2,063,250,000	0.3946	0.2516
Nothern_Plc	2012	42	1	5.7061	0.1036	3,369,113,000	0.2169	0.2704
Nothern_Plc	2013	41	2	5.1038	0.8285	3,623,417,000	0.2311	0.2566
Nothern_Plc	2014	40	2	5.5337	0.3167	3,266,615,000	0.2078	0.8415
Nothern_Plc	2015	39	2	5.3333	0.0737	2,423,711,000	0.3004	0.6376
Nothern_Plc	2016	38	2	5.3675	0.1537	1,739,760,000	0.3544	0.3908
Nothern_Plc	2017	37	0	4.5168	0.5062	4,337,444,000	0.4632	0.5007
International_Plc	2008	23	2	7.0801	0.8035	1,583,323,000	0.0243	0.3545
International_Plc	2009	22	2	6.9391	0.224	22,679,843,000	0.5078	0.0041
International_Plc	2010	21	2	6.9951	0.761	2,516,959,000	0.9728	0.9193
International_Plc	2011	20	2	7.0801	0.8035	1,583,323,000	0.0243	0.3545
International_Plc	2012	19	1	6.5939	0.4636	24,370,540,000	0.7664	0.1624
International_Plc	2013	18	1	6.5509	0.3454	23,036,762,000	0.8751	0.4559
International_Plc	2014	17	1	6.5939	0.4636	24,370,540,000	0.7664	0.1624
International_Plc	2015	16	1	6.4496	0.3087	30,171,590,000	0.7517	0.4795
International_Plc	2016	15	1	6.5631	0.2746	33,482,106,000	0.7531	0.3924
International_Plc	2017	14	1	6.4612	0.6423	44,962,735,000	0.7061	0.2397
Pz_Plc	2008	69	1	9.7767	0.2676	50,397,241,000	0.368	0.7194
Pz_Plc	2009	68	1	9.8849	0.3051	54,896,207,000	0.3919	0.2387
Pz_Plc	2010	67	1	10.765	0.0407	58,968,513,000	0.4195	0.5507
Pz_Plc	2011	66	1	9.9045	0.2901	68,926,529,000	0.3632	0.8003
Pz_Plc	2012	65	1	9.6342	0.4105	64,406,797,000	0.3782	0.7459
Pz_Plc	2013	64	1	9.8837	0.3044	72296420000	0.3371	0.8924
Pz_Plc	2014	63	1	9.842	0.2687	70,965,735,000	0.3245	0.5358
Pz_Plc	2015	62	1	9.8167	0.3029	67,387,914,000	0.3742	0.7438
Pz_Plc	2016	61	1	9.4981	0.3235	74,430,740,000	0.3561	0.6754
Pz_Plc	2017	60	1	9.6931	0.2526	900,875,725,000	0.0317	0.6571
John_Plc	2008	56	1	8.6405	0.1076	13,536,000,000	0.3716	0.6667
John_Plc	2009	55	2	8.6314	0.1028	14,332,000,000	0.3497	0.2865
John_Plc	2010	54	1	7.5356	0.9906	15,432,000,000	0.3248	0.6989
John_Plc	2011	53	1	8.7042	0.0455	18,000,000	0.3333	0.4743
John_Plc	2012	52	1	8.7261	0.0603	38,000,000,000	0.3246	0.7912
John_Plc	2013	51	1	8.7474	0.0698	51,000,000,000	0.0005	0.7864
John_Plc	2014	50	1	8.8129	0.0754	57,000,000,000	0.1228	0.0905
John_Plc	2015	49	1	8.8215	0.0618	53,000,000,000	0.0947	0.0804
John_Plc	2016	48	1	8.8407	0.075	64,000,000,000	0.0313	0.9969
John_Plc	2017	47	1	8.7649	0.1065	60,000,000,000	0.9878	0.8766
Pharma_Plc	2008	55	1	5.3035	0.0156	1,110,693,000	0.5605	0.1415

Pharma_Plc	2009	54	1	5.6651	0.0023	919,804,000	0.6355	0.1378
Pharma_Plc	2010	53	1	5.6677	0.0025	2,451,143,000	0.5717	0.6825
Pharma_Plc	2011	52	1	6.6995	0.2196	2,569,436,000	0.5173	0.9461
Pharma_Plc	2012	51	1	5.8877	0.0403	2,782,811,000	0.7647	0.9497
Pharma_Plc	2013	50	0	4.8262	0.8083	2,498,136,000	0.8087	0.0915
Pharma_Plc	2014	49	0	5.0327	0.0632	2,839,229,000	0.5634	0.0498
Pharma_Plc	2015	48	1	5.7902	0.0688	2,570,082,000	0.5036	0.4397
Pharma_Plc	2016	47	1	5.3596	0.0445	2,324,045,000	0.7468	0.3351
Pharma_Plc	2017	46	1	7.6434	0.0002	2,195,147,000	0.7977	0.2824
Multiverse_Plc	2008	15	1	4.9188	0.0487	4,596,000	0.6458	0.1051
Multiverse_Plc	2009	14	2	4.9173	0.1349	4,266,000	0.8739	0.8496
Multiverse_Plc	2010	13	2	4.6607	0.0585	4,457,000	0.8517	0.0205
Multiverse_Plc	2011	12	2	4.6607	0.0585	4,457,000	0.8517	0.3485
Multiverse_Plc	2012	11	1	4.425	0.1517	5,488,000	0.6962	0.0315
Multiverse_Plc	2013	10	1	5.6866	0.1305	4,986,000	0.6687	0.3169
Multiverse_Plc	2014	9	2	5.6944	0.0558	4,740,000	0.6713	0.9637
Multiverse_Plc	2015	8	2	5.6288	0.045	4,734,000	0.6515	0.6726
Multiverse_Plc	2016	7	1	5.7637	0.0065	4,596,000	0.6458	0.6219
Multiverse_Plc	2017	6	1	5.6425	0.0134	4,526,000	0.6332	0.0795
Beta_Plc	2008	43	1	6.1624	0.1794	5,122,410,000	0.1712	0.4321
Beta_Plc	2009	42	1	6.178	0.0809	5,276,371,000	0.5075	0.0246
Beta_Plc	2010	41	1	6.2163	0.1052	10,207,873,000	0.8573	0.0319
Beta_Plc	2011	40	1	6.3261	0.2705	18,021,590,000	0.5056	0.5916
Beta_Plc	2012	39	1	6.2688	0.2846	2,246,567,000	0.3918	0.8029
Beta_Plc	2013	38	1	6.1851	0.0378	27,166,481,000	0.3558	0.9749
Beta_Plc	2014	37	1	7.5238	0.2845	2,692,387,000	0.5582	0.6892
Beta_Plc	2015	36	1	6.3249	0.0577	27,171,069,000	0.4299	0.5457
Beta_Plc	2016	35	1	6.5991	0.0436	33,784,130,000	0.8553	0.0794
Beta_Plc	2017	34	1	6.4121	0.0745	3,178,430,000	0.0657	0.8866
Honey_Plc	2008	34	1	6.9493	0.0821	20,730,000	0.5423	0.7734
Honey_Plc	2009	33	2	8.8376	0.6841	23,533,000	0.5976	0.0823
Honey_Plc	2010	32	2	6.3674	0.4955	30,007,000	0.4304	0.0512
Honey_Plc	2011	31	1	6.546	0.291	29,504,000	0.4261	0.9276
Honey_Plc	2012	30	1	6.564	0.2647	47,930,000	0.6053	0.8168
Honey_Plc	2013	29	1	6.5815	0.2545	55,437,000	0.6308	0.0988
Honey_Plc	2014	28	1	6.627	0.2089	63,830,000	0.5653	0.0978
Honey_Plc	2015	27	1	6.1567	0.219	67,943,000	0.7253	0.3445
Honey_Plc	2016	26	1	6.4577	0.0537	76,046,000	0.7069	0.6474
Honey_Plc	2017	25	1	6.5412	0.1999	113,152,000	0.0052	0.907
Dangote_Plc	2008	25	1	9.9387	0.9979	135,621,674,000	0.0018	0.8322
Dangote_Plc	2009	24	1	7.6947	0.0456	159,047,634,000	0.8953	0.9132

Dangote_Plc	2010	23	2	8.0435	0.0471	311,068,208,000	0.0019	0.8011
Dangote_Plc	2011	22	1	8.1108	0.0592	524,045,921,000	0.0007	0.0008
Dangote_Plc	2012	21	1	8.3443	0.3391	624,000,619,000	0.5602	0.0514
Dangote_Plc	2013	20	1	8.3434	0.0465	821,699,780,000	0.5501	0.0004
Dangote_Plc	2014	19	1	8.3285	0.1278	963,441,064,000	0.2665	0.5088
Dangote_Plc	2015	18	1	8.3435	0.0335	1,124,475,000,000	0.5131	0.5023
Dangote_Plc	2016	17	1	8.5502	0.1374	1,475,441,000,000	0.0008	0.5631
Dangote_Plc	2017	16	1	8.5342	0.2558	1,611,087,000,000	0.0007	0.6257
Ellah_Plc	2008	24	0	7.6629	0.5567	2,487,542,322,000	0.438	0.5525
Ellah_Plc	2009	23	1	7.7242	0.5406	1,468,946,997,000	0.2567	0.0571
Ellah_Plc	2010	22	0	7.7899	0.5742	4,346,945,689,000	0.2425	0.0513
Ellah_Plc	2011	21	0	6.7783	0.0789	2,986,496,489,000	0.3561	0.7402
Ellah_Plc	2012	20	0	7.8909	0.5985	1,129,956,972,000	0.9487	0.8316
Ellah_Plc	2013	19	0	5.8793	0.8282	1,177,844,440,000	0.9101	0.8316
Ellah_Plc	2014	18	0	7.0672	0.1944	41,195,440,666	0.0027	0.0678
Ellah_Plc	2015	17	0	6.784	0.7103	1,180,871,155	0.926	0.1772
Ellah_Plc	2016	16	0	7.4144	0.3631	1,183,982,279	0.9156	0.2493
Ellah_Plc	2017	15	1	7.5124	0.1213	2,468,948,678	0.4317	0.0226
Neimeth_Plc	2008	60	0	5.2179	0.4049	200,143,000	0.9178	0.4288
Neimeth_Plc	2009	59	0	5.7025	0.0969	260,790,000	0.7282	0.8523
Neimeth_Plc	2010	58	1	5.1286	0.062	244,500,000	0.4021	0.8681
Neimeth_Plc	2011	57	0	5.0914	0.0839	280,990,000	0.6845	0.2044
Neimeth_Plc	2012	56	1	4.8929	0.233	234,790,000	0.9986	0.2356
Neimeth_Plc	2013	55	1	5.2604	0.2831	263,780,000	0.6152	0.7986
Neimeth_Plc	2014	54	1	5.4131	0.1173	2,783,488,000	0.1947	0.8765
Neimeth_Plc	2015	53	1	5.551	0.056	2,200,244,000	0.2142	0.9024
Neimeth_Plc	2016	52	0	5.5655	0.823	2,688,730,000	0.1871	0.9289
Neimeth_Plc	2017	51	1	5.7527	0.5415	2,530,138,000	0.233	0.6427
Thomas_Plc	2008	69	1	3.2686	0.0976	608,018,000	0.6613	0.6854
Thomas_Plc	2009	68	1	3.512	0.3005	585,298,000	0.7113	0.4483
Thomas_Plc	2010	67	1	4.3706	0.142	555,606,000	0.0438	0.9678
Thomas_Plc	2011	66	1	4.5528	0.1561	641,595,000	0.6209	0.4707
Thomas_Plc	2012	65	1	6.0993	0.9779	672,495,000	0.5839	0.9935
Thomas_Plc	2013	64	1	7.4374	0.7483	639,126,907,000	0.7577	0.2171
Thomas_Plc	2014	63	1	7.5487	0.3643	644,625,540,000	0.7389	0.4146
Thomas_Plc	2015	62	1	7.2505	0.0229	609,333,646,000	0.7576	0.6154
Thomas_Plc	2016	61	1	7.8362	0.0307	522,085,035,000	0.8484	0.8581
Thomas_Plc	2017	60	1	7.6422	0.0434	490,405,305,000	0.8625	0.6144
Flour_Plc	2008	57	1	6.9588	0.3004	21,951,793,000	0.8312	0.5859
Flour_Plc	2009	56	0	6.7005	0.2244	2,286,839,000	0.6768	0.4876
Flour_Plc	2010	55	0	5.3881	0.3065	75,000,000,000	0.7896	0.0116

Flour_Plc	2011	54	1	6.216	0.4254	72,735,721,000	0.2453	0.0781
Flour_Plc	2012	53	1	7.0809	0.3048	224,885,725,000	0.0111	0.138
Flour_Plc	2013	52	0	7.0654	0.2344	223,889,726,000	0.9793	0.0689
Flour_Plc	2014	51	0	7.0954	0.1599	22,014,554,000	0.1917	0.0711
Flour_Plc	2015	50	1	6.5942	0.384	231,529,878,000	0.3473	0.6785
Flour_Plc	2016	49	1	7.1644	0.2861	233,296,607,000	0.3675	0.4142
Flour_Plc	2017	48	1	7.0406	0.1048	343,933,157,000	0.2483	0.1812
SCOA_Plc	2008	48	0	6.6873	0.0745	89,667,000	0.6457	0.8349
SCOA_Plc	2009	47	1	5.3394	0.9967	52,119,003,000	0.0089	0.3646
SCOA_Plc	2010	46	1	5.3425	0.0359	15,281,229,000	0.0144	0.0693
SCOA_Plc	2011	45	2	5.1711	0.3171	5,581,162,000	0.0539	0.0513
SCOA_Plc	2012	44	1	7.9589	0.9992	6,579,312,000	0.1146	0.1758
SCOA_Plc	2013	43	0	7.5352	0.9964	7,976,352,000	0.1147	0.9628
SCOA_Plc	2014	42	1	7.9601	0.998	9,794,526,000	0.1171	0.7382
SCOA_Plc	2015	41	1	7.0404	0.8846	10,199,535,000	0.1543	0.2706
SCOA_Plc	2016	40	0	6.3538	0.2774	13,379,043,000	0.4504	0.5691
SCOA_Plc	2017	39	2	5.6477	0.1266	13,379,043,000	0.4504	0.5565
Eko_Plc	2008	26	0	7.7908	0.1204	1,101,932,321	0.0362	0.6345
Eko_Plc	2009	25	0	7.8616	0.133	1,298,902,155	0.9499	0.0371
Eko_Plc	2010	24	0	7.8821	0.1478	1148850603	0.2799	0.5168
Eko_Plc	2011	23	0	7.9497	0.1876	1,694,998,608	0.8632	0.5538
Eko_Plc	2012	22	1	8.1904	0.1566	3,087,289,631	0.5056	0.5176
Eko_Plc	2013	21	1	8.2772	0.1931	3,312,265,123	0.4901	0.4069
Eko_Plc	2014	20	0	7.463	0.9946	3,465,630,409	0.4682	0.0524
Eko_Plc	2015	19	1	7.4616	0.9949	3662008975	0.4372	0.4117
Eko_Plc	2016	18	1	4.9847	0.1755	13,657,413,000	0.1913	0.0213
Eko_Plc	2017	17	1	5.9871	0.2486	6,086,196,000	0.9665	0.7473
Greif_Plc	2008	80	1	5.9093	0.5067	10,100,000	0.6337	0.9365
Greif_Plc	2009	79	1	5.8894	0.5305	631,567,000	0.4275	0.9459
Greif_Plc	2010	78	1	5.4125	0.8512	631,567,000	0.1583	0.2429
Greif_Plc	2011	77	1	4.8548	0.4638	631,567,000	0.2389	0.2429
Greif_Plc	2012	76	1	4.7854	0.3617	631,567,000	0.2624	0.5066
Greif_Plc	2013	75	1	4.7199	0.4163	682,415,000	0.2429	0.0381
Greif_Plc	2014	74	1	4.7636	0.2514	663,773,000	0.2448	0.3264
Greif_Plc	2015	73		4.6058	0.3848	715,714,000	0.2181	0.6065
Greif_Plc	2016	72	1	4.4996	0.332	566,472,000	0.2754	0.3264
Greif_Plc	2017	71	1	4.8896	0.3627	786,663,000	0.1576	0.9455
Presco_Plc	2008	15	1	6.644	0.9585	21,694,107,000	0.2076	0.9876
Presco_Plc	2009	14	1	5.5291	0.2919	7,589,291,000	0.6233	0.8932
Presco_Plc	2010	13	0	6.125	0.1789	7,381,006,000	0.8013	0.9128
Presco_Plc	2011	12	1	6.4117	0.3441	24,970,023,000	0.2111	0.3274

Presco_Plc	2012	11	2	6.6207	0.0928	28,006,505,000	0.3047	0.5624
Presco_Plc	2013	10	2	6.3681	0.4271	32,663,229,000	0.423	0.6377
Presco_Plc	2014	9	1	6.8979	0.1931	49,818,490,000	0.3411	0.6393
Presco_Plc	2015	8	0	6.6271	0.4078	55,447,999,000	0.0361	0.8564
Presco_Plc	2016	7	1	7.4945	0.3039	83,161,837,000	0.2555	0.5956
Presco_Plc	2017	6	2	7.4042	0.0954	98,324,096,000	0.286	0.9786
DangoteF_Plc	2008	12	0	7.1501	0.0038	1,166,842,000	0.4831	0.8801
DangoteF_Plc	2009	11	1	6.7453	0.0365	28,200,475,000	0.6724	0.0544
DangoteF_Plc	2010	10	1	6.7373	0.3127	32,529,277,000	0.6111	0.2637
DangoteF_Plc	2011	9	1	6.3976	0.6837	70,379,238,000	0.2825	0.6679
DangoteF_Plc	2012	8	1	6.6299	0.2641	59,191,842,000	0.3167	0.6059
DangoteF_Plc	2013	7	1	6.5203	0.3521	59,800,099,000	0.2902	0.2796
DangoteF_Plc	2014	6	1	6.3548	0.8376	53,563,743,000	0.2866	0.8949
DangoteF_Plc	2015	5	0	7.1574	0.0201	1,707,829,000	0.0172	0.9464
DangoteF_Plc	2016	4	0	7.1015	0.0413	76,720,347,000	0.213	0.6442
DangoteF_Plc	2017	3	0	6.7835	0.0671	129,341,940,000	0.1698	0.2755
First_Plc	2008	57	1	5.6608	0.0464	9,422,172,000	0.5935	0.4987
First_Plc	2009	56	1	5.1632	0.4117	8,866,267,000	0.5867	0.5789
First_Plc	2010	55	1	5.2599	0.7016	8,570,793,000	0.6177	0.6789
First_Plc	2011	54	1	5.6743	0.1699	9,422,172,000	0.6163	0.5891
First_Plc	2012	53	1	6.0225	0.0464	8,866,267,000	0.5935	0.9606
First_Plc	2013	52	1	5.2268	0.4117	8,570,793,000	0.5867	0.8575
First_Plc	2014	51	1	5.0269	0.7016	8,389,909,000	0.6177	0.8034
First_Plc	2015	50	1	5.2599	0.3814	8,152,847,000	0.6902	0.7039
First_Plc	2016	49	1	5.434	0.391	9,245,829,000	0.5899	0.6359
First_Plc	2017	48	1	5.539	0.8778	9,524,990,000	0.6209	0.9039
Portland_Plc	2012	32	0	5.2994	0.1461	2,386,024,000	0.2725	0.0725
Portland_Plc	2013	31	0	5.092	0.1304	2,427,423,000	0.2289	0.9085
Portland_Plc	2014	30	0	5.2885	0.235	2,277,558,000	0.2402	0.7648
Portland_Plc	2015	29	0	5.4122	0.0982	1,899,281,000	0.2381	0.7461
Portland_Plc	2012	28	0	5.2994	0.1461	2,386,024,000	0.2725	0.0725
Portland_Plc	2013	27	0	5.092	0.1304	2,427,423,000	0.2289	0.9085
Portland_Plc	2014	26	0	5.2885	0.235	2,277,558,000	0.2402	0.7648
Portland_Plc	2015	25	0	5.4122	0.0982	1,899,281,000	0.2381	0.7461
Portland_Plc	2016	24	1	3.9864	0.1129	1,754,319,000	0.2497	0.5058
Portland_Plc	2017	23	1	5.0087	0.2202	2,095,251,000	0.4722	0.7965
Premier_Plc	2008	35	0	3.3359	1.114	320,042,000	0.9568	0.9746
Premier_Plc	2009	34	0	4.5248	0.0572	432,125,000	0.6245	0.8871
Premier_Plc	2010	33	0	4.7025	0.0009	278,892,000	0.4567	0.7572
Premier_Plc	2011	32	0	4.7557	0.0764	21,698,000	0.257	0.2386
Premier_Plc	2012	31	0	4.4218	0.4852	825,986,000	0.3658	0.5002

Premier_Plc	2014	30	0	4.4193	0.1953	259,658,000	0.6785	0.8731
Premier_Plc	2014	29	0	4.5379	0.7956	288,982,000	0.4576	0.8276
Premier_Plc	2015	28	0	4.9452	0.6175	341,289,000	0.456	0.1909
Premier_Plc	2016	27	0	4.5425	0.0377	320,042,000	0.235	0.6559
Premier_Plc	2017	26	0	4.4971	0.7161	284,085,000	0.5461	0.6131
Paints_Plc	2008	16	0	5.0385	0.3453	262,719,000	0.3796	0.0404
Paints_Plc	2009	15	0	4.4651	0.3899	873,386,000	0.1468	0.2096
Paints_Plc	2010	14	1	5.0359	0.0178	903,646,000	0.5533	0.7475
Paints_Plc	2011	13	1	5.3908	0.5876	1,172,445,000	0.9741	0.4494
Paints_Plc	2012	12	1	6.9108	0.9672	1,995,093,224,000	0.1629	0.5014
Paints_Plc	2013	11	2	7.1063	0.9775	2,337,220,475,000	0.1264	0.5361
Paints_Plc	2014	10	0	5.6093	0.5675	3,334,117,000	0.079	0.3171
Paints_Plc	2015	9	0	5.3999	0.3452	2,315,817,000	0.2159	0.2794
Paints_Plc	2016	8	0	4.7456	0.6079	2,440,617,607,000	0.1273	0.0379
Paints_Plc	2017	7	0	4.7139	0.7626	2,657,364,000	0.1086	0.4858
Cadbury_Plc	2008	53	0	6.45	0.0476	23,130,129,000	0.5453	0.4585
Cadbury_Plc	2009	52	0	6.2071	0.8329	25,246,000,000	0.4562	0.2456
Cadbury_Plc	2010	51	1	6.2849	0.4069	32,642,612,000	0.3413	0.1601
Cadbury_Plc	2011	50	1	6.725	0.2874	32,642,612,000	0.3446	0.8785
Cadbury_Plc	2012	49	1	6.7976	0.3167	39,811,415,000	0.3256	0.8284
Cadbury_Plc	2013	48	1	6.8705	0.1884	43,172,624,000	0.3921	0.7755
Cadbury_Plc	2014	47	1	6.3777	0.1042	28,811,286,000	0.5634	0.2598
Cadbury_Plc	2015	46	1	7.0773	0.0355	28,285,297,000	0.5432	0.3131
Cadbury_Plc	2016	45	1	4.4762	0.9016	28,409,000,000	0.4994	0.6043
Cadbury_Plc	2017	44	1	5.5445	0.1436	28,423,122,000	0.4884	0.4205
N NIGERIA_PLC	2008	39	0	3.7356	0.205	84,581,640	0.2228	0.8021
N NIGERIA_PLC	2009	38	0	3.6042	0.3858	105,691,590	0.2094	0.2065
N NIGERIA_PLC	2010	37	0	4.7463	0.5739	450,000,000	0.7467	0.0322
N NIGERIA_PLC	2011	36	0	4.8771	0.7258	4,098,140,000	0.0065	0.0246
N NIGERIA_PLC	2012	35	0	4.4889	0.7065	3,369,113,000	0.2776	0.3064
N NIGERIA_PLC	2013	34	0	5.519	0.3185	3,623,417,000	0.2311	0.2258
N NIGERIA_PLC	2014	33	0	5.5338	0.3167	3,266,615,000	0.2078	0.1719
N NIGERIA_PLC	2015	32	0	5.484	0.3453	2,423,711,000	0.3004	0.2324
N NIGERIA_PLC	2016	31	0	5.3466	0.112	1,739,760,000	0.3544	0.0908
N NIGERIA_PLC	2017	30	0	4.1274	0.2108	4,337,444,000	0.4632	0.0954
DN_Plc	2008	26	1	5.0645	0.0556	2,735,908,000	0.2218	0.0765

DN_Plc	2009	25	0	5.391	0.4891	2,580,000	0.7496	0.7778
DN_Plc	2010	24	1	5.081	0.0512	2,645,299,000	0.5658	0.8765
DN_Plc	2011	23	1	5.0645	0.0556	2,735,908,000	0.2218	0.8761
DN_Plc	2012	22	1	5.081	0.0512	2,645,299,000	0.5658	0.8976
DN_Plc	2013	21	1	5.6573	0.0135	2,066,906,000	0.5442	0.4221
DN_Plc	2014	20	0	4.8445	0.4984	2,088,320,000	0.5407	0.3866
DN_Plc	2015	19	0	5.5902	0.2074	906,510,000	0.1308	0.6686
DN_Plc	2016	18	1	5.6573	0.0135	2,066,906,000	0.5442	0.4221
DN_Plc	2017	17	0	4.8445	0.2984	2,088,320,000	0.5407	0.3866
Champion_plc	2008	25	0	6.1339	0.3748	4,266,000,000	0.2265	0.5232
Champion_plc	2009	24	1	6.1922	0.348	3,726,000,000	0.7023	0.5111
Champion_plc	2010	23	1	6.192	0.3488	2,802,000,000	0.5425	0.7545
Champion_plc	2011	22	0	5.7907	0.933	6,958,000,000	0.9145	0.3255
Champion_plc	2012	21	1	5.8719	0.7954	6,799,200,000	0.8328	0.9823
Champion_plc	2013	20	1	5.7963	0.883	9,137,716,000	0.7923	0.9828
Champion_plc	2014	19	1	5.6408	0.7255	9,592,381,000	0.7135	0.6345
Champion_plc	2015	18	1	5.3226	0.633	10,329,160,000	0.6697	0.4504
Champion_plc	2016	17	1	5.8043	0.1678	9,961,240,000	0.6793	0.2986
Champion_plc	2017	16	1	5.3226	0.633	10,329,160,000	0.6697	0.4504
Ag Leventis_Plc	2008	59	1	5.4942	0.8485	8,182,097,000	0.7228	0.8765
Ag Leventis_Plc	2009	58	1	5.7303	0.6282	8,754,772,000	0.6691	0.6785
Ag Leventis_Plc	2010	57	1	5.9063	0.1146	9,575,219,000	0.5951	0.9865
Ag Leventis_Plc	2011	56	1	5.4721	0.3954	14,543,807,000	0.4038	0.6347
Ag Leventis_Plc	2012	55	1	6.2036	0.2998	15,626,502,000	0.3472	0.6137
Ag Leventis_Plc	2013	54	1	5.9767	0.5726	19,117,992,000	0.162	0.7995
Ag Leventis_Plc	2014	53	1	5.3516	0.6933	23,778,433,000	0.2322	0.3427
Ag Leventis_Plc	2015	52	1	5.7916	0.8281	21,777,950,000	0.2059	0.9387
Ag Leventis_Plc	2016	51	1	6.5323	0.1057	18,268,284,000	0.2189	0.5108
Ag Leventis_Plc	2017	50	1	6.3427	0.1668	18,104,847,000	0.2289	0.9827
Cutix_plc	2008	30	1	8.2913	0.4146	462,955,279,000	0.932	0.0008
Cutix_plc	2009	29	1	8.2731	0.3512	488,783,833,000	0.1115	0.0007
Cutix_plc	2010	28	1	5.3266	0.3491	920,000,000	0.3809	0.8876
Cutix_plc	2011	27	0	5.0981	0.3273	933,361,000	0.3862	0.8911
Cutix_plc	2012	26	0	5.0742	0.334	941,609,000	0.3457	0.8494
Cutix_plc	2013	25	0	5.3604	0.3396	1,073,865,000	0.325	0.7971
Cutix_plc	2014	24	1	5.423	0.2179	1,744,670,000	0.4413	0.4934
Cutix_plc	2015	23	0	5.3055	0.2617	1,968,814,000	0.4533	0.6473
Cutix_plc	2016	21	0	5.4442	0.3148	1,891,718,000	0.4331	0.8691
Cutix_plc	2017	20	1	5.5684	0.3043	2,329,792,000	0.3303	0.0971
MC Nichols_Plc	2008	11	0	7.0637	0.0769	230,398,542,000	0.2913	0.3342
MC Nichols_Plc	2009	10	0	7.072	0.084	241,277,923,000	0.4367	0.4986

MC Nichols_Plc	2010	9	0	6.7844	0.0557	176,725,959,000	0.772	0.5478
MC Nichols_Plc	2011	8	0	6.8353	0.1206	224,546,736,000	0.7127	0.6477
MC Nichols_Plc	2012	7	0	7.0779	0.2323	2,617,351,076,000	0.0727	0.5167
MC Nichols_Plc	2013	6	0	7.4287	0.1277	321,068,591,000	0.7582	0.6942
MC Nichols_Plc	2014	5	0	7.6578	0.1086	378,273,496,000	0.7304	0.7043
MC Nichols_Plc	2015	4	0	7.8148	0.0757	420,149,791,000	0.6343	0.6131
MC Nichols_Plc	2016	3	0	7.8456	0.1745	475,140,932,000	0.671	0.5757
MC Nichols_Plc	2017	2	0	6.8186	0.5564	539,237,536,000	0.7122	0.6532
Livestock_Plc	2008	39	0	4.8076	0.2876	997,418,000	0.0039	0.7565
Livestock_Plc	2009	38	0	4.5883	0.2272	872,374,000	0.0035	0.5714
Livestock_Plc	2010	37	1	4.723	0.4644	1,076,658,000	0.0011	0.7816
Livestock_Plc	2011	36	0	5.1787	0.3526	1,559,245,000	0.2685	0.9994
Livestock_Plc	2012	35	0	5.3349	0.3567	2,056,957,000	0.2659	0.1894
Livestock_Plc	2013	34	0	5.4515	0.2548	3,670,604,000	0.1966	0.1221
Livestock_Plc	2014	33	0	5.6044	0.368	5,752,787,000	0.133	0.8997
Livestock_Plc	2015	32	0	5.4773	0.3739	4,569,513,000	0.1822	0.3448
Livestock_Plc	2016	31	0	5.3502	0.3201	7,357,533,000	0.1455	0.5278
Livestock_Plc	2017	30	0	5.8108	0.122	5,260,126,000	0.2038	0.5073
Nestle_Plc	2008	38	1	7.0742	0.2976	29,159,552,000	0.4739	0.3545
Nestle_Plc	2009	37	1	6.6038	0.9959	44,250,372,000	0.5741	0.7322
Nestle_Plc	2010	36	1	7.1883	0.3658	60,347,062,000	0.6668	0.3135
Nestle_Plc	2011	35	1	7.1555	0.119	77,723,293,000	0.7086	0.6875
Nestle_Plc	2012	34	1	7.3988	0.1562	88,963,218,000	0.6987	0.2366
Nestle_Plc	2013	33	1	7.4158	0.1455	108,207,480,000	0.6088	0.9778
Nestle_Plc	2014	32	1	7.3882	0.0904	106,062,067,000	0.6366	0.7274
Nestle_Plc	2015	31	1	7.4672	0.1905	119,215,053,000	0.5845	0.5425
Nestle_Plc	2016	30	1	7.3334	0.6322	169,585,932,000	0.4173	0.9318
Nestle_Plc	2017	29	1	7.5444	0.0372	146,804,128,000	0.493	0.4104
Boc_Plc	2008	58	0	5.5021	0.303	1,918,409,000	0.5634	0.5134
Boc_Plc	2009	57	1	5.6333	0.4195	2,039,412,000	0.5446	0.2395
Boc_Plc	2010	56	1	5.7144	0.3308	2,119,193,000	0.4846	0.8576
Boc_Plc	2011	55	1	5.688	0.3178	2,504,872,000	0.4511	0.8576
Boc_Plc	2012	54	1	5.6981	0.3896	2,648,408,000	0.5025	0.6114
Boc_Plc	2013	53	1	5.579	0.3099	2,887,279,000	0.4905	0.5834
Boc_Plc	2014	52	1	5.4917	0.2676	3,418,552,000	0.6583	0.6864
Boc_Plc	2015	51	1	5.1174	0.0752	3,214,476,000	0.7081	0.5225
Boc_Plc	2016	50	1	5.0844	0.3719	3,630,953,000	0.581	0.6712
Boc_Plc	2017	49	1	5.5842	0.3906	4,248,556,000	0.4528	0.7765
Trans_Plc	2008	13	0	6.7382	0.0057	83,196,929,000	0.007	0.2868
Trans_Plc	2009	12	0	5.8844	0.2622	16,400,716,000	0.0336	0.0413
Trans_Plc	2010	11	0	6.504	0.0415	21,523,002,000	0.0281	0.4119

Trans_Plc	2011	10	0	5.6195	0.8682	23,254,280,000	0.0234	0.6365
Trans_Plc	2012	9	0	6.3432	0.1522	38,646,720,000	0.0013	0.1792
Trans_Plc	2013	8	1	6.3901	0.1491	49,079,491,000	0.0016	0.4909
Trans_Plc	2014	7	0	6.2226	0.4844	54,241,970,000	0.0009	0.6241
Trans_Plc	2015	6	1	4.9148	0.8096	56,619,479,000	0.0006	0.8135
Trans_Plc	2016	5	0	5.6434	0.9301	57,913,703,000	0.0004	0.8715
Trans_Plc	2017	4	1	6.0684	0.5967	63,121,770,000	0.0003	0.7722
Flour_Plc	2008	57	1	6.8486	0.3872	21,951,793,000	0.8312	0.1419
Flour_Plc	2009	56	1	6.5558	0.3132	2,286,839,000	0.6768	0.0702
Flour_Plc	2010	55	1	5.9231	0.6754	172,539,744,000	0.2736	0.7033
Flour_Plc	2011	54	1	6.9786	0.0073	223,889,725,000	0.2994	0.4178
Flour_Plc	2012	53	1	6.6542	0.8143	172,539,744,000	0.2736	0.7033
Flour_Plc	2013	52	1	7.0654	0.2344	223,889,725,000	0.2994	0.4178
Flour_Plc	2014	51	1	7.0954	0.1599	220,145,555,000	0.3192	0.1225
Flour_Plc	2015	50	1	6.5942	0.384	231,529,818,000	0.3473	0.3955
Flour_Plc	2016	49	1	7.1644	0.2861	233,296,607,000	0.3675	0.3273
Flour_Plc	2017	48	1	7.0406	0.1048	343,933,158,000	0.2483	0.1804
Aluminium_Plc	2008	35	1	5.3449	0.2312	1,753,149,000	0.0007	0.5781
Aluminium_Plc	2009	34	1	5.0808	0.3112	1,840,324,000	0.7213	0.5631
Aluminium_Plc	2010	33	1	5.1057	0.3097	2,382,781,000	0.6645	0.4627
Aluminium_Plc	2011	32	1	4.907	0.3737	1,226,837,000	0.0755	0.9947
Aluminium_Plc	2012	31	1	4.8896	0.4184	1,605,896,000	0.8074	0.7003
Aluminium_Plc	2013	30	1	5.1442	0.0281	1,685,095,000	0.4563	0.7602
Aluminium_Plc	2014	29	1	5.3449	0.2312	1,753,149,000	0.0007	0.5781
Aluminium_Plc	2015	28	1	5.0808	0.3112	1,840,324,000	0.7213	0.5631
Aluminium_Plc	2016	27	1	5.1057	0.3097	2,382,781,000	0.6645	0.4627
Aluminium_Plc	2017	26	0	5.008	0.2366	2,479,128,000	0.6473	0.7573
Fidson_Plc	2008	10	1	5.7213	0.6404	5,213,767,000	0.2231	0.4022
Fidson_Plc	2009	9	1	5.7945	0.3113	5,267,324,000	0.4235	0.3507
Fidson_Plc	2010	8	1	5.8077	0.2745	5,350,817,000	0.4763	0.5107
Fidson_Plc	2011	7	1	5.6744	0.3391	7,488,020,000	0.5069	0.4284
Fidson_Plc	2012	6	1	5.7325	0.6169	10,780,930,000	0.434	0.8784
Fidson_Plc	2013	5	1	5.3972	0.3791	12,243,088,000	0.5753	0.0613
Fidson_Plc	2014	4	1	5.9399	0.2744	15,772,494,000	0.6842	0.7358
Fidson_Plc	2015	3	1	5.9233	0.1118	16,670,325,000	0.6899	0.6361
Fidson_Plc	2016	2	1	5.6472	0.2862	16,666,935,000	0.7324	0.5279
Fidson_Plc	2017	1	1	6.1983	0.328	17,446,718,000	0.7086	0.2888
Nigerian_Plc	2008	71	1	7.5743	0.315	104,412,640,000	0.6849	0.6905
Nigerian_Plc	2009	70	1	7.617	0.3258	106,987,883,000	0.738	0.2974
Nigerian_Plc	2010	69	1	7.6521	0.3242	114,389,432,000	0.7607	0.2799
Nigerian_Plc	2011	68	1	7.757	0.3274	130,882,206,000	0.7131	0.6559

Nigerian_Plc	2012	67	1	7.7453	0.3161	253,633,629,000	0.5612	0.7136
Nigerian_Plc	2013	66	1	7.7941	0.3078	252,759,633,000	0.6068	0.2496
Nigerian_Plc	2014	65	1	7.7886	0.3082	349,676,784,000	0.5536	0.0344
Nigerian_Plc	2015	64	1	7.7365	0.302	356,707,123,000	0.5526	0.0711
Nigerian_Plc	2016	63	1	7.5979	0.2833	367,639,915,000	0.5195	0.2173
Nigerian_Plc	2017	62	1	7.6681	0.2912	382,726,540,000	0.5096	0.1483
Guinness_Plc	2008	67	1	7.2328	0.3061	73,191,197,000	0.5019	0.9855
Guinness_Plc	2009	68	1	6.908	0.6737	73,868,737,000	0.486	0.3432
Guinness_Plc	2010	66	1	7.3008	0.3128	82,558,876,000	0.4632	0.4141
Guinness_Plc	2011	65	1	7.4179	0.3151	92,227,824,000	0.4998	0.2895
Guinness_Plc	2012	64	1	7.3093	0.3026	106,009,667,000	0.7197	0.7455
Guinness_Plc	2013	63	1	7.2307	0.3025	121,060,621,000	0.7278	0.6295
Guinness_Plc	2014	62	1	7.0675	0.1805	132,328,273,000	0.6853	0.9366
Guinness_Plc	2015	61	1	7.0332	0.2779	122,246,632,000	0.7178	0.5288
Guinness_Plc	2016	60	1	#NUM!	0.1412	136,992,444,000	0.6368	0.2883
Guinness_Plc	2017	61	1	6.4252	0.2774	146,038,216,000	0.598	0.2401
UACN_Plc	2008	43	1	6.3721	0.1276	53,000,666,000	0.0058	0.0164
UACN_Plc	2009	42	1	6.4557	0.1053	53,000,566,000	0.0039	0.0542
UACN_Plc	2010	41	0	8.2053	0.0044	335,200,035,000	0.8132	0.0124
UACN_Plc	2011	40	1	9.814	0.1657	23,843,291,000	0.0362	0.0067
UACN_Plc	2012	39	0	9.5531	0.2079	21,703,643,000	0.0047	0.8745
UACN_Plc	2013	38	0	7.6647	0.0665	254,560,000	0.285	0.7034
UACN_Plc	2014	37	1	9.635	0.0005	26,474,320,000	0.0322	0.0019
UACN_Plc	2015	36	1	9.5939	0.1076	27,572,156,000	0.0311	0.0118
UACN_Plc	2016	35	1	9.4235	0.0092	29,481,889,000	0.0253	0.0089
UACN_Plc	2017	34	1	8.4626	0.0086	29,666,777	0.5355	0.9475
UNILEVER _PLC	2008	93	1	9.6175	0.3736	23492656000	0.3855	0.7965
UNILEVER _PLC	2009	92	1	9.7529	0.2768	23681724000	0.4212	0.8126
UNILEVER _PLC	2010	91	0	9.789	0.3204	25935341000	0.4526	0.8471
UNILEVER _PLC	2011	90	1	9.9022	0.3122	32279958000	0.4583	0.9862
UNILEVER _PLC	2012	89	1	9.9131	0.3162	36497624000	0.5279	0.0511
UNILEVER _PLC	2013	88	1	9.8396	0.3045	43754114000	0.5313	0.0743
UNILEVER _PLC	2014	87	0	9.4584	0.1604	45736255000	0.5429	0.9208
UNILEVER _PLC	2015	86	1	9.2482	0.3268	50,172,484,000	0.5455	0.9336
UNILEVER _PLC	2016	85	1	9.6135	0.2519	72,491,309,000	0.4038	0.6234
UNILEVER _PLC	2017	84	1	10.0495	0.3352	121,084,365,000	0.2468	0.1117

UNION_PLC	2008	24	0	7.3084	0.0014	161496000	0.4808	0.2212
UNION_PLC	2009	23	0	7.9939	0.0029	124664000	0.5377	0.2064
UNION_PLC	2010	22	0	7.9463	0.0033	69645000	0.916	0.5344
UNION_PLC	2011	21	0	7.6285	0.0068	68934000	0.8985	0.5545
UNION_PLC	2012	20	0	7.3161	0.014	88938000	0.7112	0.5775
UNION_PLC	2013	19	0	7.0616	0.0252	86427000	0.7185	0.6006
UNION_PLC	2014	18	0	7.944	0.0033	93945000	0.695	0.6006
UNION_PLC	2015	17	0	6.3589	0.1519	68,477,000	0.9452	0.6084
UNION_PLC	2016	16	0	8.5765	0.029	119,871,000	0.7037	0.3498
UNION_PLC	2017	15	0	7.5517	0.4587	85,271,000	0.9664	0.3476
CHELL_PLC	2008	43	0	5.3874	0.213	6778215000	0.0353	0.0683
CHELL_PLC	2009	42	0	5.22	1.0424	7582777000	0.321	0.0041
CHELL_PLC	2010	41	0	6.6251	0.0109	8187265000	0.3413	0.0205
CHELL_PLC	2011	40	0	5.4924	0.2864	9370895000	0.32	0.6469
CHELL_PLC	2012	39	0	5.4318	0.3526	12574964000	0.2553	0.6806
CHELL_PLC	2013	38	0	5.4454	0.415	13763806000	0.2643	0.3751
CHELL_PLC	2014	37	0	5.3032	0.02	15281938000	0.0237	0.5751
CHELL_PLC	2015	36	0	6.392	0.2108	16773700000	0.2131	0.2743
CHELL_PLC	2016	35	0	5.3022	0.0801	2460091000	1.3997	0.2707
CHELL_PLC	2017	34	0	5.5389	0.4397	12273978000	0.2688	0.1876

Source: Researchers compilation from the Annual Report of Quoted Manufacturing firm in Nigeria

Appendix 1I

	Company	Sector
1	A.G. LEVENTIS NIGERIA PLC.	CONGLOMERATES
2*	ALUMINIUM EXTRUSION IND. PLC.	NATURAL RESOURCES
3	AUSTIN LAZ & COMPANY PLC	INDUSTRIAL GOODS
4	B.O.C. GASES PLC.	NATURAL RESOURCES
5	BERGER PAINTS PLC	INDUSTRIAL GOODS
6	BETA GLASS PLC.	INDUSTRIAL GOODS
7	CADBURY NIGERIA PLC.	CONSUMER GOODS
8	CAP PLC	INDUSTRIAL GOODS
9	CEMENT CO. OF NORTH.NIG. PLC	INDUSTRIAL GOODS
10	CHAMPION BREW. PLC.	CONSUMER GOODS
11	CHELLARAMS PLC.	CONGLOMERATES
12*	CUTIX PLC.	INDUSTRIAL GOODS
13	DANGOTE CEMENT PLC	INDUSTRIAL GOODS
14	DANGOTE FLOUR MILLS PLC	CONSUMER GOODS
15	DANGOTE SUGAR REFINERY PLC	CONSUMER GOODS
16	DN TYRE & RUBBER PLC.	CONSUMER GOODS
17	EKOCORP PLC.	HEALTHCARE
18	ELLAH LAKES PLC.	AGRICULTURE
19*	EVANS MEDICAL PLC.	HEALTHCARE
20	FIDSON HEALTHCARE PLC	HEALTHCARE
21	FIRST ALUMINIUM NIGERIA PLC	INDUSTRIAL GOODS
22	FLOUR MILLS NIG. PLC.	CONSUMER GOODS
23	FTN COCOA PROCESSORS PLC	AGRICULTURE
24	GLAXO SMITHKLINE CONSUMER NIG. PLC.	HEALTHCARE

25	GUINNESS NIG PLC	CONSUMER GOODS
26	HONEYWELL FLOUR MILL PLC	CONSUMER GOODS
27	INTERNATIONAL BREWERIES PLC.	CONSUMER GOODS
28	JOHN HOLT PLC.	CONGLOMERATES
29	LAFARGE AFRICA PLC.	INDUSTRIAL GOODS
30	LIVESTOCK FEEDS PLC.	AGRICULTURE
31	MAY & BAKER NIGERIA PLC.	HEALTHCARE
32*	MCNICHOLS PLC	CONSUMER GOODS
33	MEYER PLC.	INDUSTRIAL GOODS
34	MORISON INDUSTRIES PLC.	HEALTHCARE
35*	MULTI-TREX INTEGRATED FOODS PLC	CONSUMER GOODS
36	MULTIVERSE MINING AND EXPLORATION PLC	NATURAL RESOURCES
37	N NIG. FLOUR MILLS PLC.	CONSUMER GOODS
38	NASCON ALLIED INDUSTRIES PLC	CONSUMER GOODS
39	NEIMETH INTERNATIONAL PHARMACEUTICALS PLC	HEALTHCARE
40	NESTLE NIGERIA PLC.	CONSUMER GOODS
41	NIGERIAN BREW. PLC.	CONSUMER GOODS
42	NIGERIAN ENAMELWARE PLC.	CONSUMER GOODS
43	NOTORE CHEMICAL IND PLC	INDUSTRIAL GOODS
44*	OKOMU OIL PALM PLC.	AGRICULTURE
45	P Z CUSSONS NIGERIA PLC.	CONSUMER GOODS
46	PAINTS AND COATINGS MANUFACTURES PLC	INDUSTRIAL GOODS
47	PHARMA-DEKO PLC.	HEALTHCARE
48	PORTLAND PAINTS & PRODUCTS NIGERIA PLC	INDUSTRIAL GOODS
49	PREMIER PAINTS PLC.	INDUSTRIAL GOODS
50	PRESCO PLC	AGRICULTURE

51	S C O A NIG. PLC.	CONGLOMERATES
52*	THOMAS WYATT NIG. PLC.	NATURAL RESOURCES
53	TRANSNATIONAL CORPORATION OF NIGERIA PLC	CONGLOMERATES
54	U A C N PLC.	CONGLOMERATES
55	UNILEVER NIGERIA PLC.	CONSUMER GOODS
56	UNION DIAGNOSTIC & CLINICAL SERVICES PLC	HEALTHCARE
57	UNION DICON SALT PLC.[BRS]	CONSUMER GOODS

The seven companies with * are those that had incomplete information for period of the study and therefore were not used in our analysis

Appendix III

Dependent Variable: PBT

Method: Panel EGLS (Cross-section random effects)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(AGE)	0.013132	0.036128	0.363480	0.7164
CAPINT	0.025784	0.099411	0.259373	0.7955
ETR	-0.585259	0.098508	-5.941262	0.0000
RD	0.099632	0.050300	1.980762	0.0482
FS	0.083962	0.010835	7.749104	0.0000
AR(1)	0.695349	0.028720	24.21126	0.0000
THINCAP	-0.019167	0.088450	-0.216698	0.8285
C	0.583802	0.189999	3.072664	0.0023
R-squared	0.822423	Mean dependent var		6.377186
Adjusted R-squared	0.819592	S.D. dependent var		1.381556
S.E. of regression	0.586809	Sum squared resid		151.1674
F-statistic	290.4528	Durbin-Watson stat		2.204824
Prob(F-statistic)	0.000000			