

**EFFECT OF FIRM CHARACTERISTICS AND PROFITABILITY OF LISTED
MANUFACTURING FIRMS IN KADUNA**

BY

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The profitability of every organisation to some extent depends on the salient features/attributes inherent in that organisation vis-à-vis that of its competitors in the same industry, and the prevailing business environment. These attributes are regarded as the characteristics of such organisations and they include among others firm size (Egdebe & Rachinsky, 2017), growth rate, dividend, liquidity (Gurbuz, Aybars & Kutlu, 2010) and sales/turnover (Forbes, 2018). Thus, it can be inferred that firms with better growth rate can afford better machinery, leading to a gradual increase in their assets and size. Large firms attract better managers and workers who in turn contribute to the profitability of the firm (Enofe & Oladutire, 2014).

Studies have revealed several firm characteristics that can influence profitability, some of which include capital size/structure, liquidity, size and composition of credit portfolio, interest rate policy, labour productivity, state of information technology, risk level, management quality, firm size, firm age, restructuring, ownership, ownership concentration, control-ownership disparity and structural affiliation and so on (Athanasoglou, Brissimis & Delis, 2015). All these factors are capable of defining how good or bad the profitability of a firm would be.

Firm resources and objectives are summarised as firm characteristics. These include structured, market and capital related variables. Structured related

variables are Firm size, ownership and firm age. Market related variables include; Industry type, environmental uncertainty and the market environment. Capital related variables are Liquidity and Capital intensity. Firm characteristics are factors that are mostly under the direct control of management. (Golan, 2013).

Firm's profitability has to do with the manner in which financial resources of the firm are judiciously used to achieve its corporate objectives. It is a measurement of how well a firm uses its assets from its primary mode of business to generate revenue. It also discloses to the various stakeholders of the organization the continuous ability for such organization to remain in business. Profitability can be measured by applying financial analyses. The most common measure of profitability is firm characteristics. Profitability is the profit earning capacity of firms and is a crucial factor contributing to their survival (Kurfi, 2013).

Nash (2013) argues that financial performance is the best indicator of financial profitability, while Robinson (2012) and Galbraith and Schendel (2013) argues that financial performance is a function of profit margin, return on assets (ROA), return on equity (ROE) and return on sales (ROS). Profit margin measures how much a company earns in relation to its sales. It gives information about the company's resilience to competition, declining prices and sales, and adverse rising costs. Return on assets measures how well the company is utilizing its assets to generate income. Return on equity measures how much returns are given to every naira of equity capital provided by internal financiers who are

shareholders of the company. Board of directors acts on behalf of shareholders and the directors are considered as the key decision making group. Different firms have different board sizes depending on their corporate governance policies in place. Thus, how effective or otherwise the board is and the number of directors that constitute the board may have positive or negative influence on profitability.

Likewise, a more liquid firm is capable of meeting its short-term maturing obligations as at when due, saving the firm of missing short-financing of key opportunities that positively contribute to profitability. It is also practically obvious that the source of finance a firm utilizes in financing its investments counts on its profitability. The more debt financing is employed, which means part of the firm returns will be set aside for principal and interest debt payments, the lesser the shareholder returns (Ivan-Damir, Edo & Ivan, 2019).

Theories on the relationship of certain firm characteristics and firm profitability offer different opinions about the effects of each firm characteristic on financial profitability. It is against this backdrop that this study examines the effect of these firm characteristics on the profitability of listed manufacturing companies in Nigeria. However, according to the theory of agency costs, high liquidity of assets could increase agency costs for owners because managers might take advantage of the benefits of liquid assets (Adams & Buckle, 2020). Liquid assets imply high investment risk since the proceeds from liquid assets would have to

be reinvested after a relatively short period of time thus reinvestment risk would put a strain on the performance of a company. In this case, it is likely that life insurance companies with less liquid assets outperform those with more liquid assets.

Age can have adverse effects on profitability because of the organizational rigidities and inertia it brings about and because it impairs the ability of a firm to perceive valuable signals. The issue whether older firms are superior in profitability than younger firms, have generated large amount of theoretical and empirical research in the economics, management and finance disciplines. Yet, the theoretical postulates and empirical evidence have remained inconclusive on the debate, upon the impact of the age of the firm on its profitability. This is traceable to institutional issues, which necessarily are country-specific have not been taken into account. The issue of the age of a firm as it relates to firm performance in terms of profitability is currently of great importance since studies on firm performance has become a big issue in management literature. Industrial policies and follow-up from the legislation, no doubt has shown a clear, and important role for listed manufacturing companies in the Nigerian economy. To this end, it therefore, becomes an imperative to investigate whether younger firms who are often favoured by government policies, perform better than older firm or otherwise. Age is believed to be an advantage to any phenomenon That is, the older the unit (individual, group, firm or government) the more experience,

and then better performance. Although young firms are expected to be better but the higher the age, the more profit the firm is expected to generate.

The opponents of the positive relationship between firm age and profitability stated that firm profitability declines due to internal inefficiency resulting from age and a mismatch of corporate objectives with the environment of business. Moreover, older firms may lose out on grasping profitable opportunity that comes along their way because of the structural inflexibility created by bureaucracy and inertia. The structural inertia theory believes that as a firm grows, it suffers bureaucratic bottlenecks and inflexibility which may metamorphose into the problem of resistance to change (Hannan & Freeman, 2014).

1.2 Statement of Research Problem

Previous studies provide mixed findings on the effect of certain firm characteristics on firm profitability. Majumdar, (2017) examined the relationship between firm size and firm profitability in India and reports that there is a positive relationship between firm size and firm profitability, whereas Banchuenvijit (2012) investigated the determinants of firm profitability and found a contrary view that firm size has a negative effect on firm profitability. As for firm age, (Guest, 2009) in his study reports a negative relationship between firm age and profitability. But Islam, Khan, Obaidullah and Alam (2011) in their respective studies reported that there is a positive effect of firm age on firm profitability.

Nevertheless, it is amazing that most studies in this regard concentrated on only few if not one firm characteristic and have used others as control variables even though results of their findings show that the other firm characteristic used as control variables actually have significant effect on financial profitability (Nunes, Serrasqueiro & Sequeira, 2019). Although firms' managers attempt to influence firm profitability at their functional levels, such as marketing, finance or operations, there still remains a gap in understanding the combined effects of these firm characteristics on firm profitability.

Furthermore, De Jong (2012), examining the influence of leverage on firm profitability, found that leverage has a positive effect on firm profitability, whereas Kanyuru (2010) in his study reported that there is a negative relationship of leverage on firm profitability. Studies done abroad by (Majumdar 2017); Nunes, Serrasqueiro and Sequeira (2018; Lee (2019) investigating the effect of firm size and firm profitability totally ignored other potential firm characteristics that may have an effect of firm profitability, like board size. Yermack (2016) and Pacini, Hillison and Marlett (2018) who investigated the relationship between board size and firm profitability, ignored other firm characteristics like firm age and leverage in their study.

An understanding of manufacturing firms' profitability in Nigeria also calls for understanding of how different firm characteristics affect their profitability. A study conducted by Akinyomi and Olagunju (2013) examined the effect of firm

size on profitability of insurance firms in Nigeria and used other firm characteristics like firm leverage and liquidity as control variables, while ignoring board size. Ilaboya and Ohiokha (2016) is one of the studies in Nigeria that investigated the relationship between company age, size and profitability and used board size as a control variable but left out leverage and liquidity.

Manufacturing firms in Nigeria vary in their sizes and as a consequence, there is every tendency that their profitability would not be equal. The question lies on what is responsible for the success of some firms that the other poorly performing firms do not have. Could there be certain firm characteristics that researchers locally may have overlooked? The study by Akinyomi and Olagunju (2013) was conducted on insurance firms in Nigeria that researchers used one firm characteristic, while others were subjected as control variables. This shows that manufacturing firms' characteristics have not been given enough attention in Nigeria. In addition, the going concern nature of firms creates the possibility of their growth in terms of total assets, which would reshape the characteristics of the firms. As a result, the need to conduct research in this regard from time to time is worthwhile. Thus, this study examines the combined effect of both financial firm characteristics (such as leverage and liquidity) and non-financial firm characteristics (board size, firm size and firm age) on the profitability of listed manufacturing firms in Nigeria.

1.3 Objective of the Study

The main objective of this study is to assess the effect of firm characteristics on profitability of manufacturing firms in Nigeria. Specific objectives are to:

- i. Assess the effect of firm capital structure on profitability of selected manufacturing firms
- ii. Examine the effect of firm liquidity on profitability of selected manufacturing firms.
- iii. Assess the effect of firm board size on the profitability of listed insurance firms in Nigeria.
- iv. Examine the effect of firm size on profitability of selected manufacturing firms.

1.4 Research Questions

In view of the foregoing, the study raises and intends to find answers to the following questions:

- i. Does firm capital structure affect profitability of selected manufacturing firms?
- ii. What is the effect of firm liquidity on profitability of selected manufacturing firms?
- iii. Does firm board size have significant effect on the profitability of selected manufacturing firms?

- iv. What is the effect of firm size on profitability of selected manufacturing firms?

1.5 Significance of the Study

The outcome of this study would serve as a guide to regulators and management of selected manufacturing firms in Nigeria in the area of policy formulation in relation to the financial and non-financial firm characteristics that bother on profitability. It would also help management to identify and prioritize the key attributes that would facilitate profit maximization.

In addition, this study would be useful to future researchers in this area as it will provide information to those who may wish to research on this topic further. It will not only help researchers, who may wish to investigate the existence of these firms' characteristics in other industries of their interest but will also add to the existing body of knowledge in accounting and finance.

This study would also serve as reference material to investors who want to know the influence of certain firm characteristics on profitability before making an investment. It will help investors to identify favourable firm characteristics that would improve their return on investment.

To the management, this study may provide the management of these companies under study with an understanding of how firm characteristics affect the profitability of their companies. It may give them a competitive edge against their

competitors and enable them to craft strategies that will boost their overall firm profitability.

1.6 Limitation of the Study

The researcher was faced with some challenges during the course of executing this research work. These challenges include;

Research Materials: The researcher faced the challenge of lack of essential books and journals for the research. There was also the problem of respondent not willing to attend to the research.

1.7 Scope of the Study

This study focuses on the effect of firm characteristics on profitability of listed manufacturing firms in Nigeria. It would be limited to manufacturing firms quoted on the floor of the Nigerian Stock Exchange. The study covers a period of 10 years from 2007 to 2016. There has been no similar comprehensive study on the subject matter that covers this period known to the researcher, and the 10-year period is sufficient to give a better regression output. The dependent variable of the study is profitability (which is measured in terms of ROA, ROE and EPS), while the independent variable is firm characteristics, which is proxied by capital structure (CAPS), liquidity (LIQY), and board size (BSIZE).

1.9 Definition of Terms:

Concept of Firm Characteristics: This can be define as the financial and non-financial information, which are disclosed by a firm in its financial statements and annual reports for a particular fiscal year

Firm liquidity: Firm liquidity is seen as a strategy that a companies use to increase assists cash flow and generate revenue

Firm size: is the measure total assets total sales of market value of equality and also their nature

Firm Age: As the time between the initial creation of a firm and the present time.

Firm board size: Board size is a critical firm characteristic that influences firm profitability

Firm capital structure: Capital structure is the composition of a firm's capital in terms of equity and debt

Concept of Profitability: Profitability can be defined as the ability of a firm to make profit from the turnover of investment make and sustainability.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This Chapter contains the conceptual, theoretical and empirical reviews relating to the subject matter. It starts with the review of the concepts of firm characteristics and profitability; followed by the review of related theories on firm characteristics and profitability; and finally, the review of the empirical studies relating to firm characteristics and profitability.

2.2 Conceptualization

2.2.1 Concept of Firm Characteristics

Firm characteristics/attributes refer to financial and non-financial information, which are disclosed by a firm in its financial statements and annual reports for a particular fiscal year. They constitute the basis on which stakeholders adjudge nature of the firm's profitability (Maher & Andersson, 2019; Dean, Bulent & Christopher, 2010). The Company's characteristics vary from one business entity to another. According to Lang and Lundholm (2013), the characteristics of a firm are summed up to be the collection of varieties of information that are captured on the financial reports and statements of firm, which predicts quality of accounting and/or financial information and profitability of the firm (Moh'd, 2015). It also looked at as the attributes and behavioural pattern of a firm's

operations, which facilitate the achievement of predetermined objectives (Wiklund & Shepherd, 2005; Stainer, 2016).

Certain firm characteristics such as firm size (Love & Rachinsky, 2017), firm age (Yazdanfar, 2013), growth rate, dividends, liquidity (Gurbuz, Aybars & Kutlu, 2010), board size (Vafeas, 1999), sales (Forbes, 2012) and many more have been associated with firm profitability (Galbreath & Galvins, 2018). However, this study lays more emphasis on firm size, liquidity, age, board size and capital structure.

2.2.2 Firm size

Shaheen and Malik (2012) stated that firm size is the quantity and array of production capability and potential a firm possesses or the quantity and diversity of services a firm can make available concurrently to its customers. According to Pervan and Visic (2012), firm size is likened to the speed and extent of growth that is ideal for a specific company. Most companies are intent to expand the size of their business operation for them to grow either in revenue, profit, number of employees, or size of facilities. Many companies compete in rapidly changing industries, expansion of manufacturing capacity, geographical presence, market shares and so on which may be imperative for survival.

Schriner (2016) noted that one of the factors influencing firm size is the availability of workers and other resources in the surrounding community where the business is operating. He further suggested that it is possible for the company

to outgrow the communities in which they operate, particularly when they are located in a remote area. Some factors that may indicate that a company has outgrown its operating community in size include; growing at a faster rate than the community labour force, providing more than one-third of the local government's funding through taxes, and being responsible for the demise of the community, if the company should shut down (Schriner, 2016). Firm size is determined by the natural logarithm of a firm's total assets (Driffield, Mahambare & Pal, 2005; Enofe & Oladutire, 2014).

According to Penrose (2019) and Majumdar (2017), firms that are larger in size are more diversified, are able to exploit economies of scale and scope and are highly formalized in terms of procedures. They have more competitive power and also have a bigger market share which positions them for more profits. Moreover, bigger firms can seize a profitable opportunity that comes in their way since they have bigger capital resources than smaller sized firms. On the contrary, another school of thought argued that due to organizational rigidity brought about by bigger firm size and a lot of unnecessary bureaucracies, profitable opportunities that may want urgent attention will easily pass the firm and thus making them less profitable in relative terms and thus negatively impact on firm profitability (Leibenstein, 2015; Shepherd, 2016; Goddard, Tavakoli & Wilson, 2005; Banchuenvijit, 2012). It is on this basis that this study seeks to further establish effect of firm size on profitability of listed manufacturing companies in Nigeria.

2.2.3 Firm liquidity

Liquidity is a ratio of total current assets to total current liabilities obligation of a firm within a period of one year or normal operating cycle of the firm whichever is greater. It is referred to as working capital of the firm. Firms must be able to meet their maturing obligations by paying their creditors and repay their short-term debts in order to survive. It is important for a firm to maintain adequate liquidity. A very high liquidity ratio might suggest that the firm is sitting around with a lot of cash because it lacks the managerial acumen to put those resources to work. On the other hand, very low liquidity ratio means the firm may struggle to meet its short term obligations as and when they fall due. Suppliers, creditors and other short-term lenders of funds require a very sound liquidity position of a firm in order to have confidence in the firm's ability to satisfy their requirements (Kurfi, 2003). This is because a firm with weak liquidity position would scare suppliers and creditors, particularly banks who often impose minimum liquidity constraints in their loan agreements with firms. Empirical studies have shown that financial managers spend much of their time and efforts to daily internal operations relating to the current assets and current liabilities of their firms (Mahfoudh, 2013). Liquidity also represents the amount of cash or current assets that can be easily converted in cash for the day-to-day operations of a company (Pandey, 2010). It represents the amount that is invested in assets that are expected to be realized within a single accounting period. The relationship

between current assets and current liabilities should be in such a way that the current assets is twice the size of the current liabilities of firms, hence it is said that the ideal current ratio (current assets/current liabilities) is generally accepted to be 2:1, but this proportion can obviously be varied in practice, depending on the circumstances of an individual company (Akinsulire, 2014).

Chandra (2011) noted that a high liquidity is considered to be a sign of financial strength, but Neto (2013) argued that a high liquidity can be as undesirable as a low liquidity. This would be a consequence of the fact that current assets are usually the less profitable than the fixed assets. It means that the money invested in current assets generates less returns than fixed assets, representing thus an opportunity cost. Besides that, the amounts employed in current assets generate additional costs for maintenance, reducing thus the profitability of the company (Ambrose & Carroll, 2014; Carson & Hoyt, 2015).

Liquidity management means ensuring that a company maintains sufficient cash and liquid assets to satisfy the interest of suppliers and creditors. Liquidity management involves a daily analysis and detailed estimation of the size and timing of cash flows and out flows within a particular accounting period. A business organization should have a formal liquidity policy that is developed and written by the officials with the assistance of management. The policy should be reviewed and revised as needed, not less than a year and the policy should also be

flexible, so that managers may react quickly to any unforeseen events (Omolehinwa, 2016).

2.2.4 Firm age

Firm age is an absolute metric showing how many years the firm has been in operations since when it was established. Firm age has been greatly associated with firm profitability by its proponents and opponents as well. Older firms tend to benefit from increasing knowledge of effective production techniques, which improve their profit (Ilaboya & Ohiokha, 2016).

Sidhu and Bhatia (2013) argued that younger firms will be outperformed by older ones. This is because older firms have the early mover advantage and may possess specific competencies and skills which younger firms may not have developed as yet. In doing so, they are able to grow faster to achieve higher profitability. However, Hannan and Freeman (2014) suggested that older firms are more resistant to changes in a competitive environment and newer technologies which may, as a result of the need to operate in an age-old standardized manner, leave older firms progressively out-dated and lead to organization failure.

Aging is a process associated with a general decline in the physical functioning of the human body, such as the ability to remember, react, move and hear. By analogy, firms should weaken over time and lose their ability to compete. If profitability declines as firms grow older, it could explain why most of them are

eventually taken over (Loderer, Neusser, Waelchli, 2019). Age could actually help companies become more efficient. Over time, firms discover what they are good at and learn how to do things better (Arrow, 2012; Jovanoic, 2012; Ericson, Pakes, 2015). Firms specialize and find ways to standardize, coordinate and speed up their production process, as well as to reduce costs and improve quality. Older firms may also benefit from reputation effects, which allow them to earn a higher margin on sales.

2.2.5 Firm board size

Board size is normally measured by the total numbers of members serving on a particular board of a company. Board size is a critical firm characteristic that influences firm profitability. The board acts on behalf of shareholders and is considered as a major decision making group. Different firms have different board sizes depending on their corporate governance policies in place. Firm profitability may be influenced positively or negatively depending on effectiveness of the board size.

2.2.6 Firm capital structure

Capital structure is the composition of a firm's capital in terms of equity and debt (Hamada, 2019). Modigliani and Miller (2018) argued, based on the assumptions of existence of perfect capital market, homogenous expectations, absence of taxes and no transaction cost, that capital structure is irrelevant to the value of a firm. This position was supported by Hamada (2011) and Stiglitz (2014). Growth is

employed in this model as a measure of change in demand. One would therefore expect that high growth should be associated with higher profitability. However, it has been argued that extreme profitability in one period may contribute to reductions in profitability in the following period. Growth may also be achieved via pricing strategies which sacrifice current profitability (Gaskins, 2010). The proxy measure for growth rate is the annual percentage change in companies' related sales revenue over a time period. Prior studies have used this measure, or one based on the growth of physical output (Hall & Weiss, 1967; Shepherd, 2012).

2.2.7 Concept of Profitability

The profitability of the firm is its ability to make profit and to be sustainable. At the end of a financial year, the total revenues and total expenses of a firm are matched to determine whether the firm operated at a profit or loss. The firm may be unprofitable if total expenses are in excess of total revenues, known as net loss (Pandey, 2010).

The concept of profitability may be used in two senses: commercial/private profitability and public profitability. Although the use of public profitability, which is based on economists' notion of cost and benefits (i.e. the true opportunity cost and the benefits for the society as a whole, appears to be a more appropriate measure of profitability of public enterprises, the measure of commercial profitability has been used in this study. This is because of the fact

that commercial profitability is widely used to measure the profitability of public enterprises and also because it is generally acceptable and readily understandable. Although profit is essential, management's decision is not always profit-centred at the expense of the concerns for customers, employees, suppliers or social consequences (Pandey, 2010; Sandhar & Jaglani, 2013).

Profitability ratios indicate how effectively management can make profits from sales. They also indicate how much room a company has to withstand a downturn, fend off competition and make mistakes. Potential investors are interested in dividends and appreciation in market price of stock, so they focus on profitability ratios. Profitability ratios are the most frequently used tools of financial analysis, because they are used to determine the bottom line of the firm. Profitability ratios show a firm's overall efficiency and profitability (Ajanthan, 2013).

Profit is an absolute measure and profitability is a relative measure of efficiency of the operations of a firm. Profitability ratios such as Gross Profit Margin (GPM), Net Profit Margin (NPM), Operating Expense Ratio (OER), Return On Investment (ROI), Return On Equity (ROE), Earnings Per Share (EPS), Dividend Per Share (DPS), Dividend-Payout Ratio (DPR), Dividend Yield (DY) and Earnings Yield (EY), Price-Earnings Ratio (P/E), etc. are used in measuring profitability of the firm (ICAN, 2009; Pandey, 2010).

2.2.8 Return on Assets

Return On Asset (ROA) is an indicator of how profitable a company is relative to its total assets (Pandey, 2010). ROA gives an idea as to how efficient management is at using its assets to generate earnings. Calculated by dividing a company's annual earnings by its total assets, ROA is displaced as a percentage, sometimes this is referred to as "return on investment". ICAN, 2009; Pandey, 2010.

2.2.9 Return on Equity

This measures a firm's return on shareholders' equity (phongren, Harrison and Oliver, 2009). Common or ordinary shareholders are entitled to the residue profits. The rate of dividend is not fixed; the earnings may be distributed to shareholders or retained in the business. Nevertheless, the net profit after tax represents their return. A return on shareholders' equity is calculated to see the profitability of owners' investment (Pandey, 2010). The shareholders' equity or net worth will include paid up share capital, share premium and reserves and surplus less accumulated losses. Net worth can also be found by subtracting total liabilities from the total assets (Pandey, 2010). The ROI is net profit after taxes divided by shareholders' equity which is given by net worth (ICAN, 2019).

2.2.10 Earnings per Share

IAS 33 define earning per share as " the profit attributable to equity shares based on the profit for the period after tax and after deducting minority interest (if

consolidated accounts) and preference dividends but before taking into account, extra-ordinary items (EOI), divided by the number of ordinary shares in issue and ranking for dividend”

The profitability of the shareholders’ investment can also be measured using the EPS ratio. The ratio is computed by dividing the PAT by the total number of ordinary shares outstanding (ICAN, 2009; Pandey, 2010).

2.3 Review of Empirical Studies on Firm Characteristics and Profitability

This sub-section presents a review of these studies as they relate to the subject matter.

2.3.1 Firm Capital Structure and Profitability

Furthermore, Antoniou *et al.*, (2017) investigated how firms operating in capital market oriented economies (the United Kingdom and the United States) and bank oriented economies (France, Germany and Japan) determine their capital structure. The study finds that the leverage ratio is positively affected by the tangibility of assets and the size of the firm, but declines with an increase in firm profitability, growth opportunities and share price profitability in both types of economies. The leverage ratio is also affected by the market conditions in which the firm operates. The degree and effectiveness of these determinants are dependent on the country’s legal and financial traditions. The results also confirmed that firms have target leverage ratios, with French firms being the quickest in adjusting their capital structure towards their target level, and the

Japanese are the slowest. Overall, the capital structure of a firm is heavily influenced by the economic environment and its institutions, corporate governance practices, tax systems, the borrower-lender relationship, exposure to capital markets, and the level of investor protection in the country in which the firm operates.

Moreover, Liargovas and Skandalis (2018) examined the impact of key determinants of firms' profitability in Greece. The study distinguishes between financial and non-financial drivers of firm profitability. The results from the study shows that leverage, export activity, location, size and the index for management competency significantly affect firm profitability in Greece. This indicates that profitable firms in Greece are large, young, exporting firms with a competitive management team, which have an optimal debt-equity ratio and use their liquidity to finance their investments.

In Nigeria, Ibrahim (2014) assessed the association between firm characteristics and the extent of voluntary segment disclosures on IFRS 8 (Operating Segments), using a sample of 76 companies listed on the floor of the NSE. The study adopted disclosure index on a quantitative basis to measure the extent of segment disclosures on the annual statements of the sampled companies, using the un-weighted index. The study finds that firm size and industry type have a positive association with voluntary segment disclosures, while a negative association was

observed between firm listing age, growth, return on investment (ROI), ownership diffusion and voluntary segments disclosures.

2.3.2 Firm Liquidity and Profitability

Nunes, Serrasqueiro and Sequeira (2018) examined 75 service oriented companies (375 observations), using data from 2019 to 2013, to establish the effect of firm size on profitability. The study introduced several control variables, such as growth, leverage, liquidity and asset structure and both static panel models and dynamic estimators. The study found positive and statistically significant relations between the size and profitability of the firms. As for the control variables, it found a positive effect of growth and liquidity on profitability but a negative effect of firm leverage and asset structure (tangibility) on firm profitability as measured by ROA.

In Kenya, Kaguri (2013) examined the relationship between firm characteristics and profitability of life insurance companies in Kenya from 2008 to 2012, using secondary data. The study employed size, diversification, leverage, liquidity, age, premium growth and claim experience as proxies for firm characteristics. Data obtained from the financial statements of the firms were analysed using Pearson correlation and regression analysis via SPSS. The study found that the proxies of firm characteristics utilized are statistically significant in relation to profitability of the studied firms. This was further proved by the positive and strong Pearson correlation coefficients. Abdullahi (2016) investigated the relationship among

firm characteristics, governance mechanisms and profitability of a sample of 7 building material firms listed on the floor of the Nigerian Stock Exchange from 2005 to 2014. The study formulated five hypotheses and used generalized least square multiple regression to analyse the secondary data extracted from the annual reports and accounts of the seven sampled firms during the study period. The study found that leverage and firm size have significant impact on the profitability of building materials firms in Nigeria. The study also found that liquidity, operating expenses and managerial shareholdings have no significant effect on the profitability of the firms.

2.3.3 Firm Board Size and Profitability

Yermack (2016) examining the relationship between board size and profitability used a sample of 452 large US industrial corporations between the year 1984 and 1991. The study found an inverse relationship between firm profitability as measured by Tobin Q and board size. The study also found that smaller boards were effective compared to larger boards. Amongst other independent variables that were regressed using multivariate regression against Tobin Q was firm size and is found to be positively correlated to firm profitability.

Similarly, Pacini, Hillison and Marlett (2018) in investigating the relationship between board size and firm profitability in the property-liability insurance industry used a sample of 59 publicly traded P & L insurers using financial and corporate governance data from year between 1999 to 2001 in USA. Amongst

other control variables used by the researchers were firm size measured by market value of equity and leverage measured by total debt to total equity whereas firm profitability was measured by three variables market-to-book ratio (MBR), pre-tax return on revenue (ROR) and lastly operating ratio (OPR). The study employed a multivariate regression analysis as well as univariate regression analysis. The study found that leverage is inversely related to all the three measures of profitability. It documents an inverse relationship between board size and MBR and ROR and there is positive relationship between board size and OPR and lastly, the study found that firm size is positively related to all the three measures of profitability MBR, ROR and OPR.

In addition, Ngila (2012) investigated the effects of corporate governance practices on the profitability of forex bureaus in Kenya. The study selected a sample of 24 forex bureaus out of the population of 111 forex bureaus at the close of year 2011. profitability was measured by both ROA and ROE and board size was measured by number of directors on board amongst other corporate governance variables, which were regressed using multivariate linear regression. In both the two models, findings showed that board size was negatively relating to ROA and ROE. This implies that the number of people that constitute the board is not necessary a profitability driving factor but the skill and expertise inherent in the board members. Thus, limiting the quantity to the agreed

maximum and improving the quality of the board size is key to improving profitability.

Mahfoudh (2013) examined the effect of selected firm characteristics, namely firm size, leverage, firm age, liquidity, and board size on firm profitability as measured by return on assets. The study used correlational research design in an attempt to investigate the effect of firm characteristics on firm profitability and also the causation was documented by running a multivariate linear regression analysis. The study's population was seven agricultural firms listed at the Nairobi Securities Exchange and the researcher selected six out of the seven listed firms due to inaccessibility of the seventh listed firm from the year 2007 to 2012. The study found that the only variables that are statistically significant are liquidity and board size and the other three variables that are not statistically significant were namely firm size, leverage and firm age. Though firm size, leverage, firm age, and liquidity are positively related to firm profitability and board size is the only variable that is negatively related to firm profitability. This implies that focusing on those variables that positively affect long run profitability such as increased firm sizes, use of more leverage (i.e., up to a point when net costs are suffered as a result of excessive leverage), reduction of firm and product lifecycle, extending more credit sales to customer and paying of suppliers promptly as per terms and reduction of board size as it results in more expenses.

2.3.4 Firm Size and Profitability

Browne *et al.*, (2011) examined the relationship company size and profitability of Insurance company in US. It shows empirically that company size is positively related to the profitability of US life insurance companies. However, company size is not found to be an important determinant of operational profitability in the Bermuda insurance market during the period from 2013 to 2017. In the same vein, Ahmed, (2011) also examined the impact of firm level characteristics on the profitability of the life insurance sector of Pakistan over the period of seven years from 2011 to 2017. The results of the OLS regression analysis revealed that leverage is negatively and significantly related to the profitability of life insurance companies. Growth of written premium and age of a firm has also negative relation to profitability of life insurance companies but they are statistically insignificant. The study also showed that firm size is positively and significantly related to the profitability of life insurance companies. This indicates that profitability of the large size life insurance companies is better than the small size life insurance companies. The study also found that tangibility of assets and liquidity has a positive but insignificant relationship with profitability. Still in Pakistan, Malik (2011) examined the determinants of Pakistani insurance companies' profitability proxied by return on total assets. The variables tested were age of company, size of the company, the volume of capital, leverage ratio and loss ratio. The result showed that there is no relationship between

profitability and age of the company and there is a significant and positive relationship between profitability and size. On the other hand, the analysis suggests that leverage ratio and loss ratio have a negative impact on profitability of insurance companies in Pakistan.

Lee (2019) assessed the effect of size of firm on their profitability of 7,158 publicly held companies on the US stock exchange. Panel data were obtained for a 20-year period from 1987 to 2006 and were run on a multivariate regression. Firm size was used as the independent variable among other control variables against the dependent variable (firm profitability), measured in terms of net income plus advertising expenses over total assets. The study found firm size to be a key determinant in explaining profitability of the sampled firms. In addition, Lee (2018) examined the effect of equity ownership structure on firm profitability in South Korea. It focused on the role of two main dimensions of the ownership structure: Ownership concentration (i.e., the distribution of shares owned by majority shareholders) and identity of owners (especially, foreign investors and institutional investors). The study found that firm profitability measured by the accounting rate of return on assets (ROA) generally improves as ownership concentration increases, but the effects of foreign ownership and institutional ownership are insignificant. The study also found a hump-shaped relationship between ownership concentration and firm profitability, in which firm profitability peaks at intermediate levels of ownership concentration. The

study provides some empirical support for the hypothesis that as ownership concentration increases, the positive monitoring effect of concentrated ownership first dominates but later it is outweighed by the negative effects, such as the expropriation of minority shareholders.

Yazdanfar (2013) investigated determinants of profitability among micro Swedish firms using data of a sample of 12,530 micro firms from four different industries namely healthcare, transport, metal and retail trade industries having approximately 87,000 observations from data collected from the year 2006 to 2007. The study found that there is a positive and significant relationship between firm growth, firm size, lagged profitability and productivity to firm profitability measured by ROA. The study also revealed a significant and negative relation between firm age and firm profitability explaining that younger firms were more profitable than older firms. The study employed seemingly unrelated regression method which utilized the multivariate regression analysis and also correlation analysis was employed in the data analysis of the collected data. Analyses were done separately based on the four industries by running another multivariate regression to see whether the results will vary but apparently all the findings were similar to the combined regression. The R^2 ranges from 37.33% to 49.13% and that the model is able to explain such variations in firm profitability and these are significant. Firm growth, which is in terms of changes in turnover, is a key determinant of the profitability or otherwise of a firm.

However, it may depend on other factors such as market share and product acceptability as well as the primary objective of management.

Moreover, Sinthupundaja and Chiadamrong (2015) investigated firm characteristics (proxied by growth, size, age, liquidity and capital structure) and profitability of a sample of 242 Thai manufacturing companies listed on the Stock Exchange of Thailand (SET), based on six manufacturing industries from 2006 to 2010. The study adopted structural equation modelling (SEM) to establish the relationship among the study variables. The study finds that firm growth has a negative impact on firms' liquidity representing the fact that more internal financing is preferable; firm size shows a negative impact on the level of leverage, but a positive impact on liquidity and profitability improvement; and liquidity significantly deteriorates the growth of profitability's improvement. However, age has insignificant impact on the dependent

2.3.5 Firm Age and Profitability

Majumdar (1997) conducted a study of 1020 Indian firms to investigate the impact of firm size and firm age on firm level productivity and profitability by running a two multivariate regression using data from the year 1988 to 1994. The study found that firm size had positive effect on profitability but negative effect on productivity as shown in the signs of the co-efficient. With regards to firm age, the study found that age is positively related to productivity but is negatively related to profitability.

Pervan and Curak (2015) examined the influence of age on firm performance: Evidence from the Croatian food industry. Among various firm-specific factors influencing profitability, firm's age is confirmed as an important one. Performs dynamic panel analysis based on a sample of 956 firms operating in Croatian food industry during the 2005-2014 period. The result of the analysis showed that age negatively affects firm's performance. As firms get older, benefits of their accumulated knowledge in all crucial aspects of the business (technology, supply channels, customers relations, human capital and financing costs) become overcome with their inertia, inflexibility and ossesous by accumulated rules, routines and organizational structure. Beside firm's age, other firm-specific factors influencing profitability of the firms operating in Croatian food industry include size, liquidity and solvency.

Lasisi, Mustapha and Okpanachi (2018) empirically examined the effects of firm growth on the profitability of listed agricultural and agro allied firms in Nigeria. The population of the study consisted of twenty four (24) listed agricultural and agro allied firms in Nigeria as at 31st December 2016. The sample size of the study was (20) twenty for the period of nine years (2008-2016). The judgmental sample technique was applied. The panel data was extracted from the annual report and accounts of the study firms. A multiple regression was used to analysis the data through STATA 13 to test the null hypotheses of the study. The Hausman test conducted indicated that the model is fixed effect. The result of

findings showed that sales growth has a positive and significant effect on return on asset, also asset growth showed a insignificant negative effect on return on asset, while firm age revealed a significant negative effect on return on asset of the listed agricultural and agro allied firms in Nigeria. It was recommended among others that the management of agricultural and agro allied firms in Nigeria should maintained a level of sales level through market strategies. The firm managers should strike a balance between asset investment and profitability and always maintain reasonable level of profitability has company grow older to prevent liquidation of companies.

2.4 Theoretical Review

This sub-section reviews the theories underpinning the subject matter of firm characteristics and profitability. Theories reviewed include the agency theory, organisational theory, resource based theory, resource dependence theory, stakeholders theory and the stewardship theory. However, the resource-based theory was adopted for the study since it revolves around firm based characteristics as against industry based, which is in agreement with the measures of firm characteristics employed.

2.4.1 Agency theory

In most firms, ownership is separated from control. As a result, management may act out of self-interest and are self-centred, thereby, giving less attention to shareholders' interests. The separation of ownership and control in an

organization may result in managers pursuing different objectives other than that of the firm such as perquisites, choosing inputs or outputs that match their own preferences, or otherwise failing to maximize firm value. In effect, the agency cost of outside ownership equal to the lost value from professional managers maximizing their own utility, rather than the value of the firm” (Berger & Di, 2002). Greater financial leverage may affect managers and reduce agency costs through the threat of liquidation, which causes personal losses to managers of salaries, reputation, perquisites and also through pressure to generate cash flow to pay interest expense.

The board of director will effectively provide an oversight authority to ensure that the interests of shareholders are not infringed upon by managers who are internal players in the firm they are serving. Hence the bigger the board sizes the effective the monitoring role it is having over the agents. The agency cost hypothesis argues that highly leveraged firms can reduce the agency cost of outside equity and improves firm’s profitability, which effectively increases firm value. Myers (1977) observed that highly leveraged firms can mitigate conflicts between shareholders and managers concerning the choice of investment. It posits that the choice of capital structure helps in mitigating agency costs and thereby influences firm profitability (Berger & Di, 2002). Much as this theory affects leverage decisions that need to be taken to address agency conflict arising, it also helps in explaining the corporate governance role played by board of

directors in monitoring the agents (managers) of the firm. The board of directors as governance mechanism helps in keeping on toes the managers who pursue self-interest at the expense of shareholder's wealth maximization objective (Fama & Jensen, 2013).

2.4.2 Organisational theory

The organisational theory explains the effect of firm size and firm age on firm profitability. Several organizational theorists have argued their part of the story and explain how firm size and firm age impact firm profitability. Baumann and Kaen (2013) in an attempt to explain firm size came up with the organizational theory that explain firm size in relation to profitability as well as with organizational transaction costs, agency costs and span of control costs. Some of the organizational theorist like Dean *et al.* (2018) opined that firm size is somewhat related to profitability because of industry-sunk costs, concentration, vertical integration and overall industry profitability. However, Leibensten (2016) and Shepherd (2016), on the contrary, argued that firm size is correlated with market power and along with market power x-inefficiencies are created leading to inferior profitability.

2.4.3 Resource-based theory

According to Pearce and Robinson (2011) the resource-based theory analyses and identifies a firm's strategic advantages based on examining its unique combination of tangible and intangible resources such as assets, skills,

capabilities and goodwill. This theory basically is concerned with internal firm-specific factors and their effect on profitability. It considers the firm as a bundle of resources, which are combined to create organizational capabilities, which it can use to earn above average profitability (Grant, 1991). Penrose (2019) explained the importance of unique bundles of resources a firm controls that are crucial for its profitability. Such resources include all tangible and intangible assets, capabilities, organizational processes, firm attributes, information, and knowledge controlled by a firm, in order to improve efficiency and effectiveness that will generally lead to higher profitability (Daft, 2015).

In recent times, much focus has been given to the firm level characteristics as opposed to the industry level characteristics because it forms the basis upon which the firms compete. The industry related factors is majorly explained by the competitive focus approach, mainly propounded by Porter (1980) and Bain (2019). However, for the purpose of this study it will only be mentioned but not in detail so that we do not lose focus on firm characteristics on profitability.

On the contrary, this theory is criticised on the basis that researchers only concentrates on one resource type; that is, intangible assets within a single industry and examine its effect on firm profitability (Kapelko, 2016). This theory will aid in explaining profitability variation of intra industry firms as it specifically addresses firm characteristics rather than industry factors.

2.4.4 Resource dependence theory

The resource dependence theory suggests that larger boards are associated with higher levels of firm profitability. The theory contends that a larger and diverse board size will be able to effectively link their organizations to the external environment and be able to attract critical resources, including prestige and legitimacy. According to Goodstein, Gautam and Boerker (2014) and Lawler, Finegold, Benson and Conger (2012), for a board to be functional it has three dimensions which are firstly scanning the environment for opportunities and threats, secondly giving constructive feedback and guidance to the chief executive officer (CEO) and lastly to provide business network of contacts and external sources of knowledge to enhance firm profitability.

However not all scholars agree with this theory. Eisenberg, Sundgren and Wells (2018) found a negative relationship between board size and firm profitability. Yermack (2016) and Conyon and Peck (2018) found weak evidence of the existence of an inverse relationship between board size and firm profitability. Fama and Jensen (2013) and Lipton and Lorsch (2012) explained that larger boards are very effective and that the CEO will not be able to control the board easier.

2.4.5 Stakeholders' theory

This theory posits that the management of the organization has a network of relationships to serve in its stakeholder's circle in its achievement of corporate

goals It was developed by Freeman (1984) to expand the understanding of corporate accountability to include a broad range of stakeholders to include customers, suppliers, employees, business associates, government and its agencies, financial institutions and so on. Mitchell, Agle and Wood (1997) argued that stakeholders can be identified by looking at either one or two or all three of the associative attributes namely: firstly, the power to influence the firm, secondly, the legitimacy of relationship with the firm, and lastly the urgency of their claim on the firm.

Donaldson and Preston (2015) observed that all stakeholders participating externally or internally in the organization have an interest to fulfil. They further explain the characteristics and behaviours of firms including how the organizations are managed, how the board of directors thinks about corporate units, the way the managers think about managing and the nature of the organization itself. In this regards, the firm should strive to satisfy not only the interests of its shareholders but also the interests of other relevant stakeholders.

2.4.6 Stewardship theory

The theory is quite the opposite of the agency theory, which suggests that the agents are trustworthy and good stewards of the resources entrusted to them under their care and thus making monitoring useless (Donaldson & Davis, 2011; Davis, Schoorman and Donaldson, 2017). This theory opposes the agency theory

which assumes that managers will act to satisfy their own self-interest rather than that of the organization.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the methodology adopted for the study. The chapter analyses the method and sources of data collection, discusses the research design, population of the study, sample size and sampling technique, techniques data analysis, source and method of data collection, Techniques of data Analysis, Justification of the method used and summary

3.2 Research Design

The study adopted the correlation research design in examining the determinants of profitability of listed manufacturing firms in Kaduna. The method was adopted and used in collecting data for the study this design is appropriate for an academic research of this sort which study a small population and generalize the findings of the entire population.

3.3 Population of the Study

The population of this study consists of all the twenty one (21) listed manufacturing companies on the Nigerian stock exchange as at 31 December, 2017. The list of the manufacturing firms is given in Table 3.3.1

S/NO	COMPANIES	YEAR OF LISTING
1	7Up Bottling Company Plc	1986
2	Avon Crowncrups and Containers	1981
3	Berge Paints Plc	1959
4	Beta Glass Company Plc	1986
5	Cadbury Nigeria Plc	1976
6	Cutix Nigeria Plc	1977
7	Nestle Food Nigeria Plc	1979
8	Dangote Sugar Refinery Plc	2007
9	Flour Mill Nigeria Plc	1079
10	Glaxo Smithkling Consumer Plc	1979
11	May and Beker Nigeria Plc	1994
12	Guinness Nigeria Plc	1965
13	Lafarge Cement Nigeria Plc	1965
14	Neimeth International Pharmacy Plc	1979
15	Nigeria Breweries Plc	1973
16	BUA Cement Nigeria Plc	1976
17	P.Z Cussons Nigeria Plc	1974
18	Pahrma-Deko Nigeria Plc	1979
19	Unilever Nigeria Plc	1973
20	Vita Foam Nigeria Plc	1978
21	Nigeria Breweries Plc	1986

Sources: Nigerian Stock Exchange Fact Book, 2019

3.4 Sample Size

In view of the availability of data for twenty one (21) listed manufacturing firms, the study adopts convenience sampling approach by studying the five (5) manufacturing firms in Kaduna as a sample size of the study. These manufacturing firms include.

S/NO	BRANCHES	Population	Sample
1	Nigeria Breweries Plc	130	25
2	7Up Bottling Company Plc	112	21
3	Dangote Sugar Refinery Plc	101	20
4	Unilever Nigeria Plc	72	18
5	Vita Foam Nigeria Plc	97	18
	Total	512	102

Out of the 5 selected manufacturing firms with a total population 512, 102 staff were selected using the stratified random sampling technique.

3.4 Source and Method Data collection

Secondary source of data was employed for this study using financial and statistical formulas as methods to arrive at figures for further statistical computation and analysis. Historical data of return on assets, firm size, liquidity, leverage and firm age were sourced from published annual reports of firms concerned. Other secondary data and financial reports were also extracted from fact book, websites, and Nigeria stock Exchange. The justification for the use of secondary data is based on the reason that this study is a quantitative research, which tries to find out an after math effect, as such data historical in nature were analyzed.

3.5 Techniques of Data Analysis

The study employed multiple regressions in analyzing the data obtained to ascertain the impact of firm specific characteristics on the financial performance of listed insurance firms in Nigeria which is proxied as Return on Asset (ROA). The data was analyzed using STATA 10 and the outcome was used to test the hypotheses of the study after conducting necessary test. In view of this, panel data regression analysis was adopted for the study.

3.6 Justification of the Method Used

The method of data analysis is considered appropriate because it is very easy to interpret and besides, it facilitates a clear analysis devoid of ambiguity in a correlation survey study of this kind.

3.7 Summary

A correlation research design was adopted for these studies. The population consists of the entire staff of some selected manufacturing firms in Kaduna with a population of 512 persons. Out of which the entire population were adopted as the sample size. Secondary data was obtained from online journals and text. While mean (\bar{X}) was used to analyze data obtain from the field.

CHAPTER FOUR DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter comprises the presentation and results of data analysis. The panel data is presented in Appendix A. Multiple regression analysis was adopted to determine the effect of firm characteristics (measured in terms of capital structure, liquidity, board size, firm size and firm age) on profitability (proxies by return on assets, return on equity and earning per share). Next to this section is descriptive statistics, followed by diagnostic tests and regression analysis.

4.2 Descriptive Statistics

This section presents the descriptive statistics of the data for the study. It shows the Mean, Standard deviation (STD), Minimum (MIN), Maximum (MAX), Kurtosis (KURT) and Skewness (SKEW) of data variables. The result of descriptive statistics is presented in Table 3.

Table 3

VAR	MEAN	STD	MIN	MAX	KURT	SKEW	OBS
ROA	0.092	0.179	-1.453	0.903	34.714	-2.802	190
ROE	0.234	0.254	-0.290	1.63	8.348	1.748	190
EPS	3.133	5.425	-4.860	29.95	12.325	2.848	190
CAPS	0.506	0.240	-0.006	1.88	8.764	1.125	190
LIQR	1.740	2.639	0.101	18.29	26.953	4.831	190
BSIZE	0.993	0.094	0.778	1.23	2.661	0.114	190
FSIZE	7.310	0.742	5.927	8.89	1.878	-0.024	190
FAGE	1.488	0.238	0.000	1.763	16.141	-3.166	190

Source: STATA Output, 2022

Descriptive Statistics

Table 3 shows that the mean of ROA of the sampled manufacturing companies during the period of study was 0.092 which indicates that the data for return on assets deviate from both sides of the mean by 17.9% and the standard deviation (STD) of 0.179 is less than 2, it shows that the data is not widely spread from its mean. However, this is not supported by the kurtosis of 34.714. In addition, the skewness of -2.802 is an indication that most of the data fall on the left hand side of the normal curve. The table also shows the mean ROE during the study period of 0.234 which means that data for ROE deviates from its mean by 25.4%. The STD of 0.254 is less than 2 indicate that data for ROE is not widely spread from its mean. This is contrary to the kurtosis of 8.348, which indicates abnormality. In addition, the data for ROE is positively skewed at the coefficient of 1.748, which shows that most of the data fall on the right hand side of the normal curve. In the same vein, the mean EPS is 3.133, meaning that the data deviate from both sides of the mean by 542.5%. The STD of 5.425 for EPS is greater than 2 and the kurtosis of 12.325 shows abnormality of data. Moreover, the skewness of 2.848 indicates that most of the data fall on the right hand side of the normal curve.

Table 3 also shows the mean CAPS of 0.506 indicates that there is a 24% deviation of the data from both sides of the mean and the data is not widely spread from its mean with the STD of 0.24. CAPS also has the kurtosis and skewness of 8.764 and 1.125, indicating that the data for CAPS is abnormally

distributed and most of the data values fall on the right hand side of the normal curve respectively. Similarly, LIQY has the mean value of 1.74. This means that data for LIQY deviate from both sides of the mean by 263.9%. However, the STD of 2.639 is greater than 2 shows that the data is widely spread from its mean. Moreover, LIQY has the kurtosis and skewness of 26.953 and 4.831 respectively. This implies that data for LIQY is abnormally distributed and most of its values fall on the right hand side of the normal curve. Furthermore, data for BSIZE has an average of 0.993, which means that data for BSIZE deviate from both side of the mean by 9.4% and are not widely spread from the mean and the STD of 0.094. The skewness for BSIZE is 0.114 with the kurtosis of 2.661, which imply that most of the data fall on the positive side of the normal curve and that the data is abnormality distributed respectively.

Similarly, Table 3 also reports the mean FSIZE of the sampled listed manufacturing companies in Nigeria during the period as 7.310 with the STD of 0.742. This shows that the data for FSIZE deviate from both sides of the mean by 74.2%, meaning that the data is not widely spread from its mean. The data for FSIZE has a kurtosis of 1.878 and the skewness of -0.0241, which indicate that the data is normally distributed and most of the data values fall on the left hand side of the normal curve. Moreover, the mean FAGE of the sampled manufacturing companies during the study period was 1.488, with the STD of 0.742, meaning that the data for FAGE deviate from both sides of the mean by

74.2%. This is an indication that the data is not widely spread from the mean. FAGE also has the kurtosis coefficient of 16.141 and it is negatively skewed at the coefficient of -3.166, which show that the data is abnormally distributed and most of the values fall on the left hand side of the normal curve.

From the foregoing, it is deduced that only ROA, ROE, CAPS, BSIZE, FSIZE and FAGE have the acceptable STD of less than 2. EPS and LIQY have the STD of greater than 2, which signifies abnormality of data.

4.3 Correlation Coefficients

This section presents the levels of association among the variables of the study. The summary of the correlation coefficients and p-values are presented in Table

Table 4***Correlation Matrix***

VAR	ROA	ROE	EPS	CAPS	LIQY	BSIZE	FSIZE	FAGE
ROA	1							
<i>P-Values</i>								
ROE	0.1195	1						
<i>P-Values</i>	0.1007							
EPS	0.3219	0.3871	1					
<i>P-Values</i>	0.0000	0.0000						
CAPS	-0.0949	0.3345	0.0120	1				
<i>P-Value</i>	0.1926	0.0000	0.8691					
LIQY	0.1364	0.0118	-0.0903	-0.1373	1			
<i>P-Value</i>	0.0609	0.8718	0.2152	0.0590				
BSIZE	0.0397	-0.0773	0.1237	-0.2643	-0.1512	1		
<i>P-Values</i>	0.5802	0.2892	0.0891	0.0002	0.0373			
FSIZE	0.2365	0.1456	0.4490	-0.0750	-0.0181	0.5171	1	
<i>P-Value</i>	0.0010	0.0451	0.0000	0.3038	0.8043	0.0000		
FAGE	-0.1975	-0.1562	0.1379	-0.0080	-0.4218	0.2547	0.0101	1
<i>P-Value</i>	0.0063	0.0314	0.0578	0.9129	0.0000	0.0004	0.8896	

Source: STATA Output,

Table 4 shows that there is a positive correlation between CAPS and ROE of the sampled companies during the study period at the coefficient of 0.3345, which is statistically significant at less than 1% level of significance. This implies that as the companies utilize more debts to finance its assets, it leads to a direct movement in ROE to the extent of 33.45% and vice versa. On the contrary, CAPS has a negative correlation with ROA and a positive correlation with EPS at the coefficients of -0.0949 and 0.0120, which are insignificant at 19.26% and

86.91% levels of significance respectively. This shows that increasing debt financing will affect ROA and EPS to the extent of 9.49% and 1.20% respectively, although insignificantly. Similarly, LIQY has a positive relationship with ROA and ROE, and a negative relationship with EPS at the coefficients of 0.1364, 0.0118 and -0.0903, which are insignificant at 6.09%, 87.18% and 21.52% levels of significance. In the same vein, BSIZE has a positive association with ROA and EPS, while it has a negative relationship with ROE at the coefficients of 0.0397, 0.1237 and -0.0773, which are insignificant at 58.62%, 8.91% and 28.92% levels of significance.

Table 4 also shows that FSIZE has a positive association with ROA, ROE and EPS at the coefficients of 0.2365, 0.1456 and 0.4490, which are significant at 0.1%, 4.51% and less than 0.01% levels of significance. This indicates that as the assets of the sampled manufacturing companies increase, it leads to improvements in profitability measured in terms of ROA, ROE and EPS to the extent of 23.65%, 14.56% and 44.90% and vice versa. On the other hand, FAGE has a negative relationship with ROA and ROE and a positive relationship with EPS at the coefficients of -0.1975, -0.1562 and 0.1379 at 0.63%, 3.14% and 5.78% levels of significance. This means that as the sampled manufacturing companies advance in age, it leads to an inverse movement in their profitability measured in terms of ROA and ROE, while EPS also improves. This is at 19.75%, 15.62% and 13.79% degrees respectively.

4.4 Diagnostic Tests

This section presents the result of data normality test and VIF test, while the result of the test for heteroscedasticity is presented along with the regression result in section 4.5.

4.4.1 Data normality test

The Shapiro-wilk test for data normality was conducted to test the null hypothesis that data for the variables of the study are abnormally distributed, at 5% level of significance. The result of the test is presented in Table 5.

Table 5

Result of Shapiro-wilk Test for Data Normality

VARIABLE	Z	P-VALUE	OBS
ROA	8.955	0.00000	190
ROE	6.766	0.00000	190
EPS	8.877	0.00000	190
CAPS	5.717	0.00000	190
LIQY	10.203	0.00000	190
BFSIZE	-0.577	0.71792	190
FSIZE	4.220	0.00001	190
FAGE	8.718	0.00000	190

Source: STATA Output, 2018 ut, 2017.

Table 5 shows that ROA, ROE, EPS, CAPS, LIQY, FSIZE and FAGE have the Z statistic of 8.955, 6.766, 8.877, 5.717, 10.203, 4.220 and 8.718, which are significant at the p-value of 0.00000 respectively. Therefore, the study rejects the alternative hypothesis that data for ROA, ROE, EPS, CAPS, LIQY, FSIZE and FAGE are normally distributed and accepts the null hypothesis that data for ROA, ROE, EPS, CAPS, LIQY, FSIZE and FAGE are abnormally distributed.

However, BSIZE has the Z statistic of -0.577, which is insignificant at the p-value of 0.71792. As a result, the study rejects the null hypothesis that data for BSIZE is abnormally distributed and accepts the alternative hypothesis that data for BSIZE is normally distributed. Consequently, the abnormality in the data for ROA, ROE, EPS, CAPS, LIQY, FSIZE and FAGE indicates that these data values require generalized least square (GLS) regression analysis.

4.4.2 Test for multicollinearity

The Variance Inflation Factor (VIF) test was conducted to check for multicollinearity among independent variables of the study with the expectation that the VIF for all independent variables should be less than 5, while their tolerance levels should be greater than 0.10. The result of the VIF test is shown in Table 6.

Table 6

Result of Variance Inflation Factor (VIF) Test for Multicollinearity

VARIABLE	VIF	TOLERANCE (1/VIF)
CAPS	1.12	0.890798
LIQY	1.26	0.794104
BSIZE	1.63	0.614164
FSIZE	1.41	0.710967
FAGE	1.30	0.771610
MEAN VIF	1.34	

Source: STATA Output, 2018

Table 6 shows that CAPS has the VIF of 1.12 at the tolerance level of 0.890798; LIQY has the VIF of 1.26 at the tolerance level of 0.794104; BSIZE has the VIF of 1.63 at the tolerance level of 0.614164; FSIZE has the VIF of 1.41 at the

tolerance level of 0.710967; and FAGE has the VIF of 1.30 at 0.771610 tolerance level. Table 6 also presents the mean VIF of 1.34. In the case of every independent variable, the VIF is less than 5 and the tolerance level is greater than 0.10. This result implies that there is absence of perfect multicollinearity among the independent variables, indicating the fitness of the data variables for the model of the study.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Firm characteristics refer to the salient features/attributes inherent in an organisation as compared to that of its competitors in the same industry, and the prevailing business environment. These attributes are regarded as the characteristics of such organisations and they include firm size, growth rate, dividend, liquidity and sales/turnover. Thus, it can be inferred that firms with better growth rate can afford better machinery, leading to a gradual increase in their assets and size. Large firms attract better managers and workers who in turn contribute to the profitability of the firm. Similarly, previous studies have revealed several firm characteristics that can influence profitability, some of which include capital size/structure, liquidity, size and composition of credit portfolio, interest rate policy, labour productivity, state of information technology, risk level, management quality, firm size, firm age, restructuring, ownership, ownership concentration, control-ownership disparity and structural affiliation and so on. All these factors are capable of defining how good or bad the profitability of a firm would be.

It is amazing that most studies in this regard concentrated on only few if not one firm characteristic and have used others as control variables even though results of their findings show that the other firm characteristic used as control variables

actually don't have significant effect on profitability. This shows that the characteristics of manufacturing firms in Nigeria have not been given enough attention. In addition, the going concern nature of firms creates the possibility of their growth in terms of total assets, which would reshape the features of the firms. As a result, the need to conduct research in this regard from time to time is worthwhile. Therefore, this study investigates the combined effect of both financial firm characteristics (such as leverage and liquidity) and non-financial firm characteristics (board size, firm size and firm age) on the profitability of listed manufacturing firms in Nigeria for a 10 – year period from 2007 to 2016. The study utilized Return on Assets, Return on Equity and Earnings per Share as proxies for profitability as well as Capital Structure, Liquidity, Board Size, Firm Size and Firm Age as the measures of firm characteristics.

Specific objectives of the study include: (i) Find out the effect of firm capital structure on profitability of listed manufacturing firms in Nigeria; (ii) Examine the effect of firm liquidity on profitability of listed manufacturing firms in Nigeria; (iii) Determine the effect of firm board size on the profitability of listed manufacturing firms in Nigeria; (iv) Examine the contribution of firm size on profitability of listed manufacturing firms in Nigeria; (v) Find out the effect of firm age on profitability of listed manufacturing firms in Nigeria. Based on these stated specific objectives, five hypotheses are formulated and Panel data for the study period is obtained and analysed using descriptive statistics, correlation and

multiple regression techniques, with the aid of Statistical/Data Analysis (STATA) package.

Based on the analysis, the findings of the study are as follows:

- i. First, capital structure, liquidity, and firm size have insignificant effect on the profitability of listed manufacturing companies in Nigeria, measured in terms of return on assets. However, the overall result shows that firm characteristics affects profitability significantly. This finding is similar to the finding of Kaguri (2013), who also found a significant effect between firm characteristics and profitability. However, this finding contradicts that of Kiganane, Bwisa and Kihoro (2012) who also finds an insignificant relationship between firm characteristics and profitability.
- ii. Firm characteristics have a significant effect on the profitability of the sampled manufacturing companies in Nigeria measured in terms of earnings per share. Although capital structure, liquidity and board size exact a negative impact and firm size and age posed a positive effect, their relationship with earnings per share is significant. This finding is similar to the finding of Kiganane, Bwisa and Kihoro (2012).

5.2 Conclusion

In line with the findings above, conclusions are drawn based on; first, firm characteristics (capital structure, liquidity and firm size) have insignificant effect on return on assets. Secondly, the effect of firm characteristics (capital structure

and board size) on return on equity is significant. Thirdly, firm characteristics (board size and firm size) have a significant effect on the earnings per share of listed manufacturing companies in Nigeria.

5.3 Recommendations

Sequel to the findings and conclusions drawn, the study recommends as follows:

- i. The firms should reduce the level of leverage in their capital structure and focus more attention on equity financing, and decrease their assets and reduce the scope of their activities in order to decrease their size; that the regulatory authority should determine the minimum and maximum percentage of firms' equity to be owned by management of listed firms in Nigeria. However, existing literature holds that financing a firm by debt is cheaper as compared to equity financing. In addition, there is the tendency that a more sizeable firm would perform better. Thus, decreasing the size of total assets and reducing the scope of activities may affect profitability negatively; and
- ii. the study implied that focusing on those variables that positively affect long run profitability such as increased firm sizes, use of more leverage (i.e., up to a point when net costs are suffered as a result of excessive leverage), reduction of firm and product lifecycle, extending more credit sales to customer and paying of suppliers promptly as per terms and reduction of board size as it results in more expenses.

5.4 Suggested Areas for Further Research

This study is limited to listed manufacturing companies in Nigeria from 2007 to 2016. In addition, the dependent variable, which is profitability, is proxied by return on assets, return on equity and earnings per share, while the independent variable, which is firm characteristics, is measured in terms of capital structure, liquidity, board size, firm size and age of the firm. Therefore, similar studies can be carried out incorporating more companies and/or firms in other sectors/industry; covering a wider number of years; and utilizing different measures of profitability and firm characteristics.

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