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Determinants of Capital Structure in Nigeria's Quoted Consumer Goods Firms

Nurudeen Salako YISAU[1] Adesoji Aderemi OKE[2] Modinat Omotola ODUKOYA[3]

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Abstract

Although the factors that influence capital structure have been the subject of numerous prior studies, determining the best financing combination to maximise a firm's value is still one of the most contentious in corporate finance. Furthermore, the existing research in Nigeria on the theme concentrated mostly on firm-specific factors with inconclusive and mixed findings aside from neglecting the importance of macroeconomic variables. To fill the gap, this study examined the factors that influence capital structure decisions in Nigerian consumer goods publicly traded companies by accounting for the economic growth effect. The study used secondary data from the annual reports of 15 of the mentioned corporations, spanning ten years from 2011 to 2020. The association between the leverage ratio and the six explanatory variables in the model was investigated using the Panel Least Square regression approach. The study's findings showed that while non-debt tax shield is not statistically significant, asset tangibility, firm size and economic growth all positively and significantly affect leverage. Furthermore, profitability and firm growth are negative and have a large impact on leverage. Based on the study's findings, it can be said that the capital structure of listed consumer products companies in Nigeria is significantly influenced by factors such as size, firm growth, profitability, tangibility and economic growth. The study then suggested that financial managers of listed firms in Nigeria should deploy effective measures to boost these important variables to have an optimum financing mix for their firms.

Keywords: Debt financing, Tangibility, Profitability, Non-debt Tax shields, Leverage Ratio, Economic Growth

1. Introduction

Numerous academics in the field of accounting and finance have focused their attention on capital structure, one of the contentious topics in the literature on finance. Due to its critical role in the operation, efficiency, management, growth, and sustainability of organisations, this specialisation of corporate finance is constantly expanding (Akinyomi and Olagunju, 2013; Owolabi and Inyang, 2012). Numerous more theories aimed at describing the fundamental factors influencing a firm's capital structure have been developed as a result of the groundbreaking work on capital structure done by Modigliani and Miller (1958). One reason capital structure matters is that it has a direct impact on a company's capacity to satisfy the demands of different stakeholders.

Uremadu and Onyekachi (2019) state that capital structure has been a significant topic in financial economics since Modigliani and Miller (1958) demonstrated that a firm's choice of capital structure is meaningless in the

[1] Assistant Lecture, Department of Accounting and Finance, Fountain University, Osogbo, Nigeria, yisau.nurudeen@fuo.edu.ng, https://orcid.org/0000-0002-4131-6621
[2] Department of Accounting and Finance, Fountain University, Osogbo, Nigeria, okeadesojiaderemi@gmail.com, https://orcid.org/0000-0002-5558-7481
[3] Department of Accounting and Finance, Fountain University, Osogbo, Nigeria, modinatodukoya08@gmail.com, https://orcid.org/0000-0002-5987-8761

presence of frictionless markets and homogeneous expectations. Given the amount of risk, the potential returns, and the cost of capital involved, capital structure is the financial framework that illustrates how debt and equity are used to finance a company's operations and is essential to achieving its objectives (Dada and Ghazali, 2016). Determining a firm's capital in advance is necessary since a business without sufficient capital will suffer (Igbinosa and Chijuka, 2014).

Many factors have been linked to capital structure in the literature; some of the more well-known ones that have been the focus of empirical research include a firm's tangibility, size, growth, liquidity, and age. These many factors have varying effects on the capital mix that a corporation chooses. Leary and Roberts (2010) state that companies that issue stock have a high current ratio and less leverage. Guney and Fairchild (2011) note that high leverage is linked to low liquidity as indicated by the current ratio. Omran and Pointon (2009), who looked into how capital structures varied between Egyptian businesses, corroborate this. Because a company that faces bankruptcy will be better able to use more debt if it has enough liquid assets (the threat of bankruptcy allows the company to more easily convert its liquid assets into the funds required), liquidity plays a significant role in the capital structure debate.

Based on the pecking order idea, a company will initially spend domestically generated funds, which could not be enough for a developing company. The utilization of debt finance is the next option for growing businesses, which implies that they will have a significant level of leverage (Drobetz and Fix 2003). In general, a company that experiences significant sales growth frequently needs to acquire more non-current assets, according to Pandey (2001), which suggests that higher-growth companies have a greater demand for future money. Growth companies typically have limited internal resources available to finance investment possibilities because they are still relatively young. Age plays a key role in determining a firm's capital structure. In capital structure models, the firm's age denotes a conventional measure of reputation (Shehu, 2011). A company can take on more debt as it operates for a longer period, establishing itself as a continuous enterprise. However, Graham, Hazarika, and Narasinhan (2011) assert that young businesses are more likely to experience hardship when things go wrong. Vasiliou, Eriotis, and Daskalakis (2005) assert that a company's size has a direct bearing on the level of risk it carries and the cost of bankruptcy. Because they are more diverse, larger companies typically carry less risk than smaller ones. According to Aggarwal and Padhan (2017), a company with more tangible assets may give more collateral, which allows it to participate in more projects because funds are available. A company with a higher percentage of fixed assets is predicted to borrow more than a company whose cost of borrowing is higher due to having fewer fixed assets because the former has the incentive to obtain debt at a lower interest rate (Ibrahim, 2017).

Many studies on capital structure theory have been carried out in the past few years. However, Myers's (2001) research indicates that the application of each capital structure theory is contingent upon certain conditions. Very few research provide evidence from developing nations, and the majority of capital structure studies to date are based on data from enterprises in industrialized countries. A difficult decision that businesses must make is what kind of capital structure to use. The factors that determine capital structure have been discussed for several years and are still among the most important unresolved problems in the field of corporate finance, according to Gill, Nahum, Chenping, and Smita (2009). Morri and Beretta (2008) state that, over the years, some studies on the factors influencing corporate capital structure have been carried out. Only a small number of these studies have been done in developing economies; the majority of these were done in developed market economies like the United States and the United Kingdom (Huang and Song, 2002). Furthermore, these earlier studies' findings have been conflicting, equivocal, and susceptible to more research (Morri and Beretta 2008).

Researchers in the field of finance have historically focused on capital structure, with varying degrees of success. According to Zeitun and Tian's (2007) research, there is a significant positive correlation between tangibility and efficiency and performance, while there is a significant negative correlation between short-term debt, long-term

debt, and total debt using return on equity and return on asset. Non-tax debt and liquidity also exhibit a negative relationship with performance. According to Dahiru (2016), the dispute has been further focused on defining which of the factors under discussion has the greatest bearing on forecasting and deciding the capital structure of manufacturing companies.

It has been dismissed that large firms are more likely to maintain higher performance than middle firms under the same level of debt ratio. Research works in Nigeria, such as Babalola (2018), revealed that the choice of capital structure is a tradeoff between the costs and benefits of debt. The size variable supports the asymmetry of information theory, the profitability variable supports the pecking order theory, the tangibility variable supports the trade-off theory, and the growth variable supports the agency theory. Due to the tax shield available on interest payments, debt financing was deemed more appropriate for operating high-risk firms by Acemoglue (1998), Brounen and Eitchholtz (2001), Olivier and Augustin (2002), and Myers (2001). In contrast, equity financing was deemed more appropriate for operating high-risk firms with a lower success probability and higher cash flow. These studies offer differing perspectives on the best capital structure and fund type to increase a company's success. The disparities in the results of the previous study create a significant vacuum that this study aims to fill to investigate the factors influencing capital structure in Nigerian listed manufacturing companies.

The explanatory power of macroeconomic factors such as economic growth in determining firms' capital structure has also been the subject of ongoing debate. According to Köksal and Orman (2015), economic growth can be understood as a gauge of the expansion prospects that an economy offers to its businesses. Because fewer physical assets are owned by businesses than there are investment opportunities, businesses that experience difficulties will lose more value. This is especially true in high-growth environments. Thus, the trade-off theory predicts a negative relationship between leverage and economic growth. However, a high ratio of growth opportunities to internal funds would indicate a stronger demand for external financing, which is why the pecking order hypothesis predicts a positive relationship between leverage and macroeconomic growth. Kilindo (2019) and Gajurel (2006) infer that economic growth is likely to have an impact on capital structure by influencing how easily firms can obtain various forms of funding and by influencing how an economy develops financially, which in turn influences how much leverage firms choose to use. Businesses may choose to modify their capital structures in response to increased access to equity financing as economies and their financial markets expand.

Even though a handful of studies exist on the capital structure determinants in Nigeria, their findings remain mixed and inconclusive (Chandrasekharan, 2012; Chechet, Garba, and Odudu, 2013; Oladele and Adebayo, 2013; Akinyomi, 2016; Ibrahim, 2017; Sanyaolu, Olatunji, and Ogunmefun, 2018); Fanen and Alematu, 2021). None of these studies had attempted to incorporate macroeconomic factors into their analysis. The current study differs in scope (2011-2020) and stands out by additionally examining the predictive ability of economic growth which is currently receiving attention of the researchers in developed economies. Based on the aforementioned premises, this research looks into the factors that affect the capital structure of listed companies in Nigeria. In conducting the study, fifteen consumer products companies that are quoted on the Nigerian Exchange Group were chosen. Management and investors in listed Nigerian companies would greatly benefit from the study's findings, which add to the body of knowledge already available on the implications of capital structure.

The introduction is followed by four other sections that make up the framework of the research. A review of relevant research on capital structure decisions and their primary determining factors is provided in the next section. The study's methodology is covered in section three, and the presentation and discussion of the results are covered in section four. The research is concluded and the findings are summarized in the final section.

2. Literature Review

2.1 Conceptual Issues: Capital Structure and its Determinants

A company's capital structure refers to how it finances its assets. It includes debentures, long-term debt, preference shares, and equity shares. The combination of capital structure and business risks can affect a company's income statement. Operating leverage amplifies the effect of fluctuating sales on operating income. Firms use capital structure, preferred stock, and common equity to raise funds (Akintoye, 2008). To strike a balance between risk and expected return, companies must establish a well-considered capital structure policy. This policy should take into account various factors, including business risk, tax positions, financial flexibility, and managerial approach. Essentially, the capital structure policy determines the ratio of equity and debt financing that will be utilized to fund the company's operations (Philip, 2017).

Akinyomi, (2016) defines it as the technique an establishment applies for financing based on a blend of long-term capital (ordinary and preference shares, debentures, loans, loan stock, etc.) in addition to short-term obligations like overdraft and other payables. Also, Owolabi and Inyang (2012) and Kennon, (2018) opined that capital structure is the mixture of diverse securities utilized by a company in financing its profitable ventures. What is common to the above definition is that capital structure reflects each component of finance from equity to debt that a company uses in financing its operations. The problem of choosing between equity and debt is faced by many firms, especially in funding their long-term investment opportunities. To finance a larger volume of debt depends on the amount of interest on the debt, financial distress cost, income taxes, imperfections in the market, taxes that are refused to pay corporate income etc (Kalagbor, Okoba and Amah 2021).

According to Inanga and Ajayi (1999), a firm's capital structure can be divided into three categories: equity capital, preference capital, and long-term loan (debt) capital. Equity capital is the initial investment in the business made in exchange for shares of stock, as well as any profits that the company has retained for growth, acquisition, and expansion. Preference capital is a hybrid that combines the features of debentures and equity shares but without the benefits of either. Debt capital refers to the long-term bonds used by the firm to finance its investments and pay back interest. Other components of the capital structure include preferred stock, common equity, profitability, gearing, leverage, returns on assets, and returns on equity. Preferred stock is a class of ownership in a corporation that has a higher claim on the assets and earnings than common stock.

When choosing its capital structure, a firm is influenced by various factors, known as the determinants of capital structure. These determinants include the tangibility of assets, the firm's level of profitability, its growth options, non-debt tax shields, the size of the firm, and the volatility of its earnings, among others.

Tangibility: The firm should have a higher liquidation value the more tangible its assets are (Titman and Wessels, 1988; Harris and Raviv, 1991). According to Bradley, Jarrell, and Kim (1984), companies that make significant investments in tangible assets also have stronger financial leverage because they may borrow money at cheaper interest rates if the assets are used as collateral for the debt. In favour of the trade-off theory, Alipour, Mohammadi, and Derakhshan (2015) argue that a business having a lot of physical assets would be able to draw in more credit since such assets might be used as collateral in the case of bankruptcy. Results by Rajan and Zingales (1995) support the Static Trade-Off Theory, which holds that since tangible assets make good collateral, they should be used to raise debt. Additionally, it appears to lower the price of financial hardship. It is thought that having sturdy assets to utilize as collateral would make borrowing loans easier (Wedig, Sloan, Assan and Morrisey 1988). In the opinion of Booth, Aivazian, Demirguc-Kunt, and Maksimovic (2001), the debt's maturity structure has an impact on the link between tangible fixed assets and debt financing. In this case, having more tangible fixed assets may

enable businesses to take on longer-term debt, but agency issues may worsen as a result of having more tangible fixed assets since these businesses' future profit margins are less transparent.

Profitability: The Pecking Order Theory (POT) explains the correlation between a company's capital structure and its profitability. This theory suggests that businesses typically prioritize internal financing before seeking external funding, with profitable enterprises relying more on retained earnings than on outside sources. Asymmetrical information between insiders and outsiders can make external funding riskier, prompting companies to use their resources first. Therefore, instead of taking on debt, successful businesses can rely on retained profits as their primary source of funding, according to Murinde, Agung, and Mullineux (2004). Myers' (1984) "pecking order" concept provides a satisfactory explanation for the link between profitability and leverage, stating that retained earnings are the preferred financing option, followed by debt. Companies with higher earnings rates are likely to keep lower debt ratios since they can generate cash internally (Titman and Wessels, 1988; Barton and Matthews,1989).

Firm Growth: There is also a strong inverse link between growth prospects and the debt ratio. Under the trade-off argument, companies that have higher growth prospects will have less debt because they won't require the disciplining effect of debt as much. Growth will probably increase the need for internally generated capital and force the company to take out loans (Hall, Hutchinson and Nicos, 2004). High-growth companies will tend to capture comparatively greater debt levels, according to Marsh (1982). High-growth companies are anticipated to need more outside funding and to exhibit higher levels of leverage when they are small businesses with more concentrated ownership (Heshmati, 2001). Growing SMEs seem to use external financing more frequently, according to Aryeetey, Baah-Nuakoh, Duggleby, Hettige, and Steel (1994). However, it is impossible to say if finance causes growth or the contrary (or both). It is anticipated that as businesses expand through the various stages—micro, small, medium, and large—their funding sources would likewise change. First, it is anticipated that they will switch from internal to external sources (Aryeetey, 1998).

Non-debt tax shield: Interest tax shields, in the opinion of Modigliani and Miller (1958), strongly encourage businesses to take on more leverage. According to the trade-off theory, taxation has a significant impact on capital structure choices. It has been suggested that businesses choose their capital structure by weighing the expenses of carrying debt against the tax advantages the debt creates (Kraus and Litzenberger, 1973). According to DeAngelo and Masulis (1980), businesses try to take on additional debt to gain a tax shelter. Manufacturing companies generally consume less long-term debt when their non-tax debt shield grows (Wald, 1999; Rajagopal, 2011). On the other hand, non-tax debt shields and all forms of leverage, including long-term debt and overall debt, are positively correlated, according to Chang, Lee, and Lee (2009).

Ownership Structure

The best combination of ownership and leverage can reduce overall agency costs, as stated by Jensen and Meckling (1976) using the agency theory. While ownership structure is thought to affect capital structure, the relationship between ownership structure and debt level is unclear (Huang and Song, 2006). Contrary to the findings of Friend, Larry, and Lang (1988), Leland and Pyle (1977) proposed that "leverage increases in tandem with the extent of managerial equity ownership." One of the most important institutional distinctions between China and the West is ownership structure. Following China's reform of state-owned enterprises (SOEs), the majority of Chinese listed firms continue to be governed by the government and subject to government intervention. Corporate financial leverage is directly impacted by this phenomenon. The majority of shares, including those owned by the state and by legal entities, are non-circulating in China. More state-owned shares means that a company is more likely to receive help from the state. However, financially listed companies find it challenging to meet the requirements for issuing stock, thus debt financing is used instead. Legal person shares typically prioritize the long-term growth of

the company. They consequently choose high leverage (Xu, 2010). It stands to reason that companies with greater noncirculating share (NCS) ratios also have higher leverage ratios. In this study, the ownership structure of financial listed corporations is shown by the percentage of non-circulating shares, which is followed by Qian, Tian, and Wirjanto (2007).

Firm Size: The size of a company can also affect the capital structure that it chooses. Leverage and size have a mixed connection. According to the Static trade-off theory, there is a positive correlation between debt and size since larger firms are more likely to be able to issue debt. One explanation for this is that the likelihood of bankruptcy decreases with firm size (Titman and Wessels, 1988). Less asymmetric information about the larger companies exists, which lowers the possibility that the new stock offering will be undervalued and encourages big companies to employ equity financing.

2.2 Theoretical Discussions

The factors determining capital structure are complex and have been examined from several theoretical angles. Two of the several theories – trade-off and pecking order have become the subject of empirical validations in recent times. According to the trade-off theory, businesses weigh the risks of possible financial hardship against the tax advantages of debt. Businesses will select their debt and equity financing mix to balance the ongoing benefits of debt (Kalagbor, Okoba and Amah 2021). The theory proposes that firm size, tangibility, profitability, liquidity, and economic growth should be directly related to leverage decisions while growth opportunities and economic growth are posited to be negative. Empirical evidence supports that larger enterprises are more likely to borrow to take advantage of tax shields (Minh and Dung, 2015).

Pecking order theory, on the other hand, postulates that companies avoid new equity because of asymmetric information and prefer internal finance, issuing debt only when internal funds are insufficient (Amatya, 2020). Leverage decision is predicted by pecking order theory to have a positive relationship with firm growth opportunities, and economic growth whereas a negative correlation should exist in the case of size, profitability, and tangibility (Tongkong, 2012)

Our study rests profoundly on the propositions developed in the foregoing theories for its theoretical underpinnings.

2.3 Empirical Evidence

2.3.1 International Evidence

Rehan, Abdul Hadi, Hussain and Adnan Hye (2023) used data gathered from 551 listed firms of Bursa Malaysia's main market over 12 years (2005-2016) to analyze the factors that impact the capital structure of Malaysian firms across several industries. Using a variety of estimation techniques, including the Generalized Method of Moments (GMM), Auto Regression Distributed Lag model (ARDL), Panel Data Static models, and Multiple Regression analysis (MRA), the study concluded that total assets are the most important factor influencing capital structure, with the Dynamic Capital Structure theory holding the most sway.

To find out how firm-specific characteristics and the effective tax rate affected the capital structure of multinational companies in the energy industry, Ali, Rangone, and Farooq (2022) performed a study. Regression models, including OLS, fixed effect, and random effect, were employed in the study to examine a balanced panel dataset of international companies with US and UK headquarters from 2011 to 2019. The study discovered that the long-term and total debt measurements of capital structure are positively and significantly impacted by tangibility, risk,

profitability, and non-debt tax shields. On the other hand, short-term debt showed a positive correlation with company risk and a strong negative association with tangibility, non-debt tax shields, and liquidity. The study also found a negligible negative connection between leverage and firm size as well as the effective tax rate.

Lindberg and Johansson (2022) examined the effects of micro and macroeconomic factors on the capital structure of 1116 Sweden businesses over ten years from 2010 to 2019. Based on the results of the multiple regression model, the debt ratio had a substantial negative association with profitability whereas growth had a significant negative relation with the debt ratio. Additional findings showed that inflation causes a decrease in a firm's long-term debt ratio as a result of changes in the Swedish macroenvironment.

The study conducted by Sahudin, Ismail, Sulaima, Rahman, and Jaafar (2019) used unbalanced panel datasets to investigate the capital structure determinants of 305 Shariah-compliant firms listed in Bursa Malaysia between 2002 and 2011. The results of the fixed effects regression model showed that short-term debt has a significant negative relationship with profitability, tangibility, liquidity, and firm size, but it has a positive relationship with economic growth. On the other hand, firm growth and non-debt tax shields are not significant.

An analysis of the determinants of the capital structure of 14 Mexican food companies was conducted by Hernandez and Rios (2012) from 2000 to 2009. Based on the outcome of the study, these companies' primary criterion for defining their financing decisions is their tangible asset holdings.

Lim (2012) looked into the factors that influence financial service companies' capital structures in China using a relative regression of accounting data for 36 A-share financial listed businesses from 2005 to 2009. The study discovered that important influencing elements in the financial industry include profitability, business size, non-debt tax shielding, profits volatility, and non-circulating shares. Furthermore, the corporate leverage ratio and business size have a favourable relationship. It is also discovered that the capital choice decision is influenced by Chinese institutional characteristics. Although it was established that financial enterprises' capital structure factors are comparable to those of other industries, decisions on capital structure are influenced by the majority of state ownership.

Köksal and Orman (2015) found that there appears to be a significantly stronger negative relationship between leverage and economic growth in the case of large firms in their study of Turkish non-financial firms covering the years 1996 to 2009. This is likely due to the fact that large firms are typically better positioned to capture the benefits of economic growth. Additionally, the study discovered that while leverage is favorably correlated with business size and tangibility, it is negatively correlated with profitability.

Using panel data collected over a five-year period from 2010 to 2014, Nasimi (2016) conducted an empirical analysis of the factors influencing the capital structure of fifteen companies listed on the New York Stock Exchange's S&P 500 index. Using multiple regression analysis, the study discovered that the three dependent variables—total debt ratio, long-term debt ratio, and short-term debt ratio—are significantly impacted by tangibility. Thus, the factors that determine capital structure for IT enterprises in the US are profitability, size, growth, tangibility, cost of financial crisis, and non-debt tax shield effects.

Using panel data, Jacinta, Mahfuzur, and Selvam (2017) assess the factors influencing the capital structure of publicly traded companies on Bursa Malaysia, the Singapore Stock Exchange, and the Thailand Stock Exchange over ten years from 2004 to 2013. The study looked into how publicly traded companies' capital structure decisions are influenced by macroeconomic factors like inflation as well as firm-specific characteristics including profitability, firm size, tangibility of assets, and depreciation to total assets. The study discovered that theories of capital structure, including the trade-off and pecking order theories, are in line with earlier empirical research.

Using the Ordinary Least Squares regression model, Herenia, Christian, and Ricardo (2019) examined the factors influencing the capital structure of 304 Guayaquil manufacturing companies over five years from 2012 to 2016. Their goal was to determine the statistical significance and correlation between a set of chosen independent variables and the dependent variable, or debt ratio. The Pecking Order hypothesis outperformed the Trade-off theory in the study in terms of explanatory power. The study did discover, however, that there was no statistical proof of the significance of growth forecasts on the business capital structure.

Omar and Saqer (2020) looked at Jordanian service companies' capital structure factors throughout a five-year period, from 2014 to 2018. Panel regression analysis was performed on 45 companies' secondary data. The study discovered that the independent variables that were proposed as factors influencing capital structure had an impact on the debt ratio that the service companies reported. Profitability and company risk have a negative significant impact on the debt ratio, whereas size and the non-debt tax shield have a positive significant effect.

2.3.1.1 Evidence from Africa (Excluding Nigeria)

Kibrom (2010) used data from seven commercial banks between 2000 and 2009 to examine the factors that influence the capital structure of Ethiopian commercial banks. Profitability, size, age, and tax-shield variables are the important firm-level predictors of capital structure in Ethiopian commercial banks, according to the study's multivariate regression analysis. Furthermore, a negative correlation was found between the two variables (profitability and growth) and a positive correlation was observed between the capital structure and the remaining four variables (tangibility, size, age, and tax shield). Additionally, it is shown that, in the Ethiopian commercial banking case, there is consistency between the variables age and tax shield and the Static Trade-off Theory; tangibility and the Static Trade-off Theory; Pecking order theory and the Agency cost Theory; and profitability and these theories.

Magara (2012) used regression analysis to look at the factors that affected the Nairobi Securities Exchange's capital structure between 2007 and 2011. The results of the study indicate that the firm's degree of leverage is positively and significantly correlated with its size, tangibility, and growth rate.

Between 2006 and 2011, Natalia and Marek (2013) looked into the factors that affected capital structure in several European nations. The results demonstrated how the relationship between a country's internal features and its capital structure is influenced by factors such as corporate debt structure, EU membership, and national idiosyncrasies. Every nation's capital structure tends to get larger.

Using panel data approaches, Awan and Amin (2014) investigated the factors influencing capital structure in Pakistani textile companies registered on the Karachi Stock Exchange over a seven-year period, from 2006 to 2012. The study discovered that the total debt to total assets ratio is statistically significantly impacted by variables such as liquidity, net commercial trade position, non-debt tax shields, profitability, tangibility, size, and earning hazards of businesses. This indicates that capital structure matters in Pakistan's textile industry. The primary goals of this empirical study are to ascertain which factors have an impact on Pakistani textile companies and which kind of capital structure theory is more prevalent in the country's textile industry.

Ahmad Muhammad (2015) uses multiple regressions represented by ordinary least squares (OLS) to explore the factors impacting a firm's capital structure from 2009 to 2013. The study sample consisted of 49 industrial and service enterprises out of the 215 companies registered on the Kuwait Stock Exchange. The panel data utilized in the analysis came from the financial statements and annual reports of the study sample. Accordingly, the study discovered that the capital structure of listed companies is determined by the firm's age, development potential,

liquidity, profitability, firm size, tangibility, and industry. It turns out, however, that ownership structure and dividend policy do not influence capital structure.

Using panel data and descriptive analysis, Wanyoike and Tabitha (2015) created a preliminary study to investigate the factors influencing capital structure among quoted firms in the East African Securities Exchange during a five-year period from 2009 to 2013. The research discovered the relationships between capital structure and growth, profitability and capital structure, firm size and capital structure, and the relationships between asset structure and ideal capital structure in addition to establishing the relationship between cost of capital and capital structure.

Strike (2020) conducted an empirical investigation on the factors influencing capital structure decisions made by Zimbabwean listed companies during a 14-year period between 2000 and 2013 under hyperinflation and dollarization. According to the study, the type and amount of debt have an impact during the review period. The primary policy consequences need simplifying the acquisition and utilization of bank financing and capital market money. Interaction terms between factors and inflation are used in the study to capture both the specific and marginal effects.

2.3.1.2 Evidence from Nigeria

Over a ten-year period, from 2007 to 2011, Chandrasekharan (2012) examined the factors that influence the capital structure of Nigerian listed companies. Panel multiple regression was used to investigate the effects of firms' tangibility, size, growth, profitability, and age on the sampled firms' leverage. The study discovered that significant factors influencing leverage in Nigerian businesses were size, age, growth, profitability, and tangibility.

Chechet, Garba, and Odudu (2013) investigated the factors influencing capital structure in Nigerian chemical and paint companies that were listed between 2005 and 2009. The study used secondary data from the Nigerian Stock Exchange (NSE) fact books and annual reports for the study period. Ordinary least square (OLS) was used to assess if the model's independent variables and the leverage ratio were related. According to the study, size, growth, and age have no bearing on the dependent variable, while tangibility and profitability have a substantial impact on leverage at the 1% level for the Nigerian Chemical and Paints sector. Additionally, it demonstrates that the two important explanatory variables—profitability and tangibility—have negative coefficients.

Through the use of a descriptive study approach, Oladele and Adebayo (2013) investigated the factors influencing capital structure in Nigeria. 86 manufacturing companies registered on the Nigerian Stock Exchange made up the population. Using the basic random sampling technique, the sample firms were chosen. For ten years, 240 firm-year observations have been collected from secondary data derived from the annual accounts of 24 manufacturing firms that were randomly selected. As a metric of capital structure, the study found that leverage correlated positively with growth, profitability, and tangibility of assets but negatively with business size and tax.

Akinyomi (2016) conducted a study to explore the determinants of capital structure on quoted manufacturing companies using three manufacturing companies selected randomly from the food and beverage categories and a period of nine years (2007-2015) using the static trade-off and the pecking order theory point of view. He adopted the use of the correlation analysis method and found that each debt to capital, debt to common equity, short-term debt to total debt, and the age of the firms is significantly and positively related to return on asset and return on equity but long-term debt to capital is significantly and relatively related to return on asset and return on return on equity.

Ibrahim (2017) looked into the factors influencing capital structure in the manufacturing sector of Nigeria over a five-year period, from 2012 to 2016. The thirty-eight (38) listed manufacturing enterprises in Nigeria as of

December 31, 2012, make up the study's population, and the study's sample size is twenty (20). The study discovered that while growth potential, age of the company, and tangibility are favourably substantially associated with the business value, profitability, size, liquidity, and debt are adversely significantly related to the firm value.

By employing the pooled ordinary Least Square (Pooled OLS) approach, Aremu, Ekpo, Mustapha, and Adedoyin (2013) assessed the factors influencing the capital structure of Nigerian banks for five years between 2006 and 2010. The study examined whether these banks' capital decisions are influenced by the capital structure variables proposed by different writers. The study's conclusions showed that bank size, dividend payout, profitability, tangible assets, growth, business risk, and tax charge factors were the primary determinant factors that affected the bank leverage level in Nigeria's banking sector. All of these factors also conformed to sign expectations based on theoretical findings.

Sanyaolu, Olatunji, and Ogunmefun (2018) analyzed the determinants of capital structure in Nigeria for a period of ten years from 2007-2016. The data obtained from the secondary source were analyzed using descriptive statistics, panel unit root test, multiple regression analysis and the Hausman specification test was conducted to choose the appropriate model post-estimation test to consider the appropriateness of the chosen model. The study found that the random effect model revealed capital structure determinants identified in this study like profitability, liquidity, size, and growth have no significant effect on capital structure, while only tangibility was found to exert a significant effect on capital structure.

Fanen and Alematu (2021) carried out an empirical study on the determinants of capital structure in Nigerian manufacturing firms based on a panel data set from 2007 to 2014 (263 firm-year observations) comprising 31 listed manufacturing firms. The study adopts Regression analysis and OLS estimations with cross-section fixed effects, sector dummy variables and time dummy variables representing the period covering economic financial recession (2007-2008) and post-recession (2009-2014) in Nigeria. This study investigates determinants of total debt ratios considering factors that include firm size, growth, profitability, tangibility, earnings volatility and non-debt tax Shield. The study found that there is a significant relationship between profitability and the capital structure of listed manufacturing firms in Nigeria which supports the pecking order theory. The study also discovered that the oil and gas sector of manufacturing firms had a capital structure that was highly tilted towards debt financing when compared to consumer goods, basic materials, health care and industrials.

3. Methodology

This research focuses on analyzing the factors that determine the capital structure of quoted manufacturing consumer goods firms in Nigeria. It is an explanatory study that employs a quantitative method to formulate and test hypotheses that have previously been stated. The reason why manufacturing consumer goods firms within the sector are chosen is that it is an emerging and flourishing sector in Nigeria's economy, where research on the determinants of capital structure is limited. Using the purposive sampling technique, a sample of 15 consumer goods firms was selected from the population of 23 firms that have been operating in the Nigerian economy for at least the last 10 years. The secondary data used for the research were sourced from the annual reports and financial statements of the selected firms for the specified period of 2011-2020.

For the study, a combination of descriptive and inferential statistical techniques was used to analyze the collected data. The descriptive method involved measures like central tendency, dispersion, skewness, and kurtosis to summarize the basic properties of the variables. In the category of inferential statistical techniques, the study employed the Panel Least Squares regression method to estimate the specified model, while the Hausman test was conducted to choose between the Fixed Effects and Random Effects Model, given the panel nature of the data. The

study did not make use of Generalised Method of Moment estimation technique because of the GMM method suffers from small-sample bias and more importantly endogeneity is not an issue.

Additionally, correlation analysis and variance inflation factor (VIF) were conducted to identify any collinearity among the independent variables. The evaluation criteria used for the study included a priori expectations, statistical criteria, and economic criteria.

3.1 Model Specification

In order to achieve the research objectives, the study adopted the model used by Kibrom (2010) who examined the determinants of capital structure and the model is as specified below:

Leverage = f (prof, tang, size, growth) (1)

The equation (1) is translated into econometric model as follows:

$$Leverage = \beta_o + \beta_1 (prof) + \beta_2 (Tang) + \beta_3 (size) + \beta_4 (growth) + \varepsilon \quad (2)$$

In order to establish the uniqueness of the study, the model is modified and respecified by including non-debt tax shield and economic growth.

$$DERit = \beta_o + \beta_1 PRit + \beta_2 TNit + \beta_3 SZit + \beta_4 GRit + \beta_5 NDTSit + \beta_5 EGit \ \varepsilon it \quad (3)$$

Where:

DER = Debt equity ratio

β_1 = Coefficient of Profitability; β_2 = Coefficient of Tangibility; β_3 = Coefficient of Firm Size; β_4 = Coefficient of Firm Growth; β_4 = Coefficient of non-debt tax shield; β_5 = coefficient of economic growth; ε_{it} = Composite error term

3.2 Model Evaluation Criteria

Theoretically, **t**he expectations of this research are summarised in Table 3.1:

Table 3.1. *A priori Expectations*

VARIABLES	EXPECTATIONS	SIGNS	Theoretical Support	Sources
Profitability (PR)	Negative relationship	$\beta 1<0$	Pecking Order Theory	Köksal and Orman (2015)
Tangibility (TN)	Positive relationship	$\beta 2>0$	Trade-Off Theory	Abdul Kabeer and Rafique (2018)
Firm's size (FZ)	Positive relationship	$\beta 3>0$	Trade-Off Theory	Kibrom (2010)

Growth (GR)	Positive relationship	β4>0	Pecking Order Theory	Ibrahim (2017)
Non-debt-tax shield (NDTS)	Positive relationship	β5>0	Trade-Off Theory	Chang, Lee, and Lee (2009).
Economic growth (EG)	Positive relationship	β5>0	Pecking Order Theory	Köksal and Orman (2015)

R^2, a metric that indicates the portion of the dependent variable's variance explained by the model's independent variables, is one of the statistical criteria, also referred to as the first-order test. It evaluates the goodness of fit by assessing the degree of correlation between the independent and dependent variables. F-statistics was employed to test the model's variables' general parameters. The model's independent variables were tested for significance using T-statistics for each of its parameters.

3.3 Definition and Measurement of Variables

Leverage, or the debt-to-equity ratio, was the only dependent variable included in this analysis. Five explanatory variables, including profitability, tangibility, size, growth, and non-debt tax shield, were taken from the most well-known and recent empirical studies. Table 3.2 describes the selection measures for the independent variables and the dependent variable, which is leverage, a stand-in for capital structure.

Table 3.2. *Measurement of Variables*

Variable	Definition	Formula	Sources
Dependent Variable Debt-to-equity ratio	The ratio of total liability to total shareholders' equity	Total liability ÷ Total shareholders' equity	Fisseha (2010)
Profitability	The ratio of operating income to total asset	Operating income ÷ Total assets	Fisseha (2010)
Tangibility	The ratio of tangible (Fixed) assets to total assets	Fixed assets Net ÷ total assets	Chandrasekharan (2012)
Growth	Measured by the percentage change in total assets	(TAt - TAt-1) ÷ TA_t	Kibrom (2010)
Size	measure of how large the firm's operational capacity is.	Natural Logarithm of total assets	Kibrom (2010)

Non-debt tax shield	Measured by depreciation divided by total assets	Depreciation ÷Total assets	Lim (2012)
Economic Growth	Measured by the natural log of real GDP_t divided by GDP_{t-1}	$ln\left(\frac{RGDP_t}{RGDP_{t-1}}\right)$	Köksal and Orman (2015)

4. Results and Discussions

The purpose of this part is to display the data analysis results. Descriptive statistics, model estimation results to test the hypotheses, and correlation analysis results to gauge the relationship between variables are all included in the presentation.

4.1 Descriptive Statistics

An analysis that aids in summarizing and describing the features of a particular data set is called descriptive statistics. The mean, median, maximum, minimum, standard deviation, sleekness, kurtosis, and Jarque-Bera statistics are all included in the descriptive statistics. The description of the independent and dependent variables is shown in Table 4.1.

Table 4.1. *Descriptive statistics*

Statistics	DER	PR	TN	SZ	NDTS	GR	EG
Mean	0.554	0.072	1.791	18.164	0.0336	-0.292	0.024
Median	0.540	0.053	1.155	18.575	0.028	0.066	0.022
Max	1.504	0.557	11.969	21.473	0.115	0.985	0.060
Min	0.106	-0.197	-3.041	14.425	0.000	-47.373	-0.019
Std. Dev.	0.234	0.095	2.062	1.597	0.029	4.010	0.027
Skewness	1.170	0.971	2.442	-0.621	0.740	-11.237	-0.336
Kurtosis	5.725	7.552	10.340	2.788	2.769	131.394	1.925
Jarque-B	79.0***	150.0***	476.1***	9.7***	13.8***	104064.7***	9.849**
N	147	147	147	147	147	147	147

Source: Authors computation (2023)

Note: *** significant at 1%, ** significant at 5%, * significant at 10%

The sample data's descriptive statistics for the variables used in the analysis are shown in Table 4.1. The average value for each variable is displayed by the mean. This is obtained by dividing the total number of observations by the sum of the data for each time. The mean value in the table is between -0.292 and 18.164. When data is arranged in either ascending or descending order, the median shows the centre values for each variable.

For every sample, the maximum displays the highest value. The range of values is 21.473 - 0.115. Every variable's lowest value is displayed via the minimum. After comparing the data in each variable, this shows the maximum and lowest value from that variable. The table indicates that the minimum value falls between -47.373 and 14.425.

The standard deviation quantifies the difference from the mean. When data are close to the mean, they have a low standard deviation; when they are spread out over a wide range of values, they have a high standard deviation. The standard deviation can also be used to calculate risk or uncertainty. The sample firm recorded a standard deviation ranging from 0.029 to 4.010 based on the table.

A random variable's probability distribution can be measured using skewness. It gauges how asymmetrical something is. It may be zero, negative, or positive. Positive skewness denotes that the tail's right side is longer than its left, negative skewness denotes that the left side is longer than the right, and zero skewness denotes that the left and right sides are equal. It is quite different from usual, much like kurtosis. SZ and GR are negatively skewed, but DER, PR, TN, and NDTS are positively skewed. The value for normal skewness is zero. As a result, NDTS and PR both resemble a normal distribution.

Kurtosis is a measure of how much a distribution's tails deviate from a normal distribution's tails. Kurtosis calculates the probability distribution's peakedness. It is a measurement of the relative curvature degree close to the variance's mode on the frequency curve. For a normal distribution, if the kurtosis coefficient is above three, it suggests there is a high peak and if less than three, there is a low peak. The distribution is more peaked than it would be for a normal distribution since the kurtosis of all the variable values is positive. When it comes to the data's kurtosis, DER, PR, TN, and GR are leptokurtic since the kurtosis variables are > 3, whereas SZ and NDTS are platykurtic because the kurtosis variables are < 3. As can be seen from the result, the data is not normally distributed because the numbers are either less than or more than 3.

The Jacque-Bera test measures how well sample data fit a normal distribution by looking at their skewness and kurtosis. It is employed to verify that the variables are regularly distributed by testing the variable's hypothesis. It calculates how different the series' skewness and kurtosis are from those found in a normal distribution. Given that the probability values are highly statistically significant and the p-value linked to the Jacque-Bera finding for each variable is less than 1%, the null hypothesis of a normal distribution is rejected. Consequently, none of the variable distributions are normally distributed.

4.2 Panel Unit root tests

The study also probed into the stochastic properties of the variables used for regression analysis. The null hypothesis tested is that individual variable has a unit root. Given the respective values of Levin, Lin and Chu t and W-stat presented in Table 4.2, the study is compelled to reject the null hypothesis mostly at a 1% level of significance and conclude that individual variables are stationary at level, i.e. the mean, variance and covariance of each variable are constant over time.

Table 4.2. *Panel Unit Root Test Results*

Variables	Level		
	Levin, Lin and Chu t*	Im, Pesaran and Shin W-stat	Order of Integration
DER	-223.758***	-33.9074***	I (0)
PR	-12.69074***	-3.38614**	I (0)
TN	-36.5177***	-7.24900***	I (0)
SZ	-21.6408***	-7.13930***	I (0)
NDTS	-5.56762***	-1.39771*	I (0)
GR	-11.6761***	-2.04251**	I (0)
EG	-13.55575***	4.02302**	I (0)

Authors' Computation (2023)

Note: *** significant at 1%, ** significant at 5%, * significant at 10%

4.2 Test of Collinearity

The general goal of doing a regression-related correlation test in research is to ascertain whether or not there is collinearity among the independent variables used in the study. The correlation test results are summarized as follows:

Table 4.3. *Correlation Matrix and VIF Test for Collinearity*

	PR	TN	SZ	NDTS	GR	EG	VIF
PR	1.00						1.44
TN	-0.12*	1.00					1.28
SZ	0.27***	0.20**	1.00				1.40
NDTS	-0.24***	0.06	-0.20**	1.00			1.30
GR	-0.01	0.05	0.16**	0.02	1.00		1.27

EG	0.16**	-0.07	-0.04	-0.08	0.17**	1.00	1.15

Source: Author's computation (2023)

* Significant at 10%, **Significant at 5%, ***Significant at 1%

To investigate potential collinearity—a major breach of the Least Squares regression technique—between the pairs of independent variables, Table 4.3 displays the findings of correlation analysis and Variance Inflation Factors (VIF) (multicollinearity). The correlation coefficients, which range from -0.24 to 0.27 according to the data, point to a poor and weak association between the various pairings of independent variables. Table 4.3 shows further that the correlation coefficients of profitability with tangibility size, non-debt tax shield and economic growth are statistically significant ranging from 1% to 10% level of significance. Also, the relationship between tangibility and firm size is statistically significant 5%. The firm size's coefficients of association with NDTS and GR are statistically significant at 5 while the relationship between GR and EG is equally significant statistically at 5%

The findings of the variance inflation factor (VIF) corroborate the weak relationships established by correlation analysis. To rule out the possibility of collinearity, VIF should generally fall noticeably below 10. The VIFs are all between 1.15 and 1.44, indicating that none of them are any closer to the suggested threshold, according to the results displayed in Table 4.2. Therefore, it may be concluded that the explanatory variables utilized in the regression analysis do not exhibit perfect or substantial collinearity.

4.3 Hausman Test Results

Table 4.3. *Hausman Test Results*

Test summary	Chi-sq. statistic	Chi-sq. d.f.	Prob.
Cross-section random	32.262514	6	0.0000

Source: Author's computation (2023)

The Hausman test results, which are used to select between fixed effect and random effect estimates, are shown in Table 4.3. The favoured outcome of the random effect is the null hypothesis. We accept the fixed effect finding and reject the random effect specification since the null hypothesis may be rejected at the 1% level of significance with a Chi-Sq. of 37.095 and a p-value of 0.000. This study accepts the specification of fixed effects.

Table 4.4. *Determinants of capital structure*

DER	POOL OLS	RANDOM EFFECTS	FIXED EFFECTS
C	-1.906	-5.145	-16.403
	(1.492)	(2.058) **	(3.299) ***

PR	-1.195	-2.950	-3.739
	(1.602)	(1.731) *	(1.727) **
TN	1.692	1.471	1.105
	(0.062) ***	(0.077) ***	(0.093) ***
SZ	0.047	0.257	0.916
	(0.085)	(0.116) **	(0.185) ***
NDTS	0.442	0.030	-0.0281
	(0.710)	(0.759)	(0.753)
GR	-0.042	-0.055	-0.0466
	(0.029)	(0.026) **	(0.025) *
EG	7.800	8.330	9.473
	(4.635) *	(4.101) **	(3.767) **
R^2	0.866	0.863	0.706
F-stat	157.94***	484.05***	49.41***

Source: Authors Computation (2023)

Notes: *** Significance at 1%, ** Significance at 5%, * Significance at 10%

"( )" states standard error

The results of unbalanced panel data regression model are presented in Table 4.4 to investigate the determinants of capital structure in Nigeria's quoted consumer goods firms. We supplied the Generalised Least Squares (GLS)-fixed and -random effect models for comparison and robustness checks, even though the Hausman test findings supported the GLS-fixed effects. However, the fixed effect model results are the main focus of the study.

The R-squared, which is a coefficient of determination gives statistical information about the goodness of fit of the model. In our results, the value of R-squared is 0.706 indicating that about 71% of the systematic variations in capital structure were explained by profitability, asset tangibility, size, non-debt tax shield, growth, and economic growth while the remaining 29% were due to the variables not considered in the model.

The relationship between DER and PR is negative, as indicated by the β_1 (PR) coefficient of -3.739. The t-statistic of -2.17, which is the coefficient divided by the standard error, indicates the significance of this association. At a 5% level of significance, the null hypothesis that PR has no discernible impact on capital structure decisions—can be rejected due to the computed p-value, which is less than 5%. All other factors being equal, the economic implication of the significant and negative coefficient is that for every 1% increase in PR, there is a 3.739% decrease in DER.

The coefficient of β_2 (TN) is 1.105, indicating a positive correlation between DER and TN. The t-statistic of 11.882 establishes the significance of that relationship. At the 1% level of significance, the null hypothesis that TN has no discernible impact on capital structure decisions is rejected because the computed p-value is less than 1%. This means that, holding all other variables fixed, the economic significance is that, for every 1% increase in TN, DER increases by 1.105%.

The β_3 (SZ) coefficient is 0.916, suggesting a positive correlation between SZ and DER. The t-statistic (4.951) establishes the relationship's importance. The null hypothesis that SZ has no significant link with capital structure decision-making can be rejected at the 1% level of significance based on the computed p-value, which is less than 1%. This means that assuming no other changes, the marginal effect of a 1% rise in SZ is a 0.916% increase in DER.

The correlation between DER and NDTS is negative, with β_4 (NDTS) being -0.028. The t-statistic (-0.037) is too negligible to establish the importance of the association. The null hypothesis, according to which NDTS has no discernible influence on capital structure decisions, cannot be rejected at the 10% level of significance because the computed p-value is greater than 10%. The implication is that the relationship between the DER and NDTS has no statistical importance.

β_5 (GR) coefficient is -0.047 which shows a negative relationship between DER and GR. The significance of this relationship is established by t-statistic (-1.880). Since the calculated p-value is less than 5%, the null hypothesis that GR has no significant effect on capital structure decisions can be rejected at a 5% significance level. Based on this result, the economic importance of this is that when growth opportunities increase by 1% DER drops by 0.047%, all other things being equal.

Going by the β_5 coefficient of 9.473, the relationship between DER and economic growth (EG) is positive. With a t-statistic of 2.515, the null hypothesis that economic growth does not significantly determine the debt-equity ratio can be rejected at 5% significance level. This implies that holding all else constant, DER is increasing with economic growth at an increasing rate of 9.473%.

An F-statistic of 49.41 establishes the overall importance of the model estimated to study the determinants of capital structure. At a 1% level of significance, the null hypothesis that PR, TN, SZ, NDTS, GR, and EG are all concurrently equal to zero is likely to be rejected because the corresponding p-value is less than 1%. Thus, it can be said that in listed manufacturing consumer products businesses in Nigeria, capital structure is significantly influenced by tangibility, profitability, firm size, non-debt tax shield, company growth, and economic growth.

4.5 Discussions of Findings

Having investigated the determinants of capital structure in quoted consumer goods firms in Nigeria, several important findings are worthy of discussion in the study.

According to this study's estimates, profitability and leverage have a statistically significant negative association. This is congruent with the results of (Titman and Wessels, 1988; Rajan and Zingalees, 1995; Kibrom, 2010) and aligned with the a priori expectations.

The study shows a statistically significant positive association between tangibility and leverage. This conforms to the a priori expectation and is consistent with the conclusions drawn by Chandrasekharan (2012), Nasimi (2016), and Abdul Kabeer and Rafique (2018).

According to this study, size and leverage are predicted to have a strong positive association. There is statistical significance in the positive association. This matches the results of Titman and Wessels (1988), Rajan and Zingales (1995), and Booth (2001) and is consistent with the a priori expectation.

Additionally, the non-debt tax shield was shown to be a negative indicator of capital structure and to be statistically insignificant. This is inconsistent with the results found by Awan and Amin (2014) and the a priori anticipation.

Growth and leverage were found to be negatively correlated in the study and is statistically significant. This matches the results of Chandrasekharan (2012), Chechet, Garba, and Odudu (2013), and Wanyoike and Tabitha (2015) and is consistent with the a priori expectation.

Equally, economic growth and capital mix ratio were positively related. This outcome is consistent with the pecking order theory and the findings obtained by Köksal and Orman (2015) and Sahudin, Ismail, Sulaima, Rahman and Jaafar (2019).

5. Conclusion and Recommendations

The study looked into the factors that affect capital structure in Nigerian manufacturing consumer goods companies that are publicly traded. To conduct the study, 15 companies were chosen from the entire population of consumer goods firms listed on the Nigeria Exchange Group based on the accessibility of the financial statements and their existence within the research work period (2011-2020). The study developed six hypotheses to test the determinants of capital structure decisions in the sampled quoted firms.

The annual report provided the data, which were then evaluated using panel data and the ordinary least square (OLS) regression method. The debt-to-equity ratio (DER) is the capital structure metric employed in this study. In this investigation, PR, TN, SZ, NDTS, GR and EG are used as independent variables.

The study's findings showed that size (SZ), asset tangibility and economic growth had a substantial positive association with leverage and that profitability (PR), and firm growth (TN) had a significant negative link with leverage. However, the significance of the negative effect of non-debt tax shield on capital structure could not be affirmed statistically

5.1 Conclusion

The study's results indicated that firm size, asset tangibility and economic growth have a considerable favourable impact on capital structure. Additionally, except for the insignificant influence of the non-debt tax shield, firm growth and profitability have a substantial effect on capital structure. All things considered, it seems logical to conclude that the investigated manufacturing consumer goods businesses in Nigeria have a capital structure that is significantly influenced by growth, asset tangibility, profitability, size, and economic growth.

5.2 Recommendations

The study's conclusions lead to the following suggestions for improving capital structure decision-making in Nigeria's listed manufacturing sector:

Since profitability minimizes the chances of firms seeking external sources of finances in manufacturing companies, the company should diversify their operations to minimize their risks and maximize profits which will increase internally generated funds.

Based on the findings in this study, a firm's size is a significant determinant of capital structure, it is therefore recommended that directors of companies in Nigeria should increase their assets on the firm's size to be in a good position to manage their capital structure for better performance and help them grow in size.

Since tangibility is significant in capital structure, the company should invest more in tangible assets for it to have a positive influence on capital structure.

Since the level of growth has a significant positive influence on capital structure, the company should invest more in assets for firm growth.

Based on the results of this study, a non-debt tax shield is not a significant determinant of capital structure. It is therefore recommended that non-debt tax-shield should encourage firms to finance projects with debt and equity.

5.3 Suggestions for Further Research

Some of the suggestions for future research include the following:

This study has focused on a single measure of leverage which is the debt-to-equity ratio. Factors that affect short-term debt and factors that affect long-term debt might be different. Hence, future researchers can look into other measures of capital structure.

In this study, the researcher has mainly examined the determinants of capital structure in quoted manufacturing firms in Nigeria. It might be interesting and crucial to extend this research to other sectors of the economy in the country.

A comparative analysis of the capital structure decisions of firms across developing countries can give an enhanced picture of what determines their capital structure decisions. Therefore, studies should be made across countries on determinants of capital structure decisions to obtain a vivid understanding of it.

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