The Seybold Report

ISSN 1533-9211

DOI 10.5281/zenodo.6954942

EFFECT OF CAPITAL STRUCTURE ON FIRM'S PERFORMANCE: EVIDENCE FROM SELECTED COUNTRIES

DADA OLUSEGUN DAVID*

Department of Accountancy, Federal Polytechnics, Ado-Ekiti, Nigeria.
*Corresponding author E-mail:dadaolusegun66@yahoo.com

OLAOYE CLEMENT OLATUNJI

Department of Accounting, Ekiti State University, Ado Ekiti, Nigeria.

Abstract

The study examined the effect of capital structure on the performance of selected telecommunication companies among three countries; Nigeria, South Africa and Ghana covering 2015-2019. A panel estimation technique was used. Fixed and random effects estimation methods and Hausman test were used in the study. Hausman test however favoured the acceptability of random effects for both the return on asset (ROA) and return on equity (ROE). Return on assets and returns on equity were used to measure the financial performance, while debt-equity ratio, asset turnover and age of firm, were used to measure capital structure of the chosen telecommunication companies from the sampled countries. The result showed that The Age of firm and asset turnover have statistically significant positive effects on performance of telecommunication companies while debt-equity ratio has insignificant positive effect on the performance of telecommunication companies. It was concluded that the use of debt in the proportion of firms' capital has no effect on financial performance of telecommunication companies. The study recommended that telecommunication companies to dwell more on internal sources of financing for optimal performance.

Keywords: Capital structure**,** telecommunication**,** corporate performance**,** debt, equity, return on asset, return on capital employed**.**

1. Introduction

Capital structure is one of the contemporary issues that flood pages of published journals globally, of recent among the studies of researchers and scholars. The reason for this must not be misinterpreted for something else other than its roles in the determination of firms' fortune and the efforts in the fulfillment of the needs of various stakeholders. Capital structure is a full representation of both equities and liabilities of an organisation. Capital Structure is how a firm finances its overall operations and growth by using different sources of funds. Its importance derives from the fact that capital structure is tightly related to the ability of firms to fulfill the needs of various stakeholders. There is no business organisation whether newly established or an ongoing, that does not require funds to carry out its activities as no success is achievable in the absence of fund. The needed fund may be for daily running of a firm or for business dilatation. This testifies to how important fund is in the life of every business. This fund is referred to as capital.

Capital therefore refers to the means of funding a business. Firms that are willing to raise capital for their activities normally source their funds through two major sources. These sources are internal and external sources. The internal source refers to the funds generated from within an

The Seybold Report
ISSN 1533-9211
DOI 10.5281/zenodo.6954942

enterprise which is mostly retained earnings. It is derived from the proceeds the enterprises earn from their activities. Firms may in the same vein look outside to source for needed funds to enhance firm's activities. Any fund sourced not from within the earnings of their activities is termed external financing. The external funding may be by increasing the number of co-owners of a business or outright borrowing in form of loan. Financing and investment are two major decision areas in a firm. In the financing decision the manager is concerned with determining the best financing mix or capital structure. Debt comes in the form of bond issues or long term notes payable while equity is classified as common stock or preferred stock. Technically, Capital structure is the balance between equity and debt that a business uses to finance its assets, day-to-day operations and future growth. The debt-equity mix can take any of the following forms: High percentage of equity: low percentage of debt, low percentage of equity: High percentage of debt and average percentage of equity: average percentage of debt. All cases totaling hundred percent. Optimal Capital structure is the best mix of debt; preferred stock and common stock that maximises its cost of capital.

Uremadu and Efobi (2012) opined that a firm's capital structure refers to the mix of its financial liabilities. The capital structure is therefore an important concept which must be appraised holistically as it directly affects the performance and sustainability of a firm. Meanwhile, the determination of a company's capital structure is a very difficult task to achieve. In the work of Usman (2019), capital structure is described as the proportionate relationship between long-term debt and equity. Capital structure has to do with the various means used to raise funds which may also be called financial structure. The way in which a business organisation manages its financial structure will have a significant impact on the profitability or general performance of the company concerned. The corporate performance of any organization is measured in terms of money. It is the process of measuring the result of a firm's policies and operation in monetary terms. It is used to measure firm's overall financial health over a given period of time and can also be used to compare similar firms across the same industry or to compare industries or sector in aggregation and details. Examination of the effect of Capital structure on Telecommunication Industry becomes impeccable considering its impacts on the development of Africa economy, particularly, this time when Coronavirus pandemic is ravaging the entire economy of the country. There is a need for any organisation that wants to survive the multiplier effects of Coronavirus on the financial market to be proactive in taking capital structure decisions of which telecommunication sector has played significant roles.

Telecommunication sector consists of companies that transmit data in words, voice, audio or video across the globe. Nigeria's telecommunication history takes its roots from the colonial era in 1886 when telegraphic submarine cable lines were laid by the British firm, Cable & Wireless Ltd, connecting Lagos to London. This led to the installation of phone lines, connecting the famed commercial hub to Jebba, Ilorin, Calabar, Ibadan and other parts of the country. It is worthy of note that the establishment of telephone lines aided other forms of communication in Nigeria like radio, television, and internet. Nigeria Telecommunications Limited (known as NITEL) was established in 1985. NITEL was owned by the government and given monopoly status in communication sector. The firm was formed through the welding together of two government entities – the telecoms arm of the Posts and Telecommunications

The Seybold Report
ISSN 1533-9211
DOI 10.5281/zenodo.6954942

(P&T) department under the Ministry of Communications, and the Nigerian External Communications (NET). Posts and Telecommunication dealt with internal communication services in Nigeria. Services rendered by P & T were telegraph services and a manual telephone exchange service with a magneto switchboard of 100 lines introduced in Lagos by 1908. On the other hand**,** Nigerian External Communications was for external purposes as colonization had done a good job of connecting Lagos and London through a telegraph service. The company, which produced these services, African Direct Telegraph Company, became Imperial and International Communications which later transformed into Cable and Wireless.

Nigeria sought a partnership with Cable and Wireless which led Nigeria into acquiring an interest in the Nigerian arm of Cable and Wireless and renaming the company as Nigerian External Telecommunications (NET). NET did well by providing international telephone, telex and telephone services to major cities in Nigeria; Ibadan, Enugu, Kaduna, and Port-Harcourt. It was credited with the introduction of international Direct Dialing Services. P and T and NET had their fair share of ineffective services. They were mostly run with analogue infrastructure and needed a wave of digital transformation. Also, the lines were congested, the billing system was inefficient and the call completion rate for long-distance calls was below 50%. Generally, NITEL was plagued by a list of complaints, so reforms for better communication services began. The deregulation of the sector heralded the establishment of the Nigerian Communications Commission (NCC) as prescribed by Decree 75 of 1992. The decree establishing the NCC helped to liberalize terminal ends equipment, and gave room for competition and private sector participation. The deregulation meant that the NITEL regime, which was characterized by poor communication service, was over. Even though NITEL retained its monopolistic rights, new players were introduced into the industry.

Mobile Telecommunication Network (MTN) is a South African multinational mobile telecommunications company, operating in many African countries such as Ghana. Ghana suffered a serious setback in the recent past like any other Africa Countries before its deregulation in 1994 when the government announced a five-year comprehensive restructuring of the industry, known as the "Accelerated Development Programme, 1994-2000 (ADP 2000). The main policy objectives of the programme were formulated with the assistance of the World Bank, consultants and other stakeholders. It was aimed at: achieving a density between 1.5 and 2.5 lines per 100 people; improving public access in rural and urban areas through the provision of payphone facilities (public and private) and retaining an overall public regulatory control of the sector through the creation of a single agency. Despite the fact that the establishment of telephone lines aided other forms of communication in Africa like radio, television, internet and other social media which multiplier effects have greatly be felt among others, in the area of employment opportunity considering the number of Africans the sector has lifted above poverty level and the massive number of published articles on Capital structure, it is worrisome to note that there are only few articles that have been rolled out on capital structure in Telecommunication industry.

Ajayi and Araoye (2017) investigated the effect of capital structure on the financial performance of manufacturing firms in Nigeria. The study was carried out on capital structure

The Seybold Report
ISSN 1533-9211
DOI 10.5281/zenodo.6954942

but was not in telecommunication terrain, Hani and Zouhour (2019) studied the capital structure and the performance of the banking sector in Middle East countries during a period of 6 years (between 2011 and 2016). The study collected its data through primary sources in banking sector and not telecommunication industry. Hossain, Yousuf and Khalid (2019) studied the relationship between capital structure and firm's financial performance in a developing country like Bangladesh. Although an investigation was carried out in the area of information technology, it was not on Telecommunication Companies. Kusuma (2018) studied different sources of finance available to the firm for its operations; Studied the EPS under different years i.e. from 2010-11 to 2014-15.; measured the liquidity of the firm through ratios and project how to take account of a firm's financing mix in evaluating investment decisions. Apart from the fact that telecommunication companies were not given utmost priority in the study, the years under review could span to 2018. Usman (2019) examined the impact of capital structure on corporate performance in Nigeria with special focus on consumer goods firm sector of the economy and not telecommunication sector. It is on this premise and many others that this paper examined the effect of Capital structure on the performance of selected Nigerian Telecommunication companies listed in Nigerian Stock Exchange as at 20th of May, 2020. Majorly, the effect of long-term debts to total assets ratio, total debts to equity ratio and returns on assets in the Nigerian Telecommunication companies were reviewed and reported.

Concept of Capital Structure

Capital structure is the relationship between the various classes of capital used by the firm in financing its operations (Uremadu, 2004). The optimal capital structure of a firm is the capital structure with minimum cost implications which maximise the total value of the firm. It could be obtained using a combination of debt and equity financing that would give the firm a minimum cost of capital and enhanced market value. The amount of debt contained in a firm's optimal capital structure is referred to as its debt capacity. The debt capacity has implications on the borrower. Borrowed funds usually carry fixed charge interest expense. The borrower is under obligation to pay interest to debt-instrument holders irrespective of whether profits or losses are made. If a borrower fails to pay the fixed interest charges in time, the creditors are at liberty to take legal action against the borrower to get the payments and in extreme circumstances, it may force the borrower into liquidation (Nwude, 2003).

Classification of Capital Structure

The nature of capital structure adopted by different firms' varies. Rayan (2008) categorized capital structure into (3) three: zero, low and high geared. Zero Geared or Zero leveraged capital structure means the absence of any form of leverage in the capital structure. It indicates that there is no element of debt in the financing of the firm's operation. Here, the firm prefers to go on equity financing and forfeits the positive aspect to debt financing which boosts residual owners wealth. Debt = 0. Low geared or low leveraged capital structure has a low debt\equity ratio. This indicates that residual owner's contribution (equity) is higher than the claims of creditors in the business. This is most times regarded as a satisfactory capital structure (Debt < Equity). High Geared or High Leveraged Capital Structure: A firm is said to be high leveraged if the contribution of the creditors is higher than that of equity holders. This type of capital

The Seybold Report
ISSN 1533-9211
DOI 10.5281/zenodo.6954942

structure will enhance the earning of ordinary shareholders when the cost of debt is less than the firm's overall rate of return on investment (Debt > Equity).

Debt Financing

Debt financing implies raising fund through selling of bonds, mortgages or borrowing directly from financial institutions which must be repaid as at when due with interest charged. A lender incurs risk and charges a corresponding interest based on that risk. The lender usually assesses a variety of factors such as the strength of the business plan, management capabilities, financing and the past credit history of the borrower before lending it to him. Debt financing could be divided into two categories: the long-term debt financing and the short-term debt financing. Long term debt financing are equipment, land, buildings and machineries. Ward (2008) reported that with long term financing, the scheduled repayment of loan and estimated useful life of the assets extends over more than one year, while short term debt financing are funds meant for day-to-day activities or financing needs of firms. These include inventory, supplies of raw material and paying of employees' salaries or money owed to them. They are called short term debt fund because the fund borrowed would be expected to be paid back in less than one year. Besides, sources of debt financing also exist, Bank overdraft, Bank loan and Credit unions. Bank overdraft is a type of short-term debt financing in which a business owner can open a current account with a bank, the bank establishes a credit limit and the business owner is allowed to withdraw up to that limit despite the fact that there are not enough funds in the account to cover the amount. In this case, the business owner will only pay interest for the time he uses the money which ranges between one to six months as the case may be. Banks loan is the most used type of debt financing is the bank loan, which requires the business owner to make monthly payments on the principal amount plus interest. However, banks are reluctant to take risks and as such, this type of debt finance is usually beyond the reach of a start-up business. Another stumbling block for a start-up business from obtaining a loan is the bank's requirement for the provision of collateral. Commercial banks have more experience in providing business loans than ordinary savings or micro finance banks and that is why it is necessary to study the differences between bank and terms before deciding on which institution to approach for a loan. Credit Unions provide business loans, but their services are usually exclusive to members of a labour union or the employees of a company. Credit unions have higher loan approval rates than banks, and their terms and interest rates are usually much more favourable.

Equity Financing

Equity financing is the method of raising capital by selling firm's stock to investors, in return for investment. The shareholders receive ownership interest in the firm. In order to grow, a firm will need additional capital, which may be obtained through debtor equity. Equity financing involves the sale of firm's stock and giving a portion of the ownership of the firm to the investors in exchange for cash. The proportion of the firm that will be sold in an equity financing depends on how much the owner has invested in the firm and the worth of the investment at time of the financing. In addition, Sources of Equity Financing do exist which include personal saving, friend and family members. Personal savings is the first place an

The Seybold Report
ISSN 1533-9211
DOI 10.5281/zenodo.6954942

entrepreneur should look for money which is the most common source of equity capital for starting a business. Outside investors and lenders expect the entrepreneur to put some of his or her own capital into the business before inviting their friends and family Members. After emptying his or her pocket, an entrepreneur should turn to those most likely to invest in the business, friends and family members. Ten (10) percent of business owners turn to family and friends for capital Small business trends (2019). Other sources of equity financing include: shareholders, Factoring, Hire Purchase (HP), Leasing and proceeds from Sales.

Financing and telecommunication Companies

Finance is the elixir that assists in the formation of new businesses, and allows businesses to take advantage of opportunities to grow, employ local workers and in turn support other businesses and local, state and federal government through the remittance of income taxes. The strategic use of financial instruments, such as loans and investments, is key to the success of telecommunication companies. As long as expansion of the telecommunications companies is concern, co-existence of financing and capital structure remain sacrosanct!

Return on Asset and capital structure

Return on assets (ROA) often called the return on total assets is an indicator of how profitable a company is relative to its total assets. ROA gives all stakeholders in the company an idea as to how efficient a company's assets are managed to generate earnings. Return on assets is displayed as a percentage. In other words, ROA shows how efficiently a company can convert the money used to purchase assets into net income or profits. Since all assets are either funded by equity or debt, some investors try to disregard the costs of acquiring the assets in the return calculation by adding back interest expense in the formula. It only makes sense that a higher ratio is more favorable to investors because it shows that the company is more effectively managing its assets to produce greater amounts of net income. A favourable (positive) ROA ratio usually indicates an upward profit trend and vice versa. ROA is most useful for comparing companies in the same industry as different industries use assets differently. Meanwhile, the term capital structure represents the proportion of capital used by the company during its operation. Companies either use equity or debt capital or the mixture of both in order to finance assets. The ratio of the same asset is used to evaluate how effective and efficient the mixed capital has been optimized.

Return on Equity and Capital structure

Return on Equity (ROE) is the measure of a company's annual return (net income) divided by the value of its total shareholders' equity, expressed as a percentage. Alternatively, ROE can also be derived by dividing the firm's dividend growth rate by its earnings retention rate (1 – dividend payout ratio). Return on Equity is a two-part ratio in its derivation because it brings together the income statement and the balance sheet, where net income or profit is compared to the shareholders' equity. The number represents the total return on equity capital and shows the firm's ability to turn equity investments into profits. To put it another way, it measures the profits made for each naira from investors' equity. Return on equity is a formidable tool of measurement to appraise an organisation in terms of how optimal the structured capital's been

The Seybold Report
ISSN 1533-9211
DOI 10.5281/zenodo.6954942

explored. The results of Nikoo (2015), confirmed the positive impact of capital level on the ROE, ROA and EPS ratios of listed banks in Tehran over the period of 2009 – 2014.

Debit-equity Ratio and Capital Structure

The ratio is used to evaluate a company's financial leverage. The D/E ratio is an important metric used in measure firm's performance. It is a measure of the degree to which a company is financing its operations through debt versus wholly-owned funds. More specifically, it reflects the ability of shareholder equity to cover all outstanding debts in the event of a business downturn. The stance of pecking order theory is clear in this regard. The theory asserts that firms prefer to use internal financing than external financing and it is only when the internal financing is exhausted that firms exploit other forms of external financings such as debt and finally equity (Myers & Majluf, 1984). Findings by Frank and Goyal (2008) as well as Baimwera and Muriuki (2014) indicated that a high degree of financial leverage exposes firms to high financial risk which often leads to financial distress. This corroborates the assertion of Turaboglu et al. (2017) that capital structure decisions are key element of financial failure. Optimal debit-equity ratio is a sine qua non to the survival of an organization.

Asset Turnover and Capital Structure

Asset turnover (AT), total asset turnover, or asset turns is a financial ratio that measures the efficiency of a company's use of its assets in generating sales revenue or sales income to the company (Bodie, Alex and Alan (2004). Asset turnover can be further sub-divided into fixed asset turnover, which measures a company's use of its fixed assets to generate revenue, and working capital turnover, which measures a company's use of its current assets minus liabilities to generate revenue. Total asset turnover ratios can be used to calculate Return on Equity (ROE) . Companies with low profit margins tend to have high asset turnover, while those with high profit margins have low asset turnover. Companies in the retail industry tend to have a very high turnover ratio due mainly to cutthroat and competitive pricing. Asset financing is usually a function of the composition of capital structure. Companies either use equity or debt capital or the mixture of both in order to finance assets. Capital structure is very key to the success of any organization including Mobile Telecommunication network companies.

Mobile Telecommunication Network (MTN) South Africa

MTN was founded in South Africa in 1994 as M-Cell with assistance from the South African government (Reuters, 2016). MTN's competitors in South Africa included Vodacom, Cell C and Telkom Mobile. In May 2008, Bharti Airtel, an India-based telecommunications company, explored the possibility of buying MTN Group (The Economic Times, 2009). Reliance Communications was also in talks with MTN for a potential combination of their businesses (Lakshman, 2008). In July, the two companies ended discussions regarding the merger. In June 2008, MTN Group agreed to purchase Verizon Business South Africa, which was a provider of data services to customers in South Africa and four other African countries (TeleGeography, 2008). The acquisition was completed on 28 February 2009. On 26 June 2009, MTN Group's subsidiary merged with Belgacom International Carrier Services

The Seybold Report
ISSN 1533-9211
DOI 10.5281/zenodo.6954942

(BICS), a subsidiary of Belgacom (Reuters, 2009). The combined subsidiary functioned as the international gateway for carrier services of MTN. In October 2012, MTN announced a partnership with Afrihost to provide DSL Broadband services in Africa (TWeb, 2012 & Maylie, 2012). In November 2012, South African holding company Shanduka Group acquired a minority stake in MTN Group's Nigeria business for $335 million (African Business Magazine, 2015). In 2014, MTN was named on the 2014 BrandZ Top 100 Most Valuable Global Brand rankings and named the Most Admired and Most Valuable Brand in Africa.

Mobile Telecommunication Network (MTN) Nigeria Ltd

Mobile Telecommunication Network (MTN) Nigeria Ltd fondly called MTN Nigeria is part of the MTN Group, Africa's leading cellular telecommunications company. MTN became the first GSM network to make a call on May 16, 2001, following the globally lauded Nigerian GSM auction conducted by the Nigerian Communications Commission earlier in the year. Thereafter the company launched full commercial operations beginning with Lagos, Abuja and Port Harcourt. MTN Business (2019) confirmed that MTN paid $285m for one of four GSM licenses in Nigeria in January 2001 and that excess of US$1.8 billion has been invested building mobile telecommunications infrastructure in Nigeria. Since its launch in August 2001, MTN has steadily deployed its services across Nigeria. As at now, it has provided services in 223 cities and towns, more than 10,000 villages and communities and a growing number of highways across the country, spanning the 36 states of the Nigeria and the Federal Capital Territory, Abuja. Many of these villages and communities are being connected to the world of telecommunications for the first time ever. The company's digital microwave transmission backbone, the 3,400 Kilometre Y'elloBahn was commissioned in January 2003 and is reputed to be the most extensive digital microwave transmission infrastructure in all of Africa. The Y'elloBahn has significantly helped to enhance call quality on MTN network (MTN Business, 2019). The company subsists on the core brand values of leadership, relationship, integrity, innovation and can-do. It prides itself on its ability to make the impossible possible, connecting people with friends, family and opportunities. It also recently expanded its network capacity to include a new numbering range with the prefix 0806, making MTN the first GSM network in Nigeria to have adopted an additional numbering system, having exhausted its initial subscriber numbering range – 0803, 0806, 0703 etc. In its resolve to enhance quality customer service, it has also introduced a self-help toll-free 181 customer-care line through which subscribers can resolve their frequently asked questions free of charge. MTN's overriding mission is to be a catalyst for Nigeria's economic growth and development, helping to unleash Nigeria's strong developmental potential not only through the provision of world class communications but also through innovative and sustainable corporate social responsibility initiatives.

Mobile Telecommunication Network (MTN) Ghana

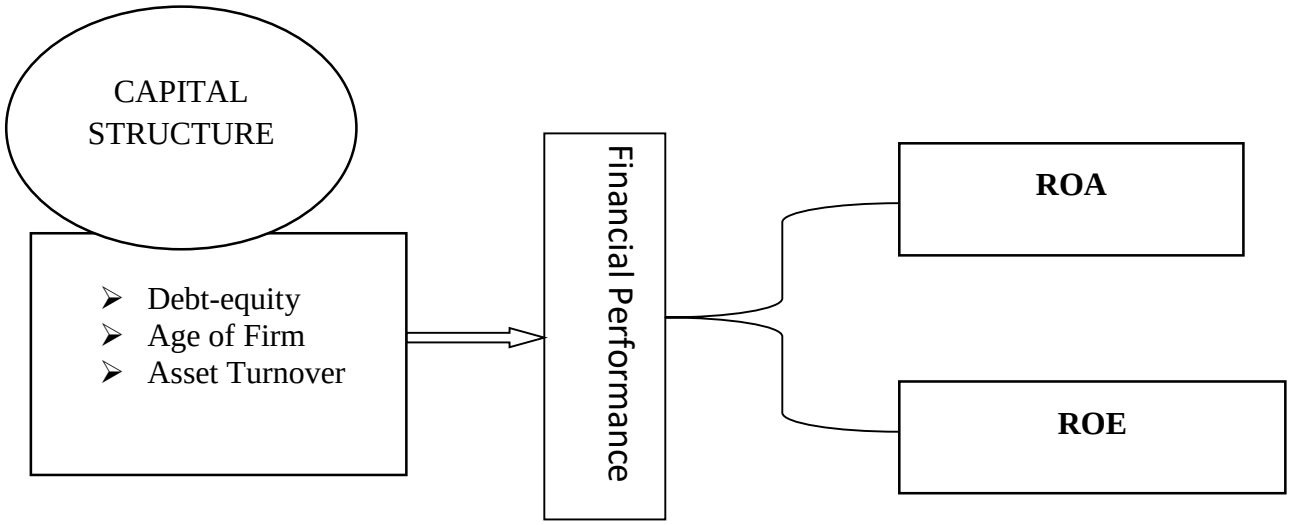
MTN was launched in Ghana in 1994. MTN Ghana is the leading provider of mobile telecommunications services in Ghana. The Company has over 17.83 million subscribers with a market share of approximately 55.09% as at December 2017. MTN Ghana, in line with its vision and mission, continues to lead the delivery of a bold new Digital World to customers and to make their lives a whole lot brighter. It recently responded to varied lifestyles of its

ISSN 1533-9211

DOI 10.5281/zenodo.6954942

customers by introducing a number of exciting products and services including the 3.5G technology, DSTV Mobile Services, Seamless Roaming Services, Mobile Money, MTN E-Selfcare MTN fon mail, and Blackberry phones and services. It is not surprising that the flexible Segments in addition to our innovative services like Call Me Back, Me2U, Voice SMS, the MTN Zone and several others have become popular in the country. Very recently MTN introduced services like the Pay4me, Phone Backup services and Mi-Life Insurance all with the aim of meeting the divergent needs of its subscribers. With the Phone Back Up service, subscribers of MTN would easily retrieve their contact numbers even when they lose their mobile phones.

Conceptual Framework



Source: Researcher's Design (2020)

Capital structure proxied by: Debt to equity ratio, Age of Firm and Asset Turnover is used as dependent variable while financial performance proxied by Return on Asset and Return on Equity is used as dependent variable.

Theoretical Review

Tradeoff Theory

The first theory of interest is the Tradeoff Theory propounded by Myers (1984) stipulates that the firm's capital structure will involve the trade-off between the tax advantage of debt and various leverage related costs. Due to differences in the characteristics of firms, target leverage ratios will vary from firm to firm. Institutional distinctions, such as different financial systems, tax rate and bankruptcy law etc., will also lead the target ratio to vary across countries. The theory predicts that firms with more tangible assets and more taxable income to shield should have high debt ratios. Firms with more intangible assets, whose value will dissolve in case of liquidation, should rely more on equity financing. In terms of profitability, trade-off theory predicts that more profitable firms should mean more debt serving capacity and more taxable

The Seybold Report
ISSN 1533-9211
DOI 10.5281/zenodo.6954942

income to shield, thus a higher debt ratio will be anticipated. Under trade-off theory, the firms with high growth opportunities should borrow less because they are more likely to lose value in financial distress.

Pecking Order Theory

The second theory of importance is the pecking order theory as developed by Myers and Majluf (1984) which stated that firms prefer internal sources of finance; they adapt their target dividend payout ratios to their investment opportunities although dividends and payout ratios are gradually adjusted to shifts in the extent of valuable investment opportunities. In addition, Myers (1984) stated that in the occurrence that external finance is required; firms are most likely to issue the safest security first that is to say they start with debt then possibly convertible debt then equity comes as last resort. In summary, Myers' argument was such that businesses adhere to a hierarchy of financing sources and prefer internal financing when available. If external financing were necessary, debt would be preferred over equity. Pandey (2005) also agreed with Myers' argument when he noted that managers always preferred to use internal finance and would only resort to issuing shares as a last resort. He proceeded to add that the pecking order theory was able to justify the negative inverse relationship between profitability and debt ratio within an industry. This theory therefore underpins this work by re-affirming the negative inverse relationship between profitability and debt ratio within telecommunication industry.

Empirical Review

Hani and Zouhour (2019) empirically studied the capital structure and the performance of the banking sector in Middle East countries during a period of 6 years (between 2011 and 2016). By using 143 banks and 723 observations, the study showed that the capital structure of the banking sector was very volatile during the studied period due to the economic conditions of the region. The results also revealed the existence of positive and significant impacts of total debt and short-term debt on the return on equity of the banking sector in Middle East region. However, the results showed negative and significant impacts of total debt and short-term debt on the return on assets (ROA). Additional analysis revealed a positive impact of long-term debt on the ROA ratio. Finally, the study refused the endogeneity hypothesis of the capital structure and the performance measured by the profitability of the banking sector, and considers that the capital structure design is highly influenced by the decision taken by the international and national regulatory boards.

Hossain, Yousuf and Khalid (2019) studied the relationship between capital structure and firm's financial performance in a developing country like Bangladesh. The investigation has been conducted through using panel data procedure for a sample of Dhaka stock market enlisted all IT firms during the year of 2013-2017. This research works have been performed through the three performance measures including return on equity, return on asset, and earnings per share as dependent variables, where capital structure is considered as debt ratio (DR), equity ratio (ER), long-term debt ratio (LTDR), short-term debt ratio (STDR) and used as independent variables. However, descriptive statistics, correlation, pooled ordinary least

The Seybold Report
ISSN 1533-9211
DOI 10.5281/zenodo.6954942

square analysis, fixed effect and Random effect model has been analyzed to find the relationship between capital structure and financial performance.

Usman (2019) examined the impact of capital structure on corporate performance in Nigeria with special focus on consumer goods firm sector of the economy. Multiple regression of ordinary least square (OLS) analytical technique was used to analyse the data. The results from the study showed a negative and insignificant impact of capital structure on corporate performance of the consumer goods firm sector of Nigeria. That long-term debt ratio to total asset had a negative and insignificant impact on returns on assets, while total debt ratio to equity also had a negative and insignificant impact on returns on assets. The study, therefore, concluded that capital structure is not a major determinant of firm performance. Hence, the study recommended that managers should be careful while using debt as a source of finance since a negative impact exist between the capital structure and corporate firm's performance. Also, that corporate firms should try to finance their activities with retained earnings and use debt as a last option as this is consistent with the pecking order theory.

Kusuma (2018) aims at studying different sources of finance available to the firm for its operations; Studying the EPS under different years i.e. from 2010-11 to 2014-15.; measuring the liquidity of the firm through ratios and project how to take account of a firm's financing mix in evaluating investment decisions. It was found that Debt equity ratio revealed that the company employed more amount of debt for raising the funds, the debt equity ratio was approximately 1.24 times and increased to 1.92 times in the year 2014-15 which is not a good sign to the company; the interest coverage ratio in the year 2010-11 is 2.99 indicating that the firm has very low debt servicing capacity; the interest coverage ratio is high in the year 2012-2013 and indicates that the firm has sufficient earning to cover the interest charges. Company's ability to service the debt has increased over the period of study; the return on net worth is high in the year 2011-13 by 17% indicating that the firm earned greater returns on their investment.; the company's turnover position is gradually increasing every year from 2010-11 to 2014-15; the net profit of the firm is growing during the period of the study and indicates the good operational efficiency of the firm and the net worth of the firm is in increasing manner for the years 2010-2013, and it is in fluctuating manner from 2013 -2014 onwards.

Ajayi and Araoye (2017) investigated the effect of capital structure on the financial performance of manufacturing firms in Nigeria. Secondary data of which the published annual reports for the period 2008-2014 were employed as the key source of data collection for ten sampled manufacturing firms. The relationship between capital structure and financial performance was determined using panel data, variables of return on assets and returns on equity were used to measure the financial performance, also variables of debt-equity ratio, asset turnover and age of firm were used to measure capital structure of the sampled manufacturing firms. The study observed that debt-equity ratio has a negative but statistically significant effect on financial performance. Furthermore, asset turnover has a positive and significant effect on financial performance also age of firm has a negative insignificant effect on financial performance of the sampled manufacturing firms as measured by Return on assets. However, the study also revealed that the debt-equity ratio has positive and insignificant effect on

The Seybold Report
ISSN 1533-9211
DOI 10.5281/zenodo.6954942

financial performance, also asset turnover has a positive and significant effect on financial performance, and the age of firm has negative but statistically significant effect on financial performance of the sampled manufacturing firms as measured by Return on equity. The study recommended that management should be careful when using debt as its source of financing its activities. The benefit of financing with debt is that there will be no tax duties accrued to borrowed funds in an organization. Therefore, management should seek to finance their activities with retained earnings and use debt as a last option as supported by the pecking order theory.

Methodology

The data used in this study were sourced from secondary means which were from annual reports and financial statements of Mobile Telecommunication Network operating in four (4) countries of the world. The study examined the effect of capital structure on the performance of selected telecommunication companies among three countries; Nigeria, South Africa and Ghana covering 2015-2019. A panel estimation technique was used. Return on assets and returns on equity were used to measure the financial performance, while debt-equity ratio, asset turnover, age of firm, interest rate and inflation rate were used to measure capital structure of the chosen telecommunication companies from the sampled countries. This study used panel data analysis as the data involved are both time series combined with cross sectional data. The panel data monitors a given sample of companies over time.

The explicit model specification is as follow:

ROA= f (DER, AT, AGE)

Implicitly the model becomes;

$ROAit = \beta_0 + \beta_1 DER + \beta_2 AT + \beta_3 AGE + \beta_4 INT + \beta_5 INFL + \mu_{it}$ ---------- (i)

$ROEit = \delta_0 + \delta_1 DER + \delta_2 AT + \delta_3 AGE + \delta_4 INT + \delta_5 INFL + \mu_{it}$ ---------- (ii)

Where:

ROA = Return on Assets.

ROE = Return on Equity.

DER =Debt-Equity Ratio.

AT = Asset Turnover.

AGE = Age of Firm.

INT = Interest Rate

INFL = Inflation rate

μ = Error term.

ISSN 1533-9211

DOI 10.5281/zenodo.6954942

i = Selected Company.

t = Time Series.

β_0 and δ_0 = Constants.

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \delta_1, \delta_2, \delta_3, \delta_4$ and δ_5 = Coefficients of Variables.

The a priori expectation of the coefficient is as shown below;

$\beta_0 > 0, \delta_0 > 0, \beta_1 < 0, \delta_1 < 0, \beta_2 < 0, \delta_2 < 0, \beta_3 < 0, \delta_3 < 0, \beta_4 > 0, \delta_4 > 0, \beta_5 > 0, \delta_5 > 0$

Data for this study were sourced from financial reports of the selected companies for the period specified. The data and their measurements are presented below:

S/NO	VARIABLES	DESCRIPTION	SOURCE	MEASUREMENT
1	ROE	Return on Equity	Financial Reports of Selected Companies	PBIT Divided by Shareholders fund
2	ROA	Return on Asset	Financial Reports of Selected Companies	PBIT divided by total assts employed
3	DER	Debit Equity Ratio	Financial Reports of Selected Companies	Long term debt divided by shareholders fund
4	AT	Asset Turnover	Financial Reports of Selected Companies	Revenue divided by Total Assets.
5	AF	Age of Firms	Financial Reports of Selected Companies	Numbers of years of form from date of incorporation

NB: Selected companies are; MTN Nigeria Ltd, MTN South Africa, Scancome Plc (MTN Ghana).

Source: Researcher's Design (2020)

The Seybold Report
ISSN 1533-9211
DOI 10.5281/zenodo.6954942

Conversion Rate

The following conversion rates were used to give room for uniformity:

COMPANY	CONVERSION RATE	SOURCE
MTN Nigeria	N387.50 – 1USD	Weighted average of the conversion rate of the years under review (Financial Reports of Selected Companies)
MTN South Africa	16.6819ZAR -1USD	Weighted average of the conversion rate of the years under review (Financial Reports of Selected Companies)
MTN Ghana (Scancom Plc)	5.69220GHS – 1USD	Weighted average of the conversion rate of the years under review (Financial Reports of Selected Companies)

Source: Researcher's Design (2020)

The findings are summarised from secondary data obtained from the financial reports of communication companies firms under review in Nigeria. The relationship between the variables was determined using panel data.

Empirical Analysis of the Relationship between Capital Structure & financial Performance;

Table 1: Regression Results of Independent Variables on ROA

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AGE	3.526132	0.781962	4.509336	0.0009
AT2	0.250016	0.042920	5.825213	0.0001
DER2	0.066150	0.044005	1.503217	0.1609
C	-56.39537	15.17482	-3.716378	0.0034
	Effects Specification			
			S.D.	Rho
Period random			0.000000	0.0000
Idiosyncratic random			10.41598	1.0000
	Weighted Statistics			
R-squared	0.881732	Mean dependent var		27.71850
Adjusted R-squared	0.849478	S.D. dependent var		23.76409
S.E. of regression	9.219803	Sum squared resid		935.0524
F-statistic	27.33648	Durbin-Watson stat		1.613608
Prob(F-statistic)	0.000021			
	Unweighted Statistics			
R-squared	0.881732	Mean dependent var		27.71850
Sum squared resid	935.0524	Durbin-Watson stat		1.613608
Correlated Random Effects - Hausman Test				
Test period random effects				
Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Period random		1.455813	3	0.6925

The Seybold Report
ISSN 1533-9211
DOI 10.5281/zenodo.6954942

The results in Table 1 showed the effect of capital structure on the performance of telecommunication companies proxied by Return on Assets. The results showed that 90 percent of the variation in financial performance is jointly explained by the explanatory variables, age of the firm, asset turnover and debt-equity ratio, as demonstrated in the R-squared of 0.881732 while the adjusted R-squared stood at 0.849478. It implies that about 90% variation of the explanatory variables are accounted for by the behaviour of the dependent variable. The F-statistic value which stood at 27.33648 with a prob. Value of 0.000021 indicates that the whole model is statistically significant as it is less than 5%. The Age of firm has a statistically significant positive effect on the performance of telecommunication companies proxied by (ROA) as shown by the positive coefficient of 3.526132 and probability of 0.0009. This means that a unit increase in the age of telecommunication companies will result to 3.5 units increase in ROA (Return on assets) of telecommunication companies. There is also significant positive effect of asset turnover on the performance of communication companies with a value of 0.250016 units and probability of 0.0001 indicating that a unit increase in asset turnover (AT2) of communication companies will result to 0.25 units increase in the performance of telecommunication companies. The coefficient of DER (Debt-Equity ratio) has a positive insignificant effect on telecommunication companies' performance. This implies that a unit increase in DER (Debt-Equity Ratio) will result to 0.66 units increase in return on asset of the communication companies.

Table 2: Regression Results of Independent Variables on ROE

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AGE	-0.530386	1.619310	-0.327539	0.7494
AT2	0.430623	0.088879	4.845033	0.0005
DER2	0.108561	0.091128	1.191307	0.2586
C	16.28358	31.42445	0.518182	0.6146
	Effects Specification			
			S.D.	Rho
Period random			0.000000	0.0000
Idiosyncratic random			21.56970	1.0000
	Weighted Statistics			
R-squared	0.801108	Mean dependent var		39.90833
Adjusted R-squared	0.746864	S.D. dependent var		37.73049
S.E. of regression	18.98319	Sum squared resid		3963.977
F-statistic	14.76876	Durbin-Watson stat		2.450197
Prob(F-statistic)	0.000357			
	Unweighted Statistics			
R-squared	0.801108	Mean dependent var		39.90833
Sum squared resid	3963.977	Durbin-Watson stat		2.450197
Correlated Random Effects - Hausman Test				
Test period random effects				
Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Period random		0.793133	3	0.8511

The Seybold Report
ISSN 1533-9211
DOI 10.5281/zenodo.6954942

The results in Table 2 showed the effect of capital structure on the financial performance of telecommunication companies proxied by return on equity (ROE). The results showed that 90 percent of the variation in financial performance is jointly explained by the explanatory variables: age of the firm, asset turnover, debt-equity ratio, interest and inflation rate, as demonstrated in the R-squared of 0.801108 while the adjusted R-squared of 0.746864 showed that the model is statistically fit. The prob (F-statistics) of 0.000357 indicated that the F-statistic of the model is statistically significant as it is less than 5%, which means that the whole model is statistically significant.

The Age of firm has a statistically insignificant negative effect on the performance of telecommunication companies proxied by (ROA) as shown by the negative coefficient of -0.530386 and probability of 0.7494. This means that a unit increase in the age of telecommunication companies will result to 3.5 units decrease in the performance of telecommunication companies. There is significant positive effect of asset turnover on the performance of communication companies with a value of 0.430623 units and probability of 0.0005 indicating that a unit increase in asset turnover (AT2) of communication companies will result to 0.0005 units increase in the performance of telecommunication companies. The coefficient of DER (Debt-Equity ratio) has a positive insignificant effect on telecommunication companies' performance. This implies that a unit increase in DER (Debt-Equity Ratio) will result to 0.11 units increase in return on equity of the communication companies. It can be interpreted further that interest on debt could have a significant negative effect on the performance of telecommunication companies.

Discussion of Findings

The Ordinary Least Square (OLS), fixed and random effects estimation methods and Hausman test were used in the study. Hausman test however favoured the acceptability of random effects for both the return on asset (ROA) and return on equity (ROE). Financial performance is examined with respect to both ROA and ROE. In relation to ROA, The Age of firm has positive effects on performance of telecommunication companies. Asset turnover also has a statistically significant positive effect on performance of telecommunication companies. This is in agreement with Ajayi and Araoye (2017) who established that there is significant positive effect of asset turn over on the financial performance of Nigerian manufacturing companies. It also supports the findings of Coleman (2006) who showed that capital structure in small to mid-sized firms is determined by measures of firm size, firm age, organizational status, profitability, and asset structure. Debt-Equity ratio has insignificant positive effect on the performance of telecommunication companies. This is in line with the findings of Foyeke, Olusola & Aderemi (2016) who submitted that there is no significant relationship between debt financing and profitability of Nigerian manufacturing companies, either long term or short term debt. This result is also supported by pecking order theory as propounded by Myers (1984) which stated that firms prefer internal sources than borrowing.

In relation to return on equity (ROE), debt-equity-ratio has insignificant positive effect on the performance of communication companies. This is contrary to the findings of Jude Leon (2013) and Hossain, Yousuf and Khalid (2019). Jude Leon (2013) established that there is a

ISSN 1533-9211

DOI 10.5281/zenodo.6954942

significance relationship between Leverage and Return on Equity of the listed manufacturing firms in Sri Lanka while Hossain, Yousuf and Khalid (2019) proved that long-term debt has significant positive impact on the equity of IT firms enlisted on Dhaka stock market. However, this study is in line with Ajayi and Araoye (2017) who proved that debt – equity ratio has insignificant effect on ROE of manufacturing firms in Nigeria. The results of this study showed that asset turnover has significant positive effects on the performance of telecommunication companies. This is also in agreement with Ajayi and Araoye (2017) who established that there is a positive significant relationship between ROE (Return on equity) and AT (Asset Turnover) of Nigerian manufacturing firms. Finally, AGE of telecommunication companies has a statistically insignificant negative effect on the performance of communication companies contrary to the a-priori expectation. This is at variance with Ajayi and Araoye (2017) who found a significant relationship between ROE (Return on equity) and AGE (Age of firm).

Conclusion and Recommendations

This study examines the effect of capital structure on corporate performance of telecommunication companies in Africa. This research work covered three (3) countries where MTN network operate in Africa over the periods 2015-2019. Consequent upon the results of the study, the findings indicated that, both measures under consideration, ROA and ROE carry the same weight in the measurement of performance. This is evident by the fact that the coefficients of debt-equity ratio in the two models are insignificant. This study therefore concludes that capital structure variable of Debt-Equity ratio has an insignificant positive effect on financial performance of telecommunication companies. Telecommunication companies should therefore dwell more on internal sources of financing their organization so as to ensure optimal performance. Also, the capital structure of a firm should be adequately planned to safeguard the interest of all stakeholders of the firm.

References

ADP (2000). http://www.colletonfire.com/ADP2000%20TM%202.0 retrieved 15th Sept, 2020

Ajayi, E. O. & Araoye, E. F. (2017). The Effect of Capital Structure on the Financial Performance of Manufacturing Firms in Nigeria (2008-2014). Journal of Accounting and Financial Management, 3(3), 37-48.

Annual Report (2018). Head Office South Africa", retrieved 30th May, 2020

Baimwera, B. & Muriuki, A. M. (2014). Analysis of corporate financial distress determinants: a survey of non-financial firms listed in the NSE. International Journal of Current Business and Social Sciences, 1(2), 58-80.

Berens, J. L. & Cuny, C. J (1995). The Capital Structure Puzzle Revisited. Econ Paper, (8) 4, 1185-1208.

Bodie, Z., Alex, K. and Alan, J. M. (2004). Essentials of Investments, 5th ed. McGraw-Hill Irwin.

Chechet, I. L & Olayiwola, A. B. (2014). Capital Structure and Profitability of Nigerian Quoted Firms: The Agency Cost Theory Perspective. American International Journal of Social Science (3)1, 139-158.

Coleman, Susan (2006). Capital Structure in Small Manufacturing Firms: Evidence from the Data," Journal of Entrepreneurial Finance and Business Ventures, 11(3), 105-122.

Frank, M. Z, & Goyal, V. K. (2003). Testing the pecking order theory of capital structure. Journal of Financial Economics, 67(2), 217-248.

The Seybold Report
ISSN 1533-9211
DOI 10.5281/zenodo.6954942

Foyeke, O. I., Olusola, F. S. & Aderemi, A. K. (2016). Financial Structure and the Profitability of Manufacturing Companies in Nigeria. Journal of Accounting, Finance and Auditing Studies 2(3), 56-63.

Gujarati, D. N, & Porter, D. C (2009). Basic Econometrics. (5th ed) McGraw- Hill Companies Inc, New York, USA.

HUNSAKER, J. (1999). THE ROLE OF DEBT AND BANKRUPTCY STATUTES IN FACILITATING TACIT COLLUSION. MANAGERIAL AND DECISION ECONOMICS, JOHN WILEY & SONS, LTD.,20(1), 9-24.

Hani and Zouhour (2019). Analysis of Capital Structure and Performance of Banking Sector in Middle East Countries. **International Journal of Economics and Financial Issues,9(2), 1- 11.**

Hossain, A, Yousuf, K. A & Khalid, S. M (2019). An Empirical Analysis of Capital Structure and Firm's Financial Performance in a Developing Country. Global Journal of Management and Business Research: C Finance, 19 (3), 9 – 15.

Jensen, M. C & Meckling, W. H. (1976). Theory Of The Firm: Managerial Behavior, Agency Costs And Ownership Structure . Journal of Financial Economics, 3(4), 305-360.

Jude Leon, S. A. (2013). The impact of Capital Structure on Financial Performance of the listed manufacturing firms in Sri Lanka. G.J.C.M.P, 2(5), 56-62.

Myers, S. C. (1984). The Capital Structure Puzzle. The Journal of Finance, 39(3), 574-592.

Myers, S. C., & Majluf, N. (1984). Corporate Financing and Investment Decisions when Firms have Information that Investors do not have. Journal of Financial Economics, 13: 187-

Modigliani, F. & Miller. M. H., (1963). Taxes and the cost of capital: A correction. American economic review, 53: 433-443.

Nikoo (2015). Can Capital Structure Affect the Financial Performance of Banks in Turkey? Finance and Market, 3(2), 1-10.

Nwude, E. C. (2003). Basic Principles of Financial Management-A Second Course, Enugu: Chuke Nwabude Nigeria.

Onaolapo, A. A. & Kajola, S. O. (2010). Capital structure and firm performance: evidence from Nigeria. European Journal of Economics, Finance and Administrative Sciences 25, 70-77.

Pandey, I. M. (2005) Financial Management. 9th Edition, Vikas Publishing, New Delhi.

Rayan, K. (2008) Financial Leverage and Firm Value. Gordon Institute of Business Science, University of Pretoria, Pretoria.

Sebastain, O. U. & Onuegbu, O. (2018). The impact of Capital Structure on Corporate Performance in Nigeria a Quantitative study of Consumer Goods Sector. Current Investigation on Agriculture and Current Research, 5(4), 679-705.

Turaboglu, T. T, Erkol, A. Y., & Topaloğlu E. E. (2017). Financial distress and capital structure decision: an Aplication on BIST 100 Firms. Business and Economics Research Journal 8(2):247-258.

Uremadu, S. O, & Efobi, R. U (2012). The Impact of Capital Structure and Liquidity on Corporate Returns in Nigeria: Evidence from Manufacturing Firms. International Journal of Academic Research in Accounting, Finance and Management Sciences (2)3, 1-10.

Usman, M. (2019). The Impact of Capital Structure on Financial Performance of Consumer Goods Industry in Nigeria. Open Journal of Accounting, 8, 47-62. doi: 10.4236/ojacct.2019.84004.

Just in: Airtel leaves behind Globacom, becomes Nigeria's second largest network". Vanguard News. 2019-08-30. Retrieved 2020-05-30.

ISSN 1533-9211

DOI 10.5281/zenodo.6954942

Nigeria Airtel ownership controversy: Econet floors Bharti-Airtel at Appeal Court - Premium Times Nigeria. 2014-02-19. Retrieved 2020-05-30.

M-Cell is Now MTN Group Limited. PR Newswire: 1. 11 October 2002. ProQuest. Web. 11 November 2013

MTN loses nearly 2 million subscribers in six months. www.iol.co.za. Retrieved 26 May, 2020.

MTN Group Limited. MTN Group Limited - Interim Results for the six months ended 30 June 2016" (PDF). mtn.com. Archived from the original (PDF) on 20 December 2016. Retrieved 30 May, 2020.

MTN settles Nigeria fine & looks at listing on the Nigerian Stock Exchange. 29 June 2020.

Hill, Liezel; Prinsloo, Loni (24 October 2016). MTN Says New CEO Shuter to Join Early as Data Traffic Soars. Bloomberg. Retrieved 24 May 2020.

Annual Report (2018). Data Sheet. MTN Group. Retrieved 30 June 2020.