



The Nexus between Tangible and Intangible Assets and Profitability of Telecommunication Firms in Nigeria

¹John Olorunleke AJEWOLE, ²Oluwagbenga Abayomi SEYINGBO, ³Oluyemi Ayodele OLONITE, ⁴ALADETANYE TAYE Solomon

¹Department of Accounting, Faculty of Management Sciences, University of Abuja, Federal Capital Territory, Abuja, Nigeria

²Department of Responsible Management and Leadership, Faculty of Administration and Digital Technologies, University of Winchester Business School, Sparkford Road, Winchester, SO224NR, United Kingdom

^{3,4}Department of Accounting, Faculty of Administration and Management Sciences, Adekunle Ajasin University, Nigeria

Corresponding Author: Oluyemi Ayodele OLONITE

Abstract

This study examined the relationship between tangible and intangible assets and the profitability of telecommunication firms in Nigeria. The study used secondary data from the telecommunication firms' annual reports from 2012 to 2020, and employed Eviews 12 for the multiple regression analysis. The results showed that tangible assets has a strong positive effect on Return on Assets (ROA), whereas intangible assets has a negative and insignificant effect on Return on Equity (ROE). On the other hand, tangible assets has a negative and significant link with ROE, but intangible assets has a positive effect on ROA. This study concludes that tangible assets are mostly used to boost ROA, but not as much for ROE, while intangible assets are better for growing ROE, but not effective for ROA. This study recommends investing more in tangible assets and reducing debt volume to increase ROA, and investing in sophisticated software to help ROE grow in the short run.

Keywords: Tangible asset, intangible asset, return on equity, assets structure, return on asset

Introduction

Business entities own or control valuable items so as to expand the assets value of the company. Different researchers opined various perspectives on the structure of assets. Zheng Sheng & Nuo Zhi (1997) ^[73] argue that assets structure involves utilizing the firm's resources in a variety of efficient ways.

Financial Performance is the checking of a company's efficiency level. Basically, the figures in the annual report are examined to understand how well a company has been efficient financially over a certain period of time. The aim is to deduce how the company is being effective in using the available resources.

The Company evaluates its financial strength over a given period by using certain metrics to identify whether the business has been successful or not. It is assumed that the firm in question has undertaken its activities in an efficient manner, leading to satisfactory returns for its shareholders and preserving the firm's market value (Bhunia, Mukhuti &

Roy, 2011) ^[11].

It has been observed that quoted telecommunication firms in Nigeria have uneven dividend distributions and unsatisfactory share price growth. This could be attributed to their asset structure as well as outdated machines and failure to upgrade the technological software. There has been no Nigerian telecommunication company that has seen any stock appreciation or beaten the Nigeria Stock Exchange All-Share Index (ASI) which has increased by 11.49% according to Olatunji & Adegbite (2014) ^[51].

Eriotis researched on the association between profitability and financing structure. They determined that companies that fund their business activities through equity are more profitable than those that use debt. Additionally, they found that financing tangible assets has a positive relationship on firms' value; although intangible assets were not included in their research.

Further research shows that the impact of company's assets structure on its financial value hasn't been enough.

Previous research studies by Okwo, Ugwunta & Nweze (2012) ^[50], and Olatunji & Adegbite (2014) ^[51] have only focused on the effects of either fixed or current assets on financial performance while other studies like Mawih (2014) ^[44], Jamali & Asadi (2012) ^[35] have focused on the manufacturing industry, on the banking industry, on the power industry, Warrad & Omari (2015) ^[71] on service companies, Martina (2015) ^[43] on small and medium enterprises and on the steel sector and little studies have been carried out on the telecommunication companies in Nigeria. The identified gaps necessitated this study.

This research aims to look into the link between physical (tangible) and non-physical assets (intangible) of certain telecommunications companies in Nigeria. The hypotheses for this study are developed as questions.

H₀₁: No significant link exist between physical asset (tangible) and firms' profitability of quoted Nigerian telecommunication companies.

H₀₂: No significant correlation can be found between non-physical asset (intangible) and firms' performance of the quoted telecommunication companies in Nigeria.

Materials and Methods

Literature review

Olonite, Okoro & Ibrahim (2021) ^[52] examined the correlation between asset structure and financial performance, utilizing secondary data obtained from various websites of Nigerian construction companies over a six year period from 2012-2018. The data used was sourced from the companies' financial statements, using a document review guide. Olonite et al. (2021) ^[52] examined how profitable the companies were by looking at earnings per share and return on assets. They measured the asset structure using tangible and intangible assets, which was used as the study's independent variable. They tested the data collected with a correlation test and the ADF, then used two types of regression models from a statistical program (Eviews 11). Their results shows that tangible assets had a major effect on the return on assets, and intangible assets impacted earnings per share and it was suggested that the construction companies should cap their debt, invest in tangible assets to raise their profitability and avoid keeping non-productive funds. Doing this would likely maximize their ROA and EPS in the future.

In contrast, Olatunji & Adegbite (2014) ^[51] examined how investing in long-term asset impacted the profits of the Nigerian banks. Their study used annual reports and financial statements from 13 Nigerian commercial banks from 2000-2012 for the study. They found that there was a connection between net profit and the independent variables such as land, fixtures and fittings, leasehold premises, and investment in computers. Additionally, they concluded that investing in fixed assets had a huge positive influence on the profitability of banking sector in Nigeria,

however, their study only used a disaggregated fixed assets. They didn't account for the complete components of intangible assets such as loan receivables and deferred tax.

Warrad & Omari (2015) ^[71] did a study on how turnover ratios affects the performance of Jordanian services sectors from 2009 to 2012. They checked out the yearly financial reports and analysed the data by using a regression technique. They evaluated the financial performance using return on asset and return on equity, and the results of their study shows that turnover ratios has little to no impact on the sectors' profitability.

Mawih (2014) ^[44] examined how current and fixed assets mix impacts the financial performance of manufacturing firms listed on the Muscat Securities Market (MSM) from 2008 to 2012. To measure the assets structure, they used current and fixed assets turnover ratio, while the financial performance was measured using the Return on Asset and Return on Investment. The study found that assets structure has negative influence on the Return on Equity unlike the ROA, only the fixed assets has an effect on the ROE. The research showed that the way assets are structured only affects ROE in the Petro-Chemical sector. It also showed that current assets does not have effect on ROA. This findings is in tandem with Zheng Sheng & Nuo Zhi (1997) ^[73] who found that how assets are structured had more significant impact in explaining financial performance, and also similar to the findings of Kotšina & Hazak (2012) ^[39].

Conceptual framework

The FASB – Financial Accounting Standards Board defined assets as economic tool that is expected to bring an entity economic benefits in the future (1985). Basically, assets can be categorised into two main categories: physical and non-physical which are tangible and intangible assets make up the aggregated asset base. Intangible asset has certain regulations based on accounting standards, therefore most assets shown on a business's balance sheet are both tangible and intangible (fixed and current). The following variables were employed:

Assets structure and financial performance

The concepts below were taken into consideration to get a direction of what the study was aiming for and what it was trying to accomplish.

Assets Structure: Sees asset structure as the sum total of all the kinds of assets that are recognized as cash on hand and in the bank, current investments, financial fixed assets and tangible fixed assets. According to the United States Financial Accounting Standards Board Concepts Statement 6, an asset is what a business gets out of past events and transactions that will lead to future economic benefits.

Tangible Asset

These are the assets that won't become cash within a year of running a business – like property, plant & equipment, land, buildings, furniture & fittings, computers & machinery. This is also called fixed asset (Scott, 2003) [61].

Intangible Asset

These are items that can be turned into cash during the regular course of business usage. This is also called current asset.

Financial Performance

Ramiz & Junrui (2014) [58] describe performance as attaining firm's objectives that are measurable, beneficial, and important to the organisational growth. It is the ability of an organization to get and utilize resources in various methods to gain an advantage over the competition.

Return on Asset (ROA): ROA is a great way to determine how well a business is running and how effective its decisions have been. It shows how well the company is utilizing its assets to generate more cash inflow over a certain period of time (Deloitte University Press, 2013) [74].

Return on Equity (ROE): ROE is a key measure of how much shareholders are getting for their investments. It shows how well the company is using the shareholder's fund to generate more income. (Kijewska, 2016) [38].

Telecommunication: This is defined as the means of sending, receiving, handling and getting information in digital form (Pandey, 2005) [55].

Theoretical review

This study has employed different theories to show how the combination of assets can affect the firms' value of the Nigerian telecom companies. These include the Pecking Order Theory, Trade-Off Theory, and the Theory of Constraint (TOC).

The Trade-Off Theory

This idea proposes that a business would make decisions on how to finance their operations by assessing the advantages and disadvantages of both debt and equity financing. It brings to light the advantages of using debt financing (Ayot, 2013) [7].

The Theory of Constraints (TOC): This research is based on the Theory of Constraints which was created by Goldratt in 1986. TOC's main idea is that if scientific principles and logical reasoning is employed, businesses will make better decisions. TOC is the perfect fit for this study, as it emphasizes that having the right assets mix, management, and maintenance can reduce risk and bankruptcy costs,

which will in turn improve the company's financial status.

For this research, the ex post facto method was chosen since the data were already available and this helped in the observation on how asset structure affects the financial performance of telecom companies in Nigeria. The research analysed the financial report of MTN Nigeria and Airtel Nigeria PLC, which were both listed in the Nigerian Stock Exchange Market in 2019. Information was gathered by examining the financial statements of the telecom companies in Nigeria from 2012 to 2020 having a nine year scope. The study used a multi-variable model and examined the linear relationships between the different variables with both regression and correlation analyses. To validate the data and test the hypotheses, the degree of freedom at 1% and 5% level of significance (DF = n – 1 and 5) was used. The dynamic ordinary least square (DOLS) of Eviews 12.0 was used for the regression analyses. This study adapted the model of Mwaniki & Omagwa, (2017) [47] on financial performance.

$$EPS_t = \alpha_0 + \beta_1PPE_t + \beta_2LNGTIF_t + \beta_3CURTAST_t + \mu_t \dots 1$$

Where,

EPS = Earnings Per Share

PPE = Property Plant & Equipment

LNGTIF = Long Term Investments and Funds

CURTAST = Current Asset

α_0 = Intercept

$\beta_1, \beta_2, \beta_3$ = Independent variable's Coefficient.

μ = Error term

t = Time (Annual)

Mwaniki & Omagwa (2017) [47] only considered two elements of fixed assets and aggregated current assets. This study expanded the scope of their scope by considering a combination of fixed and current assets and by employing a multi-variable model with Return on Assets and Return on Equity as the dependent variables to modify their model. Therefore, the regression equation of this study are as follows: ROA = $\alpha_0 + \beta_1FAST_t + \beta_2CAST_t + \mu_t \dots 2$

$$ROE = \alpha_0 + \beta_1FAST_t + \beta_2CAST_t + \mu_t \dots 3$$

Where ROA = Return on Asset: Formulae: Net Income / (Start Asset + End Asset) / 2

ROE = Return on Equity: Formulae: Net Income / (Start Equity + End Equity) / 2

α_0 = Intercept

$\beta_1 \dots \beta_2$ = Regression of the coefficient of the independent variable

FAST = Fixed Asset: Formulae: Fixed Asset / Total Assets

CAST = Current Asset: Formulae: Current Asset / Total Assets

μ = Error Term

t = Time (Annual)

It is expected that the variables (β_1, β_2) will be greater than 0, meaning that the independent variables should have a positive effect on the dependent variable. The Olonite Sampling Technique was used to gather the data in Olonite in 2021. To make sure the data from the chosen telecom companies was valid, the study employed the data after the adoption of the International Financial Reporting Standards and if it was stationary (through the Augmented Dickey Fuller test). A correlation analysis was also conducted to make sure that there no any with the data in relation to

multicollinearity. To make sure the individual data was normal, the study used descriptive statistics as suggested by Kyereboah-Coleman suggested in 2007. The study used Dynamic Ordinary Least Squares for the regression analysis.

Results

The Annual Reports of the Telecommunication Firms (MTN Nigeria and Airtel PLC) from 2012 - 2020.

Table 1: Individual Variable Data of the selected Telecommunication Firms in Nigeria (MTN Nigeria and Airtel PLC) from 2012 – 2020

Company		Years	Dependent Variables		Independent Variables	
			ROA	ROE	FAST	CAST
Mtn	1	2020	0.08158	0.08133	0.73373	0.26626
	1	2019	0.12025	0.08302	0.82938	0.71061
	1	2018	0.10316	0.15534	0.79268	0.20731
	1	2017	0.05951	0.08796	0.75098	0.24901
	1	2016	0.05948	0.08772	0.78298	0.21701
	1	2015	0.05875	0.08636	0.78405	0.21594
	1	2014	0.05814	0.08326	0.78596	0.21403
	1	2013	0.05955	0.08009	0.78105	0.21894
	1	2012	0.71803	0.07997	0.76592	0.23407
Airtel	2	2020	0.02963	0.11995	0.82080	0.17919
	2	2019	0.05952	0.11813	0.84394	0.15605
	2	2018	0.15315	0.15708	0.89217	0.21304
	2	2017	0.13263	0.14259	0.76703	0.23296
	2	2016	0.11899	0.12811	0.89514	0.21354
	2	2015	0.11946	0.12218	0.84868	0.15131
	2	2014	0.13355	0.14334	0.78892	0.21107
	2	2013	0.13409	0.13271	0.89572	0.10427
	2	2012	0.14210	0.13072	0.85568	0.14431

Source: Selected Telecommunication firms Annual reports and Authors Computation, 2021

Table 1 showed that ROA wasn't consistent in 2020, 2019, 2018 and 2012, but from 2017 to 2013 it was stable at 0.05951, 0.05948, 0.05875, 0.05814 and 0.05955 respectively. ROE was stable from 2017 to 2013 at 0.07997, different from 0.08009 in 2012. FAST was stable from 2018 to 2012, however, it changed in 2020 and 2019 to 0.73373 and 0.82938. Lastly, CAST had a stable trend from 2018 to 2012, but was not consistent in 2020 and 2019 with 0.26626 and 0.71061.

From Airtel PLC, Table 1 showed the ROA was steady for the years 2020-2012 with the numbers 0.02963, 0.05952, 0.15315, 0.13263, 0.11899, 0.11946, 0.13355, 0.13409 and 0.14210 respectively. The ROE was also stable in those years. The Fixed Asset (FAST) stayed the same in 2020-2018, dropped in 2017, and returned to a stable trend in 2016-2012. Lastly, the Current Asset CAST had a steady trend in 2020-2018, 2017, 2016, 2013 and 2012.

Table 2: Variable Data of the selected Telecommunication Firms in Nigeria (MTN Nigeria and Airtel PLC) from 2012 – 2020

Company	Years	Dependent Variables		Independent Variables	
		ROA	ROE	FAST	CAST
Mtn	2020	0.11121	0.20128	1.55453	0.44545

and Airtel	2019	0.17977	0.20115	1.67332	0.86666
	2018	0.25631	0.31242	1.68485	0.42035
	2017	0.19214	0.23055	1.51801	0.48197
	2016	0.17847	0.21583	1.67812	0.43055
	2015	0.17821	0.20854	1.63273	0.36725
	2014	0.19169	0.22660	1.57488	0.42510
	2013	0.19364	0.21200	1.67677	0.32321
	2012	0.86013	0.21069	1.62160	0.37838

Source: Selected Telecommunication Firms Annual reports and Computation, 2021

Table 2 showed the ROA figures of some telecom companies had stayed the same over the years, except for 2018 and 2012 when it rose slightly to 0.25631 and 0.86013. The ROE figures stayed pretty much the same too, apart from 2018 when it increased. The FAST figures were pretty

much stable from 2019, 2018, 2013 and 2012. The CAST figures were also steady, but it did go up a bit in 2019 compared to 2020 which had a figure of 0.86666.

Descriptive Information of Data

Table 3: Descriptive Statistics of Collected Data

	ROA Dependent Variable	ROE Dependent Variable	FAST Independent Variable	CAST Independent Variable
Mean	0.504261	0.231329	7.462643	2.467700
Median	0.070530	0.146620	4.992741	1.958916
Maximum	0.872310	0.415190	1.414104	0.969856
Minimum	0.061690	0.031260	1.366572	0.891596
Std. Dev.	0.234238	0.711880	4.201522	1.057649
Skewness	0.907234	1.085761	0.569814	-1.527951
Kurtosis	1.923935	0.403202	4.588161	2.671207
Jarque-Bera	1.297979	1.479238	0.960179	0.835547
Probability	0.522574	0.477296	0.618728	0.658511
Sum	1.429830	3.719300	3.223873	1.427390
Sum Sq. Dev.	0.329203	3.040637	2.433565	0.346221
Observations	9	9	9	9

Source: Eviews 12 result, 2021

Table 3 demonstrates the statistical information of the Nigerian telecom companies from 2012 till 2020. Fixed asset had the highest mean of 7.462643 and the lowest min and max values of 1.366572 and 1.414104, respectively. ROE had the lowest mean of 0.231329 and the lowest min and max values of 0.031260 and 0.415190, respectively. Fixed asset also had the highest standard deviation of 4.201522, meaning it was the most volatile out of the three. ROA had the lowest standard deviation of 0.234238, making it the least volatile.

Fixed asset has the highest average at 7.46, while ROE has the lowest at 0.23. The smallest and biggest values for ROE were 0.03 and 0.41, while fixed asset had a range of 1.41 and 1.36. The standard deviation shows how much the variable can change. Table 3 shows the fixed asset to be the most unpredictable, with a value of 4.201522, while ROA is the least volatile at 0.234238. Skewness measures the symmetry of a random variable's probability distribution

around its mean. If the value is over zero, it is positively skewed; if it is lower, it is negatively skewed (Eviews 12 Guide, 2020). ROA, ROE and FAST are all positively skewed, with values of 0.907234, 1.085761 and 0.527956 respectively. CAST, on the other hand, has a value under zero (-1.527951) and is thus negatively skewed. According to Eviews 12 Guide (2020), the Dynamic Ordinary Least Square should be used for regression analysis, as the Ordinary Least Square won't be suitable.

The Kurtosis tells you how normal a distribution is. According to the Eviews 12 Guide, anything from -3 to +3 is good, but if it is over +3, that could be a sign of outliers. ROA, ROE and CAST all had values within the benchmark, at 1.923935, 0.403202, and 2.671207 respectively. FAST was the only one that was over the benchmark, at 4.588161. That shows why DOLS is a good choice.

Test of Stationarity

Table 4: ADF – Augmented Dickey Fuller

Variables	In Level (0)	First Difference I(I)	Order of Integration
	ADF	ADF	
ROA	-2.92003	-8.89221***	I(1)

ROE	-1.42334	-6.01903***	I(1)
FAST	-5.78234	-4.28911***	I(1)
CAST	-4.89221	-5.05889***	I(1)

Source: Eviews 12 at ***5 % level of significance

Test for stationarity of data is important when conducting time series analysis as it can have a negative impact on the results. To figure out if there is a unit root and order of integration, the unit root test was conducted at the in level and the first difference in Table 4. The Akaike Info Criterion and the Schwarz Criterion was also employed to decide which lag order was best for the variables. The AIC was used for the response variables and SIC for the

explanatory variables, and the ADF test submits that both variables showed a unit root for ROA, fixed asset and current asset. This basically means the variables are suitable for the regression analysis.

Correlation matrix of the variables (Dependents and Independents)

Table 5: The Selected Telecommunication Firms Correlation Matrix

Variables	ROA	ROE	FAST	CAST
ROA	1234.657 1.000000000			
ROE	75666.08 0.523232263	19685.01 1.000000000		
FAST	35565.04 0.573900121	59801.127 -0.6709932095	65495.121 1.000000000	
CAST	2657.091 -0.356899232	5149.946 0.450543761	89.58159 0.690339901	59448.94 1.000000000

Source: Eviews 12

The table 5 correlation matrix for the telecommunication company's data showed that ROA and CAST had a positive correlation with a coefficient of 0.5, but ROA had a negative correlation with CAST with a response of -0.3. ROA and FAST have a positive relationship with a coefficient of 0.5, but ROE has = a negative relationship with FAST at -0.6 and a positive one with CAST at 0.4.

That means that the variables aren't too closely related to each other, since Eviews 12 says that if the correlation is lower than 0.8, the multicollinearity isn't a major issue.

**Data Analysis
Test of Hypothesis 1**

Table 6: First Regression analysis

Dependent Variable: ROA Method: Dynamic Ordinary Least Square Date: 05/20/21 Time: 06:14 Sample: 2012 2020 Included Observations: 18				
	Coefficient	Std. Error	t-Statistic	Prob.
C	0.205573	0.163150	0.577720	0.0172
Fixed Asset	4.371741	3.106511	1.201304	0.0211
Current Asset	-2.561309	1.538115	-2.031123	0.0917
R-squared	0.617741	Mean dependent var		4.824611
Adjusted R-squared	0.552180	S.D. dependent var		4.637139
S.E. of regression	0.822173	Akaike info criterion		24.10981
Sum square resid	3.358400	Schwarz Criterion		24.21004
Log likelihood	15.01410	Hanna-Quinn criter.		24.05732
F-statistic	5.439102	Durbin-Watson stat		1.304142
Prob(F-statistics)	0.003022			

Source: Eviews 12 result, 2021

Table 6 showed that the coefficient of fixed asset was expected to be greater than 0 and it was a positive submission of - 4.37 - which was significant at the 5% level,

meaning that if the telecom firms increase the fixed asset, the return on asset will increase too. Also, since the p-value was lower than 0.05 (0.0211 < 0.05), there is a

significant relationship between fixed asset and the financial performance of Nigerian telecom firms. In the case, the null hypothesis was rejected and the alternate was accepted. The study submitted an answer to the second research question and achieved the second objective. The R-squared co-efficient revealed that 61% of the variation in Return on Assets (ROA) is as a result of the fixed asset and current variables. The other 39% could be due to other variables not included in the model. The probability of the model is 0.003022, which is under

0.05, meaning that the model is a great fit. The F-statistics, which tests how precise the fit is, is at 5.439102 and the Durbin-Watson Statistics is 1.3. According to Eviews 12 User's Guide, a Durbin-Watson value close to two (2) means there's no serial correlation.

Test of Hypothesis 2

Table 7: Second Regression analysis

Dependent Variable: ROE Method: Dynamic Ordinary Least Squares Date: 05/20/21 Time: 06:48 Sample: 2012 2020 Included observations: 18				
	Coefficient	Std. Error	t-Statistic	Prob.
C	0.642889	0.345667	0.305664	0.0041
Fixed Asset	-2.896327	1.256231	-2.811672	0.0743
Current Asset	1.849211	4.770373	1.908978	0.0478
R-squared	0.572671	Mean dependent Var		3.543821
Adjusted R-squared	0.500157	S.D. dependent var		3.743328
S.E. of regression	0.687219	Akaike info criterion		18.11532
Sum squared resid	2.532690	Schwarz criterion		18.47572
Log likelihood	12.26985	Hannan-Quinn criter.		18.61521
F-statistic	4.127922	Durbin-Watson stat		1.252722
Prob(F-statistic)	0.002117			

Source: Eviews 12 result

Table 7 showed that the coefficient of fixed assets supported the expectation that the explanatory variable should be more than 0. Fixed assets had a negative coefficient of -2.8, which was significant at the 5% level, meaning that an increase in fixed assets would decrease the Return on Equity by 2.8. Also, fixed assets is not significant in explaining the Return on Equity (ROE) since the p-value was higher than 0.05 (0.0743 > 0.05). Therefore, this study accepted the null hypothesis and concluded that there is no significant connection between fixed assets and the financial performance of the telecommunication firms in Nigeria. On the other variable, current asset has an impact on ROE since the p-value is below 0.05 (0.0478 < 0.05). The expectation of this study is the coefficient of current asset to be negative as it is the asset base for debts, however, current asset shows a positive value at 1.8 which is significant at the 5% level. This means if current asset is increased by 1 unit, Return on Equity will also increase by 1.8, based on this, the study rejects the null hypothesis and asserts that there is a connection between current asset and the financial performance of telecommunication companies in Nigeria. The research question was answered and the objective achieved. In the other vein, when current asset is geared up by one, Return on Equity goes up by 1.8, and this has been

proven to be true at the 5% level. It is obvious that the current asset has an impact on ROE since the p-value is lower than 0.05 (0.0478 > 0.05). This research rejects the null hypothesis and accepts that there is a strong connection between current asset and the financial performance of telecom firms in Nigeria.

Discussion

The research into how tangible and intangible assets affect the profitability of telecoms companies in Nigeria revealed that fixed assets has a positive impact on Return on Assets (ROA). This supports Iqbal & Mati (2012) [32], Dong et al. (2012) [22], Olatunji & Adegbite (2014) [51] submission that fixed assets gives ROA a higher boost. This disagrees with Okwo et al. (2012) [50] and Martina (2015) [43], who asserted that fixed assets has a negative effect on ROA. The analysis shows that fixed asset has a negative coefficient of -2.8, which is significant at a 5% level, meaning that when fixed asset increases, ROE goes down by 2.8. The values from current asset show a negative value and insignificant influence on ROA. This supports Mawih (2014) [44] study as the study shows a negative and insignificant relationship between current asset and ROA. However, it contradicts Al-Qudah & Al-Afeef (2015) [5] finding, that there's a positive impact of current asset on

ROA. The outcome is shows that current asset has a negative coefficient of -2.56, which is significant at a 5% level. When current asset increases, ROA decreases by 2.56. This study found that fixed assets does not have an impact on ROE, but current assets does as it is an important variable for ROE. It is the same finding that Al-Qudah & Al-Afeef (2015)^[5] found with ROA.

The telecommunication companies have used their fixed assets to get a good ROA, but they have not been able to do the same with ROE. They have been able to increase the ROE with current assets, but not with their fixed assets. This is probably because current assets hold the debt of the companies, which decreases when debt is paid off.

Conclusion

So far, this research has looked into how tangible and intangible assets have affected the profitability of telecom companies in Nigeria. The firms have been using their fixed assets wisely to increase their return on asset, but have been unsuccessful in doing the same with their current assets. On the other hand, they have been able to use their current assets to increase returns on equity, but haven't had the same success with their fixed assets.

Recommendation

Based on the outcome of the study, the study recommends: Telecommunications companies in Nigeria should invest in long-term projects that require substantial capital investment in infrastructural asset and resources. This will help in generating more revenue, be more profitable, and ultimately maximize their financial performance. Managers should also focus on upgrading fixed assets.

Telecoms in Nigeria need to shrink their debt base, because it is negatively affecting the current assets. The statistics show current asset has a negative and insignificant effect on financial performance. To make liquidity and profit to increase, they should take steps to reduce the current liabilities and being proactive by having enough cash at hand, while maximize shareholder wealth.

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