Asset Structure on Economic Value Added of Listed Industrial Companies In Nigeria

Ogu, Caroline Chisara, Nmesirionye, J. A., Eke, O.A.
Department of Accounting, Michael Okpara University of Agriculture Umudike, Nigeria.
Corresponding author: carolynogu@gmail.com

ABSTRACT:
Companies are faced with financial problems which compel them to respond by adopting different financial strategies. Many companies that have gone through Mergers and acquisitions are pursuing to enhance synergy and increase assets for production, downsize and merge certain activities to increase innovation aimed at enhancing operational efficiency for growth prospects. Nonetheless, business organizations are advancing their operations and becoming competitive, posing a great threat to the growth of the market. As a result, asset structure is noted to be a good strategy to advance efficient economic value-added policies. This study examines the effect of asset structure on the economic value added of listed industrial companies in Nigeria. The study used data from 12out of 13 judgmentally selected companies (2014-2020) listed on the Nigerian Exchange Group. Data collected is analyzed using panel regression analysis; the study concludes that asset structure has a positive relationship with the economic value added of listed industrial goods companies in Nigeria. Amongst the assets structure, non-current assets and current assets both have a significant effect on economic value added, while the intangible asset has an insignificant effect on the economic value added of listed industrial goods companies in Nigeria. Thus, it is recommended that the firm's asset structure be monitored and evaluated on a regular basis by the respective company management to ensure that the composition meets the strategic requirements of the firm in order to increase the economic value added by listed industrial goods companies in Nigeria. Also, Managers of all firms should increase their allocation of resources towards long-term investments and funds, which would be intangible assets, in order to improve on their overall economic value added to the company.
KEYWORDS: *Non-current asset, current asset, intangible asset and economic value added.*

INTRODUCTION

Firms need to acquire an adequate amount of raw materials to keep the production line running until the finished goods produced are turned into cash and debts, and then inventories are replenished. Firms also need to grow their assets by increasing the amount of assets at their disposal and adopting new technologies to be competitive and increase the future flow of benefits to the firms. One aspect that requires investigation is the control of assets in firms. Firstly, the firms cannot start or expand without assets because they need assets to produce their products. These assets measure the ability of the firms to survive and compete with other firms (Reyhani, 2012). On the other hand, there is a strong relationship between the structure of assets and the structure of capital. The firm cannot borrow money without a strong asset structure, and the creditors prefer tangible assets when they decide to lend money to others (Chen Yao & Zhang, 2008). The firms hold the assets because there is no effective rental market to sell or buy these assets. Some companies hold assets (especially non-current assets) because there is a tax advantage for economic growth and technology

development purposes (Dong *et al.,* 2012). According to Schmidt (2014), asset structure consists of non-current and current assets. Organization assets determine an organization's ability to undertake projects and meet its obligations. On the other hand, value added is the degree to which an organization's financial goal has been accomplished efficiently. Value-added measures a company's financial health over time owing to the assets employed. Asset structure enhances an organization's value-added, thereby improving its production capacity.

Most of the results of the previous studies are mixed; some studies indicate positive associations, others negative associations, and several studies conclude that there is no correlation between asset structure and the value-added of firms. In most industrial goods companies in Nigeria, there is no evidence about the impact of asset structure on the company's value added. This is because most of these companies do not have an asset structure that reflects their nature. In other words, no one can distinguish this nature through its asset structure. The importance of this study is derived from the importance of assets in operating activities to generate value addition.

Business organizations are faced with financial problems which compel them to respond by adopting different financial strategies. Many companies have gone through mergers and acquisitions to increase their synergy to provide services, downsize and merge certain activities to increase innovation aimed at enhancing operational efficiency for growth prospects.

Many companies continue to experience declining performance and less value added to the firm due to failure to employ assets and capital succinctly. In contrast, some have been delisted from the capital market (Wamugu *et al.,* 2014). Such a move is contrary to stakeholders' expectations, whose interest is to see the company making tremendous strides in the market. Poor asset structure has been a cankerworm to business today. Most firms today do not pay adequate attention to their asset structure, especially the intangible assets, because they do not see nor touch it. Unfortunately, intangible is the most valued asset because it has to do with reputation and goodwill. This neglect seriously affected the performance of firms in Nigeria. In other words, poor asset structure has caused the failure of most firms today, especially in our country, Nigeria.

Consequently, the current study aimed to examine the effect of asset structure on the economic value added of listed industrial goods companies in Nigeria. According to paragraph 4.4 (a) of the *Conceptual Framework*, assets can be defined as a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity (IASB, 2018). Furthermore, the future economic benefit could contribute to the entity's operating activities (IASB, 2018). Thus, all assets have one similar characteristic: they have the potential to provide future benefits or services (Weygandt *et al.,* 2015).

Assets are generally classified into two big groups: current assets and "non-current" assets. Moreover, "non-current" asset is classified into two groups: tangible "non-current" or intangible "non-current" assets. The former term is usually called "non-current" assets or, in current standards, named property, plant, and equipment (PPE). There are two criteria to meet in order to categorize an asset as a "non-current" asset: it is used in normal business operation, rental, and administration of goods and services, and it is intended to be held and used for more than one period (Weygandt *et al.,* 2015). Examples of "non-current" assets include land, buildings, structures, and equipment. If the assets can be recognized as a PPE, paragraph 15 of IAS 16 states that the initial recognition of PPE must be measured at cost (IASB, 2013). There are three elements of cost prescribed in IAS 16: (1) Purchase price, (2) directly attributable cost, and (3) initial estimate of demobilization cost.

After having recognized an item of PPE, an entity has discretion on the measurement basis to be adopted. Paragraph 20 of IAS 16 allows two possible measurement methods: the cost model and the revaluation model (IASB, 2011). The choice of model is not applied to an individual asset but to entire assets within the class of PPE (Picker et al., 2016).

Some types of intangible assets, such as intellectual capital, are not presented in other financial statements because they are difficult to measure or quantify in monetary value. Intellectual capital refers to the collection of knowledge assets associated with an organization, which significantly enhances its competitive position by adding value to key stakeholders (Martina, 2015).

Assets Structure and economic value added.

Traditionally, there is a positive relationship between industrial goods company's value-added and non-current assets because the nature of these companies requires a high percentage of non-current assets to transfer the raw materials into finished goods. Aguzzi and Payne (2007) refer to the fact that many industrial goods companies have a "massive growth" in non-current assets. In this case, the asset structure in these companies tends to increase investment in non-current assets and decrease the investment in current assets. Moreover, the massive growth in non-current assets should lead to an increase the profit because the utilization of these assets means more products and sales (Kantudu, 2008).

Hanran and Wenshu (2014) suggest that the extent to which the firm's assets are tangible, and generic would result in the firm having greater liquidation value. Gopalan, Kadan and Pevzner (2009) argue that tangible assets, such as non-current assets, can support a higher debt level as compared to intangible assets like corporate image, business network strength and growth opportunities. Gil *et al.* (2010) added that assets can be redeployed at close to their intrinsic values since they are less specific. Therefore, assets can be used to pledge as collateral to reduce the potential of distress costs like agency costs related to debt use.

Farkoosh *et al.* (2012) provided empirical evidence of a positive relationship between debt and non-current assets, suggesting a positive relation that is in line with the theoretical arguments between the asset structure and leverage for large firms. When the volatility of the assets differs from each other, each of the single–asset entities can adjust its optimal leverage more precisely than the multi-asset firms. This advantage increases the overall value of the single-asset firms relative to the overall value of the multi-asset firm.

Armstrong et al. (2010) proposed a positive correlation between assets of different volatility levels on the overall value of the multi-asset firm. He argued that a decrease in the correlation of the assets increases the coinsurance effect, thus translating to an increase in the overall value of the firm. Amato and Burson (2007), addressing the relevancy of asset structure in connection to the value of the firm, indicated that if a financial institution discloses private information of their assets which is not available to the investors, then the institution is better off if it sells and securitizes better quality assets while keeping worse quality assets in its books and finance than with deposits. Their study showed that not only the asset structure matters but also the suitability of securitization in transforming the asset structure to optimize the value of the firm.

According to Maggina and Tsaklanganos (2012), the invisible, intangible part of the balance sheet can be classified as a family of three: individual competence, internal structural, and external structure". Meanwhile, Leif Edvinsson, as quoted by Niresh (2012), equates intellectual capital to the amount of human capital and structural capital (e.g., relationships with consumers, network management and information technology). Amato and Burson (2007) calculate excess intellectual capital as consisting of human, customer, and structural intangible assets. Thus, intellectual capital can be defined as the sum of what is produced by the three main elements of the organization (human capital, structural capital, and customer capital) related to knowledge and technology that can deliver more value to the company form of organization a competitive advantage. Aladwan and Saaydan (2015) revealed that the market value of these companies is many times their net asset value, that is, the value of their physical. The difference between the two values is the company's "hidden value", which can be expressed as a percentage of the market value ". Based on that statement, intellectual capital is the main factor that can increase market value and then a company's value.

Theoretical Framework

This study is anchored on the Growth of the Fitter Theory because there is a strong relationship between asset structure and the economic value added of firms. The growth of the Fitter theory was propounded by Alchian (1950) and believes that the fitness and economic value added of firms are depicted by the firms' profit growth, and the profitable firms grow and survive in the market while the other firms exit due to poor performance. Alchian's (1950) theoretical study argued that fitter firms grow and survive, but less vigorous firms lose their market share and exit through the evolutionary selection mechanism. Thus, if profit rates reflect the degree of fitness and economic value added, it is possible to predict that profitable firms will grow if they have the right asset structure in place. Alchian (1950) suggests that more profitable firms have a higher potential to grow since they have already shown a greater fit with the environment and asset structure they have. The study adopted the model used in the study of Whittred and Chan (2017). The adapted model is stated as follows:

Profitability= ∫ (Non-current assets & Current assets

The model is modified to become:

Economic Value Added= ∫ (Noncurrent assets + Current assets+ Intangible assets)

METHODOLOGY

The study adopts *an ex post facto* design to examine how data predict present occurrences. The population is made up of all the 13 listed industrial goods companies on the Nigeria Exchange Group as of January 2022. The researcher adopted judgmentally selected 12 companies with up-to-date financial statements for the study period (2014 to 2020) as the sample size.

RESULTS AND DISCUSSIONS

Data Analysis

Descriptive statistics

	EVA	NCA	CAA	ITA
Mean	7.470633	7.212293	7.176309	7.011101
Maximum	8.574323	8.527622	8.346592	8.888553
Minimum	5.832594	5.805190	5.420368	4.042024
Std. Dev.	0.706918	0.658401	0.740129	1.265743
Skewness	-0.528660	0.065867	-0.722861	-0.925589
Probability	0.139569	0.613329	0.024179	0.001793
Observations	84	84	84	84

Table 1 presents the descriptive statistics of all the variables. The number of observations for the study is 84. Economic value added (EVA) records a mean of 7.470633, with a deviation of 0.706918. EVA also reveals a maximum value of 8.574323 and a minimum value of 5.832594. Non-current asset (NCA) reflects a mean of 7.212293 and a standard deviation of 0.658401, it has a minimum value of 5.805190 and a maximum value of 8.527622. Current asset (CAA) reflects a mean of 7.176309 and a standard deviation of 0.740129; it has a minimum value of 5.420368 and a maximum value of 8.346592. Intangible asset (ITA) reflects a mean of 7.011101 and a standard deviation of 1.265743; it has a minimum value of 4.042024 and a maximum value of 8.888553. These various means and deviations shown by the variables show the level of variation amongst the variables in the listed firms.

The Skewness statistics of the study variables fall between -0.925589 to 0.065867 and shows that the set of data is not skewed outside the accepted range of -2 to +2, which is considered the accepted range of skewness for normalized data (Gujarati, 2007). The Jarques Berra probability statistics revealed values that are <0.05 for CAA and ITA, which depicts the non-stationarity of data except the EVA NCA variables with a Jarques Berra Probability statistic>0.05. To correct the non-stationarity of CAA and ITA data, further data validity checks are conducted.

Validity test

	Coint	UNIT ROOT	ORDER	HAUSMAN
EED		1st Diff	I(1)	
FFS	6/11	1st Diff	I(1)	**0.1311**
PPF		1st Diff	I(1)	
FFG		1st Diff	I(1)	

The validity table above presents the results for further validity tests to enable a non-spurious regression result. This test is necessary to ascertain the level of stationarity unit root, and cointegration tests are conducted so as to filter out corresponding data in the model that is capable of distorting the validity of regression results (Outliers). From the unit root test, cointegration test and Hausman test results, the table above is computed. From the table above, it is deduced that all the variables under review are unit roots at 1st difference, which led to the cointegration test. The cointegration result reveals six (6) cointegrating statistics with values <0.05 out of 11 overall test statistics. This means that the data as a whole is reverting in the long run. This necessitates the adoption of an ordinary least square method. To choose between the random and fixed effect model, the Hausman test is conducted. The Hausman probability value of 0.1311 enabled the study to choose the random effect model.

Regression of the Estimated Model Summary

This section presents the results produced by the model summaries for further analysis. Thus:

Dependent Variable: EVA
Method: Panel EGLS (Cross-section random effects)
Date: 01/15/22   Time: 11:39
Sample: 2014 2020
Periods included: 7
Cross-sections included: 12
Total panel (balanced) observations: 84

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.190809	0.166399	-1.146700	0.2549
NCA	0.554773	0.031824	17.43227	0.0000
CAA	0.508139	0.030242	16.80215	0.0000
ITA	0.001954	0.010426	0.187394	0.8518

R-squared	0.968306	Mean dependent var	4.202942
Adjusted R-squared	0.967118	S.D. dependent var	0.453113
S.E. of regression	0.082165	Sum squared resid	0.540092
F-statistic	814.7150	Durbin-Watson stat	2.306013
Prob(F-statistic)	0.000000		

The regression table above presents the regression results between NCA, CAA, ITA, and EVA. The model summary table above distils the following information.

The R^2 value stood at approximately 0.968. The R^2, otherwise known as the coefficient of determination, shows the percentage of the total variation of the dependent variable (EVA) that can be explained by the independent or explanatory variables (NCA, CAA, and ITA). Thus, the R^2 value of approximately 0.968 indicates that 96.8% of the variation in economic value added of the listed industrial companies in Nigeria is determined by the structure of their assets (NCA, CAA & ITA) while the remaining 3.2% (i.e. $100-R^2$) is accounted by other factors not included in this model.

The adjusted R^2 of approximately 0.967 indicates that if the model is adjusted and other factors are considered, this result will deviate from it by only 0.001 (i.e. 0.968 – 0.967). This result shows that there is a deviation of the sample variable examined and the factors to be considered by 0.1%. The table further shows the fisher statistics of 814.7150 with a Probability value of 0.0000, which is proof that the asset structure as a whole contributes to the economic value added of listed industrial companies in Nigeria in a significant way. Also, the Dublin Watson statistic value of 2.306013 further proves the absence of autocorrelation issues in the model (Koutsoyiannis, 2007).

The regression result, as presented in the table above, shows that when the asset structure variables are held stationary, the level of economic value added (EVA) is estimated at -0.190809. This implies that given the intercept-only model, there will be a decrease in the economic value added of listed industrial companies up to the tune of 19% occasioned by factors not incorporated in this study. Thus, a unit increase in NCA will lead to an increase in EVA of 55.5%. Also, a unit increase in CAA will lead to an increase in EVA to the tune of 50.8%, while a unit increase in ITA will lead to an increase in EVA by approximately 0.2%.

CONCLUSION AND RECOMMENDATIONS

Based on the findings of this study from the test of the three research hypotheses earlier formulated in the study, the study concludes that asset structure has a positive relationship with the economic value added of listed industrial goods companies in Nigeria. Amongst the assets structure, non-current assets and current assets both have a significant effect on economic value added, while the intangible asset has an insignificant effect on the economic value added of listed industrial goods companies in Nigeria. The study recommends that the respective company management should monitor and evaluate the firm's asset structure on a regular basis to ensure that the composition meets the strategic requirements of the firms and increases the economic value added of listed industrial goods companies in Nigeria. In addition, Managers of all firms should increase their allocation of resources towards long-term investments and funds that invest in intangible assets in order to improve the overall economic value added to the company.

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