

Effect of Firm's Attribute on Value Relevance of Accounting Information of Quoted Manufacturing Companies in Nigeria

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Abstract. The objective of this study centres around a fundamental aspect of business health. It provides an empirical analysis of how various characteristics of firms influence the value relevance of accounting data among listed manufacturing companies in Nigeria, covering a timeframe from 2017 to 2023. The research sample comprises ten companies, with the firm attributes examined including size, age, leverage, and the count of institutional stakeholders. Book value serves as the indicator of value relevance in accounting information. Using panel regression analysis conducted through E-Views, the study establishes a positive correlation between firm attributes and the value relevance of accounting information. Significant findings include the positive impact of firm size on value relevance, coupled with a considerable negative influence attributed to firm age.

Furthermore, while leverage's effect remains negative and statistically insignificant, the number of institutional investors emerges as a significant positive factor. The research concludes that larger firms typically enjoy higher book values, older firms face performance challenges, and institutional investors provide crucial oversight that protects other shareholder interests. The recommendations suggest that publicly listed manufacturing companies in Nigeria should aim to decrease their leverage and enhance equity financing options to alleviate the financial burdens incurred from external debt.

Keywords: Firm Attributes; Institutional investors; Value Relevance; Leverages; Accounting Information; Firm Size.

INTRODUCTION

Demand for relevant accounting information influenced by quantitative and qualitative data of firm attributes by various stakeholders or users is increasing due to the growing complexity of the business environment worldwide and the global financial crisis in the past. The term "firm attributes" encompasses the factors that impact a firm's internal and external decision-making [1]. These attributes are integral to business entities and can influence the value relevance of accounting information in both positive and negative ways. Key firm attributes, such as ownership structure, age, size, leverage, liquidity, profitability, institutional characteristics, and operating expenses, can significantly affect the accounting information produced by the firm. The internal and external factors of the firms are otherwise referred to as firm attributes, which will be the significant scope of this study. What constitutes the concept of corporate firm attributes has been viewed differently by different researchers. These typically include firm size, growth, liquidity and investment opportunity, risk, and intangibility. Others include firm age, cash flow, dividend, leverage, and internal governance mechanisms [2, 3]. Therefore, variables that consist of firm attributes will be chosen based on the researcher's interest.

The size of a firm indicates its scale in terms of infrastructure and workforce. It also measures operational efficiency, suggesting larger firms are more inclined to realise economies of scale. Consequently, from this perspective, firms of greater size tend to place higher importance on accounting information.

The term "firm age" denotes the years a company has been publicly traded on the Nigerian Stock Exchange and engaged in capital market activities. This characteristic is a critical factor influencing the value relevance of accounting information. Empirical studies have consistently shown that the age of a company significantly affects its financial disclosures, as established firms typically refine their annual reporting processes over time. Authors [4] argue that such advancements in reporting practices mitigate asymmetric information, thereby increasing the relevance of accounting information.

Authors [5] established that leverage and value relevance of accounting information affect each other. A financial statement has two fundamental characteristics: relevance and reliability. For a

financial statement to become effective and efficient, its information about firm attributes in qualitative and quantitative terms must be reliable and relevant [6]. Internal and external factors influence the value relevance of accounting information because the opinions formed by users of financial statements are influenced mainly by the accounting figures or information of the firms. Information from firm attributes is analysed to get a clearer picture of the firm and form a basis for investors' perception of the firm's performance.

The motivation behind this study is fundamentally linked to the rapid growth and increasing relevance of service companies. The last decade has been marked by significant advancements in service-oriented industries in Nigeria. The contribution of the service sector to Nigeria's economic growth and development has also seen a marked increase during this time. Examining the effects of firm attributes and the value relevance of accounting information is motivated by the recognition that publicly listed companies use financial statements to engage with their equity shareholders and the wider public.

Moreover, as investors express a growing interest in gaining insights into this sector's activities in Nigeria, an empirical study investigating the relationship between firm attributes and the value relevance of accounting information for quoted service companies in Nigeria is essential. Hypothesis of the study

To authenticate the data analysis, we will evaluate the following null hypothesis. This research will serve as a resource for shareholders and creditors by elucidating the influence of firm attributes on the value relevance of accounting information. This understanding will empower them to make informed decisions and judgments regarding investments in manufacturing companies listed in Nigeria. Furthermore, the study will be advantageous for managers of these companies, as it will highlight the importance of the value and relevance of their accounting information, prompting them to prioritise this area.

Last but not least, intending and future researchers who want to investigate or replicate this study will also benefit from its findings. This study will provide empirical evidence about how firms' attributes affect the value relevance of accounting information, making them beneficiaries of this study. Moreover, it will serve as a basis for

developing existing studies and add value to existing knowledge.

Literature review

Concept of firm attributes. Authors [7] describe firm attributes as the distinctive characteristics or specific features that set one firm apart. Authors [8] further elaborate that these attributes encompass firm-level variables that influence internal and external decision-making processes over time. Author [9] notes that the attributes of a firm are typically unique to each organisation, shaping stakeholders' perceptions regarding the firm's current status and future potential. Additionally, authors [8] assert that firm attributes are incentive variables that tend to remain stable at the firm level over time. Similarly, author [1] emphasises that these attributes impact decision-making within and in the firm's external environment.

Concept of firm size. According to the author [10], firm size is defined by the company's total assets, which can be evaluated through their physical characteristics or the quantity of assets acquired. In essence, firm size denotes the magnitude of a business in terms of its assets and personnel. It acts as a measure of the firm's growth rate. The notion of firm size involves scaling up business operations, which is essential for enhancing revenue, profit margins, workforce numbers, and infrastructure. Authors [11] also suggested that firm size signifies the rate and level of growth appropriate for a particular situation.

Concept of firm age. Firm age is when the firm was listed on the Nigerian stock exchange. The older a firm is, the more likely it is to disclose more accounting information than younger firms because of its extended experience and deep knowledge and understanding of financial reporting. Older firms also have the advantage of having well-organised professional staff that sort out challenging aspects of their financial statements, and large firms protect their reputation to avoid Government intervention [12].

Concept of Leverage. Leverage is the degree to which a firm funds its assets with debts rather than equity [13]. Leverage is the firm's mix of financial liabilities, which refers to the debt amount a firm uses in capital structure to finance its assets and the various financial instruments that aid potential return on investment [11]. Author [14] defines leverage as funding a firm and

its capability to meet its financial obligations, stating, "Leverage is defined as the degree to which a company uses fixed income security such as debt and preferred equity to finance its business activities." A high degree of leverage will lead to high-interest payments and may be at risk of insolvency/bankruptcy if debts are not settled at the due date. Author [9] asserted that there are two types of leverage: financial and operating.

Concept of Institutional Investors. Author [15] says that institutional investors/stakeholders play a significant role in monitoring a firm's managers; thus, firms with low shareholdings of institutional owners may have weak governance structures. Shareholders are the legal owners of the firm who have monitoring abilities, and they invest in shares to enable the firm to raise funds to finance its activities [16]. Institutional investors are the number of existing shareholders who are holders of ordinary shares, meaning individual owners of ordinary shares. Firms with significant institutional shareholding numbers are expected to have more reliable accounting information [15].

Concept of Value Relevance of Accounting Information. The need for information among investors and various stakeholders is critical for making sound financial decisions, as they utilise accounting data from financial statements provided by firms to assess risks and values associated with these entities; this highlights the necessity for accounting information that is both relevant and valuable. When accounting information possesses the qualities of relevance and reliability, it becomes instrumental for investors and stakeholders in their decision-making endeavours. However, if such information is deficient in these two attributes, it may prove unhelpful and misleading, potentially resulting in future financial losses. According to authors [17], accounting information is deemed value-relevant when it exhibits a significant relationship with a firm's market value; a lack of correlation indicates that the information does not fulfil a fundamental goal of financial reporting. Authors [18] also argue that for stakeholders to trust and rely on accounting information, it must embody specific characteristics, including timeliness, neutrality, relevance, accuracy, transparency, comparability, predictability, understandability, verifiability, and unambiguity.

Concept of Book value. Book value serves as a critical metric for assessing the value relevance of

accounting information, representing the shareholders' equity as delineated in the statement of financial position, which reflects a company's financial health. Author [19] notes that book value evaluates the correlation between accounting data and capital market valuations. Rational investors utilise book value to gauge firms' value and associated risks. It denotes a company's net worth, as recorded in the statement of financial position, identified explicitly as shareholders' equity, which is scrutinised before prospective or current investors acquire shares. It, therefore, means that book value is a fundamental measure that influences an investor's decision to buy fewer or more company shares and pushes the price of shares upward or downward. Book value appeals more to investors who assess its association with share price by using the price-to-book ratio. The share price is a reflection of a firm's net worth. Share price increases when the earnings of a firm grow and decline or reduces when the earnings of a firm decrease.

Empirical Review

The literature review is centred on previous works carried out by researchers who have a bearing on this study.

Firm Size and Value Relevance of Accounting Information. The research conducted by authors [20] focused on the factors influencing the value of manufacturing firms listed in Indonesia. The study identified four key independent variables: social responsibility, corporate governance, firm size, and profitability. The population for this research included 133 firms listed on the Indonesia Stock Exchange, with a sample of 42 firms analysed. Data were examined using partial least squares techniques. The findings indicated that social responsibility, corporate governance, firm size, and profitability positively correlate with firm value. The study did not specify the duration of the research, which was conducted in Indonesia. The researchers intend to perform a similar study in Nigeria, utilising quoted manufacturing companies from 2012 to 2018 over seven years.

Author [11] explored the relationship between company characteristics and firm value in the context of property and real estate companies listed on the Indonesia Stock Exchange. The study utilised a purposive sampling approach, focusing on 30 firms from the sector from 2010 to 2012. The independent variables examined

included managerial ownership, capital structure, firm size, and return on assets. The study's findings demonstrated that managerial ownership, firm size, and return on assets significantly affect firm value. The researcher advocates collecting additional variables and data from diverse companies and applying different analytical models in subsequent research.

Leverage and Value Relevance of Accounting Information. In their study, authors [21] explored the link between leverage and firm value among manufacturing firms listed on the National Stock Exchange in India, analysing data from 2001 to 2002 and 2010 to 2011. The research involved 231 manufacturing firms, with operating and financial leverage acting as independent variables, while the price-to-earnings ratio was used as a proxy for firm value. The analysis was conducted using an ordinary least squares regression model. The results indicated a statistically insignificant negative relationship between firm value and operating leverage and a statistically insignificant relationship between firm value and financial leverage. The present study will be conducted in Nigeria, focusing on quoted manufacturing companies, and will extend the analysis period to 2012 through 2018.

Authors [22] investigate the correlation between financial leverage and the value of firms and assess the impact of financial leverage on firm valuation. The research utilised data from five companies listed on the Nigeria Stock Exchange over six years, spanning from 2007 to 2012, with information sourced from the annual reports of the selected firms. The analysis employed the Ordinary Least Squares statistical method to evaluate the data and test the hypotheses. The findings indicated a significant relationship between financial leverage and firm value, along with a notable effect of financial leverage on the valuation of firms. For the current study, the researcher intends to focus on publicly traded manufacturing companies, extending the analysis period to seven years, from 2012 to 2018.

Age and value relevance of accounting information. The relationship between a company's age and the importance of accounting information has been thoroughly analysed and found to be considerable, given that established companies must continually refine their annual reports. This ongoing enhancement diminishes asymmetric information, elevating the relevance of accounting data. Various scholars have ex-

explored how a company's age affects the significance of both earnings and cash flows.

The study by authors [23] explores how foreign ownership structure impacts the valuation of manufacturing firms utilising offshore debt financing, particularly emphasising those listed on the Indonesia Stock Exchange between 2014 and 2016.

Institutional investors and value relevance of accounting information. The research by authors [24] in 2018 focused on the relationship between institutional ownership, firm size, and firm value in companies listed on the Indonesia Stock Exchange between 2012 and 2014. The study analysed a sample of 66 manufacturing firms, employing least squares regression and moderated regression analysis for data evaluation. The outcomes revealed that institutional ownership and the size of firms play a crucial role in determining firm value. There is a need to fill in the gap in this study, such as the period covered was just three years stop, ped in 2014, and was conducted in Indonesia. Therefore, the researcher intends to extend the period from 2012 to 2018 and use quoted manufacturing companies in Nigeria.

Theoretical Framework

Stakeholders such as existing and intending investors depend highly on accounting information of firms' attributes, which must be reliable and value-relevant to avoid being misled in investment decisions. Firms' attributes concern a firm's internal and external characteristics, such as size, age, leverage, and institutional investors. Relevant and reliable accounting information is necessary for every firm to increase the firm's value and shareholders' wealth. Accounting figures reported on the financial statement should always be helpful and relevant to the users to avoid the consequences of sending wrong signals.

Reviewed empirical literature showed that firm attributes affect the value relevance of firms' accounting information. Larger firms, in terms of assets, employees, and managers, tend to provide more information that is value-relevant to their users. Older firms increase in knowledge and experience and are expected to provide accounting information that is more relevant and reliable than younger firms. Highly leveraged firms could send a signal to their users that discouraged creditors from giving out supplies on credit bases. Financial institutions will also require more

information from the firms to enable them to assess how the firms will meet their financial obligations, and investors may be discouraged from buying more shares as well. More significant numbers of investors will monitor the control mechanism of the firms strictly than few investors, which will improve the firm's value and shareholders' wealth.

METHODS

The researcher will make use of data from secondary sources since quantitative data form the basis of the study; data gathered for the study will be extracted from the published audited annual report of the quoted Manufacturing companies in Nigeria for the period of 2017 to 2023

The study will employ panel regression through Stata's aid to examine and analyse the effect of the firm attribute of value relevance of accounting information and the relationship between both variables of quoted manufacturing companies in Nigeria. The independent variable is a firm attribute, which will be proxied by firm size, firm age, leverage, and institutional investors. In contrast, the dependent variable is the value relevance of accounting information, which will be proxied by the book value of equity.

Model Specification. To express the model of the regression in equation form is.

$Y = \text{dependent variable}$

Proxies:

$FS_{it} = \text{Firm size for firm } I \text{ in year } t$

$FA_{it} = \text{Firm age for firm } I \text{ in year } t$

$LEV_{it} = \text{Leverage for firm } I \text{ in year } t$

$ISN_{it} = \text{Institution number for firm}$

$I \text{ in year } t$

$BV_{it} = \text{Book Value for firm } I \text{ in year } t$

$\text{Firm size} = \text{Natural logarithm of total assets of the firm}$

$\text{Firm age} = \text{numbers of years from when it was listed on Nigerian Stock Exchange}$

$\text{Leverage} = \text{Total debt to Total asset}$

$\text{Institution number} = \text{Number of share holders}$

$\text{Book value of equity} = \text{Book value per case}$

RESULTS AND DISCUSSIONS

This section summarises four explanatory variables and the value relevance of accounting information across 20 companies over seven years.

The average book value is 2.2864455, with a corresponding standard deviation of approximately 1.37065; this indicates that the book value per

share varies from its mean by only 13 kobo in either direction. The highest recorded book value per share during this period is 3.989262, while the lowest is -812479. The range of book values among the companies extends from -81 kobo to 3.9 kobo.

Table 1 – Descriptive Statistics

| | BV | FS | FA | LEV | IS |
|--------------------|-----------|----------|----------|----------|----------|
| Mean | 2.2864455 | 7.526847 | 28.00714 | .3257043 | .2760756 |
| Maximum | 3.989262 | 21.7654 | 53 | 1.09981 | .5915557 |
| Minimum | -.812479 | 3.38525 | 1 | .001151 | .0023515 |
| Standard Deviation | .137065 | 5.117531 | 12.66758 | .320614 | .1594069 |
| Observation | 140 | 140 | 140 | 140 | 140 |

The average size is calculated to be 7.526847, accompanied by a standard deviation of 5.117531; this suggests that firms require approximately N 7.5 billion. The data exhibits considerable variability, as evidenced by a minimum value of 3.02555 and a maximum value of 21.7654. Consequently, to achieve a minimum book value per share, firms must possess assets valued at N 3.02 billion, while a maximum book value per share necessitates assets valued at N21.75 billion. Furthermore, the statistics regarding firm age indicate a mean value of 50.68, suggesting that the average firm in this industry is approximately 28 years old. The standard deviation of 12 indicates a relatively tight distribution around the mean. The data also reveals a minimum firm age of 5 years, representing the youngest firms in the industry, and a maximum age of 52 years, suggesting that most sampled firms and others in the industry do not exceed 52 years since their listing on the Stock Exchange.

The minimum and maximum leverage values for the firm are .001151 (5%) and .49981 (50%), respectively, while the average leverage stands at .3257043 (33%). This data implies that the firm's capital structure is predominantly financed through debt rather than equity. In the case of institutional investors, the mean leverage is .2760756, with a standard deviation of .1594069, indicating that the standard deviation is relatively small compared to the mean, reflecting a concentration around the average. Furthermore, institutional investors have a minimum leverage value of .0023515 and a maximum of 5.91557.

Correlation Matrix. This section aims to clarify the standard relationships that typically exist among the variables under examination. It is instrumental in identifying strong associations among the variables, which can contribute to multicollinearity.

Table 2 – Correlation Matrix

| | BV | FS | FA | LEV | ISN |
|-----|---------|---------|---------|--------|-------|
| BV | 1.000 | | | | |
| FS | 0.2263 | 1.00000 | | | |
| FA | -0.3253 | -0.2123 | 1.0000 | | |
| LEV | -0.0356 | -0.0955 | -0.1447 | 1.0000 | |
| IS | 0.0128 | -0.1617 | 0.4366 | 0.0169 | 1.000 |

The correlation coefficient between firm size and the book value of publicly listed manufacturing companies is 0.2263; this indicates a positive as-

sociation between firm size and book value, suggesting that firm size accounts for approximately 22% of the variation in book value. In contrast,

the correlation between book value and firm age is -0.3253, indicating a negative relationship. Additionally, leverage exhibits a negative correlation with book value, quantified at -0.0356, which suggests that as leverage increases, book value tends to decrease. Conversely, the relationship between institutional investors and book value is positive, with a coefficient of 0.0128. Overall, the findings presented in the table suggest that multicollinearity is not a concern; however, further testing will be conducted to confirm this observation.

Table 3 – Robustness Tests

| VARIABLE | VIF | I/VIF |
|----------|------|----------|
| FA | 1.31 | 0.761061 |
| IS | 1.25 | 0.799141 |
| FS | 1.07 | 0.934362 |
| LEV | 1.05 | 0.956097 |
| MEAN IF | 1.17 | |

The assessment of multicollinearity among independent variables in a study can be effectively conducted using tolerance values and the variance inflation factor (VIF) endorsed by numerous scholars. A VIF of less than 10 for all independent variables suggests that multicollinearity is not problematic, affirming the model's suitability. Furthermore, tolerance values provide additional insight; a tolerance value of 1 or greater indicates the presence of multicollinearity, while values falling below 1.00 across all variables signify that multicollinearity is not present.

The variance inflation factors of all the study's independent variables are consistently less than 10, which is the benchmark for determining multicollinearity.

This section of the study discusses the findings in line with other studies and compares them with past research findings.

Firm size and value relevance. The quantitative analysis indicated a significant positive correlation between firm size and value relevance; this suggests that the size of a firm plays a crucial role in determining the value relevance of accounting information for publicly listed manufacturing companies in Nigeria. Consequently, larger firms tend to exhibit a higher book value. This finding aligns with the research conducted by the authors [20, 25], all of whom identified a significant

positive relationship between firm size and value relevance.

Age and Value Relevance. The findings indicated a significant negative relationship between the age of a firm and its value relevance. This empirical evidence implies that firms generally exhibit declining performance as they age. Such a negative impact may also be linked to environmental factors, including heightened competition and a lack of organisational motivation – often called the syndrome of being too large or too old to adapt. These results align with the conclusions drawn by the authors [23, 26]. However, this outcome contrasts with the research conducted by the authors [27].

Leverage and value relevance. The research indicated a negative but statistically insignificant impact of leverage on the value relevance of accounting information among listed manufacturing companies in Nigeria; this suggests that leverage exerts a negative and non-significant influence on the value relevance of accounting data for these firms. This outcome aligns with the conclusions drawn by the authors [21, 28]. Conversely, this finding contrasts with the results of authors [22], who identified a significant effect of leverage on firm value.

Institutional Investors and Value Relevance. The findings indicate that institutional investors positively influence the value relevance of publicly listed manufacturing firms in Nigeria; this suggests that institutional shareholders may monitor managerial actions, thereby safeguarding the interests of other shareholders in these companies. This conclusion aligns with the research conducted by the authors [24, 29]. Such results support Agency Theory, which examines the dynamics between principals (shareholders) and their agents (managers).

CONCLUSIONS

The research demonstrates a notable and positive impact of firm size on the value relevance of accounting information, establishing firm size as a key determinant for listed manufacturing companies in Nigeria. In contrast, the study uncovered a significant negative relationship between firm age and the value relevance of accounting information, suggesting that increased age may correlate with less effective management practices. This decline could potentially lead to higher production costs and lower profitability, as there

is a recognised link between these two factors. Additionally, the analysis revealed that leverage hurts the value and relevance of accounting information. However, this effect is statistically insignificant, indicating that leverage does not significantly determine value relevance in this sec-

tor. On a more positive note, institutional ownership was found to dramatically enhance the value relevance of accounting information, implying that a more significant number of institutional investors contributes positively to the perceived value relevance of these firms.

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