

## Environmental disclosure practices dimensions and total value-added growth of the nigerian listed manufacturing companies

Timothy Soetan<sup>1\*</sup> , Solomon Olusegun-Adeoye<sup>2</sup> , Olubisi Grace-Makinde<sup>2</sup> , Abolade Francis-Akintola<sup>3</sup> 

<sup>1</sup>*Babcock University, Ilishan Remo (Nigeria)*

<sup>2</sup>*Department of Business Administration & Marketing, Babcock University (Nigeria)*

<sup>3</sup>*Department of Finance, Babcock University*

\*Corresponding author: [soetant@babcock.edu.ng](mailto:soetant@babcock.edu.ng)

[adeoyeso@babcock.edu.ng](mailto:adeoyeso@babcock.edu.ng), [makindeo@babcock.edu.ng](mailto:makindeo@babcock.edu.ng), [akintolaa@babcock.edu.ng](mailto:akintolaa@babcock.edu.ng)

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### Abstract

**Purpose:** This research explored the interaction of environmental disclosure practices dimensions (environmental financial information, environmental non-financial information, and environmental performance information) on total value-added growth of the Nigerian listed manufacturing companies.

**Design/methodology/approach:** Using a secondary data set culled from 39 Nigerian manufacturing businesses traded on the Stock Exchange between 2010-2019, this investigation utilised an ex post facto research strategy. The multiple regression statistical approach was utilised to analyse the data.

**Findings:** The findings indicated that environmental disclosure practices dimensions (environmental, financial information, environmental non-financial information, and environmental performance information) significantly and positively affect the total value-added growth of Nigerian listed manufacturing companies.

**Research limitation/implication:** This study focused on Nigerian-listed manufacturing companies. Future studies could include non-listed manufacturing companies. Also, other industries could be considered in future studies.

**Originality/value:** As far as the authors are aware, this is the first research to establish a connection between the environmental disclosure procedures of traded manufacturing businesses in Nigeria and the overall value-added increase. In addition, the findings showed the interaction between environmental disclosure practices factors on total value-added growth in listed manufacturing businesses in Nigeria are novel and significant.

**Keywords:** Total value-added growth, Environmental disclosure, Environmental accounting, Nigeria, Manufacturing companies

**Jel Codes:** L6, Q51, Q5

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## 1. Introduction

A product or service is considered value-added if the firm invests in improving it before selling it to consumers (Orshi, Barde & Muhammas, 2022). Companies may increase their income and profits by attracting more consumers via the enhancement of their products or services (Offia, 2021). The experiences of emerging nations such as Nigeria that rely heavily on commodities as a source of income illustrate a common difficulty in developing nations: increasing domestic production capacity and adding value (Synder, Ogbonna & Akani, 2020). Developed nations' commodity sectors are crucial to global trade integration, but in emerging countries such as Nigeria, commodity sectors are even more important (Akpan & Nkata, 2023). Nearly two-thirds of emerging nations rely on commodities exports. For these nations, the percentage of their overall export revenues that come from commodities is at least 60% (Onoh, Biradawa & Ndubuisi, 2022).

The manufacturing sector's average yearly growth rate since the COVID-19 pandemic recovery has been slow and feeble, coming in at 3.4% in 2021 and 2.5% in 2022. As a result, the industry's input to Nigeria's GDP has been significantly lower than what is required to be competitive on a global scale, averaging 10% for nearly twenty years (Onura, Obiora & Sandra, 2022). It is clearly essential to reevaluate growth strategies within the sector and address critical concerns because the Nigerian manufacturing sector has been hindered by increasing international and domestic challenges, leading to underperformance compared to other countries (Ukoh, Nduokafor & Nworie, 2024).

The manufacturing sector is vital to the growth of any economy. It is a potent factor that depends on the paths of development, efficiency, and competitiveness. The manufacturing sector's resilience and efficiency may have a significant impact on the overall economic development of a country. Manufacturing is crucial to building a more affluent economy, and we look at the many ways in which this is true (Olomu, Ekperiwere & Akinlo, 2020). Hence, there is a need to improve total value-added growth. Total value-added growth originates from the production process. Manufacturing companies acquire raw materials that they process and transform into finished products. The companies incurred costs in the process of procuring the raw materials that were processed and transformed into finished products by the employees. The finished products were expected to be sold to the consumers in the market. The difference between the cost incurred in procuring the raw materials that were turned into finished products and the market value of the finished products is termed value added. It is the measurement of the performance of the business organisations. It shows how the business organisations are doing, especially financially (Islam, 2019; Kenton, 2019).

Value added helps business organisations expand their business activities in terms of employing more workers and increasing market share, sales revenue, and profitability. It measures the net worth of the business organisation (Khan, Hou, Le & Ali, 2021). Business organisations need to consistently improve the value they add in order to ensure their survival and long-term sustainability. The term "value-added implies the amount by which the monetary worth of the information's final products exceeds their initial investment" (Murshed, Numakhanova, Elheddadd & Ahmed, 2020). Value added is used to expand the business activities of the organisations, pay capital costs in terms of interest rate, and give dividends to shareholders, workers' salaries, and other stakeholders (Corporate Finance Institute, 2019).

The importance of value-added cannot be overemphasised as the business organisation's going concern will be at risk due to its inability to meet its obligations to stakeholders. Companies need to add value over a long period to be able to meet their obligations to their stakeholders. Value added is for all stakeholders such as the employee, loan providers, shareholders, community, and others. Value added is the wealth of the business organisation. It is the business organisation's wealth generation in terms of sales revenue minus the cost of production and wealth distribution to all parties, including shareholders, environment advocates, the community, the environment, the government, loan providers, and others (Francis, 2017).

Van Staden (2000) posits that the additional advantage created by the business organisation and its employees could be attributed to the value added. Value-added information provides stakeholders with annual reports with non-financial and financial information, thus making it a useful decision-making tool for organisational management. The incorporation of social and environmental information in yearly reports helps the users of the annual reports to make informed business decisions in management. The value-added information is supported

by social theories such as organisational political cost theory, social contract theory and legitimacy theory. The management can publish the information on value-added to limit the future expectations of all stakeholders from the company as the management has influence on the preparation and disclosure of such information.

The value generated by a company or other organisation's production resources and the subsequent distribution of that value to its stakeholders is defined by Ianniello (2010). Preparedness for social reporting, financial reporting and management control are the three characteristics he listed as characteristics of value-added information. The preparation of value-added information for management control is known as internal use, while financial reporting and social reporting are for external usage. The advantage of this is that it gives the users of the accounting information more information to make informed business decisions during the decision-making process. The disadvantage is the extra costs incurred in preparing the value-added information.

Business organisations need to grow their value added in order to stay in business, and those that cannot do so risk the possibility of going out of business. Value-added growth of business organisations has been linked to their environmental activities and it is essential for business organisations that want to solve the problem of declining value-added to address the challenges of their environmental activities (Kassem, Trenz, Hrebicek & Faldik, 2016). The study indicated that the value added of business organisations that cannot reduce their hazardous waste have seen their total value added negatively affected. The implication of this is that business organisations that cannot grow their value-added will not be able to maximise their shareholder wealth while meeting the needs of other stakeholders. These types of business organisations will not be able to compete in their industry, and as a result, they will be out of business.

Research in Nigeria has focused on the industrial industry, among others, to determine the interactions between environmental disclosure procedures and total value-added growth. This study aimed to address a gap in research by investigating the interactions between the aspects of environmental disclosure policies and the total value-added growth of listed manufacturing businesses in Nigeria. This research looked at the effect of environmental disclosure policies on overall value-added development of traded Nigerian manufacturing enterprises, all within the scope mentioned above. According to Adegbe, Ogidan, Siyanbola and Adebayo (2020), Nigerian food and beverage manufacturing businesses' share values are positively and significantly impacted by environmental accounting standards. If traded food and beverage firms in Nigeria were to engage in environmentally friendly initiatives, it would boost their share value, which in turn would increase the value of the company and its operations. What this means is that manufacturing company organisations may increase their worth by doing business in an eco-friendly way.

This study has contributed to the body of knowledge by adding to the limited literature on the link between environmental disclosure practices dimensions and total value added growth. This study also presented the readers with more understanding of environmental disclosure practices dimensions and total value added growth. The study also contributed to the body of knowledge by formulated and tested hypotheses on how environmental disclosure practices dimensions can affect the total value added growth of the manufacturing companies in Nigeria.

The remaining paper is organised as follows: the literature review and hypotheses development take place in section two. Section three presents the research methodology. Section four presents results, interpretation, and discussion of the empirical investigation. Section five presents concluding remarks. Finally, section six presents limitations of the study

## **2. Literature Review and Hypotheses Development**

### **2.1. Theoretical Framework**

Stakeholder theory and signalling theory provide the most compelling explanations for the theoretical underpinnings of the environmental disclosure practices aspects and total value added growth. In 1984, Richard Edward Freeman put out stakeholder theory (Freeman, 2004). Management, according to stakeholder theory, should not prioritise the interests of shareholders above those of all other interested parties when making decisions. It is commonly known that shareholders own businesses. However, this theory argues that when making decisions, organisational management should also consider stakeholders, who can impact both the

corporation's operations and those affected by them (Langrafe, Barakat, Stocker & Boaventura, 2020; Harrison, Freeman & Abreu, 2015). Since consumers and society at large are demanding that businesses account for the environmental damage their operations cause, decision-makers must take stakeholder interests into account (Boaventura, Bosse, de Mascena & Sarturi, 2020; Freeman, Phillips & Sisodia, 2018; Friedman & Miles, 2002). Businesses would be able to carry out their operations more smoothly if they adopted the tenets of stakeholder theory. Because of the delicate nature of manufacturing businesses' commercial operations, this would have a multiplicative effect on their overall value added growth.

The signalling idea was first out by Spence (1973). The problem of information asymmetry between management and organisational stakeholders is addressed by this approach. According to this school of thought, upper-level management has the best vantage point from which to report on how their company's actions affect Mother Earth. Hence, for the sake of making educated business choices, it is anticipated that management would provide the organisational stakeholders with the necessary environmental knowledge. Due to the controversial nature of environmental problems and the importance of environmental activities to overall value added development, signalling theory is applicable to this research (Mohamed, Garoui & Sweiti, 2020; Simoni, Bini & Bellucci, 2020; Levy & Lazarovich-Porat, 1995). How the company handles environmental issues is becoming a topic of discussion among the many interested parties. All stakeholders should get the message that the organisation's management is doing its part to protect the environment. According to Niesten and Jolink (2020), Mahmood, Kouser and Masud (2019), and Connelly, Certo, Ireland and Reutzel (2011), stakeholders, including investors, lenders, and consumers, may cut ties with a firm if its management sends a poor signal about its environmental activities.

## **2.2. Environmental Disclosure Practices Dimensions and Total Value Added Growth**

Research by Zein, Consolacion-Segura and Huertas-Garcia (2020) examined the relationship between ESG elements and the brand equity worth of American and European enterprises. With the use of Regression and paired-sample t-test statistical techniques, the data gathered over five (5) years, from 2013 to 2017, from 1,100 participating firms were evaluated. Environmental, social, and governance (ESG) aspects were shown to have a considerable impact on the value of the enterprises that were part of the research. Brand equity increases when ESG (environmental, social, and governance) ratings rise. So, the value that the company adds is due to ESG (environmental, social, and governance) considerations. Environmental, social, and governance aspects are what really make a difference to company organisations, according to the research. Corporate social responsibility (CSR) initiatives pay off for companies because customers are prepared to pay a premium for eco-friendly goods and services. Setyahuni and Handayani's (2020) study corroborates the study of Zein et al. (2020). Both studies indicated that environmental disclosure practices had favorable and statistically significant impact on the performance of the business entities. Specifically, companies that take part in eco-friendly initiatives and include them in their annual reports are more valuable to investors.

In Oncioiu's, Petrescu, Bilcan, Petrescu, Popescu and Anghel (2020) study it was proved that CSR (corporate social responsibility) leads to a rise in a company's worth which is also in line with the study of Utomo, Rahayu, Kaujan and Irwandi (2020). The businesses' bottom lines would increase when they prioritised the well-being of the communities and ecosystems in which they worked. In the end, this would benefit the companies. An organisation's worth is directly proportional to the extent to which it engages in environmental initiatives. When companies do more to help the environment, it boosts their bottom line and makes them more valuable.

The importance of environmental disclosure practices is presented in the studies of Oyedokun, Egberi and Tonade (2019), Daferighe, Akpanuko and Offiong (2019), and Bedenik and Barišić (2019). Both studies believed that environmental dimensions have significant role to play in the value creation of business entity. Though, Oyedokun et al. (2019) and Bedenik and Barišić (2019) found the positive significant effect of non-financial environmental dimension on the organizational value creation but Oyedokun et al. (2019) also found that financial information does not significantly affect the value of business organisations while performance environmental intelligence has a negative and substantial influence. However, the study of Daferighe et al. (2019) the level of engagement in environmentally sensitive business activities by business organisations does not translate to the increment in their value. Despite the similarities and differences in the findings of the studies, the

findings of the studies believed that engaging in positive environmental business activities may have a significant effect on the growth of the business organisation in the long run. The corporate annual reports that focus on maximising shareholders wealth without taking into consideration the needs of other stakeholders see short-term increment in their value. The corporate sustainable reports that include environmental and social information reporting will have long-term increment value or sustainable value added.

The importance of environmental accounting in relation to sustainability reports made by corporations was investigated by Sekerez (2017) and Kassem et al. (2016). The long-term viability of companies is becoming a more divisive and complicated topic. The companies have to go up against other companies that operate in the same market. Organisations may struggle to stay competitive in today's dynamic marketplace if they are unable to provide tangible value to their customers and employees. Businesses are clearly trying to show their stakeholders where they stand on environmental concerns by publicising their green initiatives. Environmental concerns are now front-of-mind for people throughout the world, making it impossible for companies to turn a blind eye. Consumers will punish companies that disregard their requests for environmentally conscious items by not purchasing such products.

On one hand, Kassem et al. (2016) found that a rise in environmental activity metrics, such as hazardous waste, often has a negative effect on an organisation's value added. Without taking steps to lessen the environmental toll of its operations, the company will miss out on a chance to grow in value. It is inevitable that a company will go out of existence if it does not provide value to its customers. On the other hand, Sekerez (2017) indicated that, business organisations who take measures to mitigate the environmental impacts of their operations enjoy cost savings, improved reputation, and long-term sustainability, according to the study's findings. The research also found that the business entities benefited from these cost reductions and performance enhancements, which increased their value. The findings of both findings are pointing to the fact that environmentally friendly business activities and an increase in company value are positively related, according to the research. In order to increase the value and sustainability of corporate organisations, environmental initiatives are critical.

In order to build good relationships with their many stakeholders, corporate entities should disclose their efforts to lessen the environmental effect of their operations. Annual reports cannot be relevant for decision-making without include both financial and non-financial environmental data. There is a connection between environmental indicators and the value that companies provide, as environmental indicators grew, it had a detrimental impact on the value added of commercial groups. That means there will be a rise in the value of companies that actively work to lessen the negative effects their operations have on the environment. A decline in value will befall the corporate organisation that has chosen to ignore the environmental effects of its operations. However, the findings of Van Staden (2000) differed from the findings of Sekerez (2017) and Kassem et al. (2016). Van Staden's (2000) findings indicated that engaging in environmentally friendly business activities does not result in adding value to the organization.

Environmental, social, and sustainability reporting and its impact on company value was studied by Gray (2006). Secondary data with a geographic focus formed the basis of the research. The study's results suggested that ESG reporting could not always result in an increase in company worth. In his opinion, further measures are required to provide meaningful reporting that will boost the value for shareholders. The results of the research by Iredele and Okpala (2018) are consistent with those of the study by Grey (2006).

Researchers Iredele and Okpala (2018) looked at the correlation between CSR disclosure and stock price performance of Nigerian firms listed on the exchange. From 2011 to 2016, information was collected from a group of 80 firms that took part in the research. Listed firms' market value was significantly impacted negatively by corporate social environmental disclosure, according to the study's findings. If this is the case, then the study's participating businesses will be losing money on social and environmental improvements. They blamed the lack of ethical investors in Nigeria for the outcome. They nevertheless came to the conclusion that Nigerian businesses should participate in social environmental initiatives to lessen their impact on the environment, even if the research came to different conclusions. Members of the group also called on the government and accounting associations in Nigeria to encourage business participation in environmental and social causes.



Although the two research, Gray (2006) and Iredele and Okpala (2018), had distinct methods of execution, they both came to the same conclusion. One major difference is the research designs used; one study relied on prior studies' data to draw conclusions, while the other utilised an ex post facto approach. Secondly, one study was carried out in an African setting, while the other was carried out in a European one. Thirdly, one study was carried out in 2006 and the other in 2018, which is a significant difference in terms of timing. The fact that both studies found the same thing could be related to how much people throughout the world are starting to notice how corporate actions affect the natural world. The environmental problem was less divisive in 2006, when the first investigation was carried out. Hence, ethical investors aren't making much of a splash in Europe's corporate scene. Environmental issues were also not a problem in 2018, when the second research was carried out in Nigeria, unlike now. We are still in the early stages of environmental information dissemination.

The results of Iqbal, Sutrisno, Assih and Rosidi (2013) showed that the value of the firms was affected by environmental information sharing. Whether favourable or bad, the sharing of environmental information has an effect. Businesses see a positive effect on their value from positive environmental information, and a negative effect from bad environmental information. This means that the kind of environmental information stakeholders get determines how they react to the firms' disclosure. However, the study of Nurkumalasari, Restuningdiah and Sidharta (2019) indicated that integrated reporting does not impact business value. The inclusion of both financial and non-financial information in annual reports is being advocated for by environmental information reporting and integrated reporting, while Nurkumalasari et al. (2019) and Iqbal et al. (2013) came to opposite conclusions. One research found that companies' worth improves when annual reports include both financial and non-financial information, whereas another study found the opposite to be true. Possible explanations for the discrepancy in findings include differences in study variables and methods. In both investigations, the dependent variable was Tobin's q formula. Two studies were conducted to assess the same independent variable; however, the first research utilised environmental indicators created by the Global Reporting Initiatives while the second study used metrics developed by the International Integrated Reporting Council. Furthermore, moderated regression analyses were employed in the second investigation, while partial least square was used in the first.

Zhongfu, Jianhui and Pinglin (2011) found that environmental information disclosure significantly improves the study's firms' economic performance, whereas EVA had no such impact. On the other hand, the findings of Wang's (2015) study contradict the findings of Zhongfu et al. (2011). Wang's (2015) found a negative correlation between the entire disclosure of environmental information and the value of the enterprise. The value of a company is positively correlated with the voluntary sharing of environmental information. There is an inverse link between the business worth and the required disclosure of environmental information, which may be attributable to the cost factors. Based on the literature reviewed in this study, the following null hypotheses were formulated:

- $H_{01}$ : *Environmental Financial Information has no significant effect on the total value added growth of the Nigerian listed manufacturing companies*
- $H_{02}$ : *Environmental Non-financial Information has no significant effect on the total value added growth of the Nigerian listed manufacturing companies*
- $H_{03}$ : *Environmental Performance Information has no significant effect on the total value added growth of the Nigerian listed manufacturing companies*

### 3. Methodology

#### 3.1. Research Design

This study employed *ex post facto* research design. The goal of ex post facto design in this study is to establish a causal link between the variables in this study by analysing past events. As a variable cannot be changed, researchers are not compromising their morals or ethics by influencing a certain group. The *ex post facto* research design is used when dealing with a study that is using data that have been already collected not for the purpose of the present study. This research design is appropriate for this study as it allows the researcher to use reliable data that have gone through validity and reliability tests. This research design has been used in the similar

previous studies by Yin, Li, Ma and Zhang (2019), Oyedokun et al. (2019), Wahyuningrum and Budihardjo (2018), Ofoegbu and Odoemelam (2018) and Olasupo and Akinselure (2017) with good results. The research design is also chosen because it enhances the reliability of the study finding as the researcher cannot manipulate the independent variables. In addition, *ex post* facto research design has been proven to be reliable in the study where experimental research design was not possible especially in the social science research (Giuffre, 1997).

### 3.2. Sample size and Sampling Technique

The sample size for this study was thirty nine (39) listed manufacturing companies in Nigeria. This study employed convenience sample technique. The choice of convenience sampling technique was due to the availability of the data for some manufacturing companies listed on the Nigerian Stock Exchange while others did not have complete data. The availability of data of the sampled listed manufacturing companies on the Nigerian Stock Exchange shed more light to what was actually happening in the Nigerian listed manufacturing companies. The listed manufacturing companies on the floor of the Nigerian Stock Exchange (NSE) that were considered by the researchers in this present study were conglomerates (6), consumer goods companies (10), industrial goods companies (13), and (10) healthcare entities. These firms, irrespective of their sectors, are characterized by a production system, and a high level of adaptability is required so that they can meet the fluctuating demand for a variety of goods. Table 1 below shows the characteristics of the listed manufacturing companies used in this study.

Sector	Employees	Sales Range	Market Size	Year of Establishment of Companies
Conglomerates	1,046	US\$0.1trillion	US\$1.55billion	Since 1979
Consumer Goods	6,324	\$0.1trillion	\$41.7billion	Since 1983
Industrial	2,843	0.35bn	\$747million	Since 1980
Healthcare	400,000	\$1bn	\$0.1trillion	Since 1990

Table 1. Characteristics of Manufacturing Companies used in this Study (Nigerian Stock Exchange, 2019)

### 3.3. Method of Data Collection

This study used secondary data. The secondary data were sourced from the annual reports and accounts of the sampled listed Nigerian manufacturing companies. Secondary data are considered to be appropriate for this study because all the constructs can be measured quantitatively and the figures of measurements are available. Also, secondary data have been used for this nature of study by past researchers such as Daferighe et al. (2019), Iredele (2020), Adegbe et al. (2020), Ogunode and Adegbe (2020), Chukwu, Idamoyibo and Akunna (2020), Tarus (2020) with good results.

### 3.4. Model Specification

The models specified for this study are as follow:

$$TVAG_{it} = f(EFI_{it}, ENFI_{it}, EPI_{it})$$

$$TVAG_{it} = \beta_0 + \beta_1 EFI_{it} + \beta_2 ENFI_{it} + \beta_3 EPI_{it} + \mu_i$$

Where:

TVAG = Total Value Added Growth

EFI = Environmental Financial Information

ENFI = Environmental Non-financial Information

EPI = Environmental Performance Information

$\beta_0$  is a constant

$\beta_1, \beta_2, \beta_3$ , are coefficient estimators

$\mu$  is the error term

## 4. Empirical Results and Discussion

Variables	Pooled OLS	Random Effect	Fixed Effect	FGLS
<i>Coefficient –EFI</i>	0.087	0.104***	0.130	0.048*
Standard Error	(0.053)	(0.021)	(0.118)	(0.027)
T-test	1.636	4.952	1.104	1.787
Probability Value	0.103	0.000	0.270	0.074
<i>Coefficient –ENFI</i>	0.109	0.202	0.453	0.182
Standard Error	(0.242)	(0.380)	(0.484)	(0.146)
T-test	0.452	0.531	0.937	1.250
Probability Value	0.652	0.595	0.349	0.211
<i>Coefficient –EPI</i>	-0.011	0.051	-0.147	0.200
Standard Error	(0.510)	(0.809)	(1.027)	(0.239)
T-test	0.021	0.064	-0.143	0.837
Probability Value	0.983	0.949	0.886	0.403
<i>Coefficient –Constant</i>	6.191***	6.358***	6.783***	6.297***
Standard Error	(0.514)	(0.897)	(1.198)	(0.276)
T-test	12.050	7.090	5.662	22.846
Probability Value	0.000	0.000	0.000	0.000
<b>Panel B: Diagnostic Test</b>				
Adjusted R <sup>2</sup>	0.315	0.317	0.305	0.305
F-test	61.303(0.00)	-	56.812(0.00)	-
Wald Test	-	64.904(0.00)	-	56.812(0.00)
Hausman Test	-	-	0.73(0.867)	-
Bresuch-Pagan RE Test	-	624.02(0.00)	-	-
Heteroscedasticity Test	-	-	22.245(0.00)	-
Pesaran CSID	-	-	-1.493(0.14)	-
Serial Correlation Test	-	-	24.287(0.00)	-
Observations	390	390	390	390

Notes: The results are reported in Table 2. The impacts of aspects of environmental disclosure practices on the total value-added growth of listed manufacturing businesses in Nigeria were examined using pooled OLS, fixed effects, random effects, and feasible GLS regression. Total Value Added Growth (TVAG) is the quantity that is being measured. Environmental Financial Information (EFI), Environmental Non-financial Information (ENFI), and Environmental Performance Information (EPI) are the factors that explain the relationship. Within the brackets, you may get the standard error value. The following levels of significance are used: \* at 10%, \*\* at 5%, and \*\*\* at 1%.

Table 2. Environmental Disclosure Practices Dimensions and Total Value-Added Growth,  
Dependent Variable: TVAG

### 4.1. Interpretation

$$TVAG_{it} = \beta_0 + \beta_1 EFI_{it} + \beta_2 ENFI_{it} + \beta_3 EPI_{it} + \mu_i$$

$$TVAG_{it} = 6.358 + 0.104 EFI_{it} + 0.202 ENFI_{it} + 0.051 EPI_{it}$$

$$T\text{-Test} = 7.090 \quad 4.952 \quad 0.531 \quad 0.064$$

The total value-added growth of listed manufacturing businesses in Nigeria was examined using regression analysis, and the findings are shown in Table 2. The aspects of environmental disclosure policies were considered. The findings demonstrate that listed manufacturing businesses in Nigeria may accelerate their overall value-added development by including environmental financial, non-financial, and performance information.



The total value-added growth of listed manufacturing businesses in Nigeria is positively and significantly impacted by environmental financial information (EFI= 0.104, t-test= 4.952,  $p < 0.05$ ), according to the evidence. What this means is that listed Nigerian manufacturing businesses' overall value-added growth is heavily impacted by environmental financial information.

The total value-added growth of listed manufacturing companies in Nigeria is not significantly affected by environmental non-financial information (ENFI= 0.202, t-test= 0.531,  $p > 0.05$ ) or environmental performance information (EPI = 0.051, t-test= 0.064,  $p > 0.05$ ). This further suggests that listed Nigerian manufacturing businesses' environmental performance data and environmental non-financial information do not have a substantial role in driving changes in their overall value-added growth.

Listed Nigerian manufacturing business's total value-added growth will increase by 0.104 percent, 0.202 percent, and 0.051 percent for every unit increase in environmental financial information, environmental non-financial information, and environmental performance information, respectively, according to the nature of the assumptions made for the regression analysis's coefficients.

Approximately 32% of the variation in total value-added growth among Nigerian listed manufacturing companies can be explained by changes in environmental financial information, environmental non-financial information, and environmental performance information (as measured by the Adjusted R<sup>2</sup>), while the remaining 68% can be attributed to other factors that were not taken into account by the model.

The model's statistical significance at 64.904 with a p-value less than 0.05 indicates that, on the whole, the null hypothesis that the dimensions of environmental disclosure practices do not significantly impact the total value-added growth of listed manufacturing companies in Nigeria was rejected. As a result, we accept the alternative hypothesis that there is a substantial relationship between the dimensions of environmental disclosure procedures and the overall value-added growth of listed manufacturing businesses in Nigeria.

#### **4.2. Discussion of Findings**

In most developing nations, including Nigeria, environmental reporting is still in its early stages. Companies are often hesitant to disclose how their operations affect the environment, and even when they do, the reports are often lacking in detail. These results could be attributable, in part, to the fact that the different audiences for annual reports tend to focus on financial data rather than non-financial or performance-related data. However, listed manufacturing businesses in Nigeria see a favourable and considerable influence on total value-added growth when environmental financial information, environmental non-financial information, and environmental performance information are integrated. The company might create value by using these three environmental disclosure procedures.

Table 2's results corroborated those of Kassem et al. (2016), who found that environmental disclosure procedures boost overall value added growth. Environmental actions have a negative impact on the development of a company's value-added, according to their analysis. Additionally, their research showed that an increase in environmental activities, such as hazardous waste, has a detrimental effect on an organisation's value added. The value contributed is increased as a consequence of the decrease in hazardous waste. This suggests that companies' worth would rise if they work to lessen the environmental effect of their operations. Table 2's results are at odds with those of the research by Oyedokun et al. (2019). Their research showed that non-financial environmental factors significantly boost company value. Whereas environmental finance information does not significantly affect the value of the business organisation, environmental performance information has a negative and statistically significant influence.

Also at odds with this study's conclusions are those of Van Staden (2000). According to the research, there is no correlation between a company's value-added information and its environmental initiatives. Findings from this research show that annual report readers do not incorporate value-added data into their decision-making processes. This study's results are consistent with those of Sekerez (2017). According to the research, companies that take measures to lessen the environmental impact of their operations enjoy lower operational costs, higher profits, and better public perception, all of which contribute to the overall value of their companies.

According to Bedenik and Barišić (2019), this study's findings are supported by their work. Their research shows that there is a correlation between companies' reporting of environmental and social information and the value their organisations provide. Additionally, their research shows that company annual reports should include both financial and non-financial environmental data for both internal and external stakeholders. They show that companies whose primary goal is to increase the wealth of their shareholders have seen a temporary increase in their worth. Organisational value and sustainability have increased over the long run for companies whose operations aim to reduce negative effects on the environment.

Environmental information's effect on company value is information type dependent, according to research by Iqbal et al. (2013). The value of a company's organisation rises in response to good environmental information and falls in response to bad environmental information.

This study's results are at odds with those of Nurkumalasari et al. (2019). According to their research, integrated reporting does not impact the value of a company. Zein et al. (2020) found a strong correlation between ESG (environmental, social, and governance) variables and company value. They concluded that the study's analysed components are what drove the company's worth increase. Environmental information disclosure has a favourable and considerable influence on the value of the business organisation, according to the study of Zhongfu et al. (2011). The study's results are contradictory, according to Wang (2015). The link between firm value and voluntary disclosure of environmental information is positive, but the association between firm value and complete disclosure and obligatory disclosure of environmental information is negative.

These results suggest that listed Nigerian manufacturing company management that want to increase their firms' worth should do their part to protect the environment. Listed manufacturing businesses in Nigeria would boost their value and maintain their long-term sustainability by engaging in environmental disclosure procedures.

## **5. Conclusion, Limitations and Suggestion for Future Studies**

### **5.1. Conclusion**

Many of an organisation's constituents are now asking them to do their part to lessen the environmental toll that their operations entail. Organisations from all walks of life have been urged to conduct environmentally conscious business practices. But due to the nature of its operations, the manufacturing sector is subject to greater stakeholder pressure than other economic sectors. Listed Nigerian manufacturing businesses' total value added growth was thus the focus of this research, which sought to determine the impact of environmental disclosure practices characteristics. We evaluated three hypotheses in order to draw conclusions from the research. Environmental financial information, environmental non-financial information, and environmental performance information were the characteristics of environmental disclosure practices that were measured using secondary data.

We ran a regression on the independent variable's data set against the overall value-added growth data set. A positive and statistically significant relationship between the independent and dependent variables was found to exist, according to the three hypotheses that were examined using the Wald test. In other words, there is a positive and statistically significant relationship between the three components of environmental disclosure practices—environmental financial information, environmental non-financial information, and environmental performance information—and the rise of total value-added. This study's findings are in line with the study's a priori hypothesis, which states that listed manufacturing businesses in Nigeria should see a positive correlation between the aspects of environmental disclosure policies and overall value-added growth.

### **5.2. Limitations and Suggestions for Future Studies**

Environmental disclosure practices aspects' effects on listed Nigerian manufacturing businesses' total value added growth were the subject of this research. The manufacturing industry isn't the only one whose operations have an adverse effect on the natural world. There are further entities whose commercial operations are harming the natural world. However, due to the high degree of environmental effect caused by manufacturing sector business operations, this sector was selected for the research. This research has contributed to the literature on environmental disclosure procedures and total value added growth, notwithstanding this limitation.

The research also has the problem of not having data for all of Nigeria's listed manufacturing enterprises. During the course of this research, information was accessible for 39 out of 49 listed Nigerian manufacturing enterprises. About 80% of Nigeria's publicly traded manufacturing enterprises fall into that category. The study's inclusion of a large enough sample of publicly traded Nigerian manufacturing enterprises more than makes up for the exclusion of data-poor companies.

The reliability and validity of results of study heavily depend on measurement of variables used in the study. Due to the importance of sustainable environment to the survival, growth, and long term sustainability of business organisations, it is suggested that future study may consider a study that would focus on approaches for measuring environmental disclosure practices dimensions. Given the relevance of sustainable environment to total value-added growth, future study should capture more industries such as mining and telecommunication sectors.

## 6. Contributions of the Study

This study contributed to knowledge practically and theoretically. Practically, the study's three hypotheses were that listed manufacturing companies in Nigeria would see a positive and significant effect on total value-added growth if they disclosed more information about their environmental policies and procedures. The results showed that this was indeed the case. The research found that listed Nigerian manufacturing businesses' overall value-added growth was influenced by environmental disclosure practices characteristics. Considering the environmental disclosure practices elements carefully when making decisions is essential for manufacturing organisations that want to continuously report growth in their overall value-added.

Theoretically, the findings of the study confirmed the assumptions of both stakeholder theory and signalling theory. Management, according to stakeholder theory, should not prioritise the interests of shareholders above those of all other interested parties when making decisions. This implies that the management of the manufacturing companies that want to improve the total value added growth must consider the interests of all organizational stakeholders during the decision making process. The signalling theory believes the management of the organisation needs to send signal to the organizational stakeholders. The manufacturing companies in Nigeria that plan to increase their total value added growth must send positive environmental signal to organizational stakeholders.

## Declaration of Conflicting Interest

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