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Original Research

Environmental Accounting Disclosure and Market Value of Listed Non Financial Firms in Nigeria

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Abstract

This study examined how environmental accounting disclosure influences the market value of listed non financial firms in Nigeria between 2012 and 2020. The research design adopted is the longitudinal design. A total population of one hundred and twelve (112) listed non-financial firms was identified. A purposive sampling was used to generate a sample of seventy-two (72) listed non-financial firms sourced from firms' annual reports. The dependent variable is the market value measured using earnings per share (EPS). The independent variable is environmental accounting measured by the index of environmental disclosure constructed using a content analysis; eight themes of the Global Reporting Initiatives (GRI). The study employed panel feasible generalized least square regression technique for data analyses. The outcomes revealed that environmental disclosure influence earning per share as well as share price positively and significantly. Hence, this study found robust proof which suggests that environmental disclosure significantly influence market value of listed non-financial firms in Nigeria. The implication is that non-financial firms in Nigeria are yet to show much concern about the physical environment in which they operate; in terms of adherence to the environmental laws and standards, process and product related issues including those related to recycling, packaging, waste, pollution emissions and effluent discharges as well as provision of sustainability and other environmental related information. It recommends that corporate firms should prioritize the inclusion of environmental information in their annual reports as such has potential to bring about higher market value.

Keywords: Environmental Accounting Disclosure, Market Value, Earnings Per Share, Share Price.

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Introduction

The spate of technology and industrialization advancement in non-financial sector has greatly contributed to environmental challenges. These have raised the consciousness of both firms and other stakeholders on the environment in which the firms are situated. According to Atang and Eyisi (2020), societal concerns as well as consciousness for the environmental impact of firms have risen to an extent ever since about 4 decades ago. In 1972, the world conference by Head of States all over the world took place in Stockholm. This later resulted into the United Nations Environmental Program (UNEP) that coordinates environmental matters. Also, conferences have been held; Kyoto Protocol in 1997, Bali declaration and Global initiative for gas flaring reduction. These deliberations have stirred concern groups especially government as well as its agencies, employees, customers, as well as the communities concerning the challenges being created by the operations of the firms (Abiola & Ashamu, 2012).

Furthermore, conventional accounting system shortcomings and corporate responsibility matters towards sustainable development have given birth to environmental accounting as a new branch of accounting (Khan & Jui, 2016). According to Mehedy, et al., (2018), environmental accounting entails utilization of data about environmental costs and performance in decision making and operation of business. Also, it avail financial information on the firm’s environmental expenditure and the successive gains entails occupational safety, health and environmental protection that convert into fiscal data through systematic methods. It also records as well as summarizes the value of environmental goods and services in monetary terms and also tries to assess the influence of firm’s undertakings on environmental resources, which are widely responsible for the viability as well as development of entity (Das, 2017).

More so, the recent pressure on U.S, China as well as other non-financial firms globally to increase transparency through disclosure of new climate change as well as environmental information is imperative. These pressures from firms such as Carbon Disclosure Project (CDP), Ceres, the Global Reporting Initiative (GRI) and the Investor Network on Climate Risk (INCR), as well as the International Integrated Reporting Committee (IIRC). Also, managers were faced with pressure from stakeholders to assess the report on the risks and opportunities their firms encounter as a result to climate change, entailing the subjection of their firms to regulatory and market environment (Ernst and Young, 2011). Firm’s market value is a collection of non financial and financial measures, thus offer information on the level of attainment of objectives as well as outcome. Also, it is affected by investor’s perception of its managers’ capability to foresee as well as respond to future occurrences in the firm’s economic environment (Emeka-Nwokeji, 2019).

However, the developed countries have experienced an increase in the demand for environmental accounting as a result of disclosure practices and globalization. There are several laws and regulations enacted for environmental protection (Chavarkar, 2020). Environmental accounting information disclosure in annual reports of the firms supposed to create more awareness as regarding the environment (Bhuiyan, et al., 2017, and Ullah, et al., 2013). Considering the developed counties like USA, UK, China as well as Japan, the disclosure reporting on environmental accounting in Nigeria is still not encouraging.

Consequently, there is no strict adherence to issues of environmental accounting disclosure by listed non financial firms in Nigeria despite regulation by Corporate Governance Code for listed firms on the Nigeria Exchange Group (Mohammed, 2018). Also, studies established that the extent of disclosure of environmental information is approximately three sentences per firm, thus very low, especially in contrast with other developed and developing nations (Worimegbe & Oyewole, 2021; Şimşek & Öztürk, 2021; Ahmed, 2019 and Osazuwa, et al., 2016). This depicts that, the firms are not being responsible to their environment, so they often ignore to disclose necessary information to the stakeholder.

Despite the level of demand in environmental accounting disclosure, it is not clear whether the market assign real value to it in Nigeria (Okpala & Iredele, 2018). In other contexts and the signaling theory suggest that investors use information on sustainability disclosure in making their investment decision (Khandelwal & Chaturvedi, 2021 and Şimşek & Öztürk, 2021). The implication is that the low level of environmental disclosure by Nigeria corporate firms may negatively impact their market value. Thus, this study assesses the influence of environmental accounting disclosure on market value of listed non-financial firms in Nigeria. The specific objective is to assess the connection between environmental accounting disclosure and earnings per share (EPS) of listed non financial firms in Nigeria.

Conceptual Review

Environmental Accounting Disclosure

Environment implies the state in which we dwell. It entails every physical surrounding on Earth and object or conditions and circumstances that enclose us. The cost that a firm expended on natural resources cannot sufficiently be disclosed by traditional accounting. Environmental accounting plays an important part in availing information about the firm's accountability as regards the environment. The understanding of the firm's part in the economy towards the welfare and safety of the environment is being revealed through environmental accounting. Environmental accounting is a subset of accounting that provides numerical data, measures the use of natural resources, its cost expended by the firm and its impact on the environment. It provides data regarding the contribution of the firm toward economic welfare and cost expended on prevention of degraded resources and pollution control (Chavarkar, 2020).

Market Value

The market value of firm is a collection of non financial and financial measures that give information on the level of attainment of objectives as well as outcomes. Market value of a firm is affected by investors' perceptions of its managers' capability to foresee as well as respond to anticipated occurrence in the firm's economy environment (Emeka-Nwokeji, 2019). EPS are a financial ratio, that divides net earnings at hand to regular shareholders by the average outstanding shares over a definite period of time. Earnings are critical when evaluating a firm's profitability and are essential element in deciding a firm's stock price. It reveals how much a firm earns for each share, with a higher EPS showing the stock has a higher worth when compare with others in the industry.

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Firm Age

Md. (2018) stated that, in several works, age of firm has been used as an explanatory variable which dictate decisions as regards capital structure. Larger firms in operations for several years need no debt financing because of reasonable steady market. On the other hand, fresh smaller company put in place; more debt financing. Sharif, et al., (2012) submitted that favour big firms that make goodwill in their sector can bring about required short term debt financing because creditors are aware of their ability to pay as at when due.

Revenue Growth

Deitiana (2011) stated that, firm growth described by change in income extent, is one of the measures for evaluating the future expectations of a firm. Sofyaningsih and Hardiningsih, (2011) opined that, firm that present low level of income will definitely encounter a decline in profit, which specified that growth possibility is poor. Firm growth is very essential considering inward and outward parties. Considering the inward group, growth of firm is a basis for corporate achievement as well as a good measure of upcoming corporate expectation. As regard outward group-investors, growth of firm is notice as a beneficial signal for investors, anticipating a pleasant rate of return for their investment (Ulfa & Prasetyo, 2018).

Gross Domestic Product (GDP) Growth

Gross domestic product (GDP) refers to the absolute market value of goods as well as services generated by the economy of a nation throughout a stipulated period of time. It entails final goods as well as services specifically, those generated by the economic representative situated in that nation despite their proprietorship and that are not resold in any form (Egbunike & Okerekeoti, 2018).

Inflation

Akers (2014) revealed that inflation rate evaluate change in the average price level build on a price index. The measure of inflation is in diverse ways; though, two majorly utilized estimates are the CPI indicator or GDP Deflator. The CPI measures change in the price level of a large basket of consumable products while the GDP Deflator is a large index of inflation in the economy. The average retail price is measures by CPI paid by the consumers. An increase CPI shows that inflation is in existence. Increase in prices tend to the reduction of consumer overall spending that leads to GDP decrease while inflation is not negative, quick increase rates of inflation alert the likelihood of poor macroeconomic health.

Literature Review

Theoretical Review

This study rest on the stakeholders' theory, embedded in the management discipline as far back as 1970. The theory was established step by step by Freeman (1984) by including corporate accountability to a broad range of stakeholder (Izedonmi, 2016). Firstly, the stakeholder was applied to the relationship between managers and shareholder with no explicit recognition of other parties fascinated in the well-being of the firm. However, subsequent research effort widened the scope to include: employee, creditor, supplier, government agencies, operating environment to mention few. The stakeholder theory has several uses; in the accounting field, the belief is that a firm's achievement depends on the collaboration of its stakeholders because they supply tangible and intangible resources to secure the existence of the firm. Consequently, the firm is responsible for supplying information describing a firm's business to the stakeholder, conversely simply supplying information to the owners (Nguyen, 2020). In line with the theory therefore, the disclosure of environmental information is key to the survival of the firms. Hence, the theory theorizes a positive influence of environmental disclosure on market value of the firms.

Empirical Review

Several studies have investigated how market value of a firm is affected by the disclosure of environmental information. These studies cut across various context and scopes. In addition, the studies were conducted using varying methodology and conflicting results were reported. Some of these studies have reported on environmental disclosure and market value of the firms.

Şimşek and Öztürk (2021) evaluated the connection between environmental accounting as well as business performance using Istanbul province as a case study. It was found that there is a mutually significant connection between environmental accounting as well as performance. Nevertheless, the environmental accounting attitudes of the firms covered by the work were established to be at low level. Khandelwal and Chaturvedi (2021) examined environmental accounting disclosures as well as financial performance of sampled Indian firms. The multivariate test used in the study reveals that there is significant effect between environmental as well as ROE and ROA. Based on the analysis, it is suggested that the Indian companies need to keep pace with the regulatory framework put in place by the government and other regulatory bodies.

Wasara and Ganda (2019) investigated the link between sustainable business disclosure and the performance of listed mining businesses in Johannesburg. The data were obtained from secondary source particularly from the sustainability report and financial reports of ten listed mining firms on the Johannesburg Stock Exchange (JSE) over a period of five years covering 2010 and 2014. Return on investment was used as proxy for financial performance and sustainability data was obtained using a content analysis. The results from panel data regression described a negative connection between environmental sustainability disclosure as well as corporate financial performance.

McMillan, et al. (2019), examine environmental management's effect on Market Value in terms of the rewards and punishments. The study was set up to evaluate the degree to which the market responds distinctively to service companies as well as non financial companies with respect to environmental reputation signals. The results revealed that there is a favourable response from the market to positive environmental management reputation signals for service companies while negative environmental management reputation signals for non financial companies was found.

Jan, et al., (2019) investigated the moderating influence of Islamic corporate governance on the link between corporate sustainability disclosure as well as financial performance of 16 Islamic banks in Malaysia for a period covering 2008 to 2018. The study employed sustainability reporting index measure corporate sustainability disclosure while corporate financial performance was assessed from three different perspectives which are the market (Tobin's Q), shareholders (return on equity), and management (return on assets). The data for the study was analyzed using the Generalized Method of Moments (GMM) estimation tool. The outcomes revealed that, a positive association exists between sustainable business practices and firm performance from owners and management perspective. On the contrary, the study found negative association between sustainable business practices and financial performance from the view of the market.

Adegbie, et al. (2020), equally used data obtained from food and beverages listed firms on the Nigeria Stock Exchange to assess the impact of environmental accounting on the sampled firms' share value. The results indicated that environmental accounting practices influence positively on the share value of the firms. Also, the results revealed that the impact remain positive and significant even after controlling for the firm size. Atang and Eyisi (2020) studied the factors that determine the environmental disclosures practices among the listed non financial firms in Nigeria. The results showed that a rise in the profitability of non financial firms by 1% results to a rise of 1.8% in the environmental disclosure of the firm.

Emeka-Nwokeji and Osisioma, (2019) conducted an empirical study to analyze how all-inclusive sustainability disclosures as well as it's disaggregated dimensions including social, environment and governance influence market value of the Nigerian firms using company's' specific disclosures. The results revealed that all-inclusive affect firm value positively and significantly. In addition, it was revealed that environmental sustainability disclosure has a significant positive outcome on market value of firm.

Osazuwa, et al., (2016) employed longitudinal research design to assess the environmental disclosure extent of listed firms in Nigeria. The length of environmental information disclosure is roughly, three sentences per firm whereby, very low, mostly in contrast with the developed as well as developing nations. Furthermore, the study discovered a stable rise in the quantity disclosed over time following the events that usher the revision of the 2011 corporate governance code.

The reviewed studies revealed that several attempt have been made in literature to evaluate the influence of environmental disclosure on market value of the firms. However, these studies have largely been based on developed economies and their results were inconsistent as some reported positive, some negative while some other failed to find impact of environmental disclosure on firm market value. This suggests that, generalizing the results in developed and other developing countries to Nigeria corporate environment will not only be erroneous but also be misleading. Hence, the study assesses the link between environmental disclosure and market value of Nigerian non-financial firms.

Methodology

Data and Technique of Analysis

The research design that was adopted is the longitudinal design. This study counts on the use of data collected from the listed non-financial firm on the Nigeria Exchange Group between 2012 and 2020. Based on the information available, the study identified a total population of one hundred and twelve (112) listed non-financial firms as at December 2020. A purposive sampling was used to generate sample of seventy-two (72) listed non-financial firms. The criteria adopted for the sample selection are that the firm must have been listed as at 2012, has not undergone merger or acquisition and publishes its annual report consistently for the period under consideration. The data were manually extracted from the annual reports of these firms using content analysis. The STATA 14.0 was utilized for data analyses as well as descriptive and inferential statistical tool of panel regression. The study is based on panel feasible generalized least square (FGLS) regression.

Model Specification

The model specification takes lead from the work of (Şimşek & Öztürk, 2021 and Khandelwal & Chaturvedi, 2021). In line with these authors, firm' market value hang on earnings per share as well as book value per share while the theoretical framework submits that environment disclosure influence firm value significantly. In addition, it was revealed in the reviewed empirical literature that the earnings per share (EPS) which measures the firm's market value is affected by firm traits namely, revenue growth, firm age as well as firm size. The macroeconomic variables such as GDP growth and Inflation serve as control variables. Consequently, this study hangs on the identified model:

$$EPS = f(ENVD, FIRA, REVG, GDPG, INF) \quad (1)$$

Where:

EPS = earnings per share

$ENVD$ = environmental disclosure

FIRA = the natural log of age

REVG = Revenue growth

GDPG = GDP growth

INF = Inflation

(1) is the transformed into explicit function as:

$$EPS_{it} = \tau + \omega ENVD_{it} + \eta FIRA_{it} + \alpha REVG_{it} + \delta GDPG_{it} + \beta INF_{it} + \mu_{it} \quad (2)$$

Where:

$$\mu_{it} = \rho_i + \varepsilon_{it} \quad (3)$$

If (3) does not hold, subsequently (3) could be evaluated using pooled OLS. If it holds however, OLS cannot be utilized and (2) becomes

$$EPS_{it} = \tau + \omega ENVD_{it} + \eta FIRA_{it} + \alpha REVG_{it} + \delta GDPG_{it} + \beta INF_{it} + \rho_i + \varepsilon_{it} (4)$$

For robustness check, the study equally use the share price of the firms to represent the market value and the resulting model for market value is given as

$$SP_{it} = \tau + \omega ENVD_{it} + \eta FIRA_{it} + \alpha REVG_{it} + \delta GDPG_{it} + \beta INF_{it} + \rho_i + \varepsilon_{it} \ (5)$$

Where SP = Share price

Measurement of Variables

There are three classes of variables utilized such as; the dependent variable, independent variables and control variables.

Dependent Variable

Firm value is the dependent variable for this study. As a result of insight from previous related studies (Kusiyah & Arief, 2017). The study measures the market value of the firm using EPS and individual firm's share price at the end of financial year (for robustness check). The share price of the firm reflects the extent to which the prospective investors are interested in having stake in the firm which is a reflection of its valuation. For instance, when investors attach higher value to the firm and thus compete to get the share of the firm, there would be pressure on the price of share due to higher demand for the share of the firm. This will eventually results to a higher share price and in turn higher firm value. Thus, share price reflects the value attached to the firm by the shareholders and prospective investors.

Independent Variable

The study has one independent variable which is the environmental disclosure. Environmental or sustainability disclosure in this study is measured by environmental disclosure index relying on Global Reporting Standards (2016) and the International Standards Organization (2014) as used in prior studies such as (Aggarwal, 2013; Nwobu, 2015 and Dilling, 2010) among others. The index was calculated on the basis of the number (occurrence) of indicators disclosed. If there is an occurrence of the indicator in the company reports, 1 is assigned and if otherwise, 0 is assigned. This is termed an un-weighted approach. All items of environmental disclosure are given the same prominence and what is stated is only whether an item is outlined or not. The formula for computing the un-weighted corporate Environmental Disclosure Index (EDI) or reporting scores is expressed as follow:

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$$EDI = \sum_{i=1}^{8} d_i / d \quad (6)$$

Where:

EDI is the corporate environmental disclosure Index and it is expressed as a percentage or ratio.

d = 1 if item 'di' is stated or 0 if item 'di' is not stated

d = maximum number of items stated.

Control Variables

As a result of the theoretical model for this study as well as reviewed empirical literature, the study controls for the age of the firm, revenue growth as well as macroeconomic variables comprising GDP growth and inflation.

Table 1. Variables Definition and Sources

Variables	Descriptions	Sources
Firm Value (EPS)	Earnings per share evaluated as profit after share as a ratio of the outstanding shares	Annual Reports
Firm's value (SP)	Closing stock price of a financial year.	Annual Reports
Revenue Growth (REVG)	Change in sales over time	Annual Reports
Age (FIRA)	Log of the years a firm has been listed on the NSE	Annual Reports
Growth (GDPG)	Change in GDP over time expressed in percentage	WDI
Inflation (INF)	Consumer Price Index	WDI

Results and Discussion

Results

The outcomes gotten from the examination of the data sourced from Nigerian listed sampled non-financial firms annual reports are presented in this section; the results are obtained using various methods including descriptive statistics, correlation and panel regression technique.

Estimated Summary Statistics of Variables

The outcomes of the descriptive statistics are outlined in table 2. The outcomes indicate that the average environmental accounting disclosure of the listed firms within the period under consideration is 0.063 with 0 as a minimum as well as 1 as a maximum. An estimated standard deviation of 0.176 shows that the average environmental disclosure estimated is a widely spread around the average estimated value. The implication is that the disclosure of environmental information among Nigerian listed non financial firms is very low as the degree of environmental disclosure among the sampled firms is found to be about 6.3%. The average share price estimated is 37.337 naira with 0.2 naira as minimum as well as 1555.99 naira as a maximum. The estimated standard deviation of 137.055 shows that, the share price varies widely among the firms. Also, the outcomes in Table 2 outlined the average estimated value of EPS as 1.843 with a maximum and minimum of 57.63 and -20.23 respectively. Averagely, the firm performance represented by revenue growth is 10.533 with -100 as minimum and 1354.255 as maximum. The estimated standard deviation of 66.453 reveals wide variation in the performance of the firms.

Table 2. Estimated Summary Statistics of Variables

Variable	Obs	Mean	Std.Dev.	Min	Max
EPS	648	1.843	5.872	-20.23	57.63
SP	648	37.337	137.055	.2	1555.99
ENVD	648	.063	.176	0	1
REVG	648	10.533	66.453	-100	1354.255
FIRA	648	26.866	13.482	2	55
GDPG	648	3.166	2.564	-1.617	6.671
INF	648	11.588	2.812	8.062	16.524

Estimated Correlation Coefficients among Variables

The outcomes of the correlation among the variables are outlined in table 3. The outcomes specify that environmental disclosure has a positively weak association with earnings per share; however, 0.166 estimated correlation coefficient implies that higher EPS are associated with a lower environmental accounting disclosure. Also, the estimated correlation coefficient of 0.032 reveals a very weak positive relationship between firm performance represented by revenue growth as well as earnings per share. However, the outcomes revealed that GDP growth has a weak negative relationship with environmental accounting disclosure as it recorded an estimated correlation coefficient 0f -0.012. In addition the results indicate that a weak positive relationship exist between firm age and EPS with their correlation coefficient of 0.157. Also, the estimated correlation coefficient of 0.021 implies that a positively weak association exists between inflation and EPS.

Table 3. Estimated Correlation Coefficients among Variables

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) EPS	1.000						
(2) SP	0.819	1.000					
(3) ENVD	0.166	0.171	1.000				
(4) REVG	0.032	0.011	0.005	1.000			
(5) FIRA	0.157	0.166	0.247	-0.013	1.000		
(6) GDPG	-0.012	0.003	-0.078	0.015	-0.125	1.000	
(7) INF	0.021	-0.002	0.035	-0.001	0.074	-0.822	1.000

Furthermore, the outcomes of the correlation indicate that weak relationships are established among the independent variables of this study as the highest correlation coefficient among the independent variable is found to be 0.247 between environmental accounting disclosure and firm age. This implies that the problem of multicolinearity is not envisaged among the variables.

Diagnostic Test

The study carried out diverse diagnostic tests to guarantee the validity of the outcomes gotten among which are the Shapiro-Wilk test for normality, the Breusch-Pagan test for heteroscedasticity and the Wooldridge test for serial correlation. The outcomes of the Shapiro-Wilk examination for normality are presented in table 4. The results reveal that the null hypothesis of normal distribution is rejected for all the variables given the respective p values of all the variables. By implication, the Shapiro-Wilk test results suggest that all the variables are not normally distributed.

Table 4. Shapiro-Wilk W Examination for Normality

Variables	Obs	W	V	Z	Prob>z
EPS	648	0.504	210.925	13.013	0.000
SP	648	0.250	318.522	14.014	0.000
ENVD	648	0.851	63.144	10.080	0.000
REVG	648	0.358	272.828	13.638	0.000
FIRA	648	0.923	32.897	8.494	0.000
GDPG	648	0.965	14.696	6.535	0.000
INF	648	0.928	30.602	8.319	0.000

Variation Inflation Factor

The existences of multicolinearity amid regressors are examined employing variance inflation factors and the outcomes are outlined in table 5. From the outcomes, GDP growth has the highest VIF of 3.132, while the mean VIF was found to be 0.987. Because none of the expository variables possess VIF that is near to the threshold of 10, it is deduced that there is no multicolinearity amid the expository variables.

Table 5. Variance Inflation Factor

	VIF	1/VIF
GDPG	3.132	0.319
INF	3.093	0.323
FIRA	1.08	0.926
ENVD	1.07	0.935
REVG	1.001	0.999
Mean VIF	1.875	.

Model Regression Diagnostic Test

Moreover, the outcomes in table 6 indicate that the model is characterized with an autocorrelation on the basis of Wooldridge test which has 7.212 as F value as well as 0.0000 as corresponding p value implying that the null hypothesis of no autocorrelation is rejected. The model also reveal the existence of heteroskedastcity problem given the estimated Breusch-Pagan chi square of 168.57 with 0.0000 p value of implying that the null hypothesis of no heteroskedasticity is rejected at all conventional level of significance.

Table 6. Model Regression Diagnostic Test

Tests	Test Type	Value	P value	Conclusion
Autocorrelation	Wooldridge Test	7.212	0.0000	Presence of serial correlation
Heteroskedastic	Breush-Pagan / Cook-Weisberg	168.57	0.0000	Presence of heteroskedasticity

Panel Regression (Dependent = EPS)

In line with the results obtained from the various diagnostic tests which suggest non-normality of variables, presence of serial correlation and heteroskedasticity, the study controls for the used feasible generalized least square regression (FGLS) method which has inbuilt mechanism to accommodate non-normally distributed data as well as control for the existence of serial correlation and heteroskedasticity (Baltagi, 2010). Hence, the results of the feasible generalized least square are outlined in table 7.

Table 7. Estimated Panel Feasible Generalized Least Square Regression (Dependent = EPS**)**

EPS	Coef.	St.Err.	t-val.	p-val.	95%Conf	Interval	Sig
ENVD	4.601	1.328	3.47	0.001	1.999	7.204	***
REVG	0.003	0.003	0.83	0.408	-0.004	0.009	
FIRA	0.055	0.017	3.18	0.001	0.021	0.089	***
GDPG	0.136	0.156	0.87	0.384	-0.170	0.441	
INF	0.115	0.141	0.81	0.416	-0.162	0.391	
Constant	-1.720	2.147	-0.80	0.423	-5.927	2.488	
Meandepvar		1.843	SD dep. var			5.872	
Num. of obs		648.000	Chi-square			30.021	
Prob> chi2		0.000	Akaikecrit.(AIC)			4114.841	

**** p<0.01, ** p<0.05, * p<0.1*

From the outcomes presented in table 7, 4.601 estimated coefficient with 0.001 p value specifies that environmental accounting information has a positive and statistical impact on the earnings per share (EPS) of listed non-financial companies. In line with the results, an increase in environmental disclosure by a firm is expected to result to an increase in the EPS of the firm and vice versa. This implies that, more environmental disclosure is associated with better firm's market value.

For the control variables, the study established that, the age of the firm is an important determinant of market value as the estimated coefficient of 0.003 with p value indicates that firm age has positive and significant influence on the EPS. Hence, older firms attract higher market value than younger ones. The results show further that firm revenue growth

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is a key determinant of the EPS as the estimated coefficient and p value of 0.055 and 0.408 respectively indicate that revenue growth has positive but insignificant influence on the EPS of sampled firms. Similar results were obtained for GDP growth and inflation as the respective p value of 0.384 and 0.416 imply that both GDP growth and inflation had positive but insignificant influence on the EPS of the sampled firms.

Panel Feasible Generalized Least Square Rregression (Dependent = SP)

The study conducted a robustness check by using another proxy for market value of the firms. In line with some other extant literature Emeka-Nwokeji and Osisioma, (2019), the closing share price of the firm is used as alternative proxy for the market value as the firm's share price reflects the valuation of the firm by investors. The results were equally obtained with panel FGLS and they are outlined in table 8.

Table 8. Estimated Panel Feasible Generalized Least Square Regression Results (Dependent = SP)

SP	Coef.	St.Err.	t-val.	p-val.	95%Conf	Interval	Sig
ENVD	109.741	30.946	3.55	0.000	49.089	170.394	***
REVG	0.023	0.079	0.28	0.775	-0.133	0.178	
FIRA	1.383	0.406	3.41	0.001	0.588	2.178	***
GDPG	2.662	3.631	0.73	0.463	-4.454	9.778	
INF	1.148	3.288	0.35	0.727	-5.297	7.594	
Constant	-28.775	50.086	-0.57	0.566	-126.941	69.391	
Meandepvar		1.843	SD dep. var			5.872	
Num. of obs		648.000	Chi-square			30.021	
Prob> chi2		0.000	Akaikecrit.(AIC)			4114.841	

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

From the outcomes, environmental disclosure has a positive and significance influence of the share price with 109.74 estimated coefficients and 0.000 p value. This is consistent with the results found when EPS was used to represent the market value. Hence, this study found consistent evidence of positive and significant impact of disclosure of environmental accounting on the market value of non financial firms listed. For the control variables, the results found are as well in agreement with the results found for the baseline model of the study as revenue growth, GDP growth and inflation have insignificant positive influence on the price of share while age of the firm influence share price positively and significantly.

Discussion of Findings

The descriptive result shows that the disclosure of environmental information by corporate Nigerian non financial firms is generally low as the extent of disclosure was found to be just 6.3 percent. The implication of this finding is that non-financial firms in Nigeria are yet to show much concern about the physical environment in which they operate; in terms of adherence to the environmental laws and standards, process and product related issues including those related to recycling, packaging, waste, pollution emissions and effluent discharges as well as provision of sustainability and other environmental related information. In terms of the hypothesis of the study, the findings of positive impact of environmental disclosure suggest that this study rejects the null hypothesis that environmental accounting disclosure is not value relevant. This simply means that shareholders make use of information on how environmentally responsible a firm is while making their investment decision. This implies that environmentally responsible firms have an effect on the firm market value in terms of not only the EPS but also the share price development.

The conclusion on this hypothesis is in agreement with the work of Adegbite et al. (2020) in Nigeria, Simsek and Ozturk, (2021) in Turkey, and Khandelwal and Ganda, (2021) in India who reported value relevance of environmental disclosure but opposed to the findings of Jan, et al., (2019) in Malaysia, and Wasara and Ganda (2020) in South Africa who reported that environmental disclosure has no value relevance. Investors may see a release of better information of sustainability of the company as an indication of good overall business performance. They are thus attracted to those companies which will eventually drive up the price of share as a result of competition among potential investors to have a stake in such companies.

Conclusion and Recommendations

The need to mitigate the negative outcome of business operations on the environment has made the environmental accounting disclosure one of the most discussed issues in corporate finance literature in recent times. One of the areas of discussed is the implication of this disclosure on the performance of the firms as a way of demonstrating what a firm stands to gain by complying with standard environmental disclosure practice. While this issue has been extensively discussed in literature, there is no consensus on the impact of environmental disclosure or firm market performance. The outcomes from the previous literature suggest a country and industry specific studies to understand the link between corporate environmental accounting and the market performance of the firm. This issue has attracted relatively shallow treatment in Nigeria context as none of the study has used a large sample of Nigeria non-financial firms. Hence, this work was able to explore the influence of environmental accounting disclosure on the market value of a sample of seventy-two (72) Nigerian listed non-financial firms between 2012 and 2020 using feasible generalized least square (FGLS) panel regression technique.

The outcomes of the study showed that corporate environmental disclosure has a positive effect on the market value in Nigeria using EPS as a proxy. The results are in consonant even when share price was used as a proxy for firm value to check for the robustness of the findings. Thus, investors consider how environmentally responsible a firm is prior to taking decision as regards investment. Consequently, non-financial firms in Nigeria ought to know that enhancement in the reporting of environmental information is as essential as enhancing the firm’s value. In line with the findings, the study recommends that agencies concern with regulation of financial reporting as well as environmental standard: Financial Reporting Council of Nigeria (FRCN) and NESRA (National Environmental Standards as well as Regulatory Enforcement Agency) should enhance the collaboration with relevant stakeholders to establish in Nigeria environmental accounting as well as reporting a framework. Corporate firms should equally, prioritize the inclusion of environmental information in their annual reports as such has potential to bring about higher market value for the firms.

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