

CARBON ACCOUNTING INFORMATION DISCLOSURE AND INVESTORS' ATTITUDES TOWARDS INVESTING IN NIGERIAN ECONOMY

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ABSTRACT

Users of financial reports of companies have shifted their interest from only profitability to efforts of enterprises in addressing environmental problems, global climate change, carbon reduction, and their vision for green development. Business stakeholders particularly investors are more interested in investing their funds in enterprises that demonstrate commitment to de-carbonization and reduction of harmful effects of their operation on society and reporting. Reporting/disclosure is an issue in Nigeria where Carbon Accounting Information Disclosure (CAID) is voluntary. The voluntary disclosure has generated doubts about whether it has impacted on investors' attitudes to commit their funds to enterprises in the Nigerian economy. The aim of this study there is to examine the impact of CAID on the attitudes of investors to invest in enterprises in Nigeria. Data for the study were collected primarily through a questionnaire administered to a sample of investors in corporate enterprises in Nigeria. Analysis of the data was done through Partial Least Square Structural Equation Modeling (PLS-SEM). Results indicated that the disclosure has a positive and

significant impact on investors' attitudes toward investing in enterprises in the Nigerian economy. The study recommended that the government should by legislation make CAID compulsory in Nigeria, especially for those enterprises whose activities have a direct impact on the environment and society.

Introduction

The demand for robust Green House Gas (GHG) accounting is rapidly growing as businesses across the globe seek to demonstrate their commitment to de carbonization. It is in this bid to address the issue of carbon emission and climate change that many businesses have set carbon reduction targets by identifying where to focus emission reduction efforts, develop strategies, and track the impact of emission initiatives disclosed in annual reports (Thalbatt & Kelvin, 2017).

Disclosure on how a business operation is likely to impact the environment in which it operates, climate change, and its ability to generate value (financial and otherwise) is important to the society particularly investors who have committed their funds. The growing interest of investors in Carbon Accounting Information Disclosure (CAID) and the prominence of Environmental Social and Governance (ESG) reporting arose around the realization among investors that sustainability risks are one of the major risks in the business world (Harrison & Khan, 2016). It is in view of the risk that investors all across the globe are increasingly and rigorously scrutinizing the sustainability performance of a business for investment decisions (Khalid & Zayyad, 2016). As investors are mindful of the quantum of returns on their investment and wealth creation, they are also interested in the number of GHGs produced directly and indirectly from the activities of businesses they have invested their finances. The interest is because the disclosure of true and complete carbon information to investors is a prerequisite for carbon trading (Matisoft et al 2013; Liesen et al 2015). Investors are also interested in knowing the efforts organizations are making in tackling the many challenges that carbon emission and transmission of harmful elements to the environment in the face of global climate change and sustainability issues.

It is in the bid to tackle the challenges of environmental protection that countries especially the developed ones have been taking emission regulatory measures for compliance of businesses in order to achieve carbon emission, reduction goals. For instance, in the UK, USA, Australia, China,

and Canada, enterprises are mandated to disclose their carbon information (Polycarp & Dens, 2018). The Chinese government made the disclosure elaborate in 2017 through the Securities Regulatory Commission (SRC) of the country that required listed enterprises to disclose their environmental information in their annual and semi-annual reports (Spencer & Weird, 2014). It is envisaged that the disclosure of the efforts of enterprise in achieving carbon neutrality and reduction goals are strives towards the attainment of sustainable development of building homes where humankind will continue to exist.

As important as CAID is in other climes that deem it necessary to make it mandatory, the disclosure by enterprises in Nigeria is still voluntary (Egbuna & Ike, 2023, Garba & Dairu, 2023). In 2018, the Nigerian Stock Exchange, (NSE) issued Sustainability Disclosure Guidelines (SDGs) for listed companies. The guidelines only required companies to disclose and report ESG issues that are relevant and material to their businesses as well as how they are managing them. Beyond the ESG reporting guidelines, disclosure around carbon emission, use of green energy, and waste recycling are voluntary. In 2021, the Climate Change Act (CCA) was passed. The Act merely provides a framework for the attainment of low carbon emissions by developing climate change mitigation and adaptation strategies without information disclosure requirements on carbon emission and green energy usage by companies. The voluntary disclosure has left Nigerian society especially investors in doubt as to how much of the activities of business especially those in production/ manufacturing affect the environment, their carbon emission reduction efforts, and the vision of the enterprises for green development (Nurudeen & Salawu, 2023). According to Egbuna and Ike (2023) voluntary disclosure of information on the carbon performance of enterprises has raised issues of whether the disclosure can have any impact on attitudes of investors in investing in enterprises/businesses in Nigeria or not. The doubt on the impact of the voluntary disclosure of information carbon emission performance by enterprises in Nigeria on attitudes of investors forms the basis and the aim of this study which is to examine the impact of Voluntary CAID on the attitude of investors towards investing in enterprises in the Nigerian economy.

This paper is anticipated to add value to the existing literature in the area. Though there are previous studies on carbon accounting such as (Evans & Omah, 2015; Ojo & Elias, 2016; Bobson & Dauda, 2017; Mobolaji & Ajayi, 2019; Nurudeen & Salawu, 2023; Egbuwa & Ike, 2023) they all focused on carbon accounting information and performance of firms in Nigeria. None has

specifically investigated the influence of CAID on the attitude of investors towards investing in enterprises in Nigeria. This is a gap identified in the research area and contribution to existing knowledge. The research will be of significance to business operators, investors, society, and the government of Nigeria.

2.0 Literature Review and Hypotheses Development

Carbon Accounting Information Disclosure (CAID): The concept also known as carbon accounting information transparency is the provision of information on the amount of carbon released by industrial processes (Leon & Xian, 2015). It relates to quantitative as well as qualitative information on carbon released by industrial process carbon emission reduction targets and reporting on the process of the programme of an organization (Louis et al 2015). With CAID, business stakeholders would be able to know the amount of carbon an enterprise emits, the carbon reduction effort of the enterprise, its goal of energy conservation, and the vision of green development.

CAID methods are classified into Statement of Financial Position (SFP) and off SFP (Cormos & Penger, 2016). Disclosure of information on SFP is a presentation of carbon accounting elements in financial statements based on the basic characteristics of transactions or events. The information is usually presented in a unified currency unit including carbon assets, carbon liability, carbon equity, carbon costs carbon profits emission reduction, and vision for green development (Lawrence & Fryeid, 2016). Disclosure of Information off SFP refers to carbon accounting information that cannot be expressed in quantitative terms in annual reports but presented as notes to the accounts to inform users of the company's efforts on carbon emission reduction, environmental conversation, and vision for green development (Gregg & Klitson 2015).

Information on Carbon Assets (InfCAs): Carbon assets are a collective term for direct and indirect property and their derivatives that provide both environmental benefits and economic value (Paulo & Jackdoll, 2016). Carbon assets (intangible) include offsets (carbon direct) facilities that generate performance credits and allowances (Zyaad & Bermtner 2017). InfCA therefore is the presentation of the actual or estimated monetary values of the assets in the financial statement of an enterprise for the benefit of users like investors (Thomson & Thombert, 2018).

Information on Carbon Liability (InfCL): This refers to the disclosure of Value approximating to the economic externalities of Carbon emission in the local and global economy (Chuo & Li, 2017). Carbon Liability (CL) can be a difference between actual emission and regulatory emission limits. When the actual is greater/higher than the regulatory emission limit, it becomes a liability (Ormortovo & Veir, 2017). CL could also be defined as the difference between actual emission reduction performance and performance targets established by contracts with other parties (Paulo & Jackdoll, 2016). It becomes a liability when emission performance is below the established target (Robert & Wagner, 2017).

Information on Carbon Equity (InfCE): The concept refers to the disclosure of the sustainability works of an invested fund (Hollader & Firtz, 2016). Sustainability risk assessment is in two levels namely: Sustainability risks related to the funds invested. An example of the risk is the use of the invested fund and the increase of the company's activity that will lead to environmental pollution. The second level of sustainability risk relates to concern about the ability of fund managers to manage the portfolio well as a result of poor management teams (Louis & Hilder, 2015).

Information on Carbon Cost (InfCC): It is the disclosure of the cost based on the estimation of the negative effects of carbon emission on the environment (Geoffrey & Edwin, 2018). The negative effects relate to damages done by each additional ton of carbon emission. In the financial statements of some organizations especially the manufacturing outfits mostly in advanced economies, InfCC is disclosed under the caption Social Cost of Carbon (SCC) (Yakossi & Ballak, 2018). The SCC is usually based on estimation and approximation usually done by climate Scientists and environmentalists using models to predict what will happen to a range of indicators when a new carbon dioxide (CO₂) is released into the atmosphere (El-Mamman & Eddel, 2018).

Information on Carbon Profit (InfCP): It is defined as profit or Currency Carbon (CC) as Standardized carbon-related securities backed up by the right of one unit of carbon emissions disclosed by a business (Babbiner & Wilder, 2020). Though not a medium of exchange CC is usually issued as an incentive and will behave like financial assets. The currency/profit is gotten by an enterprise as a proportional reward for the climate mitigation effort of a business (Negglon & Anderson, 2023). It is usually treated as private property digitally created and managed by the Central Bank of a country as financial assets (Kontz & Dristine, 2021). As a final asset owned

which could be owned by individuals and businesses, it behaves as an investment most useful during the climate crisis.

Information on Emission Reduction and Vision for Green Development (InfER&VGD): It is an off-SFP disclosure and Communicating to stakeholders on the organization's emission reduction programme and vision for green development and environmental conservation (Heiffer & Kim, 2022). The information is usually disclosed in qualitative terms by way of notes to the accounts. What matters in all these disclosures is whether the information would influence investors in their decisions, especially in Nigeria where carbon accounting information disclosure is still voluntary.

2.1 Theoretical Framework

The study is anchored on the Voluntary Disclosure Theory (VDT) developed by Verrecchia in 1983 and 1990 (Spencer & Weir, 2014). Determinants of Voluntary disclosure fall into Motivation (M) and Constraints (Cs). M determinant factors are categorized as capital market transaction/information asymmetry, corporate control contest, stock compensation, increased analysis coverage, management talent signaling, and limitations of mandatory disclosure (Robert & Wagner, 2017). Cs on voluntary disclosure include disclosure precedent, proprietary cost, agency cost, and political and litigation costs, (Graham et al, 2005). The most prominent factor among the determinants is in the category of M which is capital market transactions/information asymmetry. The theory proposed that when company managers want to issue new capital through equity or debt, the perception of investors toward information asymmetry by managers needs to be removed (Myers & Majluf, 1984). Removal of information asymmetry helps firms avoid the problem of adverse selection of investors, take advantage of investment opportunities, and allocate resources efficiently in the capital market.

The information asymmetry removal in the proposal of the theory is particularly relevant to this study in a Nigerian business environment where CAID is entirely voluntary. It is only enterprises with good performance in Nigeria that tried to remove information asymmetry by voluntarily disclosing their carbon emission information while many of them do not (Egbuna & Ike, 2023; Nurudeen & Salawu, 2023).

2.2 Empirical Review

In this Section, related literature in respect of the impact of CAID on the attitude of investors towards investment in businesses is examined.

Information on Carbon Assets in Annual Reports and Attitude towards Investment

In recent years scholars have started to study the impact of information on carbon assets disclosed in financial statements of enterprises especially manufacturing outfits on the attitude of investors towards investing in the enterprises. For instance, Dannilo and Frenard (2022) examined the impact of information on carbon assets disclosed in the financial statements of manufacturing enterprises on the attitude of institutional investors in the UK. The study found that information on Carbon assets in annual reports of companies positively impacts the attitude of investors. In another study, Thorney et al (2022) examined the impact of information on the economic value of carbon assets in the annual reports of enterprises on the attitude of investors in China. The authors found that the information has assisted investors in understanding the productive capacities of the assets and their attitude toward investing in enterprises in China. In Nigeria however, no study assessed the impact of information on carbon assets in the annual reports on the attitude of investors. Therefore, the research hypothesis (H1) of this study is proposed as:

H1: Information on carbon assets in the annual reports of enterprises in Nigeria has no impact on investors' attitudes.

Information on Carbon Liabilities in Annual Reports and the impact on attitude towards Investing in enterprises.

To assess the extent to which businesses are committed to decarbonization Zhang and Andrew (2021) examined the impact of compliance with carbon emission regulation by manufacturing enterprises in China on the attitudes of investors towards investing in the enterprises. It was found that analysis of the actual emission of the businesses and the regulated emission limit disclosed in the reports of the enterprises impact investors' decisions on whether to commit their funds or not. In another study, Banerny and Kinto (2022) studied the impact of disclosure of carbon emission performance and performance targets of ESG reporting on the attitude of investors in making investments in Canadian manufacturing firms. The results of regression analysis revealed that

reports on the extent of performance of the firm impact the attitude of investors (actual and potential).

There is no literature or existing studies on carbon liability disclosure by enterprises in Nigeria and the impact of the disclosure on investors' attitudes. Therefore, this study hypothesized that:

HO₂: Information on carbon liability disclosed in the annual reports of manufacturing enterprises in Nigeria has no impact on investors' attitudes.

Information on carbon equity in annual reports and attitude towards investing in enterprise. Funds invested in enterprises usually increase the activities of enterprises, especially those engaged in manufacturing/production. Environmental hazards as a result of activities are always of concern to investors. Dulman et al (2020) investigated the impact of business activities and hazards of pollution reported in the financial statement of manufacturing enterprises on the decision of investors to commit funds to the enterprises. It was found that the disclosure has a significant influence on the decisions of investors to invest in enterprises. On the sustainability risk of investment, Holdar and Dorkan (2022) examined the relationship between the Sustainability of funds committed to board diversity disclosed in annual reports and investors' decision of whether to invest in Kenya enterprises. The authors found that the ability to manage a portfolio as a result of board diversity and experience disclosed in annual reports of companies has a significant influence on investors' attitudes and investment decisions.

Studies on carbon equity disclosure and the influence on investors' decision to invest in enterprises in Nigeria are lacking. Therefore, research hypothesis three (3) of this study is proposed as:

HO₃: Information on carbon equity in annual reports of enterprises in Nigeria has no impact on investors' attitudes.

Information on carbon cost in annual reports and attitude towards investing in enterprises. The adverse effects of carbon emissions and the cost of curbing the effect have been of interest to researchers and investors. Dafleen and Boateng (2021) evaluated the effect of environmental degradation and cost of carbon emission disclosure on the attitude of investors in investing in firms in Ghana. Descriptive analysis of data obtained from randomly selected investors in the country revealed that the disclosure has positively influenced the attitude of investors in their investment decisions. Cartron and Gailley (2022) examined the impact of carbon emission cost disclosure by

manufacturing enterprises in Thailand on investors' attitudes. Using inferential statistics of regression analysis, results indicated that the cost of carbon emission disclosed in annual reports of enterprises has positively influenced the decision of investors. The finding suggests cost incurred by enterprises to prevent the negative effects of carbon emissions arising from activities disclosed in annual reports is of interest to investors. In India, Madhiray and Sharma (2023) evaluated the influence of carbon emission reduction efforts on manufacturing enterprises and investors' attitudes. It was found that a decrease in the level of carbon emission disclosed in the annual reports of the enterprises has a significant positive impact on investors' attitudes. The decrease is a result of the cost of environmental protection disclosed in annual reports. In Nigeria, there are no studies on carbon cost information disclosure in the annual reports of enterprises. Therefore, this study hypothesized that:

HO₄: Information on Carbon Cost in annual reports of enterprises in Nigeria has no impact on investors' attitudes.

Information on carbon profit in annual reports and attitudes towards investing in enterprises in Nigeria.

Parney et al (2023) examined the impact of carbon profit disclosure and the attitude of investors toward investing in manufacturing enterprises in the USA. Results of regression analysis revealed that the disclosure positively impacts on attitudes of investors in their investment decisions. The findings suggest that the decisions of investors to invest in enterprises especially managerial firms (Carbon emitting businesses) is a function profitability of carbon trading disclosed in annual reports. From another perspective, Fregesson and Park (2023) explored challenges by manufacturing enterprises in reporting carbon profits in developing nations. The findings of the study revealed that failure to update energy data, and factor sets, and inability to use dedicated ESG reporting software are major challenges for enterprises in developing economies.

This study is different from previous studies as it looked at carbon profit disclosure in Nigeria and investors' attitudes for which there are no previous studies in the country. Therefore, the fifth hypothesis is stated as:

HO₅: Information on carbon profit in annual reports of enterprises in Nigeria has no impact on investors' attitudes.

Information on emission reduction and vision for green development.

Joel et al (2023) assessed the impact of the disclosure of the environmental conservation policy of the organization in developing economies on the decision of investors. It was found that the disclosure has a significant influence on investors' decisions. The finding suggests that disclosure of information on the vision for green development policy has a positive influence on investment decisions. In a similar study, Larluger and Beniyel (2023) examined the consequence of non-disclosure of the information in the annual reports of companies. Using a questionnaire to collect data from institutional investors and managers of Conglomerate enterprises in the USA, it was found that apart from punitive compliance measures for non-disclosure it deprives organizations of valuable investments as the act (non-disclosure) deters investors. There are no previous studies on the impact of disclosure of information on emission reduction and vision for green development on investors' attitudes in Nigeria. Therefore, this study hypothesized that,

HO₆: Information emission reduction and vision for green development in the annual reports of enterprises in Nigeria has no impact on investors' attitudes.

3.0 Data and Methods

The research work was steered around the Philosophical assumption of epistemology rooted in the deductive method to reach a reliable inference about the phenomenon under consideration. It was survey research where data for the study were primarily collected through questionnaires administered to randomly selected 1350 volunteered investors in corporate enterprises in Nigeria. Out of the administered questionnaires, 889 were found usable. The convenience sampling method was used in selecting the respondents who were able to respond to the questionnaire online. In addition to the online response, the researcher was able to visit the brokers' offices in the stock exchange in Lagos and found some investors who were able to fill out the questionnaires and return them.

Construct Reliability (CR) was used to check the reliability of the measuring instrument. The reliability of the instrument was confirmed with CR values higher than 0.6. CR values of 0.6 and above confirm the reliability of a measuring instrument (Fornell & Lacker 1981; Hair et al, 2017).

The convergent and discriminant validity of the instrument was validated by checking the acceptable range of the Average Variance Extracted (AVE) and Variance Inflation Factor (VIF).

The analysis of the data was done using Partial Least Square Structural Equation Modeling (PLS-SEM) to check the influence of the predictor variables on the response value.

Reliability and Validation of Measuring Instrument.

The reliability and validity of the constructs were confirmed by checking the acceptable range of the Average Variance Extracted (AVE). The convergent validity of the construct was achieved as the AVE for the variables exceeded 0.5 as suggested by Fornell and Lacker (1981). Further, the discriminant validity was assessed and found to be adequate as the square root of AVE demonstrated to be greater than their correlation relative to any other construct.

The diagonal number shown in bold represents the square root of AVE while the correlation ratio is presented below the diagonal showing the Fornell Lacker Criterion test for the reliability and validity of the measuring instrument.

Table 1: Reliability and Validity of the Construct

Item	CR	AVE	IA	InfCA	InfCL	InfCE	InfCC	InfCP	InfER&VGD
IA	0.809	0.691	0.792	0.248	0.563	0.231	0.279	0.391	0.421
InfCA	0.743	0.673	0.335	0.417	0.625	0.417	0.326	0.522	0.544
InfCL	0.826	0.637	0.163	0.334	0.773	0.411	0.287	0.473	0.328
InfCE	0.804	0.759	0.304	0.231	0.456	0.134	0.257	0.369	0.476
InfCC	0.781	0.685	0.221	0.183	0.411	0.346	0.270	0.458	0.339
InfCP	0.839	0.676	0.267	0.214	0.377	0.405	0.713	0.833	0.601
InfER & VGD	0.796	0.721	0.267	0.315	0.634	0.393	0.332	0.627	0.443
			CR	AVE	CAID	IA			
			CAID	0.832	0.582	0.811	0.423		
			IA	0.729	0.624	0.422	0.755		

Source: Author's Computation 2024.

Descriptive Analysis of the Data and Factor Loading

Table 3: below shows the descriptive analysis of the data and values for factor loading, Variance Inflation Factor (VIF), and Interquartile Range (IR). The factor loading was statistically significant and the VIF values are uniformly below the threshold of 5.0 indicating the absence of multicollinearity and strong predictive ability/power of the explanatory variables (Leviatt & Dekaran, 2012). Further, the values of the median for responses and information disclosure on the variables range between 3.0 and 4.0 indicating the significance of the disclosure on the investment attitude of investors. The IR which is a measure of dispersion has 1.0 values for the responses implying a consensus opinion among the respondents of the significance of these disclosures on investors' attitude.

Table 2: Descriptive Analysis of the Data and Factor Loading

Construct	Item	Loading	VIF	Median	IR
Investors' Attitude	IA1	0.702	1.375	4.0	1.0
	IA2	0.696	1.331	3.0	1.0
	IA3	0.827	2.567	3.0	1.0
	IA4	0.811	2.213	4.0	1.0
Information on Carbon Asset	InfCA1	0.742	1.371	4.0	1.0
	InfCA2	0.658	1.042	4.0	1.0
	InfCA3	0.882	2.637	3.0	1.0
Information on Carbon Liability	InfCL1	0.931	3.206	3.0	1.0
	InfCL2	0.732	1.977	4.0	1.0
	InfCL3	0.679	2.735	3.0	1.0
	InfCL4	0.770	2.478	3.0	1.0
Information on Carbon Equity	InfCE1	0.811	3.607	4.0	1.0
	InfCE2	0.763	2.495	4.0	1.0
	InfCE3	0.907	3.047	4.0	2.0
	InfCE4	0.876	2.117	4.0	1.0
Information on Carbon Cost	InfCC1	0.824	2.293	3.5	2.0
	InfCC2	0.769	2.003	4.0	1.0
	InfCC3	0.704	1.996	4.0	1.0
Information on Carbon Profit	InfCP1	0.729	3.588	3.0	2.0
	InfCP2	0.699	3.279	3.0	1.0

	InfCP3	0.711	3.108	4.0	1.0
Information on Commission Reduction and Vision for Green Development	InfER&VGD1	0.882	2.901	3.0	1.0
	InfER&VGD2	0.747	2.330	4.0	1.0

Source: Smart PLS Output 2024.

4.0 Results of PLS-SEM and Discussion

Table 4 below presents the results of SEM. It was found that information in disclosure on CA, CL, CE, CC, CP, and ER&VGD is significant in influencing individual investor's attitude towards making investment decisions as indicated by the beta values of $\beta = 0.863$, $\beta = 0.839$, $\beta = 0.716$, $\beta = 0.614$, $\beta = 0.786$, and $\beta = 0.678$ for InfCA, InfCL, InfCC, InfCE, InfCP, and InfER& VGD respectively supported by (Cyprian & Duke, 2015; Erbon & Morgan, 2015; Harrison & Khan, 2016; Ormortovos & Veir, 2017, Yakossi & Ballak ,2018; Zhang & Andrew, 2021). The support is found in the theory of voluntary disclosure that in a bid to woo investors, businesses remove information asymmetry and disclose their performance including that of carbon emission (Myers & Majluf, 1984).

Further, the influence of the predictor variables on the response variable (IA) implies a rejection of the null hypothesis of the study. The rejection of the null hypothesis of the study. The rejection of the null hypothesis was established by p-values of 0.000, 0.000, 0.017, 0.000, 0.015, and 0.013 for InfCA, InfCL, InfCE, InfCC, InfCA, and InfER&VGD respectively are less than 0.05 at a chosen 5 percent level of significance or 95 percent level of confidence.

The coefficient of determination (R^2) showed the measure of the impact/influence of the explanatory variables on IA. The value of 0.493 (0.113, 0.076, 0.155, 0.041, 0.016, and 0.092) indicates that approximately 49 percent of likely changes in the IA are accounted for by the combined effect of the explanatory variables. The rest 51% of IA influencing factors are outside the predictions of the independent variables of this study.

The finding of the study is consistent with previous studies (Dafleen & Boateng, 2021; Dannilo & Frenard, 2022; Holdar & Dorkan, 2022; Zhang & Andrew 2022 Fregesson & Park, 2023; Joel et al, 2023).

Table 3: Result of PLS-SEM

Hypothesis	Path	B	Std. Error	t-value	p-value	R ²	F ²	Q ²	Decision
H1	InfCA>IA	0.863	0.038	3.611	0.000	0.0113	0.215	0.257	Supported
H2	InfCL>IA	0.839	0.012	1.323	0.000	0.076	0.326	0.182	Supported
H3	InfCE>IA	0.716	0.063	2.606	0.017	0.155	0.522	0.234	Supported
H4	InfCC>IA	0.614	0.013	2.141	0.000	0.041	0.227	0.171	Supported
H5	InfCP>IA	0.786	0.024	3.413	0.015	0.016	0.412	0.218	Supported
H6	InfER&VGD>IA	0.678	0.0318	2.012	0.013	0.092	0.376	0.125	Supported

Source: Authors Computation, 2024.

5.0 Conclusion and Recommendation

The study was survey research that examined the influence/impact of carbon accounting information disclosure on the attitude of investors towards investing in enterprises in the Nigerian economy. Data for the study were obtained primarily from sampled investors in corporate organizations in the country. The data were analyzed using PLS-SEM. Results indicated that all the explanatory variables of the study InfCA, InfCL, InfCC, InfCP, and InfER&VGD have a positive influence/impact on IA. The study therefore recommended that the government should by legislation compel organizations especially those that have a direct impact on their operation/activities on the environment to disclose their carbon emission performance for the benefit of such disclosure to organizations/enterprises, business stakeholders particularly investors and the Nigerian economy.

References:

- Babbinner, S. O & Wilder, B. B (2020) Carbon emission Information disclosure and Value of firms: Evidence from advanced economies. *Journal of Economics and Entrepreneurship Finance* 1(2), 102 – 115.
- Barnerny, D. & Kinto, E. R (2022) Effects of carbon emission Performance reports on the attitude of investors; Evidence from Canadian Manufacturing firms. *Journal of Finance and Entrepreneurship Development* 1(4), 189-103.

- Bobson, Z. K. & Daudu, H (2017) Hurdles of gas emission disclosure in annual reports of companies in Nigeria: An exploratory review. *Journal of Social Management and Entrepreneurship Studies* 2(3), 19 – 32
- Cartron, I. P & Gailley, C (2022) Impact of carbon emission on the environment: Evidence from Thailand. *Journal of Production and Management Science* 1(7), 114-126.
- Chuo, H. L. & Li, C. C (2017) Empirical analysis of investment reaction and carbon emission information disclosure by entities: Evidence from China. *Journal of Information, Finance and Economic Research* 6(3) 447 – 461.
- Cormos, O. V & Penger, A. C (2016) Determinants of firm value: An analysis of the role of carbon emission and vision for green development disclosure. *Journal of Science, Environment and Development Studies* 2(7), 121 – 133
- Dafleen. N. S & Boateng, K. G (2021) Effects of environment degradation on the Standard of Living in Ghana. *Journal of Environmental Study and Management* 2(2), 79 – 94.
- Dannilo, M. H & Frenard, E. I (2022) Effects of carbon assets Information disclosure on the attitude of investors: Evidence from the UK. *Journal of Information Management and Business Studies* 5(6), 507-522.
- Deong, F. H & Miethan, L (2016) Effects of atmospheric pollution disclosure on investment thinking of stakeholders in selected Asian firms. *Journal of Operation and Entrepreneurship Research*. 1(4), 321-334
- Donald, O. O & Peterson, A. D (2014) Carbon accounting information disclosure: An analysis of the dimension in a globalized economy. *Journal of Accounting Financial Management and Development Studies* 2(4) 49 – 63.
- Dulman, C, Punniel, A. A & Dorcas D. E (2020) Attitude towards investing in corporate entities in Asian Countries: Do carbon emission reports matter? *Journal of Business Finance and Entrepreneurship Studies* 2(3), 126 – 139.
- Egbuna, I. E & Ike, A. W (2023) Analysis of the pros and cons of carbon accounting information disclosure by firms in Nigeria. *Journal of Business, Management and Accounting Research* 1(3) 237 – 251.
- El-Mamman, B. B & Eddel, T (2018) Carbon information disclosure in annual reports of firms: Do inducing factors differ in economies?. *Finance, Economy and Entrepreneurship Review* 3(1), 398 – 412.
- Evans, N. D & Omah, R. R (2015) Analysis of relevance of mandatory carbon reporting in a globalized economy. *Environment Science of Marketing Research Journal*. 10(1), 39 – 50.
- Fornell, C & Larcker, D. F (1981) Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- Fregesson, H & Park, E. L (2023) Challenges of carbon accounting information disclosure in a globalized economy: An exploratory study. *Journal of Operation Management, Business and Finance* 1(3), 161 – 175.

- Garba, M. A & Dairu, B. M (2023) Cost and importance of carbon emission reporting in Nigerian business environment. *Journal of Accounting, Business, Environment and Management and Research* 1(4), 327 – 341
- Geoffrey, O. L & Edwin, M. R (2018) Disclosure of greenhouse gas emission and and performance of firms. *Journal of Business, Finance and Development* 2(8), 192 – 205
- Graham, E. G, Erstabel, O. O & Dorpes, R (2005) Disclosure of carbon emission and attitude of stakeholders in assessing firms' responsibilities. *Business, Economy and Public Policy Review* 3(4), 201 – 214.
- Gregg, U & Klitson, T. A (2015) Impact of voluntary carbon emission information disclosure on confidence building by enterprises. Evidence from the U.K. firms. *Journal of Environmental Studies, business and Management Research* 6(7) 69 –
- Hair, J. F, Hult, G. T.M, Ringle, C. M & Sarstedt, M (2017) *A Primer on partial least squares structural equation modeling* (2nd ed). Thousand Oaks CA: Sage.
- Harrison, A. J & Khan, E. M (2016) Carbon emission and environmental management disclosure: Do the disclosures affect firms' value? *Journal of Economics Accounting and Entrepreneurship Management* 7(3), 402 – 415.
- Heiffer, R. D & Kim, N (2022) Information asymmetry, carbon accounting reporting and value of firms. A review of Literature. *Journal of Finance and Entrepreneurship Management* 1(6) 25 – 38.
- Holdar, F & Dorkan, O. O (2022) Effects of Board diversity on sustainability reports of corporate enterprises: Evidence from Kenyan firms. *Journal of Management, Finance and Entrepreneurship Studies* 3(1), 264 – 279.
- Hollader, T. O & Firtz, B (2016) Content and determinants of carbon emission disclosure: How influential are they in developing economies? *Journal of Production Management and Policy Development* 8(2), 284-299.
- Joel, E, Forrel A. C & Mordeccai, A (2023) Disclosure of Conservation Policy of organization: How it matters in developing countries. *Environmental Management Technology and Sustainability Review* 2(3) 115.
- Khalid, A. A. & Zayyad, M. A (2016) Determinants of carbon emission disclosure: An examination of selected firms in developing countries. *Journal of Regional Economy and Corporate Management* 1(5), 321 – 334.
- Kontz, E. T & Dristine, B. L. (2021) Greenhouse gas reporting by enterprises: An assessment of the relevance of the disclosure to stakeholders. *Journal of Management Economies and Accounting Studies* 1(3) 213 – 225.
- Larluger, A. S & Beniyel, N (2023) Does non-disclosure of ER&VGD information matter? An empirical examination. *Journal of Entrepreneurship, Finance and Management Studies* 2(1), 73 – 84.

- Lawrence B. D & Fryied (2016) Role of voluntary greenhouse gas emission information disclosure in sustainability assurance of firms. *Journal of Entrepreneurship Studies and Development Research* 9(3), 120 – 135.
- Leon, S. E & Xian, L. L (2015) Carbon accounting information and performance valuation of firms. *Journal of Entrepreneurship and Strategy Development* 1(2), 43 – 55.
- Liesen, B, Othman, L. H & Arllan, J (2015) Carbon emission reporting and investors' patronage: Evidence from European Countries. *Finance, Management and Entrepreneurship Review* 1(2), 271 – 285.
- Louis, D & Hilder, S. M (2015) Greenhouse gas emission disclosure and Visibility Performance of Firms in the global economy. An empirical analysis. *Journal of Business Model and ethics* 14(2), 201 – 213.
- Louis, N. U, Erthellien, M & Sterner, O (2015) Carbon accounting information disclosure and market performance of firms: An analysis of the efficacy of mandatory US voluntary disclosure. *Journal of Investment Entrepreneurship Studies* 5(2), 109 – 121.
- Madhiray, N. A & Sharma, F. I (2023) Influence of carbon emission on environmental sustainability. *Journal of Pure and Environmental Science* 2(5) 139 – 153.
- Matisoft, E. S, Ambulene, A. A & Patrick, R. G (2013) Carbon accounting disclosure and firms' financial performance. *Journal of Entrepreneurship Finance Accounting and Management Research* 8(3), 58 – 71.
- Mobolaji, O. O & Ajayi, B. J (2019) Greenhouse gas Emission reporting and performance of selected Manufacturing Enterprises in Lagos. *Business, Management and Entrepreneurship Review* 4(1), 119-134
- Myers, O. B & Majluf, N. S (1984) Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial and Economics* 13(2), 187-221.
- Negglon, D & Anderson, C. G (2023) Carbon emission disclosure in annual reports of companies in a non-regulated emission limit. An analysis of the effects on Firms Value. *Journal of Environment and Policy Management* 1(2), 44 – 57.
- Nurudeen, A. B & Salawu, A. M (2023) Carbon accounting voluntary information disclosure and performance of firms in Nigeria: An empirical Study. *Journal of Management Social and Entrepreneurship Studies* 1(3) 76 – 89.
- Ojo, B. I & Elias, P. J (2016) Greenhouse gas emission reporting: Does the disclosure build trust in Nigerian environment? *Journal of Accounting, Finance and Business Research* 5(3), 196 – 208.
- Ormortovos, K & Veir, S. S (2017) Carbon emission disclosure: A business strategy for legitimacy and Sustainability of firms. *Journal of Environmental Research and Economy* 1(2), 72 – 86.

- Parney, A, Channon, F & Torsby, T. N (2023) Impact of carbon emission on the profitability of enterprises: Evidence from manufacturing firms in the USA. *Journal of Management, Finance and Entrepreneurship Research* 1(4), 96 – 113.
- Paulo, C. A & Jackdoll, A. P (2016) Carbon emission reporting in the non-regulated economy and societal expectation. *Journal of Business Economics and Entrepreneurship Research* 2(4), 237 – 253.
- Polycarp, K. N & Deng, B. F (2018) Demand for greenhouse gas emission performance of entities: How influential are the stakeholders? *Journal of Entrepreneurship and Accounting Research* 4(1), 139 – 143.
- Robert, N. B & Wagner, A. A (2017) Carbon emission performance reporting and stakeholders' expectation: The need to evaluate the reporting system. *Journal of Sustainable Management and Development* 1(6) 258 – 273.
- Spencer, N. P. & Weird, C. S (2014) Greenhouse gas emission reporting: The relevance of the practice in global climate change and sustainability. *Journal of Policy Development and Management Studies* 3(3), 146 – 157.
- Thalbatt, O. U & Kelvin, N. E (2017) Carbon accounting information disclosure: A veritable tool for promoting corporate social responsibility. *Journal of Finance Accounting and Entrepreneurship Development*. 2(1) 39 – 53.
- Thorney, T, Derhin, C. H & Herbarten, N (2022) An analysis of the economic value of carbon assets in the Chinese economy. *Journal of Global Finance and Management* 13(2) 324 – 337.
- Yakossi, D. D & Ballak, O. K (2018) Carbon information disclosure in annual reports of companies: It is a responsibility disclosure? *Finance, Accounting and Technology Review* 3(1), 470 – 484.
- Zhang, L. Z & Andrew, W. B (2021) Carbon emission performance regulation and attitude of investors in Chinese Corporate organizations. *Journal of Enterprise Management and Accounting Research* 4(2), 209 – 224.
- Zyaad, A. Y & Bermtner, O (2017) Disclosure of carbon emission information in annual reports: A Strategic tool for sustainable development in global climate change. *Journal of Production Operation Management and Finance* 1(4), 131 – 145.