Corporate Sustainability Dimensions and Enterprise Value Creation in Agro-Allied Firms Listed in the Nigerian Exchange Group

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Abstract

The study investigated the effect of the corporate sustainability dimensions on the enterprise value creation of agro-allied firms listed on the Nigerian Exchange Group. The objective of the study is to assess the effect of the corporate sustainability dimensions of environmental, social, governance, and economic on the enterprise value creation of agro-allied firms. This was carried out using a survey research design. The population of the study was 1176 permanent staff of the five agro-allied firms listed on the Nigerian Exchange Group, with a sample of 298 personnel obtained using the Taro Yamane formula. The study used primary qualitative data that was translated into quantitative data using 5-point Likert scaling. The questionnaire used for the study was tested for its reliability and validity and was found to be adequate for the study. Using version 26 of the Statistical Package for Social Science software, the data were analysed using descriptive and inferential statistics. For the inferential statistics, linear multiple regression was used. The study's findings reveal that, overall, corporate sustainability dimensions have a significant effect on the enterprise value creation of agro-allied firms listed on the Nigerian Exchange Group. In line with the study hypothesis, it was concluded that the environmental dimension has the leading positive and significant effect on the agro-allied firms' enterprise value creation, followed by the governance dimension and the social dimension. Whereas the economic dimension has no significant effect on the agro-allied firms' enterprise value creation. The study, therefore, recommends that the corporate sustainability dimensions of environmental, social, and governance be prioritised over the economic dimension by agro-allied firms listed on the Nigerian Exchange Group.

Keywords— Corporate Sustainability, Environmental Sustainability, Social Sustainability, Governance Sustainability, Economic Sustainability, Enterprise Value Creation.

I. INTRODUCTION

The governance of a corporation, business interaction with the environment and contributions to social well-being are the core pillars of corporate sustainability (Taliento et al., 2019; Elshawarby, 2018). The concept of corporate sustainability has occupied a significant position in business literature in recent years (Taliento et al., 2019; Uwuigbe et al, 2018; Honore et al., 2015). According to Kocmanová et al., (2016), the concept and measure of corporate sustainability could be classified into environmental, social and corporate governance. The environment deals with climate change, greenhouse gas emissions, exploitation of resources, waste, pollution and deforestation. The social level or dimension deals with working conditions, health and safety, diversity, and relationships with employees and host communities. While corporate governance concerns mechanisms or practices (Ibe et al., 2017).

Before the advent of enterprise value creation, the Nobel economist, Milton Friedman (1912 - 2006), who propended the shareholder theory or stockholder theory, famously argued that the primary purpose and the only social responsibility of a business are to maximise profit for its shareholders. Whilst this view has been considered the traditional form of business, Sorkin (2020), argued that times are changing and that corporations may be leaving the Friedman doctrine behind. In other words, simply generating profit for shareholders without creating value for stakeholders is a step backwards. Corporations or businesses would not exist if value creation did not exist. Value creation is a critical basis for achieving long-term, profitable and sustainable growth while still giving actual value to stakeholders (Kocmanová et al., 2016). The enterprise value of a firm is a measure of its total worth—encompassing the full market value of the company rather than just the equity value based on market capitalisation.

The movement toward corporate sustainability reporting has therefore become progressive and strategic within both developed and developing countries due to demands from internal and external stakeholders of the business for holistic information regarding corporate sustainability factors (CSFs). Thus, the debate on the relationship between corporate sustainability factors and firms' performance value has been on a significant increase in recent years (Taliento et al., 2019; Uwuigbe et al, 2018; Sanna-Lena, 2015). Outcomes of empirical studies conducted on corporate sustainability showed to be mixed or inconsistent. Previous research carried out on corporate sustainability before and during the global financial crisis of 2008 revealed that there is a positive relationship between corporate sustainability factors and firms' performance and others showed statistically negative and insignificant relationships (Miralles-Quiros et al., 2019; Taliento et al., 2019; Uwuigbe et al., 2018; Tarmuji et al., 2016). These mixed findings could be attributed to or explained by the inconsistencies in the framework adopted to measure the corporate sustainability factors and financial performance or value creation (Umoren et al., 2015).

Based on the aforementioned discrepancies, in addition to the fact that very limited research on the subject has been conducted on agro-allied firms, this study considers the problem (mixed results, corporate sustainability factors, time frame of previous works and dearth of empirical studies in Nigeria) to ascertain the effect of corporate sustainability factors on enterprise value creation on the agro-allied firms listed on Nigerian Exchange Group (NGX) (formerly known as Nigerian Stock Exchange (NSE)), using the most current data to run the analysis of the study. Furthermore, reports of the high rate of corporate failures in sustainability practices with adequate funds, accounting and managerial skills call for investigations. Evidence from extant literature indicated that the inability of firms to develop and shape an effective knowledge base, where new capabilities are created within the operational and dynamic organisational process has put firms in difficult situations. The research seeks to access how corporate sustainability practices affect enterprise value creation.

The main objective of the study is to examine the effect of the corporate sustainability dimension on enterprise value creation among firms listed on the Nigerian Exchange Group (NGX). The specific objectives are to: investigate the effect of the environmental sustainability component on enterprise creation among agro-allied firms listed on the NGX; examine the effect of the social sustainability component on enterprise value creation among agro-allied firms listed on the NGX; determine the effect of the governance sustainability component on the enterprise value creation among agro-allied firms listed on the NGX; ascertain the effect of the economic sustainability component on the enterprise value creation among agro-allied firms listed on the NGX.

The selection of the agro-allied firms listed on the NGX was due to many reasons. The agro-allied firms in Nigeria play a vital role in providing a significant contribution to the country's GDP, export earnings and employment. More so, the agro-allied firms listed in the NGX have most of their company records available to the public. Hitherto the problems identified and considering the objectives of the study, the following hypotheses were formulated:

H_{01}: Environmental sustainability dimension has no significant effect on the enterprise value creation of agro-allied firms listed on the Nigerian Exchange Group.

H_{02}: Social sustainability dimension has no significant effect on the enterprise value creation of agro-allied firms listed on the Nigerian Exchange Group.

H_{03}: Governance sustainability dimension has no significant effect on the enterprise value creation of agro-allied firms listed on the Nigerian Exchange Group.

H_{04}: Economic sustainability dimension has no significant effect on the enterprise value creation of agro-allied firms listed on the Nigerian Exchange Group.

II. LITERATURE REVIEW

2.1 Corporate Sustainability Dimensions

The word "sustainability" has a number of meanings (Sheehy & Farneti, 2021). According to some academics, sustainability refers to a person's capacity to protect the natural resources that are at hand and avoid abusing them excessively so that they become scarce in the future. It has been described as policy-making by others (Jaimes-Valdez & Jacobo-Hernandez, 2016). According to the viewpoint of agro-allied industries, Nina et al. (2010) asserted that sustainability in agribusiness is a model that provides enough food to satisfy the demand that exists both today and in the future. The claim is that in order for an agribusiness to be sustainable, it must produce food with consideration for the environment (to ensure that production can go on indefinitely), as well as generate enough production to meet demand and provide growers with an adequate return to support the lifestyles they and their descendants will need.

The definition provided by the United Nations Commission on Economic Development (UNCED) in its Brundtland Report from 1987, however, appears to be universally accepted. Sustainability is described in the report "our shared future" as something that "meets the requirements of the present without sacrificing the potential of the future generation to fulfil their own goals." Even though some academics have considered this concept to be problematic thus far, the majority of researchers thought that it satisfied the majority of sustainability requirements in its broad uses (Mensah, 2019).

Corporate sustainability is a strategy that focuses on the social, ethical, environmental, economic and cultural, aspects of conducting business in order to provide long-term stakeholder value (Nnabuife & Onwuzuligbo, 2015). According to Tarmuji et al. (2016), corporate sustainability encompasses three factors viz. environmental, social and governance acronym as the ECG factors. The developed solutions aim to promote longevity, openness, and appropriate personnel growth inside a company organisation. Companies frequently use a declaration of corporate sustainable standards, which are typically policies and initiatives intended to meet or exceed minimum regulatory requirements, to demonstrate their commitment to corporate sustainability (Sheehy & Farneti, 2021).

The complicated performance indicator developed by Kocmanová et al. (2016) is one method of evaluating company sustainability. This includes assessing company sustainability using composite indicators that combine metrics for the environment, corporate governance, society or social, and the economy (which is what this research emulates). Meanwhile, Jerónimo-Silvestre et al. (2016), have claimed that the four requirements that must be fulfilled in order to achieve sustainable development should include eco-equity, economic effectiveness, social effectiveness and sufficiency.

2.2 Environmental Sustainability

Environmental sustainability is "the potential to offer reduced long-term risks associated with resource exhaustion, fluctuations in energy costs, product liabilities, environmental pollution, and waste management issues" (Papoutsi, 2018). In the same way, Thompson and Norris (2021), termed sustaining nature's services at an appropriate level as environmental sustainability. They claimed that environmental sustainability included using natural resources less frequently than they would reproduce naturally or emitting no emissions more frequently than the natural ecosystem could absorb and assimilate them. Environmental sustainability is a concept that recognizes that ecological resources are inadequate and thus suggests that firms need to reform, redesign, and restructure their business operations to minimise negative environmental impact (Papoutsi, 2018). Hence, environmental sustainability addresses the issues of resource conservation, waste reduction, and decrease in consumption of hazardous materials.

In today's society, the importance of taking environmental performance into account when making investment decisions is growing significantly. The present Principles of Responsible Investing (PRI), according to Linnenluecke (2022), have prompted investors to treat environmental concerns as crucial economic difficulties as well as sustainability issues. This will reveal the long-term shareholder value of businesses that are ill-equipped to deal with ecological problems and have a detrimental impact on their ability to make investments and/or run their operations.

2.3 Social Sustainability

The code name for the social dimension of corporate sustainability is corporate social responsibility (CSR). CSR refers to how the Organisation treats its employees, the community, and the client, through responsibility for their products and services. It explains the Organisation's responsibilities to society and includes issues concerning poverty alleviation and disease management, access to health care and education, and the general well-being of society (Taliento et al., 2019; Asuquo et al., 2018; Elshawarby, 2018; Papoutsi, 2018). Another aspect of CSR relates to the human capital of the

firm and covers business practices that are fair and favourable to the people directly or indirectly affected by the company's activities (Papoutsi, 2018). Corporate social responsibility requires firms to provide equitable opportunities, encourage diversity, provide training and development seminars to employees, and maintain high occupational health and safety standards (Taliento et al., 2019).

According to Thomson Reuters (2017), the main categories of the corporate social responsibility disclosure measures or in other words, corporate social performance scoring methodology are Product responsibility, Workforce, Human rights, and Community. The workforce category involves measuring how effective companies are in working with job satisfaction, equality, diversity, keeping a healthy and safe workplace, and also how effective they are at employee training and development. The human rights category addresses the company's respect for fundamental human rights, while the community category evaluates the company's commitment to protecting public health, being a good citizen, and respecting business ethics.

2.4 Governance Sustainability

Governance is associated with doing the "right things" in the "right way" by adhering to a framework that is ultimately geared to fulfilling any Organisation's desired goals. Governance is necessary not only for publicly-listed corporations but also for all types and sizes of businesses. All of these organisations have the goal of maintaining continued and profitable operations that meet their long-term strategic goals and, ultimately, satisfy their stakeholders (Nassar, 2015). In essence, corporate governance refers to the policies and procedures put in place to guarantee that a firm follows the law and serves the best interests of all stakeholders.

Thus, governance sustainability can be said to be a system by which corporations are governed and controlled, to increase shareholders' value and meet the expectation of other stakeholders. It holds firm the guiding principle of transparency, accountability, good quality management, and integrity for corporate sustainability. According to Clarke (2017), good corporate governance strategies help to decrease the cost of equity, risk, and information asymmetries by being more transparent. There are also studies which show that companies with poor corporate governance strategies are evaluated lower and have lower operational performance.

2.5 Economic Sustainability

The economic dimension of corporate sustainability is concerned with the organisation's influence on its stakeholders' economic situations as well as the economic systems at the local, national, and global levels (GSSB, 2015). The economic component displays the flow of capital among various stakeholders, as well as the major economic repercussions of the organisation on society.

The economic dimension is characterised as the development of competitive value and advantage, given that enterprises are a source of material wealth that allows them to survive over time (Sidhoum & Serra, 2017). Even though the ultimate purpose of corporations is not financial profit, they must be economically sustainable to meet the concept of equal distribution of surplus (González et al., 2019). It is the inclusion of the economic dimension and profit that allows corporations to embrace sustainability plans. The economic dimension acts as a check on the extreme steps that firms are sometimes forced to take, such as quitting fossil fuels or chemical fertilisers immediately rather than gradually (Beattie, 2022).

2.6 Enterprise Value Creation

Sometimes people confuse enterprise value with equity value. Enterprise value is the total equity value and net debt value, whereas equity value is the portion of enterprise value that remains for shareholders after creditors have been paid. The measure of a company's overall worth, according to the Corporate Finance Institute (CFI), is called Enterprise Value (EV). All ownership interests and asset claims from both debt and equity are included since the metric considers the total market value rather than simply the equity value. The notional price of a target firm (before a takeover premium is taken into account) or the effective cost of purchasing a company are two ways to conceptualise enterprise value (CFI, 2018).

EV is equal to the sum of the following: market capitalization and market value of debt less cash and equivalents (This is a straightforward formula for calculating enterprise value. The more thorough formula is: EV is equal to the sum of the following: common shares, preferred shares, market debt, and minority interest, less cash and equivalents.

The assets the firm has can be used to determine its worth. However, it can be time-consuming and challenging to determine the market value of each item. However, by considering assets as the use of funds and both liabilities and shareholder's equity as the sources

of funds used to finance those assets, a straightforward accounting equation may act as a guide. Enterprise value, also known as a firm value, is the current or market worth of the business, which includes both the market values of the company's assets and liabilities.

2.7 Empirical Review

Several studies on sustainability practices in various countries about enterprise value creation have been conducted. This part of this chapter reviewed previous empirical studies related to the study.

Ordu and Amah (2021), examined the performance of a few publicly listed oil and gas firms from 2012 to 2017 concerning sustainability accounting. They focused on examining the connection between environmental accounting and return on assets for publicly traded oil and gas firms in Nigeria. The study, which employed an explanatory and correlational approach, utilised secondary data. Information was acquired through annual reports and accounts, which were made public on the websites of the firms and the Nigerian Exchange Group (various years). Data collection took place between 2012 and 2017. Annual reports comprise financial statements, sustainability reports, yearly returns submitted with the Nigerian Exchange Group for the years under review, and annual returns of publicly listed oil businesses. Regression was employed for both data analysis and hypothesis testing. The research showed no connection between environmental accounting and the analysed oil and gas businesses' return on assets in Nigeria. Ordu and Amah (2021), who employed a suitable statistical research technique to examine the variables, failed to adequately account for the variance in their dependent variable as seen by their low R-squared of 0.5%.

Atanda et al. (2021), used data from 10 randomly chosen listed deposit money banks in Nigeria covering the years 2014–2018 to assess the impact of sustainability disclosure on company value. To measure the overall sustainability disclosure index and its three dimensions (social, environmental, and economic), they used an ex-post facto research design, qualitative content analysis, and audited reports and accounts as their source of data. They then used descriptive tools and ordinary least square (OLS) fixed-effects regression for analysis. According to their findings, environmental sustainability disclosures and general sustainability disclosures hurt rather than helped business value. In the end, they came to the conclusion that deposit money banks in Nigeria's sustainability reporting do not increase business value; rather, it only legitimises their activities. Atanda et al. (2021)'s use of OLS suffices to

determine the best-fitting line for the set of data points. However, because the OLS approach is used to estimate the unknown parameters, it is crucial to evaluate if the data is normally distributed, which the researchers failed to do.

Jha et al. (2020) investigated the relationship between corporate sustainability performance (CSP) and corporate firm performance using a sample of the top 500 Indian corporations covering the years 2008 to 2018. (CFP). In order to account for the CSP elements, both aggregate and disaggregate levels of ESG performance were considered. On the other hand, CFP was assessed using both accounting and market-based parameters. Then, the bidirectional causation and strength of the CSP-CFP link were investigated using the Granger causality test and multiple regression for panel data. After that, they offered a sector-level trend analysis, dividing the industries represented by the enterprises into ESI and non-ESI sectors. Their findings demonstrate that there is no causal association between CSP and CFP variables in either direction and that the CSP-CFP linkage is mostly insignificant for Indian firms at the aggregate level. At the individual level, however, CSP and CFP are shown to have some detrimental associations. Both CSP-CFP linkages are negatively impacted by this connection, which means that Indian enterprises do not gain financially from investments made for sustainability. Even though the works by Jha et al. (2020), provided a common framework to show the casualty between the ESG and EV relationship, the argument that the Granger test is not a true test for causality was not addressed. Aside, the Granger causality failed to forecast when the three variables are interdependent.

Ihemeje et al. (2020), explored how production capacity affected the productivity growth of agro-related small companies in South-South Nigeria. The study questions, which are formatted on a closed-ended, five-point Likert scale, serve as the instrument for gathering data. The information was gathered from 250 SME owners and employees in the study's target major industrial cities using a stratified random sample approach. The Ordinary Least Square regression method was used to assess the association between dependent business productivity and independent variables of production capacity practice. The study discovered a favourable and statistically significant link between production capacity and business productivity. This suggests that small agro-related enterprises in Nigeria have the sufficient production capacity to support an improvement in productivity. The study by Ihemeje et

al. (2020), presented a good framework for the research as their chosen method of analysis adequately accounts for the study variables.

Gupta and Gupta (2020), aimed to understand how environmental sustainability affected a number of performance factors for a company. The study examined the financial performance of a firm, customer performance, internal business process performance, and learning and growth performance as four factors that contribute to a company's success. Using known scales and confirmatory factor analysis in AMOS, the study's concepts were verified. Top executives of Indian business firms provided a sample of 200 cross-sectional replies, which they collected. They then used structural equation modelling in AMOS to investigate the impact of environmental sustainability on company performance. Their research demonstrated that environmental sustainability has a favourable and significant impact on the four critical functional performance dimensions of businesses. The works of Gupta and Gupta (2020) offered insights into how sustainability and company performance relate when taking into account all important functional parameters. However, the correlation was employed instead of the covariance matrix in the SEM analysis, which is clearly unsuitable in the multi-sample and multi-occasion models.

2.8 Theoretical Framework: Stakeholder Theory

Robert Edward Freeman initially developed the stakeholder theory in his book "Strategic Management: A Stakeholder Approach," released in 1984. The stakeholder theory arose from the shareholder theory notion that a corporation's primary goal should be to maximise the wealth of its shareholders (Wijnberg, 2000; Mitchell et al., 1997). In contrast to the shareholder theory, the Stakeholder theory holds that corporations' primary responsibility is not to maximise shareholder wealth, but to act in the best interests of all stakeholders in the business environment, without favouring one stakeholder over another in potential trade-offs (Mansell, 2013; Freeman, 2008). The idea has grown in prominence and popularity in the management area, both in research (which has resulted in several publications) and in basic management principles. The concept of "stakeholder" has become "a staple aspect of Introduction to Management lectures," according to Donaldson and Preston (1995). Stakeholder theory, according to Wood and Jones (1995), explores and explains the configurations of interactions between companies and society.

The stakeholder theory was developed in response to changes in the commercial and economic backdrop of the 1980s, as well as changes in management methods. The "productive perspective of the company," which was previously ubiquitous and popular in model organisations, was superseded by the "managerial view of the business" with the advent of principal-agent models, as well as the separation of control and ownership (Freeman, 2008). Because modern enterprises must interact with a growing number of interested parties, the previous model, the production perspective, was no longer capable of producing an accurate analysis of the firm. As a result, a new paradigm was required to describe the success determinants for doing business in the new, more complicated environment. The corporate climate has undergone significant transformation and increasing instability. According to Freeman (2008), the stakeholder framework addressed three major issues: Understanding and managing a business in the twenty-first century (the problem of value creation and trade); integrating ethical, responsible, and sustainable thinking with the traditional economic view of capitalism (the problem of capitalism's ethics); and understanding what to teach managers and students about what it takes to be successful in today's business world (the problem of managerial mindset).

To be successful, organisational managers must have effective models that account for these shifting aspects, therefore providing direction and strategic solutions in an unstable and dynamic environment. According to Freeman (2008), changes are classified into two types: internal changes and external changes. Internal change is a change that "needs activity, but it does not immediately challenge our mental map of the world". Internal changes can occur in the corporation's owners, customers, suppliers, and staff. This change is at a level that the organisation can handle with minor tweaks and does not necessitate a significant strategy shift. The organisation is already aware of these variables and can handle and address the majority of difficulties associated with them. External change is "the creation of new organisations, events, and challenges which cannot be simply grasped within the framework of an existing model of theory". To understand and analyse external changes, managers must develop new models or frameworks that allow them to deal with a high level of uncertainty caused by these changes (Freeman, 2008).

Essentially, the stakeholder theory seeks to integrate social responsibility into the operations of organisations without jeopardising the interests of shareholders or

the principles of the capitalistic market economy (Mansell, 2013). The Stakeholder theory aligns with this research since it is a smart management approach, that organisations used to maximise profit whilst taking cognisance of external stakeholders. To properly integrate and fulfil the interests of all stakeholders, business organisation management must first identify all stakeholders. To encapsulate the strategic management approach through stakeholder theory, Freeman (2008) states that the company does not only affect the stakeholders, but the stakeholders may also have a significant impact on the organization's performance. Based on this, it is believed that in order to be as effective as possible, the organisation need a strategic management plan that takes the demands and interests of the stakeholders into account (Dahlberg & Wiklund, 2018).

III. METHODOLOGY

The study adopted the survey research design which relies on responses gotten from primary data. The sample size of the study comprised 298 management and permanent staff of the five agro-allied firms listed in the Nigerian Exchange Group. The reason for using a survey research design is that the information needed in this study is obtained through the use of a questionnaire that is administered. The study also relied on asking respondents questions, and respondents are more likely to provide detailed and honest responses to questions. It is also the objective approach to decision-making.

The stratified random sample technique was used for the investigation. While random sampling refers to the process of randomly selecting a random sample of units from a population, stratified random sampling splits the population into smaller subgroups known as strata in order to allow generalisation from the sample to the population (Saunders et al., 2019). The stratified technique was chosen since there are five agro-allied firms researched. The population figures of these businesses according to Wall Street Journal (2021), Library of Nigerian Exchange Group (2021) and their human resources department, consists of 1,176 senior/permanent staff. As of 31st December, 2021, are a total of five agro-allied firms listed on the Nigerian Exchange Group (NGX) that comprises of:

Table 3.1: Population of Study

S/N	Name of Company	Date Listed	Date Incorporated	Population
1	Ellah Lakes PLC	January 24, 1993	July 2, 1980	127
2	FTN Cocoa Processors PLC	August 28, 2008	August 26, 1991	74
3	Livestock Feeds PLC	April 1, 1978	March 20, 1963	84
4	Okomu Oil Palm PLC	September 9, 1997	December 3, 1979	426
5	Presco PLC	October 10, 2002	September 24, 1991	465
Total				1176

Source: Library of Nigerian Exchange Group, 2021.

Taro Yamane's sample size determination formula by Yamane (1967), was used to effectively determine the sampling representative of the study population. Taro Yamane's formula is stated as follows:

$$n = \frac{N}{1 + N(e)^2}$$

Where: n = sample size; N = population size; e = degree of tolerance error, which with a confidence level of 95%, the degree of tolerance error is 5% (0.05).

$$n = \frac{1176}{1 + 1176(0.05)^2}$$

$$n = \frac{1176}{1 + 1176(0.0025)}$$

$$n = \frac{1176}{1 + 2.94}$$

$$n = \frac{1176}{3.94}$$

$$n = 298.447$$

Based on the formula, two hundred and ninety-eight (298) is the sample size for the study. This sample size of 298 was adopted as it is usually not the largeness of

the sample size that made a sample valid but its representativeness (Young, 2022). However, 10% of the questionnaire was added to ensure a successful return of 298.

The study collected primary data by using a structured questionnaire to elicit responses from respondents. The questionnaire was chosen because it is not time-consuming and frequently has standardised answers that make it simple to complete data; it allows respondents to provide answers that are confidential to them. This instrument was used to elicit responses from respondents about the effect of the corporate sustainability dimension on the enterprise value creation of the agro-allied firms listed on the Nigerian Exchange Group. The respondents were allowed to provide more considered opinions and more adequate

information; respondents checked the information before filling out the questionnaire. A Likert scale of 5 points was used to measure the extent to which the various respondents agreed or disagreed with the issues raised.

3.1 Validity and Reliability of the Instrument

The questionnaire was tested to ensure consistency and that the questions were correctly answered. The validity of the instrument was not considered because the questionnaire was adapted from Ogadinma's (2019) study. The questionnaire was used because the variables in the study were the same. The questionnaire's reliability was defined as having an Alpha value of 0.6 or higher, indicating that the instrument was considered reliable. The variables' reliability values are shown in Table 3.2.

Table 3.2: Reliability of the Variables with Cronbach's Alpha Model

Variables	Cronbach's Alpha	Number of Items
Environmental Dimension (ENV)	0.843	5
Social Dimension (SOC)	0.771	5
Governance Dimension (GOV)	0.819	5
Economic Dimension (ECO)	0.704	5
Enterprise Value Creation (EVC)	0.738	5

Source: Researcher's Computation, 2022

Table 3.2 demonstrates the instrument's reliability, with variables with Cronbach's Alpha values greater than 0.7 is regarded as all being reliable. In the view of Schindler (2021), a minimum Cronbach's Alpha value of 0.7 is stated to be reliable.

3.2 Techniques for Data Analysis

All the data were analysed with the aid of SPSS version 26. The data on both biography and psychographic variables (e.g. age, sex, education etc.) was presented in simple percentage distribution tables. Furthermore, analysis and interpretation of the data in these tables were based on the frequency of each data. The researcher utilised a simple average and frequency table to present the results of the questionnaire, as well as, the results collected from the personal data. The primary data that was obtained from the questionnaire was presented in absolute figures and where necessary in percentage or proportion. In all the cases where the proportion of responses from respondents was more than 0.50 or (50%), such responses were adjudged to be sufficient evidence to substantiate the point of view under investigation (Schindler, 2021). Test proportion

was used to analyse the responses to the questions and also used to test the hypotheses.

The questionnaire was the main data collection instrument to test each of the hypotheses formulated. The responses of the respondents to the raised questions in the questionnaires were put in the data figure to test the hypotheses; using linear multiple regression analysis.

3.3 Model Specification

The linear multiple regression analysis was used to test the hypotheses. The model specification vis-à-vis the general formula for regression analysis is:

$$y = a + bx + e \quad \text{...(3.1)}$$

Where; y = Dependent Variable; x = Independent Variable; a = constant; b = coefficient of x; e = error margin.

$$EVC = f(ENV, SOC, GOV, ECO) \quad \text{......................(3.2)}$$

In line with equation (3.1), mathematically stated as:

$$EVC = a_0 + b_1 ENV + b_2 SOC + b_3 GOV + b_4 ECO + e_t \text{......(3.3)}$$

Where: EVC = enterprise value creation; ENV= environmental sustainability; SOC=social sustainability; GOV =governance sustainability; ECO = economic sustainability; a_0 = unknown constant; b_1 to b_4 = unknown coefficients; e_t = error term.

IV. DATA PRESENTATION AND ANALYSIS

To establish the effect of the corporate sustainability dimension on the enterprise value creation of the agro-allied firms listed on the Nigerian Exchange Group, a Likert scale was used to gather data on the variables concerning the degree of agreement on a scale of 1 to 5.

The scale is such that 1 is the indicator for strongly disagree and 5 is the indicator for strongly agree. The data presented in this study was gathered from senior/permanent staff or supervisors of agro-allied firms listed on the Nigerian Exchange Group. Meanwhile, the questionnaires were delivered to respondents using a stratified random sampling technique. The gathered responses were presented and analysed using descriptive and inferential statistics in this section.

4.1 Distribution of Responses and Descriptive Statistics

Table 4.1: Environmental Dimension (ENV) of the Agro-Allied Firms

Statements	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)
Protects the environment and conducts annual environmental audits	15(5.0)	74(24.8)	118(39.6)	65(21.8)	26(8.7)
Reduces its consumption of natural resources	8(2.7)	39(13.1)	109(36.6)	101(33.9)	41(13.8)
Recycles waste products	14(4.7)	52(17.4)	68(22.8)	103(34.6)	61(20.5)
Communicates to its customers its environmental protection practices	18(6.0)	107(35.9)	99(33.2)	61(20.5)	13(4.4)
Exploits renewable energy in a productive process compatible with the environment	35(11.7)	79(26.5)	62(20.8)	92(30.9)	30(10.1)

Source: Author's Computation, 2022

Table 4.1 showed the distribution of responses of the environmental dimension of the agro-allied firms. 5.0% of the respondents strongly disagreed that their agro-allied firm "protects the environment and conducts annual environmental audits," 24.8% disagreed, 39.6% were undecided, 21.8% agreed while 8.7% strongly agreed. 2.7% of the respondents strongly disagreed that their agro-allied firm "reduces its consumption of natural resources," 13.1% disagreed, 36.6% were undecided, 33.9% agreed while 13.5% strongly agreed. 4.7% of the respondents strongly disagreed that their agro-allied firm "recycles waste products," 17.4%

disagreed, 22.8% were undecided, 34.6% agreed while 20.5% strongly agreed. 6.0% of the respondents strongly disagreed that their agro-allied firm "communicates to its customers its environmental protection practices," 35.9% disagreed, 33.2% were undecided, 20.5% agreed while 4.4% strongly agreed. 11.7% of the respondents strongly disagreed that their agro-allied firm "exploits renewable energy in a productive process compatible with the environment," 26.5% disagreed, 20.8% were undecided, 30.9% agreed while 10.1% strongly agreed.

Table 4.2: Social Dimensions (SOC) of the Agro-Allied Firms

Items	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)
Is committed to improving the welfare of the communities in which it operates	16(5.4)	94(31.5)	106(35.6)	64(21.5)	18(6.0)
Actively participates in social and cultural events	11(3.7)	58(19.5)	131(44.0)	65(21.8)	33(11.1)
Plays a role in society that goes beyond mere profit generation	24(8.1)	109(36.6)	66(22.1)	52(17.4)	47(15.8)

Items	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)
Helps to solve social problems for their employees	31(10.4)	104(34.9)	85(28.5)	48(16.1)	30(10.1)
Provides training and promotion opportunities for their employees	27(9.1)	83(27.9)	83(27.9)	55(18.5)	50(16.8)

Source: Author's Computation, 2022

Table 4.2 showed the distribution of responses of the social dimension of the agro-allied firms. 5.4% of the respondents strongly disagreed that their agro-allied firm "is committed to improving the welfare of the communities in which it operates," 31.5% disagreed, 35.6% were undecided, 21.5% agreed while 6.0% strongly agreed. 3.7% of the respondents strongly disagreed that their agro-allied firm "actively participates in social and cultural events," 19.5% disagreed, 44.0% were undecided, 21.8% agreed while 11.1% strongly agreed. 8.1% of the respondents strongly disagreed that their agro-allied firm "plays a role in society that goes beyond mere profit generation," 36.6% disagreed, 22.1% were undecided, 17.4% agreed while 15.8% strongly agreed. 10.4% of the respondents strongly disagreed that their agro-allied firm "helps to solve social problems for their employees," 34.9% disagreed, 28.5% were undecided, 16.1% agreed while 10.1% strongly agreed. 9.1% of the respondents strongly disagreed that their agro-allied firm "provides training and promotion opportunities for their employees," 27.9% disagreed, 27.9% were undecided, 18.5% agreed while 16.8% strongly agreed

Table 4.3: Governance Dimension (GOV) of the Agro-Allied Firms

Items	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)
Considers diversity when appointing members in a leadership role	7(2.3)	74(24.8)	106(35.6)	65(21.8)	46(15.4)
Ensures staff members continuously receive training on anti-corruption and ethics	10(3.4)	31(10.4)	99(33.2)	119(39.9)	39(13.1)
Creates transparent rules and controls that align the interests of shareholders and stakeholders	15(5.0)	47(15.8)	90(30.2)	84(28.2)	62(20.8)
Discusses corporate sustainability dimensions at the board level	13(4.4)	66(22.1)	106(35.6)	71(23.8)	42(14.1)
Ensures top management often consults with other stakeholders on the best sustainability practices	20(6.7)	71(23.8)	83(27.9)	84(28.2)	40(13.4)

Source: Author's Computation, 2022.

Table 4.3 showed the distribution of responses of the governance dimension of the agro-allied firms. 2.3% of the respondents strongly disagreed that their agro-allied firm "considers diversity when appointing members in a leadership role," 24.8% disagreed, 35.6% were undecided, 21.8% agreed while 15.4% strongly agreed. 3.4% of the respondents strongly disagreed that their agro-allied firm "ensures staff members continuously receive training on anti-corruption and ethics," 10.4% disagreed, 33.2% were undecided, 39.9% agreed while 13.1% strongly agreed. 5.0% of the respondents strongly disagreed that their agro-allied firm "creates transparent rules and controls that align the interests of shareholders and stakeholders," 15.8% disagreed, 30.2% were undecided, 28.2% agreed while 20.8% strongly agreed. 4.4% of the respondents strongly disagreed that their agro-allied firm "discusses corporate sustainability dimensions at the board level," 22.1% disagreed, 35.6% were undecided, 23.8% agreed while 14.1% strongly agreed. 6.7% of the respondents strongly disagreed that their agro-allied firm "ensures top management often consults with other stakeholders on the best sustainability practices," 23.8% disagreed,

27.9% were undecided, 28.2% agreed while 13.4% strongly agreed

Table 4.4: Economic Dimension (ECO) of the Agro-Allied Firms

Items	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)
Obtains the greatest possible profits	47(15.8)	59(19.8)	45(15.1)	86(28.9)	61(20.5)
Tries to achieve long-term success	32(10.7)	67(22.5)	79(26.5)	65(21.8)	55(18.5)
Improves its economic performance	23(7.7)	78(26.2)	54(18.1)	64(21.5)	79(26.5)
Ensures its survival and success in the long run	56(18.8)	69(23.2)	70(23.5)	41(13.8)	62(20.8)
Pursues competitive value and advantage	44(14.8)	63(21.1)	83(27.9)	54(18.1)	54(18.1)

Source: Author's Computation, 2022

Table 4.4 showed the distribution of responses of the economic dimension of the agro-allied firms. 15.8% of the respondents strongly disagreed that their agro-allied firm "obtains the greatest possible profits," 19.8% disagreed, 15.1% were undecided, 28.9% agreed while 20.5% strongly agreed. 10.7% of the respondents strongly disagreed that their agro-allied firm "tries to achieve long-term success," 22.5% disagreed, 26.5% were undecided, 21.8% agreed while 18.5% strongly agreed. 7.7% of the respondents strongly disagreed that their agro-allied firm "improves its economic performance," 26.2% disagreed, 18.1% were undecided, 21.5% agreed while 26.5% strongly agreed. 18.8% of the respondents strongly disagreed that their agro-allied firm "ensures its survival and success in the long run," 23.2% disagreed, 23.5% were undecided, 13.8% agreed while 20.8% strongly agreed. 14.8% of the respondents strongly disagreed that their agro-allied firm "pursues competitive value and advantage," 21.1% disagreed, 27.9% were undecided, 18.1% agreed while 18.1% strongly agreed

Table 4.5: Enterprise Value Creation (EVC) of the Firms

Items	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)
Has increased its enterprise value in the past 10 years	8(2.7)	22(7.4)	72(24.2)	114(38.3)	82(27.5)
Has reduced its net debt value in the past 10 years	4(1.3)	36(12.1)	84(28.2)	97(32.6)	77(25.8)
Has increased its equity value in the past 10 years	14(4.7)	54(18.1)	63(21.1)	99(33.2)	68(22.8)
Has increased its market price per share in the past 10 years	12(4.0)	35(11.7)	47(15.8)	124(41.6)	80(26.8)
Has increased its customer base in the past 10 years	22(7.4)	65(21.8)	36(12.1)	66(22.1)	109(36.6)

Source: Author's Computation, 2022

Table 4.5 showed the distribution of responses of the enterprise value creation of the agro-allied firms. 2.7% of the respondents strongly disagreed that their agro-allied firm "has increased its enterprise value in the past 10 years," 7.4% disagreed, 24.2% were undecided, 38.3% agreed while 27.5% strongly agreed. 1.3% of the respondents strongly disagreed that their agro-allied firm "has reduced its net debt value in the past 10 years," 12.1% disagreed, 28.2% were undecided, 32.6% agreed while 25.8% strongly agreed. 4.7% of the respondents strongly disagreed that their agro-allied firm "has increased its equity value in the past 10 years," 18.1% disagreed, 21.1% were undecided, 33.2% agreed while 22.8% strongly agreed. 4.0% of the respondents strongly disagreed that their agro-allied firm "has increased its market price per share in the past 10 years," 11.7% disagreed, 15.8% were undecided, 41.6% agreed while 26.8% strongly agreed. 7.4% of the respondents strongly disagreed that their agro-allied firm "has increased its customer base in the past 10

years," 21.8% disagreed, 12.1% were undecided, 22.1% agreed while 36.6% strongly agreed

Table 4.2: Study Variables' Descriptive Statistics

	N	Minimum	Maximum	Mean	Standard Deviation	Skewness	Kurtosis
Environmental Dimension (ENV)	298	1.40	4.20	3.1557	0.5730	-0.773	0.574
Social Dimension (SOC)	298	1.20	4.40	2.9826	0.5920	-0.532	0.605
Governance Dimension (GOV)	298	1.40	4.60	3.3121	0.6484	-0.902	0.722
Economic Dimension (ECO)	298	1.60	4.60	3.1289	0.6019	-0.192	-0.444
Enterprise Value Creation (EVC)	298	1.80	4.80	3.6711	0.6731	-0.770	0.237
Valid N (list-wise)	298						

Source: Author's Computation, 2022

Table 4.6 depicts the results of the descriptive statistics of the study variables. It encompasses the means (averages) and standard deviations; the skewness and kurtosis; the lowest and maximum mean values. The mean is also known as the average value while the standard deviation measures how much a variable's values deviate from its mean value. Environmental Dimension (ENV) has a mean value of 3.1557 with a standard deviation of 0.5730; Social Dimension (SOC) has a mean value of 2.9826 with a standard deviation of 0.5920; Governance Dimension (GOV) has a mean value of 3.3121 with a standard deviation of 0.6484; Economic Dimension (ECO) has a mean value of 3.1289 with a standard deviation of 0.6019 and; Enterprise Value Creation (EVC) has a mean value of 3.6711 with a standard deviation of 0.6731.

The skewness and kurtosis of the variables are also indicated in the study to show whether the data is normally distributed. A common guideline for skewness is that a distribution is considered significantly skewed if the number is more than +1 or less than -1 (Hair et al., 2022). When it comes to kurtosis, a value more than +1 denotes an excessively peaked distribution, whereas a number less than -1 denotes an excessively flat distribution. In the view of Hair et al. (2022), distributions with skewness or kurtosis that surpass these limits are deemed non-normal. All of the variables' skewness and kurtosis, as shown in Table 4.16, are within acceptable bounds, indicating that the data are normally distributed.

4.1 Test of Hypotheses

The multiple linear regression was used to assess the relationship between the independent variables (environmental dimension (ENV), social dimension (SOC), governance dimension (GOV), economic dimension (ECO)) and the dependent variable (enterprise value creation (EVC)).

Table 4.7: Regression Analysis

Model Summary [b]

Model	Multiple R	R Square	Adjusted R Square	RStd. Error of the Estimate	Durbin-Watson
1	0.833[a]	0.693	0.689	0.37528	1.927

a. Predictors: (Constant), ECO, GOV, SOC, ENV

b. Dependent Variable: EVC

ANOVA [a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	93.308	4	23.327	165.636	0.000[b]
	Residual	41.264	293	0.141		
	Total	134.572	297			

a. Dependent Variable: EVC

b. Predictors: (Constant), ECO, GOV, SOC, ENV

*.**Decision Rule:** 0.05

Model		Unstandardized Coefficients		Std. Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	0.821	0.180		4.554	0.000
	ENV	0.401	0.167	0.341	2.400	0.017
	SOC	0.250	0.097	0.220	2.572	0.011
	GOV	0.314	0.095	0.302	3.320	0.001
	ECO	-0.064	0.037	-0.057	-1.752	0.081

a. Dependent Variable: EVC

*.**Decision Rule:** 0.05

Source: Author's Computation, 2022

Table 4.7 shows the regression analysis. In the model summary, it shows that the model is fit for the study since the f-statistics in the ANOVA is significant at 5% level of significance. The $R^2 = 0.693$ indicates that only 69.3% of variation on corporate sustainability dimensions can be used to explain the enterprise value creation of the agro-allied firms listed in the Nigerian Exchange Group. However, 30.7% can be explained by other factors not noted in the regression model which is referred to as the error term.

The result also shows that the environmental dimension (ENV) has a positive (0.401) and significant (0.017) effect on the enterprise value creation of the agro-allied firms listed in the Nigerian Exchange Group. This effect is significant since the P-value is less than 5%. Thus, we reject the null hypothesis and accept the alternative hypothesis that the environmental sustainability dimension has a positive and significant effect on the enterprise value creation of the agro-allied firms listed in the Nigerian Exchange Group.

The result also shows that the social dimension (SOC) has a positive (0.250) and significant (0.011) effect on the enterprise value creation of the agro-allied firms listed in the Nigerian Exchange Group. This effect is significant since the P-value is less than 5%. Thus, we reject the null hypothesis and accept the alternative hypothesis that the social sustainability dimension has a positive and significant effect on the enterprise value creation of the agro-allied firms listed in the Nigerian Exchange Group.

The result also shows that the governance dimension (GOV) has a positive (0.314) and significant (0.001) effect on the enterprise value creation of the agro-allied firms listed in the Nigerian Exchange Group. This effect is significant since the P-value is less than 5%. Thus, we reject the null hypothesis and accept the alternative hypothesis that the governance sustainability dimension has a positive and significant effect on the enterprise value creation of the agro-allied firms listed in the Nigerian Exchange Group.

The result also shows that the economic dimension (ECO) has a negative (-0.064) and insignificant (0.081) effect on the enterprise value creation of the agro-allied firms listed in the Nigerian Exchange Group. This effect is insignificant since the P-value is more than 5%. Thus, we accept the null hypothesis and reject the alternative hypothesis that the economic sustainability dimension has no significant effect on the enterprise value creation of the agro-allied firms listed in the Nigerian Exchange Group.

4.2 Discussion of Findings

The study's findings indicate that corporate sustainability dimensions of the agro-allied firms listed on the Nigerian Exchange Group have a favourable and significant effect on their enterprise value creation. The study findings reveal that corporate sustainability dimensions might be considerably quantified by the dimensions of environmental, social and governance; since the economic dimension as autonomy was found to be insignificant.

This finding is consistent with the perspectives of Umoren et al. (2015), Ait-Sidhoum and Serra (2017), Dahlberg and Wiklund (2018) and Alcvar et al. (2020). This is so since they found a positive and significant relationship between the corporate sustainability dimensions of environmental, social and governance and firms' performance or enterprise value creation. However, for the economic dimension, Taye et al. (2019) found a negative association just as in this research. On the other hand, the study varies from other studies like those of Garcia et al. (2017), Nobanee and Ellili (2017) and Ana et al. (2018), who found no significant relationship between the corporate sustainability dimensions of environmental, and social and governance and firms' performance or enterprise value creation.

Meanwhile, the findings of Dahlberg and Wiklund (2018), demonstrated that the effects of the corporate sustainability dimensions on enterprise value creation are context-dependent, which explains the diversity in results among researchers. According to Dahlberg and Wiklund (2018), using Tobin's Q (a company's market value divided by the cost of replacing its assets) measurements for enterprise value creation could yield a different outcome than when Return on Assets is used as a measurement for enterprise value creation.

The study findings are consistent with the stakeholder theory, which according to Freeman (2008) states that corporations' principal obligation is not to maximise shareholder wealth but to operate in the best interests of all stakeholders in the business environment, without favouring one stakeholder over another in potential trade-offs. The study findings are equally in line with the United Nations ESG framework, which embraces the broad view that sustainability encompasses more than just environmental concerns. This incorporates a "Stakeholder Value Development Chain" that highlights the confluence between the ESG framework, the stakeholder theory, and enterprise value creation. The findings of this study illustrate the reinforcing carryover effect of stakeholders' contributions to the company's economic performance. A positive externality is that many people desire to work for environmentally friendly organisations, and higher employee involvement may increase productivity, innovation, enterprise value, and so on.

V. CONCLUSION AND RECOMMENDATION

Enterprise value deterioration will unavoidably occur if constructive action is not taken in response to peer advancement on corporate sustainability concerns, evolving consumer, employee, and investor expectations, and new regulations. Since this study indicated that corporate sustainability dimensions have a considerable positive effect on the enterprise value creation of agro-allied firms, it is pertinent for these organisations to develop their corporate sustainability dimensions. Of the dimensions of corporate sustainability that were tested (environmental, social, governance and economic) only the economic dimension was found to be insignificant, while the environmental, social and governance were found to be significant. The findings of the study are consistent with Alcvar et al. (2020), who averred that organisations can become more strategic in their sustainability efforts by using an environmental, social, and governance (ESG) approach, which can enhance their enterprise value, thereby improving factors such as operational and financial performance, risk profiles, staff attraction and retention, brand value amongst others.

The study, therefore, recommends that the environmental, social and governance corporate sustainability dimensions should be prioritised over the economic dimension by agro-allied firms. After all, the agro-allied firms listed on the Nigerian Exchange Group are not significantly impacted by the economic dimension.

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