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Corporate Sustainability Disclosures and Cash Flow Return on Investment of Shareholders of Oil and Gas Companies in Nigeria

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ABSTRACT
The main objective of this study was to ascertain the effect of sustainability disclosures on cash flow return on investment of shareholders of oil and gas companies in Nigeria. Secondary source of data was used and the research design adopted was *ex post facto*. The study adopted time series and cross sectional analysis of selected oil and gas firms quoted on the Nigeria Stock Exchange as at 31st December 2020 for a period of seven years spanning 2014-2020. Content analysis methodologies were employed to get data for the sustainability parameters. To test the hypotheses which were formulated in the study, the researcher adopted the robust panel least square regression technique. The results from the study reveal that social sustainability disclosure have a positive significant effect on cash flow return on investment of listed oil and gas firms in Nigeria. Also, the results reveal an insignificant effect of health and safety disclosure as well as environmental disclosure on cash flow return on investment. It was concluded that sustainability disclosures do not significantly affect cash flow return on investments of shareholders. It was thus recommended that all the wealth of the shareholders should not be sacrificed for the benefits of other stakeholders as these sustainable activities may only erode the cash return on investments of the shareholders.
Keywords: sustainability reporting, cash flow return, social disclosures, environmental disclosures, organizational health, safety disclosures

INTRODUCTION

As businesses strive to survive in the competitive and dynamic economies, oil and gas companies acknowledge the need to maintain healthy and uninterrupted cash flows. This can only be achieved if these companies are able to balance their operating activities with those factors that can threaten their existence. One of such factors is the negative impact of their business activities on the social, environmental and health and safety of various stakeholders. In order to be good corporate citizens, manage high expectations of government and host communities, obtain social licence to operate and mitigate other risks, oil and gas companies invest millions of naira on local communities to support their sustainability. These sustainability investments is grounded on the assumption that when the local communities are developed, the relationship between the company and the society will improve and this in turn reduce the likelihood of hostility and disruption of the business activity as well as the cash flows of the company.

After undertaking these sustainability investments, the company takes further steps to disclose these development ventures to the various stakeholders to intimate them of their responsibility towards nature, society and future generations. This report provide a meaningful outline of progress and evidence over target-setting beyond the financial domain, reduce information asymmetry, solidify organizational reputation and legitimacy while adding transparency in business activities (Romolini *et al*., 2014; Martínez-Ferrero *et al*., 2016).More so, these voluntary disclosures boost the investors' confidence that their investments are not endangered by hostility of host communities and that their cash flow return on investment are maximized. Sustainability disclosures can help companies build confidence and improve corporate reputations through social responsibility programs and transparent risk management. According to Shank and Shockey (2016) designing a robust business strategy is dependent on how well a company positions itself in terms of sustainable development that balances financial environment and human development.

Cash flow is a major determinant of the health of any company as it signals the ability of any company to pay dividend and also offers financial flexibility to shareholders' welfare. To achieve the company's objective of wealth maximization, managers make investment decisions that produce positive operating cash flows as well as positive net present value. A healthy cash flow, being the life wire of any business, can translate into shareholders prosperity, increased share prices as well as enhanced public image. Companies that make voluntary disclosures of their sustainability strides have advantage over others as it constitutes one of the criteria used in assessing and rating sustainable companies.

This research was undertaken as a result of the seeming knowledge gap existing in the literature as most researchers focused mainly on the relationship between sustainability disclosures and other performance measures. Some researchers (Alsehi, Haithan & Hhare, 2018; Hahn & Figge, 2011; Crisóstomo, 2011; Granerud et.al. 2011; Gregory et.al, 2014) focused on the effect of sustainability reporting on firms' performance measured using ROA, ROE, EPS and other accounting performance measures. Others studied the effect of sustainability disclosures on firms' value (Ghodrati & Hashni 2014; Tangnsisalu, 2020; Hafex 2016; Loh et.al 2017; Makori & Jagongo, 2013; Shank & Shockey, 2016). Thus there is need to fill this knowledge gap by ascertaining if sustainability disclosures can affect the cash flow return on investment. Specifically, this study attempts to determine the effects of social disclosures, occupational health and safety disclosures and environmental disclosures on cash flow return on investment of shareholders of oil and gas companies in Nigeria.

2.0 LITERATURE REVIEW AND THEORETICAL FRAME WORK

According to Global Reporting Initiative, (2011) a sustainable report is a document published by organizations about the economic, environmental and social impacts caused by their everyday activities. It is a periodical report issued by companies with the goal of sharing the corporate social responsibility actions and results. By doing so, companies make stakeholders aware of how they are integrating the principles of sustainable development into their everyday operations. Corporate sustainability disclosure has some strength that can be explained by some theories. The legitimacy theory postulates that companies seek legitimacy by appearing to be socially responsible and voluntary corporate transparency is an effective way to accomplish this. From stakeholder theory perspective, one can infer which companies disclose what type of information as a way of presenting their accomplishments to stakeholders. According to agency theory, disclosure practices are an indication of how companies deal with agency problems.

Corporate social reporting refers to disclosure of information about companies' social performance. Corporate social performance refers to the principles, practices and outcomes of business relationships with people, organizations, institutions, communities, societies and the earth, in terms of the deliberate actions of businesses toward the stakeholders as well as the unintended externalities of the business activity (Wood, 2018). Corporate social disclosure assumes that companies do not only maximize shareholders wealth but also consider the well being of other stakeholders. As good corporate citizens, companies embody social goals in their strategic plans and make public disclosures about progress in fulfilling these goals. In the words of Woods (2010) corporate social disclosure is a set of descriptive categorizations of business activity, focusing on the impacts and outcomes for society, stakeholders and the firm itself.

Studies carried out in developed countries show that corporate social disclosures have increased in response to various circumstances, including legislation, risk, pressure from activist groups, ethical investors, specific events, awards, economic activities, media interest, social conscience and politics (Haniffa & Cooke, 2005).

Occupational health and safety (OHS) is generally defined as a multidimensional construct concerned with the anticipation, recognition, evaluation and control of hazards arising in or from the workplace that could impair the health and well-being of workers, taking also into account possible impacts on the surrounding communities and the environment (Alli, 2008). In this context, reporting on OHS issues reflects a critical point of corporate sustainability disclosure against a turbulent environment that generates new forms of employment hazards, exposures, risks and opportunities (Celma et al., 2014). OHS reporting pertains to the collection, processing and disclosure of related information with the aim of facilitating organizational leadership, managerial effectiveness and empowering stakeholder decision-making (Syder et.al., 2020). Several studies have examined OHS disclosure in the context of broader corporate non-financial reporting mechanisms (e.g. Campbell & Rahman, 2010; Li et al., 2011). Research findings suggest that OHS information provision can yield tangible benefits in bringing internal improvements of the working environment (Jain et al., 2011; Williams and Adams, 2013), attracting of new, talented, workforce, increasing customer loyalty, along with reputational and legitimacy gains.

Corporate environmental reporting is an innovative sustainability initiative that has been defined as that aspect of reporting which has to do with the identification, location and analysis of objective flows and their allied money flows by using corporate environmental reporting systems to provide insight in environmental impacts and attached with financial consequences (Islam et.al 2020). According to Rahman and Rahman (2020), environmental or green reporting involves measuring the environmental execution of an organization, including government bodies and manufacturers in economic terms. Islam et.al. (2020) define corporate environmental reporting as the systematic disclosure of financial and non-financial information in order to maximize corporate environmental and economic performance and to attain sustainable business.

The International Federation of Accountants (1998) describes environmental reporting as the environment related reporting system and practice that manages the environment and economic performance through the development and implementation of appropriate environmental related issues. The disclosure of environment related information is ad hoc and usually involves only good news, but there have been signs of innovative and transparent attempts by some corporations.

Cash flow return on investment (CFROI) is the financial ratio that is used as a proxy for economic return against the overall investment made in the company. In other words, it is a valuation technique that is based on the premise that financial metric based on cash flow is better than those based on corporate earnings. In effect, it is the internal rate of return that is compared with the hurdle rate to check whether or not the company is performing better than the set expectations. It is an indicator that helps a firm to evaluate the performance of an investment or product. Cash flow return on investment helps a business to determine the returns on the investment that has been made and that return must be greater than the cost of the capital.

2.1 Theoretical Framework

This study is supported by two major theories – stakeholder theory and agency theory. Stakeholder theory was developed in the mid-1980s by business ethicists to formalize the recognition of rights of a number of parties (customers, suppliers, creditors, employees, the community, etc.) that have influence on or are influenced by a company. Gara and Boaventura (2020) used stakeholder theory to explain sustainability disclosure, finding that measures of stakeholder power, strategic posture and economic performance are significantly related to levels of sustainability disclosures. It has been demonstrated that sustainability disclosure follows as a result of stakeholder management, as well as from other determinants (Lee et.al, 2019). This observation correlates with the intention of firms to serve as mechanisms for coordinating stakeholder interests, going beyond the role of maximizing profits (Rahman and Rahman, 2020; Wood, 2018).

Legitimacy theory on the other hand, is based on the "generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (Suchman, 1995). Based on this theory, disclosure is used as a way of promoting stakeholders' perception of environmental responsibility and of affirming that a company's system of values agrees with the social norms in which it operates. Companies pragmatically aim to be transparent, increase stakeholders' level of confidence in them, enhance their reputation and ensure that their actions are seen as legitimate. From the legitimacy theory perspective, companies adopt different strategies for sustainability disclosure to maintain a social contract to guarantee their survival and legitimize their future existence (Haji, 2012). With regard to what a company chooses to disclose, it is known that different groups demand different types of information and the intensity of these demands and the legitimacy perceived are susceptible to variations (Takala et.al., 2014). Strategies to gain, maintain, and recover legitimacy include the construction of communication links between organizations and their social surroundings to disseminate the necessary information for persuading stakeholders of their good intentions (Suchman, 1995).

Empirical Framework

Sustainability reporting has been in the fore front of research in recent times, and few empirical studies on the subject matter are considered in this section. Evangelinos et.al (2020) devised a composite disclosure index to assess the comprehensiveness of voluntary occupational health and safety (OHS) disclosures of large business entities. They relied on well-established performance indicators and focus on the information found in the sustainability reports of corporations pertaining to the oil and gas, chemical, airline and construction industries. Findings indicate that companies tend to place emphasis on their overall management approach to OHS but fall short in reporting quantitative and qualitative information beyond 'conventional' metrics of occupational injury rates.

Ezeokafor and Amahalu (2019) on the other hand, studied to determine the effect of sustainability reporting on corporate performance of quoted oil and gas firms in Nigeria. This study adopted time-series and cross-sectional analysis of selected oil and gas firms quoted on the Nigerian Stock Exchange as at 31st December 2017 for a period of seven years spanning from 2011 – 2017. This study made use of Ex-Post Facto research design. Data were gotten from secondary sources obtained from fact books, annual reports and accounts of the studied quoted oil and gas companies in Nigeria as at 31st December, 2017. The relevant data obtained were subjected to statistical analysis using Pearson correlation coefficient and multiple regression analysis via E-View 9.0 statistical software. The results of this study revealed that sustainability reporting (proxied by economic, environmental and social performance indices) has a significant positive effect on return on equity, net profit margin and earnings per share at 5% level of significance. The study recommended amongst others the need to adopt standardized Sustainability Index as this will help in putting pressure on companies to pay more attention to their environment and take much more seriously the issues of sustainable development.

Effiong, Oti and Akpan (2019) study the effect of triple bottom line disclosures on economic value added, market value added and cash flow return on investment of oil and gas companies in Nigeria. Secondary data were obtained from the NSE Fact Book and Annual Reports of studied companies quoted in NSE. A disclosure checklist of GRI guidelines was used in obtaining information concerning triple bottom line while ex post facto research design was adopted. All the twelve quoted Oil and Gas companies were studied for ten years with descriptive statistics and panel data regression analysis. The findings show that economic, social and environmental performance disclosures significantly affect economic value added, market value added and cash flow returns on investment. These results confirm that corporate strategies of reporting the organization's footprints on the basis of environment, social and economic conditions of stakeholders significantly maximize shareholders' value.

Tangngisalu (2020) examines and analyzes the effect of cash flow and corporate social responsibility disclosure on firm value. This research uses quantitative methods with an associative form. The research population comprises all banking companies listed on the Indonesia Stock Exchange for the period 2017-2019. The sample using a purposive sampling technique so that 33 companies were selected according to the sample determination criteria with a sample size of 99 examples analyzed using the multiple regression analysis models. The results showed that the cash flow variable had a positive and significant effect on firm value and corporate social responsibility disclosure also had a positive impact on firm value. This implies that investors see how flexible the company's cash flow can be used to finance the company's operational activities and increase investment, which impacts on the welfare of shareholders.

Onyekwelu and Ugwuanyi (2014) carried out a research on corporate social accounting and enhancement of information disclosure among firms in Nigeria and found out that the inclusion and separate presentation of social costs incurred by organizations in the financial statements will enhance information disclosure in the statement. Nze, Okoh and Ojeogwu (2016) examine using the ordinary regression analysis the effect of corporate social responsibility on earnings of quoted firms in Nigeria in the oil and gas sector over a ten-year period and found out that corporate social responsibility has a positive and significant effect on earnings of firms studied.

Ghodratollah (2014) investigates the impact of corporate social responsibility disclosure (CSRD) on the financial performance of companies listed on the Tehran stock exchange. The independent variable (CSRD) was measured by economic, social and environmental indices while Return on Assets, Return on Equity and Price Earnings Ratio were used in measuring financial performance. The analysis produced inconsistent results. Using ordinary least square regression, Onyekwelu and Ekwe (2014) examine whether corporate social responsibility predicates good financial performance using the banking sector in Nigeria. The findings of their study show that the amount committed to social responsibility vary from one bank to the other. It further revealed that the sample banks invested less than ten percent of their annual profit to social responsibility.

Asuquo et.al (2020) examine the effect of sustainability reporting on corporate performance of selected quoted brewery firms in Nigeria. To determine the association between sustainability reporting and corporate performance, data was obtained from the audited financial statements of the three brewery firms under study for a period of five years (2012-2016). The result of the study shows that Economic Performance disclosure (ECN), Environmental Performance disclosure (ENV) and Social Performance disclosure (SOC) have no significant effect on return on asset (ROA) of selected quoted firms in Nigeria.

Najul, (2018) examines the impact of corporate sustainability reporting on firm performance in four Asian countries – Japan, South Korea, Indonesia and India and also found out whether there was any significant difference between developed and developing countries of Asia with respect to the impact of such reporting on firm performance. Content analysis (binary _0 and 1) was used to calculate the disclosure score of sustainability performance, based on Global Reporting Initiative (GRI) format. The study found out that the average level of disclosure is more in the case of Japanese companies (90 per cent), followed by India (88 per cent) and South Korea (85 per cent). On the other hand, the average level of disclosure is only 72 per cent for Indonesian firms. Regression results depict a significant positive association between sustainability reporting and firm's performance.

Another study relating to corporate sustainability reporting and firm performance in the context of Global Fortune N100 firms was conducted by Hussain (2015). After measuring corporate social performance using the GRI reporting framework, the study observed the positive significant impact of corporate sustainability reporting on firm performance under fixed effect regression model. In the same vein, Aggarwal (2013) studied the impact of corporate social performance on financial performance with a study period of two years. Based on the panel data technique, the outcome of the study reported a positive but insignificant impact of CSP on financial performance measured by return on assets and growth in total assets. Again, in the context of Indonesian companies Kusuma and Koesrindartoto (2014) report a positive but insignificant impact of sustainability reporting on the financial performance of the firm. The main plausible reason for such outcome may be due to short study period (3 years), or lack of awareness of such practices, or inconsistency in the disclosure of sustainability performances of such companies.

3.0 RESEARCH METHODOLOGY

This research adopts ex post facto research design because the data used were obtained from the annual reports of the studied companies. The study adopts time series and cross sectional analysis of selected oil and gas firms quoted on the Nigeria Stock Exchange as at 31st December 2020 for a period of seven years spanning 2014-2020. As at the end of 2020, there were thirteen listed oil and gas companies and this constituted our population. The sample size of twelve oil and gas companies was purposively selected due to availability of data for analysis. The secondary data collected were analyzed using descriptive statistics, correlation and regression analysis. The cash flow return on investment was measured as a ratio of operating cash flows to capital employed, while sustainability reporting was measured using content analysis where '1' was given where the sustainability item was disclosed and '0' where there was no disclosure. The model for this study is adopted from the studies of Loh, Thomas, and Wang, (2017) but modified to suit the hypotheses of this study. Hence, econometric function used is specified below:

CFROI=f(sustainability reporting)

$CFROI_{it} = \pi_0 + \pi_1 SocDis_{it} + \pi_2 HeSDis_{it} + \pi_3 EnvDis_{it} + \sum_t$

Where:

CFROI = Cashflow returns on investment

SocDis	=	Social disclosures
HesDis	=	Health and safety disclosures
EnvDis	=	Environmental disclosures
it	=	(i = no of cross section and t = time periods)
∑	=	Model Error Term

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.1 Data Presentation and analysis

The data used in this work are as presented and analyzed below:

Table 4.1
Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
cfroi	72	.0145833	.1988059	-.71	.54
socdisc	72	.5694444	.4986288	0	1
hsdisc	72	.8055556	.3985498	0	1
envdisc	72	.1527778	.3622979	0	1

Source: STATA'16 Output

Table 4.1 shows the summary of the descriptive statistics for the study. From the table, we find that on average, cash flow return on investment was 0.01 with a standard deviation of 0.20. We also find that on average, about 57% of the firms in our sample discloses information about their social responsibility activities. In terms of occupational health & safety disclosure, the table shows that on average, about 81% of the firms in our sample disclose information relating to employee health & safety during the period under study while about 15% of the firms in our sample disclose information about their environmental sustainability practices.

Table 4.2

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
cfroi	72	0.77008	14.480	5.822	0.00000
socdisc	72	0.99783	0.137	-4.336	0.99999
hsdisc	72	0.92809	4.529	3.290	0.00050
envdisc	72	0.88650	7.148	4.284	0.00001

Source: STATA'16 Output

From table 4.2, it is observed that the dependent variable of cash flow return on investment (Prob> z = 0.00000) is not normally distributed since the probability of the z-statistics is significant at 1%. The same can be said for the independent variables of occupational health and safety disclosure (Prob> z = 0.00050) as well as environmental sustainability disclosure. However, the independent variable of social disclosure (Prob> z = 0.99999) follows a normal distribution.

Table 4.3

Key
rho   *Number of obs*   *Sig. level*

	cfroi	socdisc	hsdisc	envdisc
cfroi	1.0000 72			
socdisc	0.1974 72 0.0965	1.0000 72		
hsdisc	-0.3358 72 0.0039	-0.0728 72 0.5431	1.0000 72	
envdisc	-0.1675 72 0.1597	0.3692 72 0.0014	0.2086 72 0.0786	1.0000 72

Spearman's rank-order correlation analysis

Source: STATA'16 Output

Specifically, the analysis from the spearman rank correlation shows that only the independent variable of social disclosure (0.1974) has a positive correlation with the dependent variable of cash flow return on investment. However, the independent variables of occupational health & safety disclosure (-0.3358) as well as environmental disclosure (-0.1675) have negative correlations with cash flow return on investment. Furthermore, the associations are seen to be weak hence there is no room to suspect the presence of multicollinearity in the estimated model.

Table 4.4

Pool Least Square Regression Estimation Result

cfroi	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
socdisc	.1556368	.0484719	3.21	0.002	.0589126	.2523611
hsdisc	-.0541685	.0576261	-0.94	0.351	-.1691595	.0608226
envdisc	-.0677798	.0680316	-1.00	0.323	-.2035346	.0679751
_cons	-.0200523	.0588219	-0.34	0.734	-.1374296	.0973251

No of Observations = 72 Probability F- Statistics = 0.0090 R^2 = 0.1556

4.2. Diagnostic Test

4.2.1 Test for Multicollinearity

Multicollinearity occurs in multiple regression models and it applies to a situation where two or more independent variables are found to be collinear. In a nut shell, if multicollinearity is found among the independent variables of interest, it means that they are perfectly correlated. When this happens, the parameter coefficients will be indeterminate and the standard error of the estimated coefficients becomes bloated. According to Gujarati (2003), there is no consequence if the mean VIF is less than 10 or 1/VIF is less than 0.10. The result from the VIF test depicts (See Appendix 1) the absence of multicollinearity since the mean VIF (1.17) is within the region of 10 against which the presence of multicollinearity may be suspected.

4.2.3 Test for Homoscedasticity

The assumption of homoscedasticity states that if the errors are heteroscedastic then it will be difficult to trust the standard errors of the least square estimates. Hence, the confidence intervals will be either too narrow or too wide. The presence of heteroscedasticity tends to produce p-values that are smaller than they should be due to increased variance of the coefficient estimates which unfortunately least squares' estimators does not detect this increase. The result obtained from the regression reveals a probability value of (P-value: 0.0140) obtained from the Breusch-Pagan test (see Appendix). This result indicates that the assumption of homoscedasticity has been violated due to very low P-values which is statistically significant at 5% level. However, the researcher adopts the Robust Panel Regression Estimator to correct for this violation.

4.2.4 Robust Standard Error Estimator

Due to the presence of heteroscedasticity obtained from the panel least square regression estimator, the study employs the Eicker-White standard errors which is relied upon for hypotheses testing.

Table 4.5

Robust Least Square Regression Estimation Result

cfroi	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
socdisc	.1556368	.0541161	2.88	0.005	.0476498	.2636239
hsdisc	-.0541685	.0825288	-0.66	0.514	-.2188521	.1105151
envdisc	-.0677798	.0351051	-1.93	0.058	-.137831	.0022715
_cons	-.0200523	.095496	-0.21	0.834	-.2106116	.1705071

No of Observations = 72 Probability F- Statistics = 0.0060

Source: STATA'16 Output

Table 4.5 shows a summarized result obtained from robust standard error estimator for cash flow return on investment model. Specifically, the researcher provides interpretation for the robust standard error estimator as recommended by Gujarati (2004). The model goodness of fit as captured by the Fisher statistics (4.52) and the corresponding probability value (0.0060) shows a 5% statistically significant level suggesting that the entire model is fit and can be employed for interpretation and policy recommendation.

4.3 Test of Hypotheses

Hypothesis 1

H_0: Social sustainability disclosures have no significant effect on cash flow return on investment of listed oil and gas firms in Nigeria.

H_1: Social sustainability disclosures have significant effect on cash flow return on investment of listed oil and gas firms in Nigeria.

The results obtained from the pool robust least square regression model revealed that social disclosure has a significant positive effect on cash flow return on investment during the period under investigation. This is shown as; Social sustainability disclosure (socdis; Coef. = 0.156, t = 2.88 and P - value = 0.005). Following the results above, it is revealed that the effect of social sustainability disclosure on cash flow return on investment is positive and significant at 5% level, and thus the null hypothesis was rejected and the alternative accepted.

Hypothesis 2

H_0: Occupational Health and Safety disclosures have no significant effect on cash flow return on investment of listed oil and gas firms in Nigeria.

H_1: Occupational Health and Safety disclosures have significant effect on cash flow return on investment of listed oil and gas firms in Nigeria.

The results obtained from the pool robust least square regression model revealed that occupational health and safety disclosures have an insignificant negative effect on cash flow return on investment during the period under investigation. This is shown as; occupational health and safety disclosure (hsdis; Coef. = -0.054, t = -0.66 and P -value = 0.514). Following the results above, it is revealed that the effect of occupational health and safety disclosure on cash flow returns on investment is negative.and insignificant at 5% or 1% level.

Hypothesis 3

H_0: Environmental sustainability disclosures have no significant effect on cash flow return on investment of listed oil and gas firms in Nigeria.

H_1: Environmental sustainability disclosures have significant effect on cash flow return on investment of listed oil and gas firms in Nigeria.

The results obtained from the pool robust least square regression model revealed that environmental sustainability disclosures have an insignificant negative effect on cash flow return on investment during the period under investigation. This is shown as; environmental sustainability disclosure (envdis; Coef. = -0.068, t = -1.93 and P -value = 0.058). Following the results above, it is revealed that the effect of environmental sustainability disclosure on cash flow returns on investment is negative and insignificant at 5% or 1% level. This finding is consistent with the stated null hypothesis which leads to its acceptance and the rejection of the alternate hypotheses.

4.4 DISCUSSION OF FINDINGS AND CONCLUSION

Form the data analysis, it was discovered that social sustainability disclosures have a positive significant effect on cash flow return on investment of oil and gas companies of Nigeria. When compared with other performance measures, the result aligns with those of Evangelinos et. al. (2020) and Effiong, Oti and Akpan, (2019). In the context of employee health and safety sustainability disclosure, this study documents an insignificant effect on cash flow return on investment of oil and gas companies in Nigeria. The author negates the findings of Evangelinos et.al (2020) who maintained that the relationship between firms' performance and occupational health and safety information disclosure is positive. The researcher aligns the finding of this study as it relates to environmental sustainability disclosure with the positions of Asuquo et. al (2020); Aggarwal, (2013) and Kusum and Koesrindartoto, (2014) who found insignificant relationship between environmental disclosures and other performance measures. Based on these findings, it is concluded that sustainability reporting does not significantly affect cash flow return on investment except for the social sustainability disclosures. Thus sustainability disclosures may have significant impact on other performance measures except cash flow return on investment. It is thus recommended that all the wealth of the shareholders should not be sacrificed for the benefits of other stakeholders as these sustainable activities may only erode the cash return on investments of the shareholders.

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APPENDICES

Appendix A: STATA 16 Output

```
 ___  ____  ____  ____  ____ (R)
 /__    /   ____/   /   ____/
___/   /   /___/   /   /___/   16.0   Copyright 1985-2019 StataCorp LLC
  Statistics/Data Analysis            StataCorp
                                      Downloadly.ir
    MP - Parallel Edition             College Station, Texas 77845 USA
                                      800-STATA-PC        http://www.stata.com
                                      979-696-4600        stata@stata.com
                                      979-696-4601 (fax)

Single-user 2-core Stata network license expires 20 Aug 2022:
       Serial number:  501609213901
         Licensed to:  Ace Cafe' and Ratios, Lagos, Nigeria.

Notes:
      1.  Unicode is supported; see help unicode_advice.
      2.  More than 2 billion observations are allowed; see help obs_advice.
      3.  Maximum number of variables is set to 5000; see help set_maxvar.

summary statistics: mean, sd, min, max, sum
by categories of: year (Year)

year |     cfroisocdischsdiscenvdisc
---------+----------------------------------------
    2014 |       .01  .3333333  .8333333         0
| .0889331   .492366  .3892495         0
         |       -.2         0        00
         |       .13         1         1         0
         |       .12         4        10         0
---------+----------------------------------------
    2015 |  .0216667  .4166667       .75         0
| .0999848  .5149287   .452267         0
         |      -.24         0        00
         |       .15         1         1         0
         |       .26         5         9         0
---------+----------------------------------------
    2016 |     -.035        .5  .8333333  .1666667
| .2449675   .522233  .3892495  .3892495
         |      -.71         0        00
         |       .25         1        11
         |      -.42         6        10         2
---------+----------------------------------------
    2017 |  .0166667  .8333333       .75       .25
| .1876812  .3892495   .452267   .452267
         |      -.47         0        00
         |       .34         1        11
         |        .2        10         9         3
---------+----------------------------------------
    2018 |  .0183333  .6666667  .8333333       .25
| .2603087   .492366  .3892495   .452267
         |      -.71         0        00
         |       .44         1        11
         |       .22         8        10         3
---------+----------------------------------------
    2019 |  .0558333  .6666667  .8333333       .25
         |   .263765   .492366  .3892495   .452267
         |      -.63         0        00
         |       .54         1        11
         |       .67         8        10         3
---------+----------------------------------------
   Total |  .0145833  .5694444  .8055556  .1527778
| .1988059  .4986288  .3985498  .3622979
         |      -.71         0        00
         |       .54         1        11
         |      1.05        41        58        11
--------------------------------------------------
```

```
               Shapiro-Wilk W test for normal data

    Variable |        Obs       W           V         z       Prob>z
-------------+------------------------------------------------------
cfroi |        72    0.77008     14.480     5.822    0.00000
socdisc |        72    0.99783      0.137    -4.336    0.99999
hsdisc |        72    0.92809      4.529     3.290    0.00050
envdisc |        72    0.88650      7.148      4.284    0.00001
```

```
+-----------------+
|  Key           |
|-----------------|
|   rho          |
|   Number of obs |
|   Sig. level    |
+-----------------+

          |    cfroisocdischsdiscenvdisc
-------------+------------------------------------
cfroi |   1.0000
          |       72
          |
          |
socdisc |   0.1974   1.0000
          |       72       72
          |   0.0965
          |
hsdisc |  -0.3358  -0.0728   1.0000
          |       72       7272
          |   0.0039   0.5431
          |
envdisc |  -0.1675   0.3692   0.2086   1.0000
          |       72       727272
          |   0.1597   0.0014   0.0786
          |
```

```
      Source |       SS           df       MS      Number of obs   =        72
-------------+----------------------------------   F(3, 68)        =      4.18
       Model |  .436618944         3  .145539648   Prob> F         =    0.0090
    Residual |   2.3695685        68  .034846596   R-squared       =    0.1556
-------------+----------------------------------   Adj R-squared   =    0.1183
       Total |  2.80618744        71  .039523767   Root MSE        =    .18667

------------------------------------------------------------------------------
cfroi |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
socdisc |   .1556368   .0484719     3.21   0.002     .0589126     .2523611
hsdisc |  -.0541685   .0576261    -0.94   0.351    -.1691595     .0608226
envdisc |  -.0677798   .0680316    -1.00   0.323    -.2035346     .0679751
       _cons |  -.0200523   .0588219    -0.34   0.734    -.1374296     .0973251
------------------------------------------------------------------------------
```

```
    Variable |       VIF       1/VIF
-------------+----------------------
envdisc |      1.24    0.807885
socdisc |      1.19    0.840168
hsdisc |      1.07    0.930462
-------------+----------------------
    Mean VIF |      1.17
```

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of cfroi

chi2(1)      =     6.04
Prob>chi2  =   0.0140


Linear regression                        Number of obs    =        72
F(3, 68)         =       4.52
Prob> F          =     0.0060
                                         R-squared        =     0.1556
                                         Root MSE         =     .18667

------------------------------------------------------------------------------
             |               Robust
cfroi |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
socdisc |   .1556368   .0541161     2.88   0.005     .0476498    .2636239
hsdisc |  -.0541685   .0825288    -0.66   0.514    -.2188521    .1105151
envdisc |  -.0677798   .0351051    -1.93   0.058     -.137831    .0022715
       _cons |  -.0200523    .095496    -0.21   0.834    -.2106116    .1705071
------------------------------------------------------------------------------
```

Appendix B: Panel Dataset Employed