



## DETERMINANTS OF EXPENDITURE ON CORPORATE SOCIAL RESPONSIBILITY BY QUOTED FIRMS IN NIGERIA

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### **Abstract:**

The study assesses the determinants of corporate social responsibility (CSR) expenditure among 16 quoted firms in Nigeria. Panel data analysis is adopted and variables such as return on asset, total asset, leverage, competition, legal environment and inflation rate are used as the independent variables while CSR expenditure is the dependent variable. The results show that all the identified determinants except inflation rate, exert positive impact on CSR of firms in Nigeria. In addition, only total asset reflects significant impact indicating that an increase in total asset has the capacity to significantly spur CSR spending of firms in Nigeria. The general implication is that size of firms is very germane to their being socially responsible.

**Keywords:** corporate social responsibility, total asset, determinants

### **1. Introduction**

Cornett, Erhemjamts and Tehranian, (2013) stated that one of the major reasons for practicing corporate social responsibility (CSR) is because customers as well as governments today are demanding more ethical behavior from organizations. In response, corporations volunteer their products to incorporate CSR as part of their business strategies, mission statement and values in multiple domains, respecting labor and environmental laws, while taking care of the contradictory interest of various stakeholders (Kashyap, Mir and Iyer, 2006). Another justification in favor of CSR

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actions by the leading corporations today is to gain competitive advantage which may not be enjoyed by the peer corporations. CSR actions in this respect also help corporations to attract and retain not only customers but also motivated employees, which in turn ensure long-term survival of the corporation. Drumwright (1996) supported that companies with sound CSR actions developed positive social identity and enjoyed increased loyalty from both customers and employees. CSR actions are also often associated with better financial performance of the organizations. However this required long-term perspective as in short-run CSR actions may be viewed as expensive but in fact it is an investment which will yield additional cash flows for the corporations. Margolis & James (2001) in their study found significant positive relationship between CSR and corporate financial performance. CSR actions have potential to create additional value for corporations. CSR combines the social and environmental aspects in doing business. CSR is an approach, whereby a company considers the interests of all stakeholders both within the organisation and in society and applies those interests while developing its strategy and during execution. CSR offers organisations various opportunities not only to differentiate themselves from competitors but also for reducing costs. If managed adequately, a CSR approach creates value for both business and society simultaneously (Nolan, Norton & Co., 2009).

Again, CSR maybe based within the human resources, business development or public relations departments of an organization (Azad, A., Zahir, R., and Hossain, Z. 2010) However, it is aimed at aiding an organization's mission as well as a guide to what the company stands for and will uphold to its consumers. Moreover, business case driven CSR will bias how corporations select their CSR strategy, because not all socially responsible behaviors have equal potential profitability or market demand. The bias will result in increased corporate attention to certain social needs that are less costly and potentially profitable, while other costlier social misery will be conveniently ignored. From the perspective of society, the social problems ignored by corporations may well be much more urgent issues that require corporate expertise and operational capacity.

Based on the foregoing, the issue of what determines if a firm will be socially responsible is brought to the fore. Studies have shown that firms in the real world based their decision to be socially responsible on some parameters which can be quantitate or qualitative in nature. These factors can either be external or internal depending on the structure of the organization. For instance, legal environment, business environment, and geographical environment among others are seen as qualitative and external to the organisation and they play important role in determining the tendency of an organisation been socially responsible (Hsiang-Lin, C., Hsiang-Hsuan, C. and Tzu-Yin, C., 2010). For the internal factors, they comprise mostly of quantitative variables that measure the performance the strength of the organisation. This ranges from profit level to earnings ratios and total asset base among others. According to Hisiang-Lin Chin *et al* (2010) all these factors are very germane in determining if an organisation will belong to CSR group or not and they also have important implications on the nexus between their CSR expenditure and performance on the organisation.

Again, as explained in the background earlier, factors that are responsible for a firm being socially responsible are very important to assessing the gains that a firm can derive from being socially responsible. Apart from the fact that the determining factors play an important role in categorizing an organization to belong to CSR group or non-CSR group, these factors are also important in determining the areas of CSR or CSR project the organizations will channel their funds to if they belong to CSR group. All these factors consequently have implications on the level of impact CSR will have on the organization performance. According to Hisang-Lin Chin *et al* (2010), it is important to assess these factors that account for the decision to belong to CSR group or the areas of CSR to invest before the effect of CSR on an organization performance can be thoroughly examined.

In addition, there have been studies on determinants of CSR in recent periods but most of them made use of firms from developed economies as their case studies (Hisang-Lin Chin *et al* (2010) among others. Notwithstanding, few studies on Nigeria such as Barclift, (2012) made use of a few quantitative variables as those factors that constitute determinants of CSR neglecting qualitative variables such as legal, geographical and business environments which are well captured in studies outside Nigeria and found to play germane roles in determining CSR expenditure of organisations. Again on methodology, most of the studies applied ordinary least square estimating technique which is very prone to spurious results to assess the relative influence of individual identified factor on CSR. Consequently, the major focus of this study is to assess the factors that determine CSR by including both the qualitative and quantitative variables as done in the studies outside Nigeria.

## 2. Literature Review

Ginnarakis and Theotokas (2011) evaluated CSR in 112 companies whose leaders implemented the Global Reporting Initiative (GRI) between 2007 and 2010 in an attempt to measure the effects of the financial crisis on CSR performance. The basis of the GRI reporting framework was a 6-point score tested on 112 companies that measured the companies' corporate reputation, concern for the community, stakeholder pressure, and economic performance. The Wilcoxon signed-rank-sum test showed that companies that increase CSR increase their business performance significantly (Ginnarakis and Theotokas, 2011). A parametric paired-sample t test indicated that the financial crisis caused company leaders to terminate socially responsible behavior because satisfying stakeholder expectations was costly (Ginnarakis and Theotokas, 2011). However, Ginnarakis and Theotokas (2011) concluded that there are many benefits of implementing CSR and that CSR is critical for a company's longevity because it confirms trust between the company and its stakeholders. A strength of this research study was the use of the GRI framework because it is the most thorough reporting of CSR by a business (Ginnarakis and Theotokas, 2011). Two limitations discussed by Ginnarakis and Theotokas (2011) were that they based the study on companies that

listed 4 years of GRI and they only examined large companies, as opposed to small and medium companies. Corporate social responsibility is vital for large, small, and medium-sized companies.

The study by Marcia, Ogtontsetseg and Hassan (2013) investigated whether US commercial banks in aggregate were taking substantive steps at being socially responsible, if their socially responsible activities had changed since the financial crisis, and whether they were being rewarded for their actions. The study used publicly available data on CSR to analyze CSR strengths and CSR concerns. It found out that the largest banks consistently had higher CSR strengths and CSR concerns during the sample period. Further, this group saw a steep increase in CSR strengths and a steep drop in CSR concerns as the worst of the financial crisis passed. The study also found that more profitable banks, banks with higher capital ratios, and banks that charged lower fees on deposits had significantly higher CSR strengths. The researchers found out that banks with more females and minorities on the board of directors had significantly higher CSR strengths. Examining the relation between CSR and bank performance, the researchers realized that the largest banks appeared to be rewarded for being socially responsible as both size adjusted ROA and ROE were positively and significantly related to CSR scores. Thus, after the financial crisis, the biggest banks that had been accused of putting their own interests ahead of their customers and the financial system as a whole worked to repair their reputations by turning to more socially responsible activities. For these banks, the increased participation in socially responsible activities was related to improved financial performance.

Carmen-Pilar, Rosa and Lisa (2013) aimed at analyzing the effect exerted by CSR on short-term and long-term corporate financial performance of European companies listed in the Stoxx Europe 600 index and Stoxx Europe Sustainability index from 2007 to 2010. Results revealed that the implementation of a CSR strategy, the level of economic development of the country and firm size determine the ROE of the firm. The CSP variable is positively and significantly related to the ROE of companies. Thus, companies with more socially responsible activities improve the shareholders' return by realizing higher CFP. Thus, firms in more developed countries obtain significantly better financial performance than other companies situated in less developed countries. In contrast, there was a negative and significant relation between firm's volume of total assets and ROE which could be due to larger firms having a more complex organizational structure that is more formal and centralized than those of smaller firms. The results for ROA showed that the estimators obtained using the different models also presented differences in terms of size and level of significance, as was the case for the ROE specification. The study found a positive and significant relationship between the ROA variable and CSP and the classification of the country in which the company's headquarters were situated, while the relationship between ROA and firm size was negatively significant. The results showed a positive and significant relationship between CSR, CSP and the level of development of the country where their headquarters were located.

Adeyanju (2012) conducted a regression analysis, analysis of variance (ANOVA), and Pearson correlation coefficient and found that there was a strong relationship with MTN, GTB, and Zenith regarding societal progress and contributing to improving life in Nigerian and other African communities. Adeyanju (2012) concluded that the Nigerian banking industry has contributed to the development of Nigerian society and outranks other businesses in terms of being a good corporate citizen and socially responsible, based on banking documents, but has the potential to do more. Leaders of Nigerian banks have spent millions of naira in an effort to contribute toward improving infrastructure and protecting the environment and through donations because CSR helps the community and adds to the goodwill of a company, while increasing the company's image and profit margin (Adeyanju, 2012). However, most of the public is unaware of the banks' goodwill efforts (Adeyanju, 2012). According to Adeyanju (2012), a company cannot progress in a society that is not advancing, and governments should regulate CSR because it improves development and infrastructure in a country.

Babalola (2012) conducted a research study on the impact of CSR and the success of businesses in Nigeria using secondary data on 10 randomly selected successful businesses on the NSE, Nestle PLC, PZ PLC, UAC Foods PLC, Flour Mills, Cadbury Nigeria, Unilever PLC, Baker PLC, Nigerian Bottling Company, Northern Nigerian Flour Mill PLC, and Pepsi, over a 10-year period. Babalola (2012) studied the relationship between CSR and firms' profitability in Nigeria using secondary data collected from 10 randomly selected firms' annual reports and financial summaries between 1999 and 2008. The theoretical frameworks used for the research study were the utilitarian theory, managerial theory, and relational theory (Babalola, 2012). The study included correlation, regression, and ANOVA tests, and data analysis included a standard error test, *t* test, R<sup>2</sup> coefficient of determination, F test, Durbin Watson, and regression coefficient (Babalola, 2012). According to Babalola (2012), Nigerian firms are inconsistent with CSR practice, it varies from one firm to another, and all the firms sampled invested less than 10% of their profit in CSR. The bigger the profit of Nigerian firms, the smaller the amount spent on CSR (Babalola, 2012). Babalola (2012) noted that Nigerian organizations have cultural challenges regarding the execution of CSR. Wealthy Nigerian organizations do not practice CSR properly, which jeopardizes their business in the long term (Babalola, 2012). Babalola (2012) concluded that the challenges related to CSR in Nigeria are political, organizational, and embedded in the culture, which is threatening the existence of Nigeria. Babalola (2012) recommended the business leaders place more importance on CSR policy framework. Babalola's research study had a strong introduction and theoretical review, the methodology and data analysis used should be easy to replicate, and the data presentation was clear. However, most of the firms studied were MNCs as opposed to indigenous companies; it would have been good to see a comparison between CSR in MNCs and in indigenous firms.

## 2. Methodology

This aspect of the paper explains the model specification, definition of variables, sources of data and the estimating techniques.

### 2.1 Model Specification

The model examines the determinants of CSR in the quoted firms in Nigeria. The formulation of the models here is built on the works of Hisiang-Lin Chin *et al* (2010) who based their work mostly on external factors. This study combines both the internal and external factors to examine the determinants of CSR in Nigerian quoted firm. The model is stated thus:

$$TCSRS_{it} = \alpha_0 + \alpha_1 ROA_{it} + \alpha_2 TOA_{it} + \alpha_3 LEV_{it} + \alpha_4 COM_{it} + \alpha_5 INF_{it} + \alpha_6 LEG_{it} + \mu_{1...}(1)$$

**Where:** TCSRS=Total Corporate Social Responsibility Spending, ROA=Return on asset, TOA=Total Asset (measure of firms size), LEV=Leverage ratio (Debt equity ratio which is a measure of capital structure/firm's leverage ratio), COM= Competition, INF=Consumer price index Inflation rate (measures the economic environment), LEG= Legal environment,  $\mu$  (s)=stochastic error terms, i=cross section unit, t=time period

### 2.2 Estimating Techniques

The study adopts panel data regression analysis to analyze the determinants of CSR and also investigate the impact of CSR on the performance of some selected firms in Nigeria. The panel data procedure starts with the panel unit root test as it is important that all the variables included in the panel model are stationary and in other to make the findings robust both fixed effect and random effect will be employed in estimating the data set and a Hausman-test conducted to determine the most appropriate for the study

### 2.3 Sources and Data Collection Techniques

Secondary data are sourced for this study. From the Published Annual Reports and Statements of Accounts of the selected firms are data collected for variables such as profit after tax, total assets, total deposit liability for banks, the numbers of network spread (Proxy for market share) and CSR spending covering the period between 1999 and 2015. The data collected from the Annual reports and statement of accounts of the Central Bank of Nigeria (CBN) and Nigeria Deposit Insurance Corporation (NDIC) include the total number of banks with operation license and from the Nigeria Stock Exchange (NSE) was collected the list of the quoted oil and gas firms listed on the Exchange. Other information are also extracted from the Statistical Bulletins of CBN, and NDIC. The data for inflation rate was collected from the Federal office of statistics covering the same period. This period is considered broad enough to be able to make a reasonable comparison between the two industries to ascertain the degree of their involvement in CSR and how it has impacted their financial performance and thereby

facilitate the drawing of valid conclusions for the study to establish significant and dynamic relationships among the variables.

### 3. Results and Discussion

This aspect of the paper explains the empirical results from the data collected on the variables. It also discusses the implications of the results. It begins with the unit root test.

#### 3.1 Unit Root Analysis

The unit root test is the first step under panel data analysis. It explores the data properties of all the variables included in the panel model. All variables must be stationary before panel data can be analyzed.

**Table 4.3: Panel Unit Root Test Result**

Variables	Test at Level			Test at First Difference		
	LLC	IPS	ADF	LLC	IPS	ADF
TCSRS	-2.95947**	-1.47903*	60.3818**	--	--	--
ROA	-5.15701*	-4.33625*	74.9269*	--	--	--
TOA	-3.69565*	-1.36259	45.2442	--	-7.7251*	115.931*
COM	-9.15026*	-6.70601*	101.850*	--	--	--
INF	-11.1225*	-6.05907*	89.8100*	--	--	--
LEV	-45.5912*	-17.1513*	104.495*	--	--	--
LEG	-5.75397*	-4.33151*	90.0585*	--	--	--

\*(\*\*) connote rejection of unit root hypothesis at 1% (5%) level of significance level

Source: E-view Computation, (2017)

Table 4.3 present results of Levin-Lin-Chu test (LLC), Im-Pesaran-Shin test (IPS) and ADF fisher Chi-square test statistics of unit root for continuous variables used in the study in the quest to describe stationary property of each of the variables. The test statistics is reported at level and first difference. Result showed that there is evidence to reject the null hypothesis of no unit root at level for all the variables used, based on all the three unit root test conducted, except in the case of total asset, and working capital which shows rejection of null hypothesis at level base on Levin-Lin-Chu test only. Given the rejection of the null hypothesis of no unit root for all the variables at level as reflected in table 4.3, it stands therefore that the possibility of spurious interrelation between variables of the model can be neglected, as the panel observation for each variables included in the models tends to be stationary at level without significance reflection of disruption of the short run equilibrium relationship amidst variables.

There is no need to worry about stationarity and/or co-integration in panel data when dealing with small cross sectional unit and period, as inference from pooled OLS, fixed effect and random effect estimation is not misleading as such there is no need for panel co-integration test of the models estimated in the study.

### 3.2 Panel model estimation: Fixed Effect Estimation for the determinants of CSR spending

Fixed effect estimations incorporate heterogeneity effects across firms over time into the analysis to account for variations in corporate social responding spending due to effect across firms and/or over time. This study separately incorporated firm's heterogeneity effect and period effect into the model using least square dummy variable (LSDV) approach in which each firm and year period is assigned an intercept term as a dummy variable. Results of the least square dummy variable fixed effect estimations (cross section and period specific) for investigating the relationship between CSR spending and its determinants are presented in table 4.5 here under:

**Table 4.5:** Fixed Effects Estimates (Cross-sectional and Period specific)  
 for the determinants of CSR spending

Cross-Sectional Specific Effect			Time Specific Effect		
Variables	Coefficients	Prob	Variables	Coefficients	Prob
C	-60.08013	0.203	C	49.75173	0.615
ROA	.0813023	0.964	ROA	.9838804	0.591
TOA	.0002514	0.000	TOA	.0002716	0.000
LEV	.7687059	0.285	LEV	1.002797	0.204
COM	60.03864	0.108	COM	75.55997	0.049
INF	-2.385458	0.282	INF	-14.30563	0.168
LEG	62.30857	0.201	LEG	6.878748	0.760
<b>Effects</b>			<b>Effects</b>		
DIAMOND BANK	155.7648	0.001	2000	11.53553	0.822
FIRST BANK	189.0859	0.000	2001	181.4163	0.106
GTBANK	50.05501	0.297	2002	95.12006	0.121
FCMB BANK	142.7857	0.004	2003	115.1231	0.098
UBA BANK	-47.06253	0.329	2004	124.8016	0.107
UNION BANK	-37.848	0.429	2005	158.5982	0.120
ZENITH BANK	247.2068	0.000	2006	21.68546	0.643
WEMA BANK	54.84809	0.267	2007	7.328035	0.903
FIDELITY BANK	-.9489123	0.984	2008	85.62651	0.095
TOTAL NIG PLC	10.86954	0.824	2009	188.5664	0.000
MRS PLC	8.680716	0.857	2010	90.84036	0.160
OANDO PLC	22.51852	0.640	2011	84.6815	0.080
FORTE OIL	-2.192142	0.964	2012	47.93831	0.381
CONOIL	.0158841	1.000	2013	57.96667	0.221
MOBIL	10.64908	0.830	2014	76.10904	0.122
ETERNAL OIL	7.94115	0.456	2015	61.1516	0.432
R-square= 0.7151 Adjusted R-square=0.6927 F-statistics=31.91 Prob(F-stat)= 0.0000			R-square=0.6502 Adjusted R-square=0.6227 F-statistics=23.63 Prob(F-stat)= 0.0000		

Sources: E-view Computation, (2017).

Fixed effect cross sectional specific estimation result presented in table 4.5 revealed that when heterogeneity effect across firms is incorporated into the model all the variables



except inflation rate exert positive impact on corporate social responsibility, with coefficient estimates of 0.0813023 ( $p=0.964 > 0.05$ ) for return on asset, 0.0002514 ( $p=0.000 < 0.05$ ) for total asset, 0.7687059 ( $p=0.285 > 0.05$ ) for leverage, 60.03864 ( $p= 0.108 > 0.05$ ) for competition, -2.385458 ( $p=0.282 > 0.05$ ) for inflation rate, and 62.30857 ( $p=0.201 > 0.05$ ) for legal environment.

Estimates reported in table 4.5 for fixed effect period specific showed that all explanatory variables except inflation rate exert positive impact on corporate social responsibility spending with coefficient estimate of 0.9838804 ( $p=0.591 > 0.05$ ) for return on asset, 0.0002716 ( $p=0.000 < 0.05$ ) for total asset, 1.002797 ( $p=0.204 > 0.05$ ) for leverage, 75.55997 ( $p=0.049 < 0.05$ ) for competition, -14.30563 ( $p=0.168 > 0.05$ ) for inflation rate, 6.878748 ( $p=0.760 > 0.05$ ) for legal environment. R-square statistics showed that about 72% of the systematic variation in corporate social responsibility spending can be explained jointly by the explanatory variables when cross sectional heterogeneity effect is incorporated into the model, while about 65% can be explained when period specific effect is incorporated into the model.

Deviation from the intercept term (-60.08013) corresponding to the reference firm (Access bank Plc) stood at 155.7648, 189.0859, 50.05501, 142.7857, -47.06253, -37.848, 247.2068, 54.84809, -.9489123, 10.86954, 8.680716, 22.51852, -2.192142, .0158841, 10.64908 and 7.94115 respectively for Diamond bank, First bank, Guaranty trust bank, FCMB, UBA, Union bank, Zenith bank, Wema bank, Fidelity bank, Total Nig Plc, MRS Plc, Oando Plc, Forte Oil, Conoil, Mobil and Eternal Oil respectively. Deviation from the intercept term (49.75173) corresponding to the reference period (1999) stood at 11.53553, 181.4163, 95.12006, 115.1231, 124.8016, 158.5982, 21.68546, 7.328035, 85.62651, 188.5664, 90.84036, 84.6815, 47.93831, 57.96667, 76.10904, and 61.1516 for year 2000, 2001,2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012,2013, 2014 and 2015 respectively.

### 3.3 Random Effect Estimation for the determinants of CSR spending

The study also uses random effect method for the panel data analysis the results are presented in table 4.6

**Table 4.6:** Random Effect Estimation for the determinants of CSR spending

Series: TCSRS ROA TOA LEV COM INF LEG

Variable	Coefficient	Standard Error	Z-Test Values	Probability
C	11.27279	41.26886	0.27	0.785
ROA	.1013375	1.735742	0.06	0.953
TOA	.0002549	.0000144	17.75	0.000
LEV	.7668193	.7099097	1.08	0.280
COM	62.19715	36.48677	1.70	0.088
INF	-2.307174	2.200817	-1.05	0.294
LEG	-3.493446	44.08449	-0.08	0.937

R-square=0.6274;

Wald chi<sup>2</sup> (5) = 356.19;

Prob> chi<sup>2</sup> = 0.0000;

Sources: E-view Computation, (2017)

Random effect estimation result presented in table 4.6 revealed that all the determinant variables exert positive impact on corporate social responsibility spending except inflation and legal environment with coefficient estimates of 0.1013375 ( $p=0.953 > 0.05$ ) for return on asset, 0.0002549 ( $p=0.000 < 0.05$ ) for total asset, 0.7668193 ( $p=0.280 > 0.05$ ) for leverage, 62.19715 ( $p=0.088 > 0.05$ ) for competition, -2.307174 ( $p=0.294 > 0.05$ ) for inflation rate, and -3.493446 ( $p=0.937 > 0.05$ ) for legal environment. R-square value stood at 0.6274 which implies that about 63% of the systematic variation in corporate social responsibility spending of the sampled firms can be explained by return on asset, total asset, leverage, competition, inflation rate and legal environment, when heterogeneity effect across firms over time is incorporated into the error term.

### 3.4 Post estimation Test for the determinants of CSR spending

F-statistics reported in table 4.7 stood at 5.45 and 1.14 with probability values of 0.0000, and 0.3232 for cross sectional and period specific effect respectively. Given the probability values, it is clear that there is enough evidence to reject the null hypothesis that all differential intercept corresponding to each cross sectional specific units are equal to zero, but otherwise for the period specific intercepts.

**Table 4.7** Restricted F Test of Heterogeneity  
 (Cross-Sectional and Time Specific) for the determinants of CSR spending

	F-statistics	Probability
<b>Cross sectional</b>	5.45	0.0000
<b>Time specific</b>	1.14	0.3232

Sources: E-view Computation, (2017)

Thus, there is significant cross-sectional heterogeneity effect in the sampled firms but otherwise over time. Thus, invalidating the restriction of pooled OLS estimation, in favor of cross sectional fixed effect estimation.

**Table 4.8:** Hausman Test for the determinants of CSR spending

	Chi-square stat	Probability
<b>Null hypothesis</b>		
<b>Difference in coefficient not systematic</b>	29.53	0.0000

Sources: E-view Computation, (2017)

Table 4.8 reported chi-square statistic of 29.53 and probability value of 0.0000. This result showed that there is enough evidence to reject the null hypothesis that differences in coefficients of fixed effect estimation and random effect estimation is not significant. Thus, making fixed effect cross-sectional specific estimation presented in table 4.5 the most consistence and efficient estimate for analyzing the impact of return on asset, total asset, leverage, competition, inflation rate and legal environment on corporate social responsibility of the selected firms.

**Table 4.9:** Other Post Estimation Test for the determinants of CSR spending

<b>Wald test</b>		
<b>Null hypothesis</b>	<b>Statistics</b>	<b>Probability</b>
Panel homoscedasticity	582.6560	0.5216
<b>Pesaran test</b>		
<b>Null hypothesis</b>	<b>Statistics</b>	<b>Probability</b>
No cross sectional dependence	12.525	0.2116
<b>Wooldridge test</b>		
<b>Null hypothesis</b>	<b>Statistics</b>	<b>Probability</b>
No AR(1)panel autocorrelation	14.6695	0.5415

**Sources:** E-view Computation, (2017)

Table reported result of post estimation test conducted to confirm if the specified model is in tune with basic assumptions underlining panel estimation. The result showed that there is no evidence to reject null hypothesis on panel homoscedasticity, null hypothesis of no cross sectional dependence and null hypothesis of no AR (1) panel autocorrelation, given the reported probability statistics of  $0.5216 > 0.05$  for Wald test and  $0.2116 > 0.05$  for Pesaran test,  $0.5415 > 0.05$ . Hence, it can be established from the result of the post estimation tests reported in table 4.8 and 4.9 to validate the assumptions of equal variance of residual terms, cross sectional independence and absence of serial autocorrelation, thus reflecting that the model is fit for inferential analysis

#### 4. Conclusions and Recommendations

All the identified determinants except inflation rate, exert positive impact on corporate social responsibility of firms sampled in the study, only total asset reflect significant impact. Thus, it stands that among other things increase in total asset unlike other determinants (return on asset, total asset, leverage, competition, legal environment) has the capacity to significantly spur corporate social responsibility spending of firms in Nigeria. The implication of the result is that firms' sizes are very germane to determine how socially responsible a firm will be. It can further be concluded from the study that there exists a direct relationship between firm sizes and CSR expenditure. In other words, it shows that bigger firms should be more socially responsible than the smaller firms.

In addition to the conclusions drawn from the study, the estimated panel has shown that the model for the determinants of CSR expenditure is statistically significant. The implications are that all the variables used as determinants will jointly influence CSR expenditure in the sampled firms significantly. This implies that they all desirable variables in the panel model and are all worthy of inclusion in the panel model as the determinants of CSR among the firms.

Generally, it is recommended that relevant authorities in Nigeria should include firms' size as an important factor when enforcing CSR compliance among quoted firms

in Nigeria. Findings have revealed that even some big firms in Nigeria try to shy away from being socially responsible.

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