

# ARE TAX AGGRESSIVE FIRMS LESS SOCIALLY RESPONSIVE? EMPIRICAL EVIDENCE FROM LISTED MANUFACTURING FIRMS IN NIGERIA

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## ABSTRACT

*The focus of the study is to examine the relationship between corporate social responsibility (CSR) and tax aggressiveness using listed manufacturing firms in Nigeria. The ex-post research design was used for the study and the study sample covered 40 manufacturing. Employing quantile estimation, the distributional dynamics for Tax aggressiveness reveals that for firms that are very tax aggressive in the highest quantile regions, the relationship with CSR is negative. For example the coefficients for  $Q[0.1] = -0.0715$ ,  $Q[0.2] = -0.137$ ,  $Q[0.3] = -0.092$ ,  $Q[0.4] = -0.083$  and  $Q[0.5] = -0.0237$ . The results suggest that for highly tax aggressive levels, CSR has a negative effect and thus at such points, increasing CSR activity tends to reduce the extent of tax aggressiveness though the study finds statistical significance at 5% for points at  $Q[0.2]$  and 10% for points at  $Q[0.1]$  and  $Q[0.3]$ . However, at aggressive levels below mean for aggressive sample, the coefficients are positive;  $Q[0.6] = 0.120$ ,  $Q[0.7] = 0.153$ ,  $Q[0.8] = 0.151$  and  $Q[0.9] = 0.187$  which suggest that at such points, increases in CSR activity tends to increase tax aggressiveness. The quantile distributional dynamics for non-aggressive distribution tends to highlight that the effect of CSR is significant at 5% for firms at different quantile regions. Specifically, the result reveals that for firms at  $Q[0.1]$ ,  $Q[0.2]$ ,  $Q[0.3]$  and  $Q[0.4]$ , which is made up of distributions in the highest non-tax aggressive quantile region have coefficient and p-values of  $[0.146, p=0.0029]$ ,  $[0.2136, p=0.000]$ ,  $[0.2719, p=0.000]$  and  $[0.2902, p=0.000]$  respectively. This suggests that CSR is a significant positive determinant of non-tax aggressive disposition. The results suggest that on the overall, the effect of CSR is positive and significant across all levels of non-tax aggressive quantiles. The study tends to support that existence of a significant positive relationship between CSR and firms that are not tax aggressive. This finding tends to also lend credence to the artificial entity view. By way of recommendation, the study suggests that tax authorities should be strong on enforcement and improve their strategies to detect irregular tax planning practices by firms. Also more sensitization is needed especially because CSR is voluntary and thus companies should not see it as an opportunity cost for tax payments.*

**Keywords:** Corporate Social Responsibility (CSR), manufacturing firms, tax

## 1. INTRODUCTION

Tax aggressiveness has been a problem since the inception of tax legislations and remains the most challenging issue especially at corporate level (Hundal, 2011). According to Chen, Cheng and Shevlin (2010), tax aggressiveness is defined as the effort of the company to minimize tax payments using aggressive tax planning activities and tax avoidance. While

minimizing the amount of corporate taxes paid could be deemed to be a legitimate exercise within the spirit of the law, where corporations deliberately engage in strategic behavior designed solely to minimize corporate taxes, such behavior is considered to be socially irresponsible (Williams, 2007). The link between corporate social responsibility (CSR) and corporate tax aggressiveness is still very uncertain theoretically. However several scholars (Preuss, 2010; Lanis & Richardson, 2012; Knuutinen, 2014) have argued that constructing a theoretical expectation on how tax aggressiveness and CSR interrelates depends largely on how the firm views CSR. That view, in turn, depends on the view of the corporation. Historically, three views of the corporation have emerged and rotated in cyclical fashion. The first is the “artificial entity” view. The second is the “real entity” view and the third is the “aggregate view” and all of these three views has different implications for the issue of tax and corporate social responsibility (CSR.).

Under the artificial entity view, the corporation owes its existence to the state and is granted certain privileges in order to be able to fulfil functions that the state would like to achieve. Thus, engaging in some forms of corporate social responsibility (CSR) is part of the corporation’s mission, and paying corporate tax is one way of fulfilling the corporation’s CSR obligations. Hence in this context, organisations are likely to be less tax aggressive and more disposed to CSR activities (Knuutinen, 2014). Under the real entity view, the corporation may not be required to engage in CSR, but corporate management should be encouraged if they do so. As for taxes, a corporation is legally required to pay taxes and is expected not to engage in over-aggressive tax planning in an attempt to minimize its tax obligations. Hence in this context, organisations are likely to be less tax aggressive but indifferent towards CSR activities. Under the aggregate view, management arguably has a responsibility to maximize shareholder profits by minimizing corporate taxes as much as possible. Hence both taxing and spending becomes purely governmental functions. Then again, if corporations are tax aggressive, this could limit state resources for welfare purposes. Thus, the aggregate view of the corporation, taken to its logical extreme, is self-defeating, because it could mean that corporations neither fulfil their responsibility to government or to society (Lanis & Richardson, 2012; Knuutinen, 2014). Nevertheless, it is claimed by Landolf (2006) and that the payment of corporate taxes does have community and societal implications because it forms the important function of helping to fund the provision of public goods in society. Thus firm with stronger CSR disposition may be less likely to engage in tax aggressive behaviour.

Most studies that have been carried out in the area of corporate social responsibility and tax aggressiveness have been predominantly from the developed countries which may not directly apply in Nigeria’s circumstances as a developing nation. (Carroll & Joulfaian, 2005; Hanlon & Heitzman, 2010; Sikka, 2010; Preuss, 2010; Lanis & Richardson, 2012) with conflicting results. In the Nigerian environment, aside from the study by Mgbame, Chijoke-Mgbame, Yekini and Yekini (2017) and Agundu and Siyanbola (2017) the researcher is unaware of any other published study in this area. The review of studies on corporate social responsibility and tax aggressiveness since the assertion was long made revealed that very scanty studies were carried out on this field. These issues have given researchers cause for increasing concern. Against this background, it becomes necessary to examine these issues in the listed manufacturing firms in Nigeria.

Consequently, these paper was directed at examining the association between tax aggressive firms and corporate socially responsibility measured by effective tax rates, CSR disclosure index and log of total assets.

The remaining section of this paper are as follows: section 2 reviewed the relevant literature including the empirical review of corporate social responsibility and corporate tax aggressiveness, theoretical framework and hypotheses development. Methodology and variable measurements are contained in section 4, while conclusion and recommendations are contained in section 5.

## **2. LITERATURE REVIEW**

Various scholars and practitioners had researched into the relationship between corporate social responsibility and corporate tax aggressiveness. The findings from a broad spectrum of these studies have been inconclusive as a result of conflicting opinions and results.

Lanis and Richardson (2014) examine the association between corporate social responsibility (CSR) and corporate tax aggressiveness. Based on a sample of 408 publicly listed Australian corporations for the 2008/2009 financial year, our regression results show that the higher the level of corporate social responsibility(CSR) disclosure of a corporation, the lower is the level of corporate tax aggressiveness. The study found a negative and statistically significant association between corporate social responsibility( CSR) disclosure and tax aggressiveness which holds across a number of different regression model specifications, thus more socially responsible corporations are likely to be less tax aggressive in nature.

Renselaar (2016) examined the relationship between corporate social responsibility (CSR) and corporate tax avoidance. Based on a sample of 3304 observations between 2002 and 2014. The author finds that the corporate social responsibility( CSR )score of companies is negatively related to their effective tax rate. This indicates that on average, responsible companies are more involved in tax avoidance activities compared to less responsible companies. This result is robust against different sets of control variables.

Omer, Molloy and Ziebart (2015) examined the relationship between tax aggressiveness and corporate social responsibility based on the CSR disclosure and annual reports for the Sub-Saharan African subsidiaries of three major beverage companies, the author analyses the connection between the companies' CSR initiatives on the one side and their tax avoidance behavior. The study finds that the CSR and tax avoidance of the three companies seem inversely related. The poorest CSR performer has the highest tax contribution and vice versa. On the regional level however, trends seem ambiguous indicating that a connection between CSR and tax avoidance may vary substantially even within company groups.

Mgbame, Chijoke-Mgbame Yekini, and Yekini (2017) investigated the effect of corporate social responsibility (CSR) performance on tax aggressiveness of listed firms in Nigeria. A cross-sectional research design was utilized for the study, and data were collected from the published annual reports. Using a sample of 50 companies for the period of 2007 to 2013, the findings of the study reveal that there is a negative relationship between CSR performance and tax aggressiveness in Nigeria. A significant relationship was also found between firm size and tax aggressiveness, though with mixed positive and negative results. In addition, the results reveal a negative and significant relationship between firm performance and tax aggressiveness, and the extent of tax aggressiveness is reinforcing.

Agundu and Siyanbola (2017) examines the relationship between CSR and tax aggressiveness using data from 13 distinguished firms among Nigerian Stock Exchange (NSE) top 30. The analytical methods involve descriptive, correlation and regression statistics, with robust, fixed and random effects consideration. The results establish that tax aggressiveness is significantly related with CSR focal components (environmental enhancement and community involvement).

Sari and Tjen(2013) examine the influence of the corporate taxpayers' level of CSR disclosure and environmental performance on the level of tax aggressiveness. This study took a sample of non-financial companies listed on the Indonesian Stock Exchange during 2009-2012. This study shows that the corporate taxpayers' level of CSR disclosure has significant negative effect towards the tax aggressiveness. It means the higher the level of the CSR disclosure, the lower the company's tax aggressiveness. This study supports the view that more socially responsible corporations are likely to be less tax aggressive.

Zeng (2011) examines the relationship between corporate social responsibility (CSR) and tax aggressiveness. A model was developed showing that a profit maximization firm is willing to incur additional costs in CSR, such as paying more taxes, as long as they could differentiate their products from non-CSR firms, and socially conscious consumers will buy products from CSR firms at a higher price than those of non-CSR firms. The empirical results using Canadian companies listed in the S&P/TSX 60 index indicates that socially responsible firms are less likely to undertake aggressive tax activities, while those firms who are less interested in being socially responsible are more likely to undertake aggressive tax activities.

### **3. THEORETICAL FRAMEWORK -STAKEHOLDER THEORY**

This study is guided by stakeholders' theory based on its antecedents and its coexisting relationship with studies bordering on corporate social responsibility and tax aggressiveness.

The stakeholder theory assumes that organizations are not solely responsible to their immediate shareholders but are also responsible to its other stakeholders. Accordingly, Freeman (1984) proposes that there are several stakeholders of a firm and they are identified based on their interests in the firm. As such, stakeholders include shareholders, suppliers, customers, employees, and even the public. Therefore, firms from this perspective are expected to engage in a responsible manner towards this group of persons while acknowledging a duty of care. Stakeholder theory suggests that the needs of shareholders and stakeholders of an organization should be met side by side with consideration being given to both sides. Under the stakeholder theory view, the corporation owes its existence to the state which is one of the key stakeholders and is granted certain privileges in order to be able to fulfil functions that the state would like to achieve. Thus, engaging in some forms of CSR is part of the corporation's mission, and paying corporate tax is one way of fulfilling the corporation's CSR obligations. Hence in this context, organisations are likely to be less tax aggressive and more disposed to CSR activities (Knuutinen, 2014).

### **4. METHODOLOGY AND MODEL**

The ex-post research design was used for the study as it permits the examination of independent variables in retrospect for their possible influence on the dependent variable.

The study sample covered 40 manufacturing firms listed on the Nigerian stock exchange. The study covers the period 2011-2018. The simple random sampling technique was used for the sample selection and the quantile estimation technique was used for the estimation of the data.

The basic quantile regression model assumes that the conditional quantiles are linear functions of the explanatory variables. Assume that we have a sample of  $N$  observations from a population, that is,  $\{(y_i, x_i): i=1, \dots, N\}$ , where the subscript  $i$  indexes each observation,  $y_i$  is the dependent variable, and  $x_i$  is the  $K \times 1$  vector of explanatory variables, which can include the intercept term.

Moreover, let  $\tau \in (0,1)$  define the quantile of interest; let  $\beta(\tau)$  be the corresponding parameter vector for the vector of characteristics that vary with quantiles; and let  $Q_\tau(\cdot)$  be the quantile

function, which is defined as the inverse function of  $F(\cdot)$ , the underlying conditional (on  $x_i$ ) cumulative distribution function for  $y_i$ . Then the quantile of interest is written as a linear function of a set of characteristics as;

$$y_i = x_i' \beta(\tau) + u_i(\tau) \quad (1)$$

$$Q_\tau(y_i | x_i) = x_i' \beta(\tau) \quad (2)$$

where  $u_i(\tau)$  denotes the error term, which is also a function of the quantile of interest. Based on the preceding two equations, error terms must satisfy the quantile restriction:

$$Q_\tau(u_i(\tau) | x_i) = 0 \quad (3)$$

The parameter estimates for the  $\tau^{\text{th}}$  sample quantile minimizes the weighted absolute deviations (the errors); that is,

$$\min_{\beta \in \mathbb{R}^k} \left[ \sum_{i \in \{i: y_i < x_i' \beta\}} \tau |y_i - x_i' \beta| + \sum_{i \in \{i: y_i \geq x_i' \beta\}} (1 - \tau) |y_i - x_i' \beta| \right] \quad (4)$$

For  $\tau = 0.5$ , one would weigh deviations equally, which is known as median regression. Recall that the  $\tau^{\text{th}}$  quantile denotes the maximum value that  $y_i$  can take with given probability  $\tau$ .

The  $\tau^{\text{th}}$  conditional linear quantile regression of  $y$  for given  $\mathbf{x} = (1, x_1, x_2, \dots, x_k)^T$  is defined as

$$Q_y(\tau | \mathbf{x}) = Q_\tau(y | x_1, x_2, \dots, x_k) = F^{-1}(\tau | \mathbf{x}) \\ = \mathbf{x}^T \beta(\tau) = \beta_0(\tau) + \beta_1(\tau)x_1 + \dots + \beta_k(\tau)x_k, \quad 0 < \tau < 1, \quad \text{-----}(5)$$

where  $\beta(\tau) = (\beta_0(\tau), \beta_1(\tau), \beta_2(\tau), \dots, \beta_k(\tau))^T$ .

Koenker and Bassett (1978) proposed a  $L_1$ -loss function to obtain estimator  $\hat{\beta}(\tau)$  by solving

$$\hat{\beta}(\tau) = \arg \min_{\beta(\tau) \in \mathbb{R}^p} \sum_{i=1}^n \rho_\tau(y_i - \mathbf{x}_i^T \beta(\tau)), \quad 0 < \tau < 1,$$

where  $\rho_\tau$  is a loss function

$$\rho_\tau(u) = u(\tau - I(u < 0)) = \begin{cases} u(\tau - 1), & u < 0; \\ u\tau, & u \geq 0. \end{cases}$$

Quantile regression problem can be formulated as a linear program

$$\min_{(\beta(\tau), \mathbf{u}, \mathbf{v}) \in \mathbb{R}^p \times \mathbb{R}_+^{2n}} \left\{ \tau \mathbf{1}_n^T \mathbf{u} + (1 - \tau) \mathbf{1}_n^T \mathbf{v} | X\beta(\tau) + \mathbf{u} - \mathbf{v} = \mathbf{y} \right\}, \quad \text{-----}(7)$$

Where  $\mathbf{1}^T$  is an  $n$ -vector of 1s,  $X$  denotes the  $n \times p$  design matrix, and  $\mathbf{u}, \mathbf{v}$  are  $n \times 1$  vectors with elements of  $u_i, v_i$  respectively (Koenker 2005). ----- (8)



Hence for the study, the quantile model is specified as;

$$Q_R(\tau|x) = \hat{\beta}_0(\tau) + \hat{\beta}_1(\tau)x \quad \text{-----}(9)$$

Where  $Q_R(\tau/x)$  be the quantile function for tax aggressiveness and  $\beta(\tau)$  = parameter vector for the vector of characteristics that vary with quantiles;  $x$  is the  $K \times 1$  vector of explanatory variable (Corporate social responsibility) and control variable firm size

**Table 1. Variable definition, Measurement and Source**

Variable	Definition	Measurement	Source
TAGG	Tax Aggressiveness	Effective tax rate	Lanis and Richardson, (2011).
CSR	Corporate social responsibility (CSR)	CSR disclosure index	Mgbame, etal (2017)
FSIZE	Firm size	Log of total assets	Mgbame, etal (2017)

## 5. PRESENTATION OF RESULTS

**Table 2. Descriptive Statistics**

	CSER	TAX-AGG	FSIZE
Mean	0.52762	0.39608	7.077513
Median	0.42857	0.251254	6.995521
Maximum	1	0.50907	8.976039
Minimum	0	0.06859	5.626074
Std. Dev.	0.19060	0.206108	0.702814
Skewness	0.71508	1.698872	0.229997
Kurtosis	3.3981	7.948924	2.362981
Jarque-Bera	26.9967	441.4473	7.563007
Probability	0.0000	0.000	0.022788

Source: Researchers Compilation (2020).

The descriptive statistics in Table 2 reveals that the mean of corporate social responsibility (CSR) has a mean value of 0.527 which suggests a slightly above average disclosure index for the sampled companies with a standard deviation of 0.190 which is an indicator of the extent of dispersion from the mean with a maximum of 1 and minimum of 0 respectively. The mean tax aggressiveness ratio for the firm stood at 0.396 which is higher than the 30% company income tax ratio and this suggest that on the average firms in the sample exhibit some measures of tax aggressive behavior. The mean for firm size used as control variable for the study stood at 7.077. On the overall, the Jarque-bera statistics for all the variables showed p-values less than 0.05 which suggest the likely absence of outliers in the series.

**Table 3. Pearson Correlation Matrix**

Probability	FSIZE	CSER	TAX-AGG
FSIZE	1		
CSER	0.087344	1	
p-value	0.1351		
TAX-AGG	0.10687	0.07319	1
p-value	0.0673	0.2108	

Source: Researchers Compilation (2020).

From table 3, it is observed that CSR is positively correlated with FSIZE ( $r=0.0732$ ) which indicates that firms engaging in more CSR activity may be associated with increased tax aggressive behavior. A positive correlation is also observed between CSR and FSIZE ( $r=0.087$ ) indicating that larger firms could be associated with increased CSR. The inter-correlation coefficients between the independent variables are also quite relatively low and are not indicative of any problem of multicollinearity.

**Table 4 (part-i). Quantile Regression Result for Tax aggressive Sample**

	Quantile	Coefficient	Std. Error	t-Statistic	Prob.
C	0.1	0.105818	0.12721	0.831839	0.4062
	0.2	0.164833	0.109543	1.504733	0.1335
	0.3	0.121977	0.112072	1.088379	0.2773
	0.4	0.170294	0.118005	1.443107	0.1501
	0.5	0.117677	0.129427	0.909212	0.364
	0.6	0.10711	0.141085	0.75919	0.4484
	0.7	-0.07086	0.15427	-0.45934	0.6463
	0.8	-0.04719	0.17179	-0.27468	0.7838
	0.9	0.220366	0.19386	1.136727	0.2566
CSER	0.1	-0.07146	0.043278	-1.65125	0.0998**
	0.2	-0.13689	0.043038	-3.18058	0.0016*
	0.3	-0.09165	0.055033	-1.66543	0.0969**
	0.4	-0.0828	0.071507	-1.15797	0.2478
	0.5	-0.02365	0.098805	-0.23938	0.811
	0.6	0.12007	0.116899	1.027128	0.3052
	0.7	0.153486	0.095216	1.611978	0.1081
	0.8	0.150697	0.106392	1.416436	0.1577
	0.9	0.187817	0.151932	1.236196	0.2174
FSIZE	0.1	0.002133	0.018047	0.11817	0.906
	0.2	0.004915	0.0153	0.321263	0.7482
	0.3	0.013531	0.015232	0.888314	0.3751
	0.4	0.010559	0.015902	0.664009	0.5072
	0.5	0.020762	0.017335	1.197656	0.232

**Table 4(part-ii). Quantile Regression Result for Tax aggressive Sample**

Quantile	Coefficient	Std. Error	t-Statistic	Prob.
0.6	0.020485	0.020312	1.008512	0.314
0.7	0.053672	0.024236	2.214593	0.0276*
0.8	0.059403	0.02705	2.195998	0.0289*
0.9	0.030203	0.030027	1.005856	0.3153

Source: Researchers Compilation (2020).

Employing quantile estimation, the study probes further into examining distributional dynamics in the behavior of corporate tax aggressiveness in relation to corporate social responsibility disclosure at different tax aggressiveness quantile levels. The usefulness of the quantile regression technique is that unlike the OLS regression which does not show the effect of an independent variable on different level of the dependent but is regarded as a mean regression, the quantile regression parameter estimates the change in a specified quantile of the response variable. The conditional quantile regression traces the entire distribution of the independent variable, conditional on a set of categories for the dependent variable. As observed, the distributional dynamics for Tax aggressiveness reveals that for firms that are very tax aggressive in the highest quantile regions, the relationship with CSR is negative. For example the coefficients for  $Q[0.1] = -0.0715$ ,  $Q[0.2] = -0.137$ ,  $Q[0.3] = -0.092$ ,  $Q[0.4] = -0.083$  and  $Q[0.5] = -0.0237$ . The results suggest that for highly tax aggressive levels, CSR has a negative effect and thus at such points, increasing CSR activity tends to reduce the extent of tax aggressiveness though the study finds statistical significance at 5% for points at  $Q[0.2]$  and 10% for points at  $Q[0.1]$  and  $Q[0.3]$ . However, at aggressive levels, below mean for aggressive sample, the coefficients are positive;  $Q[0.6] = 0.120$ ,  $Q[0.7] = 0.153$ ,  $Q[0.8] = 0.151$  and  $Q[0.9] = 0.187$  which suggest that at such points, increases in CSR activity tends to increase tax aggressiveness. However, the relationship is not significant at 5%. The literature in this area is still very nascent and burgeoning as researchers are still trying to understand the nexus between CSR and tax aggressiveness. Though none of the reviewed studies used a quantile estimation system or created sub-samples of aggressive and non-aggressive firms, to some extent, the finding is similar though those of Lanis and Richardson (2014) and Mgbame, Chijoke-Mgbame Yekini, and Yekini (2017) with results showing that the higher the level of CSR disclosure of a corporation, the lower is the level of corporate tax aggressiveness. However, Renselaar (2016) and Omer, Molloy and Ziebart (2015) results the below mean results for aggressive sample, indicating that on average, responsible companies are more involved in tax avoidance.

**Table 5 (part-i). Quantile Regression Result for non-Tax aggressive Sample**

	Quantile	Coefficient	Std. Error	t-Statistic	Prob.
C	0.100	-0.051178	0.100352	-0.509988	0.6102
	0.200	0.135159	0.113631	1.189456	0.2347
	0.300	0.278781	0.102786	2.712242	0.0069
	0.400	0.289074	0.090892	3.180404	0.0015
	0.500	0.322900	0.094659	3.411196	0.0007*
	0.600	0.369534	0.103747	3.561857	0.0004*
	0.700	0.354116	0.116690	3.034667	0.0025*
	0.800	0.430114	0.177472	2.423560	0.0157*
	0.900	0.605496	0.171684	3.526815	0.0005*



**Table 5 (part-ii). Quantile Regression Result for non-Tax aggressive Sample**

	Quantile	Coefficient	Std. Error	t-Statistic	Prob.
CSR	0.100	0.145709	0.048812	2.985100	0.0029
	0.200	0.213599	0.054567	3.914465	0.0001*
	0.300	0.271881	0.057956	4.691145	0.0000*
	0.400	0.290221	0.054485	5.326669	0.0000*
	0.500	0.274024	0.067630	4.051825	0.0001*
	0.600	0.299803	0.068531	4.374691	0.0000*
	0.700	0.318182	0.077098	4.126977	0.0000*
	0.800	0.259774	0.112252	2.314203	0.0210*
	0.900	0.274702	0.060203	4.562898	0.0000*
FSIZE	0.100	0.025789	0.012368	2.085108	0.0375
	0.200	0.003586	0.014721	0.243594	0.8076
	0.300	-0.018683	0.013866	-1.347390	0.1783
	0.400	-0.011258	0.014100	-0.798451	0.4249
	0.500	-0.008455	0.016007	-0.528224	0.5975
	0.600	-0.006976	0.016751	-0.416449	0.6772
	0.700	0.002941	0.017949	0.163866	0.8699
	0.800	0.008958	0.017794	0.503427	0.6148
	0.900	-0.007592	0.021618	-0.351203	0.7256

Source: Researcher's compilation (2020) using Eviews 10.0. \* sig @ 5%, \*\*sig@10%

As observed, the quantile distributional dynamics for non-aggressive firms tends to highlight that the effect of CSR is significant at 5% for firms at different quantile regions. Specifically, the result reveals that for firms at Q[0.1], Q[0.2], Q[0.3] and Q[0.4], which is made up of distributions in the highest non-tax aggressive quantile region have coefficient and p-values of [0.146, p=0.0029], [0.2136, p=0.000], [0.2719, p=0.000] and [0.2902, p=0.000] respectively. The results suggest that for distributions in the high non-tax aggressive region above the average, the influence of CSR is positive and significant. This suggest that for firms that are highly non-tax aggressive, CSR is a significant positive determinant of their non-tax aggressive disposition. A similar pattern is also observed even for firms in the average and below average quantiles. For example, at Q[0.5], Q[0.6], Q[0.7] and Q[0.8], with coefficient and p-values of [0.274, p=0.000], [0.2998, p=0.000], [0.318, p=0.000] and [0.2598, p=0.0210] respectively. The results suggest that on the overall, the effect of CSR is positive and significant across all levels of non-tax aggressive quantiles. The study tends to support that existence of a significant positive relationship between CSR and firms that are not tax aggressive. This finding tends to also lend credence to the artificial entity view, the corporation owes its existence to the state and is granted certain privileges in order to be able to fulfil functions that the state would like to achieve. Thus, engaging in some forms of CSR is part of the corporation's mission, and paying corporate tax is one way of fulfilling the corporation's CSR obligations. Hence in this context, organisations are likely to be less tax aggressive and more disposed to CSR activities (Knuutinen, 2014).

Table 6. Regression Diagnostics

<b>B-G LM test for serial Corr</b>	
<i>F-statistic</i>	0.3321
<i>Obs*R-squared</i>	0.9119
<i>Prob.</i>	0.7243
<i>Prob. Chi-Square</i>	0.6341
<b>Heteroskedasticity Test</b>	
<i>F-statistic</i>	0.8502
<i>Prob (f)</i>	0.4928
<i>Scaled explained SS</i>	2.8047
<i>Prob. Chi-Square</i>	0.4227
<b>Ramsey Reset Test</b>	
<i>t-statistic</i>	0.9269
<i>f-statistic</i>	0.9269
<i>Likelihood</i>	0.9172

Source: Researchers compilation (2019)

The Breush-Goffery LM test for serial correlation test for the presence of stochastic dependence between the errors across time and as can be observed, the probability value of the F-stat (0.9119) confirms that the null hypothesis of no serial correlation in the residuals is accepted at 5% level. The white test for Heteroskedasticity also shows that the p-value (0.4928) of the F-stat (0.8502) confirms that the null hypothesis of homoscedastic errors is accepted at 5% level and finally, the Ramsey specification test also confirms that the appropriateness of the functional specification of the model.

## 6. CONCLUSION AND RECOMMENDATIONS

The relationship between corporate social responsibility and tax aggressiveness is an interesting area of research that holds insightful implications for predicting corporate disposition towards CSR and tax aggressiveness. Using the hindsight from the theoretical perspectives pointed out in the introductory section, the study is concerned with investigating basically if tax aggressive firms are more or less socially responsive. The study employed a quantile regression approach for this procedure and creates a subsample of tax aggressive and non-tax aggressive data distributions based on the CIT rate of 30%. The results for the study reveals that for tax aggressive distribution in the highest quantile regions, the relationship with CSR is negative. The results suggest that for highly tax aggressive levels, CSR has a negative effect and thus at such points, increasing CSR activity tends to reduce the extent of tax aggressiveness though the study finds statistical significance at 5% for points at Q[0.2] and 10% for points at Q [0.1] and Q[0.3]. However, at aggressive levels below mean for aggressive sample, the increases in CSR activity tends to increase tax aggressiveness. The quantile distributional dynamics for non-aggressive distribution tends to highlight that the effect of CSR is significant at 5% for firms at different quantile regions. This suggest that CSR is a significant positive determinant of non-tax aggressive disposition. The results suggest that on the overall, the effect of CSR is positive and significant across all levels of non-tax aggressive quantiles. This finding tends to also lend credence to the artificial entity view of the firm. By way of recommendation, the study suggest that tax authorities should be strong on enforcement and improve their strategies to detect irregular tax planning practices by firms. Also more sensitization is needed especially because CSR is voluntary and thus companies should not see it as an opportunity cost for tax payments.

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