

TAX AGGRESSIVENESS AND CORPORATE INVESTMENT EXPENDITURE IN NIGERIA

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ABSTRACT

This paper evaluates the effect of tax aggressiveness on corporate investment expenditure in Nigeria based on a sample of 119 non-financial firms quoted in Nigeria stock exchange from 2010 to 2017. The outcomes measured by estimating pooled ordinary least squares, random and fixed effects models. The corporate tax aggressiveness indicators are tax saving, effective tax rate, book tax gap, temporary tax differences with firm size as control variable. Findings, among others, reveal that tax aggressiveness has a statistically significant influence on corporate investment expenditure in Nigeria. It provides evidence that tax aggressiveness is positive and statistically significant. Its coefficient variables, particularly tax saving and effective tax rate maintained a consistent positively and statistically significant relation to corporate investment expenditure across all model specifications. In other words, increase in tax saving and effective tax rate boosts total investment expenditure, investment maintenance expenditure and new investment expenditure in Nigeria. Other findings are that book tax gap shows a negative impact on corporate investment expenditure. This is because managers reduce taxable income to increase investment maintenance expenditure. For the control variable, total assets boost corporate investment expenditure.

Keywords: tax aggressiveness, tax saving, effective tax rate, book tax gap, temporary tax difference and investment expenditure

1 Introduction

Corporate investment is the allocation of money in the expectation of some benefits in the future, known as return. Helpman, Melitz and Yeaple (2004) stated that some motives behind firms engaging in investments are trade friction, value of exercising corporate control, wealth maximization and so on. Investment is geared towards firms' growth, wealth growth and job creation. One of the unresolved questions in economics is the degree at which corporate taxation affects corporate investment (Moon, 2019). The study re-emphasized a recurring debate on what extent tax aggressiveness would stimulate corporate investment. Federici¹ and Parisi¹ (2015) reported that corporate investment is one of the main drivers of the economy and how tax aggressiveness affects corporate investment behaviour of firms is a question of importance. They reported that taxation has large effect on firm's investment decisions. Corporate taxes impinge directly on the incentive to accumulate capital and to perform research in many countries. Nigeria is among the countries in West African that the influence of corporate taxation on corporate investment expenditure had been categorized at a growing stage. Holland and Vann (1998) clearly explained the two broad corporate taxation drivers on corporate investment decisions. Firstly, investors emphasize on the benefits of tax incentives in form of tax aggressiveness of firms which increase investments and give rise to regional development; employment creation; technology transfer and export promotion. Secondly, investors emphasize on the unimportant form of tax aggressiveness in investment decision, they consider basic economic and institutional situations such as potential markets development; policy stance of governments and

rudimentary state of the legal framework. In this case, tax aggressiveness benefits on their own cannot overcome these adverse factors.

Tax aggressiveness means reduction of tax liability through firms' tax policies; which includes using financial instruments as a vehicle for tax advantage. However, it becomes legitimate when operating within the content of the law (tax avoidance) and unethical when it undermines the integrity of the tax system. It is a situation close to abusive tax avoidance, which is the 'worst case' of tax aggressiveness. Corporate taxation is a form of wealth to government but tax aggressiveness practices entails transfers of wealth from government to firm owners because it is a value maximizing activity to shareholders. Shareholders value increases with corporate tax aggressiveness activity with management having two options. Firstly, is to pay shareholders the cash flow from tax aggressiveness activities. While secondly, is to re-invest the cash flow from tax aggressiveness activities. Managers are much concerned about re-investment of the cash flow from tax aggressiveness activities to benefit from more incentives and sustainable growth (such as salary increment). The question of whether cash flow from tax aggressiveness practices increases total investment expenditure more than investment maintenance expenditure or new investment expenditure in Nigeria have become the pivot of this study to compare how tax aggressiveness affects corporate investment in Nigeria. The extent to which managers utilize this cash flow from tax aggressiveness on corporate investment becomes central question that needs answer especially Nigeria being biggest West Africa economy. Is it more on total investment expenditure; investment maintenance expenditure or new investment expenditure? This study focuses on re-investment of the cash flow from tax aggressiveness because of the issues that lead to how cash flow from tax aggressiveness affects investment expenditure? What investment expenditure are necessary to maintain new, existing and total investment? Does cash flow from tax aggressiveness practices affect new, existing and total investment expenditure in Nigeria? The main aim of the study is to determine the effect of tax aggressiveness on corporate investment in Nigeria, while the specific objectives are:

1. to determine the effect of the tax saving on corporate investment in Nigeria
2. to determine the effect of the effective tax rate on corporate investment in Nigeria
3. to find out the effect of the book tax gap on corporate investment in Nigeria
4. to ascertain the effect of the temporary tax differences on corporate investment in Nigeria

A set of null hypotheses were formulated for the study as follows:

1. The tax saving does not have a significant effect on corporate investment in Nigeria
2. The effective tax rate does not have a significant effect on corporate investment in Nigeria
3. The book tax gap does not have a significant effect on corporate investment in Nigeria
4. The temporary tax differences does not have a significant effect on corporate investment in Nigeria

To analyse the investment expenditure effect, we show how cash flow from tax aggressiveness in Nigeria drives corporate investment expenditure. Our empirical approach are (1) the sample contains 119 non-financial quoted companies on the Nigeria stock exchange, (2) the focus is on the corporate investment expenditure, that is, 2010-2017, and (3) three empirical techniques - pooled ordinary least squares (POLS), random effects (RE) and fixed effects (FE) are applied. The increase in value of shareholders investment from tax aggressiveness and the question of if retained back for reinvestment in the organization during these periods deem it an interesting phenomenon to be investigated. The set

of empirical analyses examine whether tax saving, effective tax rate, book-tax differences, temporary tax differences and firm size (control variables) are effective in mitigating corporate investment expenditure. All data are directly taken from companies' financial statement.

The rest of the study is structured as follows: Section 2 reviews relevant empirical literature, Section 3 outlines the empirical approach and data, Section 4 discusses the results while Section 5 concludes.

2 Literature review

A number of studies on the effect of tax aggressiveness on corporate investment expenditure have been carried out with opposing results, which is often attributable to the scope of the study, changes in variables and econometric methodologies adopted. Some studies analyse corporate investment in relation to investment opportunities and investment realization to mention a few. For instance, Beatty, Riffe, and Welch, (1997) reported cash flow from tax aggressiveness on investment expenditure of United States firms prior to 1985 as firms with high taxation payments invest less than equivalent firms. They stated that Tax Reform Act of 1986 significantly altered firms' investment behaviour because of cash flow from tax aggressiveness realized. Firms take advantage of the investment tax credit and the accelerated depreciation schedules (investment expenditure necessary to maintain assets in place) in 1986. Their result found evidence that the 1986 Tax Reform Act significantly affects the investment expenditure of firms in United States. Seidman, (2010), Watrin et al (2012), Jarboui and Koubaa, (2017) Martinez (2015) concentrated on book-tax differences without capturing the effect of temporary and permanent differences in corporate taxation. Muhtar, (2015) argued that excess dividend taxes discourage investment. Dhirendra, (2018), Bank Bazaar, (2017) Gordon, (2015) Edame and Okoi, (2014) Musgrave, (1959). Brown, (1962) reported positive effect of corporate taxation on investment while Dacklay, (2015), Arnold, (2008), Clark, (1978), Kelvin, (2018), Becker et al, (2006) and Hakeen, (1966) reported negative effect of corporate taxation on investment. Chang et al, (2009) Zur, (2011) Harington, et al, (2010) Corporate finance institute, (2018) reported that deferred tax assets is value relevant, pointing out that temporary differences that leads to deferred tax liability is significant. But Burges, et al (2012), World stroke organization, (2018), Lisowsky, (2009) and Ayers, (1998) reported that discounting deferred tax asset is reversal, not related to actual tax liability, no significant relationship existing between deferred tax expense and annual returns. Osegbue et al. (2019) concluded that cash effective tax rate, long term effective tax rate, tax savings temporary and permanent tax differences are insignificant while tax book gap are significant to earnings management in Nigeria.

Richardson (2006) worked on over-investment of free cash flow of United States firms between 1988 and 2002 with 58,053 observations. The primary focus of the study is on the extent to which over-investment and the role of governance structures in mitigating over investment. The result shows a positive effect of free cash flow on new investment expenditure. They reported that majority of free cash flow is retained in the form of financial assets, because little evidence shows that free cash flow is distributed to external stakeholders, thereby creating the potential for retained free cash flow to be over-invested in the future. This assumes cash flow from tax aggressiveness increases new investment expenditure. Kelvin, (2018), wrote on effect of retail inventory on annual taxes using evidence from emerging economy and evidence from New York. The study reported that keeping track of inventory costs reduces tax bill which will help one arrive at a profit figure. The result indicates a positive significant effect of tax-saving on corporate investment meaning that firms report minimum income to

avoid high tax. Serena, Thomas and Gaetan (2012) on debt – equity tax bias examine the effect of private equity firms and tax aggressiveness on firms' portfolio as an additional source of economic value, taking cognizance of tax saving, cash effective tax rate, book-tax differences as independent variables on corporate investment in Malan. They reported that debt-equity financed firms pay lower taxes and vice versa. Their result indicates a positive significant effect on tax savings and corporate investment, which means that investors outside equity financing pay higher taxes.

Simone, Klassen and Seidman (2018) investigates the relationship between income-shifting aggressiveness and corporate investment efficiency. Their model predicts that investment increases with aggressive income shifting, though the efficiency of the investment relative to a non-tax world declines as tax motives interfere with production incentives. The result shows a positive relationship between income-shifting aggressiveness and the level of investment and a negative relationship between income-shifting aggressiveness and investment efficiency. However, the study documented a previously under-explored consequence of tax-motivated cross jurisdictional income shifting. Armstrong, Blouin, and Larcker (2012) worked on the incentives for tax planning using 423 unique firms in United States from 2002 to 2006. The study assumed that tax director is not the primary executive charged with selecting the firm's investment activity. They reported that tax directors are directly involved in planning and investment location decisions, because they are advisor. The result shows negative effect of effective tax rate on new investment, which suggests that firms with relatively more new depreciation deductions have smaller abnormal permanent tax differences.

Thus, in this study we propose to test the role of Nigeria data for the period 2010 to 2017. The aim is to examine how re-invested cash flow from tax aggressiveness drives investment expenditure that are necessary to maintain new, existing and total investment in Nigeria. To our knowledge, this study is one of the very studies that explores the effect of c Tax aggressiveness on corporate investment expenditure in Nigeria.

3. Methodology and Data

The population of the study comprises 165 quoted firms in Nigeria Stock Exchange (Nigeria Stock Exchange, 2017). While the sample size consists of 119 quoted companies excluding financial services firms due to their nature of financial reporting. The study uses data on 119 non-financial firms in Nigeria from 2010 to 2017 with all variables sourced from the firms published financial statements. The reason for 2010 fiscal year is the approval of National Tax Policy (NTP) in January 2010. The NTP seeks to provide guidelines, rules, basics of tax legislation and tax administration in Nigeria tax system. To our knowledge, this study is one of the very studies that explores the effects tax aggressiveness on corporate investment to explore this path of analysis restricted only to data in Nigeria.

3.1 The indicators

In line with similar studies, the main variables are total investment ($Total_{invest}$), investment maintenance (I_{main}) and new investment (New_{invest}) which are the measures of corporate investment; tax saving ($TaxSav$); effective tax rate (ETR); book tax gap (BTG); temporary tax differences ($TemDiff$). For robustness, control variable firm size ($FirmSize$) is included.

Total investment captures all the sums of all outlays on capital expenditure, acquisitions, research and development less receipts from the sale of property, plant and equipment used by Richardson 2006; Armstrong, Blouin, & Larcker, 2012.

$$TI_t = \text{CapExp}_t + \text{Acquisitions}_t + \text{R\&D}_t - \text{SalePPE}_t$$

Where TI_t = total investment in year t

CapExp_t = capital expenditure (book value of property, plant and equipment plus depreciation and amortization expenses); Acquisitions_t = acquisition of property, plant and equipment; R\&D_t = research and development; SalePPE_t = sale of property, plant and equipment.

Investment maintenance captures investment expenditure necessary to maintain assets in place. We measure investment maintenance using similar method used by Richardson 2006, which used amortization and depreciation to proxy investment maintenance because it captures investment expenditure necessary to maintain assets in place.

New investment is the difference between total investment and investment maintenance (Richardson 2006). $\text{New}_{\text{invest}} = \text{Total}_{\text{invest}} - I_{\text{main}}$

Where $\text{Total}_{\text{invest}}$ = total investment; I_{main} = investment maintenance

Tax saving is calculated as difference between the statutory tax rate and the effective tax rate ($\text{TaxSav} = 30\% - \text{ETR}$). Where a firm operates across a number of jurisdictions with varying statutory rates, tax rate differentials can provide a tax saving recognized in investment. (Ilaboya, Izevbekhai and Ohiokha, 2016; Ftouhi, Ayed and Zemzem, 2010; Kawor and Kportorgbi, 2014; Lisowsky, Lennox and Pittman, 2013; Atwood and Reynolds, 2008)

Effective tax rate is computed as the total tax expenses divided by the income before tax, reflecting the aggregate proportion of the accounting income payable as taxes. It captures tax aggressiveness as it relates to accounting earnings. (Salihu et al., 2013; Chen et al., 2010; Dyreng et al., 2010).

Book tax gap is calculated as differences between income reported on financial statements and income reported on tax returns (i.e. book income less taxable income) ($\text{BTG} = \text{EBIT} - \text{TI}$). Taxable income is calculated as current tax expense divided by corporate statutory rate (30%). We used book tax gap to measure the abusive tax aggressiveness behaviour of sample-quoted firms. (Seidman, 2008; Talisman, 1999; Mills, Newberry and Trautman, 2002; Desai, 2003; Waluyo, 2016; Plesko, 2004 in Satyawati and Palupi, 2017).

Temporary tax differences is calculated as deferred tax expense divided by the corporate statutory rate (deferred tax / 30%). We use it to measure how temporary tax differences affects corporate investment because of the nature of most methods used on firms investment due to time difference that reverses in the near future. (Seidman, 2008).

For the control variable, *firm size* is total assets measured at the start of the year. We used firm size as a control measure to tax aggressiveness because firm size drives it investment expenditure. (Welch and Wessels 2000).

3.2 Summary statistics and correlation analysis

The relative statistics of these indicators are shown in Table 1. It shows the large difference between the maximum and minimum values of total investment, investment maintenance, and new investment that the quoted firms have different investment expenditure. It observed that on the average over the eight years period (2010 – 2017), the sampled quoted firms has N24,583,534 on total investment expenditure; N1,483,289 on investment expenditure necessary to maintain assets in place and N22,835,223 on new investment expenditure which indicates an average of investment expenditure of quoted firms. We also observed that total investment expenditure over the period was N4, 520,000,000 maximum with minimum stood at N 0.0000; investment maintenance was N73,495,000 maximum with minimum at N0.0000 while new investment was N4,520,000,000 maximum and minimum of N0.0000. This show quoted firms have different investment expenditure. We also find out that on the average; about 12% are tax saved, 14% proportion of tax on accounting income payable as tax on ETR. Book tax gap was N1, 274,891 leading to N71, 944,175 on temporary tax differences. Firm size stood at N249,817.5. The correlation matrix in Table 2 shows that there is a weak positive association between tax saving and effective tax rate; also weak positive association between book tax gap and tax savings, and weak negative association between book tax gap and effective tax rate. This clearly shows that increase in tax savings reduces effective tax rate. In the case of temporary tax differences. We observed that, temporary tax differences was positive and weakly associated with tax saving and book tax gap, while negatively and weakly associated with effective tax rate. This clearly shows that increase in temporary tax differences increases tax saving and book tax gap; and reduces effective tax rate. Firm size was negative and weakly associated with tax savings and book tax gap, while firm size was positively and weakly associated with effective tax rate and book tax gap. It shows that increase in firm size reduces tax savings and book tax gap; and increases effective tax rate and temporary tax differences.

Table 1: Statistics summary

stats	mean	min	max	std.dev	Skewness	kurtosis
TaxSAV	0.1265	-40.784	91.1831	3.4284	18.0406	558.8113
ETR	0.1467	-90.8831	41.0840	3.4285	-18.0159	558.1975
BTG	1274891.	-36503027	2.19E+08	13979091	10.2665	125.7404
TempDIFF	71944175	-4.55E+08	3.42E+10	1.47E+09	21.7096	475.5538
FirmSIZE	249817.5	0.0000	15409608	920989.3	10.9459	162.0817
TotalINVEST	24583534	0.0000	4.52E+09	1.94E+08	16.5722	339.3432
InvestMAIN	1483289.	0.0000	73495000	5045568.	7.6888	81.5859
NewINVEST	22835223	0.0000	4.52E+09	1.89E+08	17.5931	375.6500

TaxSAV: tax savings; ETR: effective tax rate; BTG: book tax gap; TempDIFF: temporary tax difference; FirmSIZE: firm size; TotalINVEST: total investment; InvestMAIN: investment maintenance; NewINVEST: new investment

Source: Authors' Computations

Table 2 Correlation matrix

	Taxsav~s	CurCas~R	Bookta~p	Tempor~f	Totala~t
Taxsavings	1.0000				
CurCasheff~R	-0.0999	1.0000			
Booktaxgap	0.0046	-0.0039	1.0000		
TemporaryD~f	0.0033	-0.0029	0.6662	1.0000	
FirmSIZE	-0.0019	0.0039	0.3858	0.2362	1.0000

TaxSAV: tax savings; ETR: effective tax rate; BTG: book tax gap; TempDIFF: temporary tax difference; FirmSIZE: firm size; TotalINVEST: total investment; InvestMAIN: investment maintenance; NewINVEST: new investment

Source: Authors' Computations

3.3 The model

There is an extensive literature in economics and finance that has examined firm level investment decisions (e.g., Hubbard 1998 in Richardson 2006). Expected investment expenditure on new projects will be an increasing function of growth opportunities. The underlying construct of growth opportunities refers to the present value of the firm's options to make future investments (Myers, 1977 in Richardson 2006; Armstrong, Blouin, and Larcker 2012). Since corporate investment is influenced by taxation, which often is determined by factors such as tax saving, effective tax rate, book tax gap, temporary tax differences and firm size, there are reasons to believe in a positive effect between corporate tax aggressiveness and corporate investment. To evaluate the effect of investment expenditure using the full and sub-samples, we used this literature to estimate expected investment expenditure according to the following regression specification:

$$Y_{it} = \alpha_0 + \alpha_1 K_{it} + \alpha_2 L_{it} + \alpha_3 P_{it} + \alpha_4 Z_{it} + \alpha_5 X'_{it} + u_{it} \quad (1)$$

With Y_{it} being the corporate investment expenditure ($Total_{invest}$, I_{main} and New_{invest}); $\alpha_1 K_{it}$, is the tax saving; $\alpha_2 L_{it}$, is the effective tax rate, $\alpha_3 P_{it}$, is the book tax gap; $\alpha_4 Z_{it}$ is the temporary tax differences; X'_{it} is the control variable (firm size); and u_{it} is the general error term.

Furthermore, the following estimation approaches are adopted: (1) the sample is split along three model delineations: total investment expenditure, investment maintenance expenditure and new investment expenditure to allow for the comparison of findings across corporate investment. (2) To systematically draw the significance of corporate tax aggressiveness on corporate investment expenditure, the study adopts the use of static models. The estimation methods are used by similar studies and given that the study uses panel data of 932 observations (N) across 8 years (T), hence, $N > T$. Similarly, the adoption of these techniques serve as robustness for one another in order to observe the consistency of the effect of corporate tax aggressiveness on corporate investment expenditure. The static models are the pooled ordinary least squares (*POLS*) which do not allow for heterogeneities across the panels and the fixed effects (*FE*) and random effects (*RE*) model which recognizes panel heterogeneities.

4 Results and discussion

4.1 Pooled OLS results

The results for the *POLS* estimator are shown in Table 3. Columns 1, 2 and 3 are specific to the total investment expenditure, investment maintenance expenditure and new investment expenditure with firm size as the control variable. Results show the positive and statistically significant relationship (at the 1% level) between tax aggressiveness and corporate investment expenditure variables. On the tax saving, the coefficient of *TaxSAV* is positive and statistically significant for the total investment expenditure, investment maintenance expenditure and new investment expenditure regressions at the 1% and 5% level, respectively, which aligns with what was expected a priori. This validates the role tax saving plays for corporate investment expenditure. Tax saving in this sense are major consideration in driving corporate investment expenditure in Nigeria. Therefore, corporate investment expenditure will increase in Nigeria as a result of an increase in corporate tax saving.

Table 3 MAIN REGRESSION OLS results (Dep. Variable: Corporate investment expenditure)

Independent variables	TotalINVEST	INVESTmaint	NewINVEST
	(1)	(2)	(3)
c	-7.5200* (-3.81)	-3.1550*** (-0.07)	-7.5185* (-3.80)
TaxSAV	2.0800* (3.00)	2.8962** (1.97)	2.0500* (2.95)
ETR	2.0700* (2.99)	2.9097** (1.98)	2.0400* (2.95)
BTG	-2.1875* (-3.67)	0.1669* (13.19)	-2.3544* (-3.95)
TemDIFF	0.0090*** (1.68)	-0.0004* (-3.90)	0.0094*** (1.76)
FirmSIZE	70.8210* (10.19)	2.1644* (14.64)	68.6566* (9.86)
R-Sqd	0.11	0.43	0.10
Adj-R-Sqd	0.11	0.42	0.10
F-Stat	24.09	139.79	22.63
P(f-stat)	0.0000*	0.0000*	0.0000*
N(n)	932 (119)	932 (119)	932 (119)

Absolute values of *t*-statistics are reported in parentheses below the coefficient estimates. Asterisks represent *, **, *** are statistically significant at the 1%, 5% and 10% levels respectively.

Source: Authors' Computations

The results obtained on *ETR* shows that coefficient is positive and statistically significant (at the 1% and 5% level) which implies that a proportionate increase in corporate investment expenditure occurs when *effective tax rate* changes by 1% on average, *ceteris paribus*. *BTG* shows negative statistically significant for the total investment expenditure and new investment expenditure regressions. In

addition with positive statistically significant for the investment maintenance expenditure at the 1% level respectively. This implies that proportionate decrease in total investment expenditure and new investment expenditure occurs when *book tax gap* changes by 1%. While proportionate increase in investment maintenance expenditure occurs when *book tax gap* changes by 1%. On the factors of *TemDIFF*, the coefficient is positively significant for the total investment expenditure and new investment expenditure regressions. In addition it is negatively significant for the investment maintenance expenditure at the 1% and 10% level respectively. For the control variables, *FirmSIZE* shows a positive statistically significant impact on corporate investment expenditure, which implies that proportionate increase in corporate investment expenditure occurs when companies *total assets* changes in Nigeria. Across all model specifications, the *F*-statistics indicate that the regressors are jointly significant in explaining corporate investment expenditure.

4.2 Random and fixed effects results

Having control for panel heterogeneities, the results for the augmented model using the fixed effects (*FE*) estimators are displayed in Table 4 for the sample.

Table 4 FIXED EFFECTS RESULTS (Dep. Variable: Corporate investment expenditure)

Independent variables	TotalINVEST	INVESTmaint	NewINVEST
	(1)	(2)	(3)
C	-3.9303 (-1.38)	1.2044* (2.59)	-4.0508 (-1.42)
TaxSAV	2.2717 (0.21)	-5.3757 (-0.03)	2.2770 (0.21)
ETR	2.2138 (0.21)	-4.8942 (-0.02)	2.2187 (0.21)
BTG	-2.3383** (-2.20)	0.0484* (2.79)	-2.3867** (-2.25)
TemDIFF	0.0080 (1.43)	-0.0002* (-3.20)	0.0083 (1.48)
FirmSIZE	130.3948* (14.45)	1.0099* (6.84)	129.3859* (14.32)
R-Sqd	0.23	0.70	0.23
Adj-R-Sqd	0.12	0.66	0.11
F-Stat	2.05	16.05	2.00
P(f-stat)	0.0000*	0.0000*	0.0000*
Hausman Test	0.0000*	0.0000*	0.0000*
N(n)	932 (119)	932 (119)	932 (119)

Absolute values of *t*-statistics are reported in parentheses below the coefficient estimates. Asterisks represent *, **, *** are statistically significant at the 1%, 5% and 10% levels respectively.

Source: Authors' Computations

The findings which are quite similar to those obtained using the *POLS* estimator on the sample, reveal the consistencies of both *book tax gap* and *total assets* as statistically significant. Proportionate decrease in total investment expenditure and new investment expenditure occurs when *book tax gap* changes while proportionate increase in corporate investment expenditure occurs when companies *total assets* changes in Nigeria. In addition, the effects of *tax savings* (positive) and that of *effective tax rate* (positive) are statistically not significant on total investment expenditure and new investment expenditure. On the goodness-of-fit, the model specifications show that the proportion of variation in the dependent variable explained by the regressor's ranges from 23%, 70% and 23% and the *F* statistics indicates that the regressors are jointly significant in explaining corporate investment.

5 Conclusions

This study examines the effect of tax aggressiveness on corporate investment in Nigeria. Contribution is made to the corporate investment literature in Nigeria by using panel data of 119 non-financial quoted companies from 2010 to 2017, four tax aggressiveness indicators (tax saving, effective tax rate, book-tax differences, temporary tax differences), in addition with firm size as control variable. We report some compelling and robust findings which substantiate that tax aggressiveness has a statistically significant influence on corporate investment in Nigeria. This provides evidence that tax aggressiveness is positive and statistically significant. Its coefficient variables, particularly tax saving and effective tax rate maintained a consistent positive and statistically significant relation to corporate investment expenditure across all model specifications. In other words, increase in tax saving and effective tax rate boost total investment expenditure, investment maintenance expenditure and new investment expenditure in Nigeria. Other findings are that book tax gap shows a negative impact on corporate investment expenditure. This is because managers reduce taxable income to increase investment maintenance expenditure. For the control variables, total assets boost corporate investment expenditure.

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