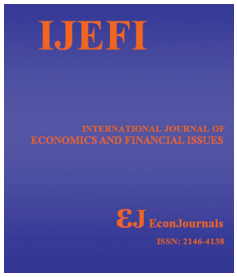

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Firm-specific Determinants of Aggressive Tax Management among East African Firms

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ABSTRACT

Since tax represents an inflow of revenue to the government and an outflow of revenue to firms, factors that influence the tax planning activities of firms have gained considerable attention among management, shareholders, policymakers and researchers. Following the impact of taxation on an economy and a firm, the study investigated the factors that influence aggressive tax management practices of firms listed in East African economies. Data were collected from 99 firms for an 11-year period, from 2008 to 2018. Both cash effective tax rate and accounting effective rate were used as measures of tax planning. Multiple regression models were used for the estimation. The study results showed that smaller firms are more tax aggressive compared with larger firms, which is consistent with the political cost theory. This finding may alert policymakers and regulatory authorities (for example, revenue authorities) that small firms are most likely to avoid paying taxes compared with larger firms. This might be associated with fewer regulations and enforcements imposed on this category of business. The evidence further demonstrated that profitable firms are less tax aggressive. Consistent with the political power theory, this study has confirmed the view that profitable firms have enough earnings to pay their taxes and thus are less tax aggressive. The study further found that older firms are less involved in tax avoidance. This study has policy implications as it will assist both policymakers and firm management in their decision-making. Shareholders and firm management would benefit by understanding why some firms successfully reduce their tax burden compared to other firms.

Keywords: Tax Planning, Tax Management, Cash Effective Tax Rate, Accounting Effective Tax Rate
JEL Classifications: H21, H25, H26

1. INTRODUCTION

Following the involvements of several multinational corporations (MNCs) in aggressive tax management, the issue of tax planning has attracted attention among academics, political bodies, investors and the public at large (Huseynov et al., 2017; Lee, 2020). For instance, recent evidence about tax management in companies, such as Starbucks, Apple and Facebook (Davis et al., 2015), and the unforgettable scandals involving firms, such as Enron and WorldCom (McGill and Outslay, 2004), have shown that tax planning has become more aggressive, which is notable in today's businesses around the globe. Supporting this claim, Ogembo (2019) showed that tax planning/avoidance worldwide had reached $650 billion per year as of 2018. Nevertheless, some companies promptly pay a substantial amount of taxes annually. Tax management is a there are various strategies that firms can use to reduce the amount of taxes paid to the government by taking advantage of the differences in the corporate tax systems of various nations and shifting profits from countries with higher tax rates to those with lower ones. Tax aggressive management is also known as tax planning.

Empirical findings indicate substantial differences in the amounts of taxes that firms pay (Thomsen and Watrin, 2018). The variation

in the level of tax payment of firms has been evidenced in empirical studies that showed that different companies pay different amounts of corporate income taxes (Mocanu et al., 2021; Chen et al., 2019; Jingga and Lina, 2017; Dyreng et al., 2017). This means that some companies seem to reduce their corporate income taxes successfully compared to their counterparts in the same economy or industry. In addition, Thomsen and Watrin (2018) showed that some companies pay very little taxes compared to other companies in the same country. Thomsen and Watrin (2018) noted that while more than half of the companies paid effective tax rate (ETR) ranging from 30% to 40% of their profits, other companies paid as low as 20%.

This considerable variation in corporate tax avoidance amongst firms has raised concerns among academics, researchers and policymakers. The central question of debate is, therefore, why do some companies aggressively reduce their taxes, whereas others pay substantial amounts of taxes with an ETR that is equal to or above the statutory tax rate? This variation may be associated with the tax planning opportunities presented by loopholes in tax laws (Dyreng et al., 2016; Wang et al., 2020). Some studies such as those of Cooper and Nguyen (2020), Sianipar et al. (2020), Nasution et al. (2020) and Chyz et al. (2021) documented the level and trend of tax planning in some countries, which indicated that tax planning activities are carried out by firms and that there was a gradual increase in these activities. Such practice is becoming common in East African Countries (EACs) where Kimea and Mkhize (2021) reported that firms were increasingly adopting aggressive tax planning posture. Nonetheless, these studies did not clearly reveal the determinants (factors) that may affect tax planning in these countries. Some factors may explain the variations in the level of tax planning; however, their influence remains equivocal. This shortcoming meant a lack of clarity about tax planning activities in EACs. It is against this background that the study investigated the firm-specific determinants of tax planning in the East African context, and thus contributed to the existing literature on the topic by showing whether firm-specific factors influence tax planning.

2. LITERATURE REVIEW

Some studies have investigated the influence of firm-specific characteristics on corporate tax planning. For instance, firm attributes, such as firm size, profitability, leverage, capital intensity, and the age of firms have been constantly investigated to examine their influence on the trend and level of tax planning (Ribeiro, 2015; Wahab and Holland, 2012). Studies have documented conflicting results on the relationship between these specific characteristics and corporate tax planning. The mixed results might be due to different methods of measuring tax planning, different research timespans and the estimation techniques used in analysing the data (Minnick and Noga, 2010). The various studies on the influence of firm-specific characteristics on tax planning are that discussed below. These firm characteristics are size, profitability, leverage, capital intensity and age.

2.1. Firm Size and Tax Planning

The influence of firm size on tax management has been researched in the literature, with studies using two competing views in their arguments based on the political power theory and the political cost theory. The political power theory maintains that larger firms pay lower taxes because they have substantial resources (such as financial capacity and manpower), which capacitate them to hire competent tax planners to organise their financial affairs for optimal tax saving. Owing to their power, larger firms have political connections with high-level government officials, which allow them to manipulate political processes and minimise their taxes (Wu et al., 2016). This view argues that political power possessed by larger firms allows them to negotiate with revenue authorities about their tax position. Kraft's (2014) study confirms this view by documenting that the larger firms are more tax aggressive than smaller firms.

Previous studies have documented a positive association between tax planning and firm size (increased firm size equates to increased tax aggressiveness), which they explain by way of the political power theory (Hanlon and Heitzman, 2010; Hoi et al., 2013). These studies suggest that large firms have enough resources to manage their taxes, which is not the case with smaller companies. Similar findings emanated from Lanis' and Richardson (2018) study investigating the determinants of tax planning in listed firms in Australia between 1997 and 2003. Using ordinary least squares (OLS) as an estimation technique, the authors found that larger firms have a smaller ETR than smaller firms. In addition, their study concluded that larger companies appear to possess superior economic and political power compared to smaller firms and they are also able to reduce their tax burden.

A number of studies also base their arguments on political cost theory, which was developed by Jensen and Meckling (1976). This theory proposes that large size companies are subjected to political pressure, which limits them from practising aggressive tax planning. According to this theory, firms may opt not to avoid taxes to protect their reputation and thus lessen their level of tax management to avoid being seen as unpatriotic corporations that do not pay their fair share of taxes to support the social and economic wellbeing of the country.

Studies that have found that the size of a firm is negatively associated with tax planning have explained their result in terms of the political cost theory. In other words, large-sized firms are less tax aggressive compared to small-sized firms. Zimmerman (1983) finds that companies that are relatively large have higher ETRs. Additionally, the literature suggests that as the size of a firm increases and become more visible, it attracts the government's attention and thus is closely monitored to meet revenue collection targets (Kraft, 2014). Therefore, successful businesses are subjected to stringent scrutiny, are less tax aggressive (Halioui et al., 2016; Blaufus et al., 2022) and transfer more wealth to the government. According to Halioui et al. (2016), larger and more prosperous firms become more exposed to strict government regulations (Parisi, 2016).

Jingga and Lina (2017) also hold the view that governments and other regulatory authorities closely supervise and investigate larger firms, as opposed to smaller firms. Larger firms represent the interests of the public, who are shareholders, and those to whom the corporations offer employment opportunities. They also pay a substantial amount of taxes to governments. Therefore, their strategic role makes it logical that they are subjected to many

regulations because any wrongdoings could affect the interests of the public. The literature argues that this close supervision limits tax avoidance in larger firms. Thus, large firms endure higher political costs because of their size, as found by Irianto et al. (2017), who conducted a study to determine the firm attributes that affect tax avoidance practices. The study found a positive link between firm size and tax avoidance that was explained by the political cost theory.

However, several studies have suggested that firm size significantly influence tax planning. Askenberg and Isaksson (2018) conducted a study to investigate the relationship between two proxies (revenue and total assets) of firm size and the ETR. This study showed that large firms are most likely to avoid more taxes compared to small firms, which is consistent with the political power theory. Surprisingly, when revenue was used as a measure of firm size, the results showed a positive relationship, in line with the political cost theory. According to Askenberg and Isaksson (2018), Jaffari et al. (2021) and Fernández-Rodríguez et al. (2021) the relationship between a firm's size and tax planning is amongst the most interesting research topics, owing to its inconsistent results in previous studies, and thus is recommended for further research.

Studies based on the political power theory argue that large firms are more tax aggressive compared to small firms. However, other studies believe that small firms have an advantage in tax planning over large firms because of the political cost theory. To the best of the researcher's knowledge, studies that have investigated the influence of firm size on tax aggressiveness are limited in developing nations, and those that are available provide mixed results. Thus, the researcher was motivated to investigate the influence of firm size on tax planning in the East African context and formulated the following hypothesis:

Hypothesis One (H_1): Firm size positively and significantly influences the effective tax rate.

2.2. Profitability and Tax Planning

According to the political cost theory, profitability influences tax planning (Graham et al., Fernández-Rodríguez et al., 2019; Jingga and Lina, 2017). This theory holds that large and more profitable firms are more exposed to government regulations than smaller firms. This limits their tax management, and thus they pay their taxes according to the law to avoid reputation loss. Furthermore, Fernández-Rodríguez et al. (2019) suggest that more profitable firms have higher corporate ETRs and are less tax aggressive than less profitable firms. However, the findings of Derashid and Zhang (2003) reveal that profitable firms have lower ETRs and are more tax aggressive than less profitable firms. Thus, the findings of the studies support the political power theory that presumes that profitable firms have resources, such as financial and competitive human resources and tax planning instruments at their disposal, which allow them to minimise their tax burden. The current study included the firm profitability variable as a possible determinant of the level of tax planning in EACs. Based on the explanation above, this study formulated the following hypothesis:

Hypothesis (H_2): Profitability has a positive influence on the effective tax rate.

2.3. Leverage and Tax Planning

Leverage is the ratio of debt finance to equity finance. Firms can use the debt from external sources as an alternative to equity finance from the shareholders. Debt finance results in interest expenses that the firm has to pay to debt owners. The interest on debt finance is a tax-deductible expense in most countries. As a result, firms with more debt finance than equity finance will have a smaller net profit compared to those firms with more equity finance. This argument is logical since the cost of equity (dividend) is not a tax-deductible expenditure, while the cost of debt finance (interest expenses) is an allowable expenditure when computing taxable income (Parisi, 2016).

According to Parisi (2016), a firm's decisions about capital structure affect its ETR. This study argues that tax laws exhibit differential treatment of capital structure (debt and equity). Consequently, firms use finance decisions as a tax planning decision to reduce their tax burden (Lanis and Richardson, 2018). The view suggests that the leverage ratio significantly and positively affects tax planning. In line with the argument that companies use debt as a tax planning strategy, Ozkan and Ozkan (2004) posits that firms with higher tax liabilities may choose to acquire more loans to get tax deductions.

Swingly and Sukartha (2015) investigated the determinants of tax avoidance in Indonesia, using a sample of 41 manufacturing firms listed on the Indonesia Stock Exchange (IDX) between 2011 and 2013. The results of this study indicated that leverage has a positive effect on aggressive tax planning. In this context, Arora and Sharma (2016) suggest that a high leverage ratio lowers the ETR. This means that firms with high leverage ratios are more tax aggressive. This study maintains that companies deliberately use debt finance to reduce their tax burden. Conversely, Irianto et al. (2017) argue that leverage does not influence the level of tax planning. The authors investigated the factors that affect a firm's tax planning. Amongst other results, this study found that the leverage ratio does not significantly influence tax planning. Conversely, Fernández-Rodríguez (2021) and Mocanu et al. (2021) claims that leverage does not have any effect on the level of a firm's tax planning.

In conclusion, previous studies about the influence of leverage on tax planning document mixed empirical results. A few studies revealed a near consensus that high debt financing results in low ETRs, although other studies found that leverage does not significantly affect the level of tax planning. However, the current study expects that firms with high leverage ratios might have a lower ETR. Therefore, based on the above discussion, the current study proposed the following hypothesis:

Hypothesis (H_3): There is a negative and significant relationship between leverage and the effective tax rate.

2.4. Capital Intensity and Tax Planning

The capital intensity ratio measures a firm's investment in capital assets (fixed assets). The study proposes a link between tax planning and capital intensity because Ribeiro (2015), argues that firms invest in fixed assets as a tax planning strategy, although

they may depreciate over time. Some studies have investigated the influence of capital intensity on tax planning (Parisi, 2016; Ribeiro, 2015). These studies show that capital intensity significantly influences the ETR. Richardson and Lanis (2007) maintain that there is a negative and significant relationship between capital intensity and ETR and that corporate taxpayers are permitted to write off the cost of a fixed asset (depreciable asset) in a shorter period than the asset's economic life. Therefore, companies that are relatively more capital intensive are likely to have a lower ETR. However, Irianto et al. (2017) claim that capital intensity does not significantly influence tax planning. Due to the mixed results from previous studies relating to capital expenditure, the current study included this variable as a possible factors that influence tax planning in EACs. Hence, the researchers formulated the following hypotheses:

Hypothesis (H_4): Capital intensity has a negative impact on the effective tax rate.

2.5. Age of Company and Tax Planning

Age is the length of the period that a company's stock has been traded in the securities market. The relationship between the length of time that firms trade on the capital market and their involvement in tax planning has been debated in the literature. Some studies argue that firms that have been longer in the capital market are under pressure to maintain their performance and to meet future performance expectations, which leads them engaging in aggressive tax planning activities. Supporting this claim, Lanis and Richardson (2018) and Mocanu et al. (2021) presented evidence to show that older firms are more tax aggressive compared to the new firms in the public capital market. However, Halioui et al. (2016) and Irianto et al. (2017) as well as Askenberg and Isaksson (2018) used political cost theory to connect firm age and tax planning. They avow that older firms with well-established businesses are prone to reputational risk and choose not to practise tax planning that may harm their reputation. Therefore, the current study predicted that older firms are less tax aggressive with the following hypothesis:

Hypothesis Five (H_5): Age is positively associated with the effective tax rate.

3. METHODOLOGY

3.1. Data

The study used a sample of listed firms from East African countries comprising Kenya, Tanzania and Uganda. The dataset included financial and taxation information. This information was archival, as companies were required to publish it publicly through their annual reports (audited annual reports and accounts). Consequently, the data were obtained from Bloomberg, McGregor, financial stock markets and particular company websites. Data were collected on the variables of interest for an 11-year period, from 2008 to 2018. The starting date 2008 reflected the year when the EACs adopted their code of corporate governance, while the cut-off date, 2018, reflected the most currently available data. Although 1089 firm-year observations were targeted, those of some firms were not available, resulting in a shortage of 68. As a result, 1021 firm-year observations were used for the study.

3.2. Model Specification and Estimation Method

The study used a panel data estimating technique. With this type of data, the individual behaviours of entities are observed across time. One significant advantage of panel data is that it can control for individual heterogeneity and allow identifying and measuring effects that are not detectable using other data models (Khan et al., 2018). In addition, it has the benefit of reducing collinearity and allowing more degrees of freedom while being more efficient. In this sense, a panel data structure controls for unobservable effects in cross-section and time dimensions. To test the hypotheses about the influence of a firm's specific characteristics on the level of tax planning, the study presented two regression models. These two models only differed in the dependent variables, the cash effective tax rate (CETR) and accounting effective tax rate (AETR). These models are stated as follows:

$$CETR_{it} = \beta_0 + \beta_1 SIZE_{it} + \beta_2 ROA_{it} + \beta_3 LEV_{it} + \beta_4 CNT_{it} + \beta_5 AGE_{it} + \varepsilon_{it} \quad (1)$$

$$AETR_{it} = \beta_0 + \beta_1 SIZE_{it} + \beta_2 ROA_{it} + \beta_3 LEV_{it} + \beta_4 CNT_{it} + \beta_5 AGE_{it} + \varepsilon_{it} \quad (2)$$

Where

CETR	Cash effective tax rate	AGE	Years of existence of the firms
AETR	Accounting effective tax rate	β_0	Constant of the equation
SIZE	Size of the firms at a time	β_1 to β_5	Coefficients of the variables
ROA	Return on assets	ε_{it}	The stochastic error term
LEV	Leverage	i	Firms
CNT	Capital intensity	t	Time (the year 2007 to 2018)

3.3. Definition and Measurement of Variables

3.3.1. Dependent variable

The study used tax planning measured by the effective tax rate (ETR) as the dependent variable. Following recent studies (Armstrong et al., 2019; Chen et al., 2010; Dyreng et al., 2016; Lennox et al., 2013), this study used a cash effective tax rate (CETR), together with an accounting effective tax rate (AETR), to measure tax planning. An ETR is computed as the tax expense divided by a firm's pre-tax accounting income (Hanlon and Heitzman, 2010). Therefore, an ETR measures the ability of a company to minimise its tax, compared with its pre-tax accounting income, and is an indication of its tax burden relative to other firms. Firms with lower ETRs are said to be more tax aggressive compared to the firms with higher ETRs tax rates. CETR is computed as cash taxes paid divided by pre-tax accounting income (Dyreng et al., 2017; Chen et al., 2010), while AETR is computed as total tax expense divided by pre-tax accounting income (Chen et al., 2010; McGuire et al., 2012). The use of more than one measure helps to capture the broad range of activities that are symptomatic of tax planning. In addition, the use of multiple measures improves the robustness of the results.

3.3.2. Independent variables

To examine the influence of firm-specific characteristics on tax planning, the study used five firm-specific factors, comprsing size, profitability, financing decisions, investments decision and age.

3.3.2.1. Size

To investigate the influence of size on a firm's tax planning, the study used the variable of firm size (size), which was computed as the natural logarithm of total assets. This variable is largely used in previous papers related to tax planning (Armstrong et al., 2012).

3.3.2.2. Profitability

Following Armstrong et al. (2012) and Kraft (2014), the study included the profitability of a firm as another possible factor affecting the firms' level of tax planning. A firm's profitability is commonly argued to have the explanatory power of its ETR. The study measured profitability using return on assets (ROA). ROA was measured as the ratio of pre-tax income to total assets. ROA has been used in previous tax planning studies, such as those conducted by Armstrong et al. (2012) and Kraft (2014).

3.3.2.3. Financing decisions

To evaluate the influence of financing decisions on the level of tax planning, the study included leverage, which was the ratio of long-term debt to shareholder equity, as computed by Chen et al. (2010). Chen et al. (2010) and Armstrong et al. (2012) are some of the authors who used leverage in their studies.

3.3.2.4. Investment decisions

To investigate the influence of investment decisions on the level of tax planning, the study used capital intensity to represent the asset mix of the firms, which was the ratio of fixed assets to total assets. Asset mix has been used to investigate its power on tax planning variation (Richardson and Lanis, 2007; Minick and Noga, 2010).

3.3.2.5. Age

In addition, the study included the variable of age to investigate the influence of a firm's experience in business on its level of tax planning. The age variable was measured as the number of years a corporation's stock had been traded on the stock market (Maama et al., 2019).

4. RESULTS AND DISCUSSION

This section presents the results of the variables that influenced the tax-planning practices of firms in EACs. The summary of the descriptive statistics for the variables is presented in Table 1.

Table 1: Descriptive statistics

Variables	Obs	Mean	SD	Max	Min
AETR	1021	0.263	0.139	0.30	0.000
CETR	1021	0.195	0.107	0.30	0.000
SIZE ($m)	1021	48.67	27.01	203.85	13.59
ROA	1021	0.086	0.151	0.692	-0.557
LEV	1021	0.578	0.252	0.995	0.007
CNT	1021	0.599	0.212	0.983	0.009
Age	1021	27.000	12.947	67.00	14.00

For the dependent variables, the results showed that the mean value of the accounting effective tax rate (AETR) was 0.263 (26.3%) while that of the cash effective tax rate (CETR) was 0.195 (19.5%). This showed that, on average, the tax liabilities of the firms in the EACs represented 26.3%. However, the firms paid 19.5% as tax, suggesting tax-planning activities. This is because the statutory tax rate for all three EACs (Kenya, Tanzania, and Uganda) had been 30% over the past 12 years. Therefore, the mean value of less than 30% indicated the presence of tax planning in EACs. The standard deviation (SD) of AETR and CETR were 0.139 and 0.107, respectively. This suggested a small degree of dispersion of AETR and CETR amongst the firms in the EACs.

Furthermore, the mean value of the firm-specific variables, such as firm size, return on assets, leverage, capital intensity and age were 48.67, 0.086, 0.578, 0.599 and 19.992, respectively. The average firm size of 48.67 indicated that the average total assets of the firms amounted to $48.67 million. This shows that the firms in the EACs had relatively large assets. A standard deviation of 27.01, suggested wide variations amongst the asset size of the firms. In addition, the average ROA of 0.086 indicated that the average ROA of the firms was 8.6%, suggesting that they were profitable, albeit small. In addition, the results showed that the average leverage of the firms was 0.578. This showed that, on average, the debt of firms in EACs represented 57.8%. Concerning the capital intensity of the firms, the mean value was 0.599, suggesting that the percentage of fixed assets to total assets of the firms was relatively low.

4.1. Multicollinearity Tests

The Pearson correlation matrix, together with the variance inflation factor (VIF), were performed to check the possibility of multicollinearity amongst the independent variables used in the model. Table 2 below provides the results of the Pearson correlations matrix and VIF. The results of the VIF and correlation matrix showed that all variables were far from being highly correlated. The estimation indicated that the VIF of all variables was less than two, which was far from the threshold of 10, which is suggested by literature (Marcoulides and Raykov, 2019). These outcomes suggested that no variables used in this analysis suffered from multicollinearity. Similarly, the correlation matrix results suggested no strong correlation among the variables used in the analysis. All the correlation coefficients were <0.5, suggesting that the variables were not highly correlated. These results showed that the use of these variables in the regression would not produce any spurious results.

4.2. Regression Results of the Impact of Firm-Specific Characteristics on Tax Planning

This section presents the results and discussion of the influence of firm-specific characteristics on the level of tax planning. After establishing that the panel data estimation models were appropriate techniques, the study explored the type of panel data estimation model to be adopted, either fixed effect (FE) or random effect (RE) model. The Hausman test was used to decide whether FE or RE was the appropriate technique in equations 1 and 2. The results of the Hausman tests are reported in Table 3. The results showed that the two equations, each obtained a $P < 0.05$. These results were significant. Therefore, H_0 was rejected in the research models, implying that the models had to be estimated using the fixed effect

Table 2: Pearson correlation matrix together with the VIF

Variables	CETR	AETR	SIZE	ROA	LEV	CNT	AGE	VIF
CETR	1.000							1.39
AETR	0.893***	1.000						1.92
SIZE	0.155	0.064	1.000					1.06
ROA	0.241**	0.203**	−0.104	1.000				1.29
LEV	0.096	0.022**	0.068	−0.422*	1.000			1.62
CNT	−0.269*	−0.156	0.097**	−0.189	0.013*	1.000		1.83
AGE	−0.047	0.015	−0.004	−0.065	−0.104**	0.119	1.000	1.47

***Significance at 0.01; **at 0.05 and *at 0.1, and *at 0.1. VIF: Variance inflation factor

Table 3: Regression results: The influence of firm-specific factors on tax planning

Variable	Model 1	Model 2
Size	1.1668*** (7.486)	0.0674** (2.0705)
Return on Assets	0.1493*** (4.662)	0.3754*** (3.2989)
Leverage	0.0499 (0.542)	0.1286 (1.496)
Capital Intensity	−0.0716 (−1.028)	−0.0528 (−0.756)
Age	0.4012*** (3.382)	1.1703*** (7.701)
C	−0.3901** (−2.322)	−1.6225*** (−2.679)
R-squared	0.8525	0.8576
Adjusted R-squared	0.4836	0.8502
F-statistic	5.0725	5.1927
Prob (F-statistic)	0.0000	0.0000
Prob. of Hausman test	0.0000	0.0000
Durbin-Watson stat	2.2554	2.2785

***Significance at 0.01; **at 0.05 and *at 0.1, and *at 0.1

estimation method. Table 3 below presents the regression results of Models 1 and 2, which analysed the impact of the firms' specific characteristics on tax planning, using the cash effective tax rate (Model 1) and the accounting effective tax rate (Model 2).

The study analysed the influence of firm-specific characteristics on the firms' level of tax aggressiveness in Model 1 and Model 2, using the fixed effects model. Model 1 and 2 included different tax planning measures as dependent variables and firm-specific characteristics as independent variables. Table 3 presents the estimation results for Models 1 and 2. As explained above, the two models had the same independent variables, and the only difference was the measure of the dependent variable, which was the tax planning variable. Model 1 used CETR, which was the main measure of tax planning of the study, while Model 2 used the accounting effective tax rate (AETR) as the alternative measure of tax planning. The cash effective tax rate was expected to be a more reliable measure of tax planning because the literature shows that it can control for the effects of tax reductions through other factors, which are not necessarily tax-planning activities (Zimmerman, 1983). Therefore, our discussion is based on Model 1, although Model 2 is also discussed to support Model 1's results.

Hypothesis 1 (H_1) predicted a significant positive relationship between firm size and level of tax planning, measured by CETR and AETR. The results in Table 3 shows that the size of the firms has a significant positive association with CETR ($P < 0.01$) and AETR ($P < 0.05$). This finding supports H_1 that firm size influences the level of tax planning. This finding suggested that large companies report higher effective tax rates, that is, a low level of tax planning than small firms, which implies that larger firms do not engage in tax planning activities as much as smaller firms. This finding also suggested that an increase in the size of a firm would result in a decrease in its tax planning activities. A possible explanation of these results is that large firms are exposed to effective and efficient scrutiny by various regulatory agencies, stakeholders and, particularly, the tax authority. They would have little or no chance to minimise tax expenses aggressively. Another explanation is that larger firms are concerned about their reputation and would like to protect it, hence their decision not to engage in tax planning activities. In other words, the community may view big firms that pay less tax as socially irresponsible, which damages their reputation.

This explanation is consistent with the legitimacy theory, which explains that firms may want the public to perceive them as responsible, which may force them to pay higher taxes and will enhance their public image and acceptance. The results also support the political cost theory, which postulates that big companies prevent a negative reputation by avoiding aggressive tax planning. Moreover, the results conform with the findings of several other studies, such as those of Askenberg and Isaksson (2018), Kraft (2014), Minnick and Noga (2010) and Ribeiro (2015). These studies found that an increase in a firm's size increases the ETR (less tax avoidance).

Hypothesis 2 (H_2) predicted that a firm's profitability has a significant and positive relationship with the ETR. This hypothesis postulated that more profitable firms report higher ETRs (less tax planning) than less profitable firms. The results in Table 3 above showed that ROA has a positive and statistically significant association with CETR well below ($P < 0.01$) and AETR at the level of ($P < 0.05$), which is consistent with H_2. This finding affirms that more profitable firms are less tax aggressive than those that are less profitable. The results are not surprising because it is expected that tax rates are progressive according to income. Therefore, profitable firms are expected to pay more taxes than the less profitable ones. Similarly, these results suggest that profitable firms have higher earnings that would allow them to pay their taxes. In addition, these results were consistent with political cost theory, suggesting that large and more profitable firms are exposed to government regulations that reduce their chance of tax avoidance. The finding of a positive relationship between ETRs and ROE is consistent with that of Richardson and Lanis (2007), Minick and Noga (2010) and Armstrong et al. (2012). However, these results contradict the conclusions of Derashid and Zhang (2003) as well as Kraft (2014), who documented a negative association between effective tax rates and firm profitability. With this finding, the study accepts the second hypothesis that there is an association between tax planning and ROA.

Hypothesis 3 (H_3) envisaged a negative and statistically significant relationship between leverage and level of tax planning. This hypothesis predicted that firms with a high leverage ratio have a low ETR (more tax aggressive). As anticipated, the results in Table 3 shows that leverage has a positive but statistically insignificant association with CETR and AETR ($P > 0.1$). This result is inconsistent with H_3, which predicted a positive and statistically significant relationship between leverage and ETR. The study predicted a negative association between ETR and leverage because a higher leverage ratio implies that a firm uses more debts than equity as its tax planning strategy. Leverage reduces taxable income because the use of debts accumulates interests, which are tax-deductible expenses. Contrary to the expectation of the study that there is a negative relationship between leverage and ETR, the results reveal a positive and statistically insignificant association. These finding is aligned with Minnick and Noga (2010). Thus, as well as. Thus, the research showed that managers might view debt as a burden for a company and therefore they choose to remove it, rather than use it as a tax avoidance tool.

Hypothesis 4 (H_4) predicted a negative and significant relationship between capital intensity and the ETR. It suggested that firms with a high capital intensity ratio have a lower ETR than firms with a low capital intensity ratio. The results from Models 1 and 2 showed that capital intensity has a negative and insignificant relationship with CETR and AETR ($P > 0.1$). These results indicated that firms with high capital intensity (more fixed assets) have a lower effective tax rate. Furthermore, the results confirmed H_4. This finding was accepted because firms with higher capital intensity exhibit a lower ETR due to the deductibility of depreciation and amortisation expenses. Big investments in physical assets, for example, tend to use higher values of depreciation expense to reduce their assessable income, and therefore pay lower income tax expenses. This evidence is in line with the findings of other studies such as those of Gupta and Newberry (1997) and Richardson and Lanis (2007). However, the insignificant results might have been because firms in emerging economies are relatively incapable financially of having massive investments in physical assets.

Hypothesis 5 (H_5) envisaged a positive relationship between age and tax planning (ETR). This hypothesis predicted that older firms have a higher ETR (less tax aggressive) than new firms. Table 3 above shows that age is positive and statistically significant with CETR ($P < 0.01$) and AETR at 0.05. This result is consistent with H_5, which predicted a positive relationship between age and the ETR in EACs. This finding indicates that older firms are less tax aggressive than new firms. One might expect that the old firms with experiences and connections have the advantage to reduce taxes. However, this result is aligned with the political cost theory which postulates that older and big companies may be under close government monitoring, which could limit their possibilities of averting tax. These results show that the older firms in EACs tried to be good citizens by paying their fair taxes to the government. These firms likely tried to avoid reputation loss due to their long history of good reputations and goodwill. The high involvement in tax planning by the more recently listed firms might have been facilitated by pressure from the firms' owners and stakeholders to compel management to meet earning expectations.

Furthermore, the adequacy of the independent variables in explaining the dependent variables was tested. The general results showed that, in Models 1 and 2, all the variables had an influence, except leverage and capital intensity. Moreover, the results indicated that the models were robust and justified by the high coefficients of R^2 and adjusted R^2. The results show that R^2 was 85.24% for Model 1 and 85.56% for Model 2. This meant that the two models showed that firm-specific characteristics could explain about 85% variations in the level of tax planning. This result showed that the findings related to the first regression were more robust concerning the influence of firms' characteristics on the ETR tax rate. On the whole, the finding of the estimations indicated that the firm-specific characteristics influence the level of corporate tax planning measured by the ETR.

5. CONCLUSION AND RECOMMENDATIONS

Understanding the factors that influence the tax planning activities of firms has gained considerable attention among management, shareholders, policymakers and researchers. This justifies the importance of studies that examine the determinants of tax planning in selected emerging economies. Following the significance of tax planning to an economy and a firm, the study investigated the influence of firm-specific characteristics on tax planning. Firms listed in East African economies were used for the study. Both cash effective tax rate and accounting effective rate were used as measures of tax planning. Multiple regression models were used for the estimation. The study results showed that smaller firms are more tax aggressive compared with larger firms, which is consistent with the political cost theory. This finding may alert policymakers and regulatory authorities (for example, revenue authorities) that small firms are most likely to avoid paying taxes compared with larger firms. This might be associated with fewer regulations and enforcements imposed on this category of business.

Furthermore, the results revealed that profitable firms are less tax aggressive. This result confirmed the view that profitable firms have enough earnings to pay their taxes and thus are less tax aggressive. Given this, the researcher recommends that emerging economies should revisit their policies to make their economies more conducive in order to attract profitable investments. Moreover, the evidence showed that older firms are less involved in tax avoidance. This is possible because old firms are affected by political pressure to pay fair taxes to avoid reputation loss. However, results of the examination of leverage and capital intensity found no influence on the level of tax planning. Thus, the study has contributed to existing literature that explores the determinants of tax planning in emerging markets. The findings provided a better understanding of tax planning in listed firms in EACs by demonstrating that firm-specific characteristics influence the level of tax planning in EACs.

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