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Corporate Tax Rates, Financial Leverage, and Firm Growth in Sub - Saharan Africa

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Abstract: The study investigates the moderating effect of corporate tax rates on the relationship between financial leverage and firm growth in sub-Saharan Africa. Firm and country-level data of 327 non-finance firms in sub-Saharan Africa are obtained from the Bloomberg terminal and the Global Competitive Index of the World Economic Forum (WEF) from 2007 to 2017 for the study. The difference Generalized Moment of Method (GMM) approach was used for the analysis. Results of the study reveal a positive and statistically significant relationship between financial leverage and profitability. Financial leverage is negatively and statistically significantly related to firms' growth opportunities in SSA. However, the study finds that, in the presence of corporate tax rates, financial leverage positively relates to the growth of firms in SSA. Per the observed influence of corporate tax in the measured relationship between financial leverage and firm growth, governments in sub-Saharan Africa should implement tax policies that do not adversely affect firm expansion but rather motivate foreign investors and encourage local companies to grow.

Keywords: Profitability; Growth opportunities; Firm growth; financial leverage; Corporate tax rate

JEL Classification: D2; D46; D92; H25; L25

1. Introduction

Financial leverage refers to the ability of a company to utilize fixed financial charges to strengthen the effect of variations in Earnings Before Interest and Tax (EBIT) on earnings per share (Rath & Kumar, 2021). The term involves increasing the returns to equity holders using external funds obtained at a fixed rate (Rely, 2018). Corporate tax refers to the amount of charges levied on firms' EBIT (Ahalem, Jabbar & Mahammed, 2017). The Organization of Economic Cooperation for Development

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(2019) and the International Monetary Fund (2019) consider corporate tax as the tax levied on a company's profit at the national level, which has international implications. On the other hand, firm growth is considered to be the expansion in the indicators used to measure the size of a firm. For instance, a strand of literature measures the size of a firm to be the number of employees a firm has, and others use the total sales and total assets, while other studies measure firm size based on total profit. So, improvement in any of the above measures depicts that the firm has experienced growth (Sumari, 2013; Coad, 2007).

The literature suggests that corporate taxes are charged because similar to individuals, firms utilize public goods such as infrastructure, and for that matter, they are liable to compensate the government through corporate tax (Ahalem et al., 2017; Hissan, 2018). Devereux & Sorensen (2006) also state that corporate tax is implemented to curtail leakages to raise enough revenue. The preference of a firm to use borrowed funds instead of equity for its investment serves as a tax shield (Zaman, Hassan, Akhter & Meraj, 2018). This connotes that the more a firm uses borrowed funds to finance its investment, the lesser the amount of tax burden borne by the firm and the ability of management to invest the acquired funds to earn a return on investment higher than the rate of interest to be paid on loan positively impact the earning pattern of the company which translates into higher profit that can be ploughed back to increase the scale of operation leading to firm growth (Zaman et al., 2018).

Several studies have investigated financial leverage and firm growth (Hamouri, Al-Rdaydeh & Ghazalat, 2018; Gamlath, 2019; Ohrn, 2018). However, to the best of the researcher's knowledge, there is sparse empirical literature of studies that have investigated how in the presence of corporate tax, financial leverage affects the growth of firms, particularly in sub-Saharan Africa. Therefore, the present study explores this uncharted area, particularly in firms outside of developed markets like sub-Saharan Africa, and contributes to extending the corporate finance literature in several dimensions. Moreover, firms that pursue expansion drive may prefer to employ different strategies placing less considerate importance on their capital mix. In contrast, others strongly desire external debt because it serves as a tax shield, while others prefer equity due to interest payments on borrowed funds. These inconsistencies result from inadequate knowledge of the effect of financial leverage on firm growth. The current study incorporates corporate tax to examine how it intervenes in the financial leverage-firm growth nexus.

Therefore, the study investigates the moderating role of corporate tax in explaining the relationship between financial leverage and the growth of firms in sub-Saharan Africa. The incorporation of corporate tax is premised on the fact that tax has the potential of reducing net profit, which would mean slower growth when profitability is used to measure the growth of a firm. This implies that levered firms would stand a higher chance of growth since interest payment serves as a tax shield (Zaman et al.,

2018). The rest of the paper is structured as follows; chapter two presents the literature review and hypotheses development; chapter three looks at the data and methodology, and chapter four presents and discusses the study's results. Chapter five handles the concluding remarks and recommendations.

2. Literature Review and Hypotheses Development

2.1. Stylized Facts About Corporate Tax Rates Among Sub - Sahara African Countries

The second fastest-growing continent remains Africa after East Asia (African Economic Outlook (AEO), 2017). Geographically, Sub-Saharan Africa (SSA) is a part of the African continent found south of the Sahara Desert, with approximately 1 million inhabitants residing in 48 countries. These countries are of different sizes and have different economic and political histories, with South Africa and Nigeria being giants. Apart from South Africa, in 2015, SSA grew rapidly by 4.2%, higher than the continent's average, where East Africa led the way with 6.3% growth (AEO, 2017).

Despite this improvement, the issue of unemployment associated with the world's youthful population is a challenge to its sustainability. Africa's poverty level has reduced from about 56% to 43% in 1990 and 2012, respectively (AEO, 2017).

Below are the corporate tax rates of some countries in sub-Saharan Africa. Botswana's 22 percent corporate tax rate is the lowest. Other countries like Cote D'Ivoire, Cape Verde, Ghana, Lesotho, Zimbabwe, and Guinea-Bissau have a 25 percent corporate tax rate. Countries such as Zambia, Cameroon, Eritrea, and Namibia also have corporate tax rates of 35%, 33%, 34%, and 32%, respectively.

2.2. Theoretical Review

Scholars have propounded several theories that guide empirical investigation regarding the concepts under discussion, such as corporate tax, financial leverage, and firm growth. This section of the study is devoted to reviewing the theories underpinning the topic under discussion. One such theory is the pecking order theory by Myers & Majluf (1984) which is based upon information asymmetry between internal stakeholders and the company's external finance providers. The theory suggests that front runners of companies are always concerned with choosing financial policies that minimize the cost arising from asymmetric information. So, companies prefer funds obtained internally to external financing. This position of the theory can be ascribed to the fact that companies do so to avoid the astronomical charges on borrowing in SSA.

The theory suggests that a manager's taste and preference for the different sources of financing include internal financing, issuance of risk-free debt, and issuance of risky debt instruments, with the issuance of equity as the least preferred option. The theory maintains that managers demonstrate less appetite for loans because of the interest cost associated with loans. This can be opposed to an extent since debt serves as a tax shield. Thus, levered firms endure less burden of corporate tax since interest on loans reduces Earnings Before Interest Tax (EBIT). Issuing debt ignites the board's trust that an investment is worthwhile and the current share price is undervalued, while issuing equity demonstrates precisely the reverse (Adair & Adaskou, 2015).

Penrose's theory of firm growth also asserts that firm growth is triggered by inner impetus produced through learning by doing (Penrose, 1959). When managers are initially engaged, most executive duties become challenging due to unfamiliarity with such tasks. However, managers become extra productive when they become familiar with their official duties, saving them considerable time and energy due to the experience garnered (Coad, 2006).

The saved resources can be channeled toward value-creating development possibilities with a focus on training new managers (Coad, 2007). Companies are incentivized to grow since the working knowledge of a company's staff tends to rise routinely with experience (Penrose, 1959). Firms that grow beyond the optimal growth experience incur higher operating costs than their cohort with a slower growth rate. Companies possess idiosyncratic configurations of capacities, which can lead to a competitive edge if only such capacities are distinct and valuable, and their peers cannot imitate or reproduce quickly (Penrose, 1959; Eisenhart & Martin, 2000; Coad, 2007). As suggested by the theory, increasing operating costs would reduce a firm's corporate tax burden since the higher operating costs would mean smaller EBIT.

2.3. Empirical Review

In investigating the effect of financial leverage on the growth of firms in Jordan for ten years, Hamouri et al. (2018) employed the panel regression estimation technique. They found an insignificant relationship between leverage and growth in an asset. A significant and positive relationship was ascertained between the increase in sales volume and employment, whilst both variables related positively to firm growth (Hamouri et al., 2018). Similarly, Gamlath (2019), examined the effect of financial leverage on firm growth. The proxies used for financial leverage were total debt to total assets ratio and total debt to equity, while firm growth was measured by profit growth, sales growth, and growth in assets. The study revealed a significant association between total debt to equity and all proxies used for firm growth. The result affirms the findings of Hamouri et al. (2018), who obtained the same result between financial leverage and sales growth. Again, a positive linkage was detected between firm growth and total debt to the total assets (TDTA). This outcome, however,

contradicts what Hamouri et al. (2018) put forth. Only 26% of changes in the firm growth are accounted for by financial leverage. However, the effect was very significant specifically, older companies experience a faster rise in profit, turnover and assets (Gamlath, 2019). Relatedly, Mishra and Deb (2018) investigated financial factors that determine firm growth using a sample of 1,450 small and more significant companies for 12 years. Applying the variable-reducing method through principal component analysis and logistic regression approach, these scholars revealed that efficient management of current assets and capital are the predominant factors driving firm growth for both sizes.

Again, in small companies, efficiency in the capital mix significantly influences firm growth. In contrast, efficiency in asset management is the crucial driver of growth in larger firms. The study's conclusion agrees with that of (Hamouri et al., 2018; Gamlath, 2019). Botta (2020) and Izevbekhai & Odion (2018) put forth a contradictory finding of a negative association between financial leverage and firm growth. They argue that companies with a flexible financial mix encounter high returns on investment, which encourages growth.

2.4. Corporate Tax and Financial Leverage Nexus

Corporate tax can decrease after-tax consumption from dividends (increase leverage) and increase the tax shield through leverage (Choi, Chung & Kim, 2020). This means that corporate tax negatively affects financial leverage since leverage serves as a tax shield. Therefore, highly levered firms enjoy the advantage of paying less corporate tax as held by the pecking order theory (Chen, Kemsley & Sivadasan, 2020). This departs from the conclusions of Delgado, Farnandez-Rodriguez & Martinez-Arias (2020) that levered firms incur high costs that result from the charges associated with seeking credit and translate into lower profit slowing rapid growth. Similarly, Limberg (2020) believed that during a financial crisis where access to credit becomes limited, the corporate reaction leads to shifting in general tax policies. To examine the effect of corporate tax on leverage, Deng, Zhu, Smith & McCrystal (2020) showcased that companies become irresponsive to tax reduction but employ long-term financial leverage in times of rising taxes.

This finding agrees with the outcome of Choi et al. (2020). The study continued that government invasion in capital allocation overturned the emblematic tax-financial leverage nexus established by the study since corrupt firms minimize their use of long-term leverage in times of corporate tax reduction and thus become unconcerned with a tax increase (Deng et al., 2020). The latter pronouncement by the study coincides with Zou, Shen & Gong (2018), who maintain that the company's financial leverage ratio dwindles after tax reforms pushed by non-long-term liabilities. This implies that corporate tax reforms have explanatory power on the capital mix and use of financial leverage, as put forth by Limberg (2020), Choi et al. (2020), and Suciarti, Suryani &

Kurnia (2020). On the other hand, financial leverage exerts a marginally positive impact on corporate tax avoidance (Damayanti & Wulandari, 2021). This means that under the pretext of an agency framework, companies would use more leverage to avoid corporate tax. However, institutional stakes in firms curtail firms to omit tax avoidance (Damayanti & Wulandari, 2021). In a similar narrative, a study with a population of 47 mining entities listed on the Indonesian stock exchange for twelve years used a census sampling method and revealed that financial leverage has a significant positive relationship with corporate tax avoidance (Rahmadani, Muda & Abubakar, 2020). Further, Hassan (2018) opined that at an optimal level of financial leverage, firms enjoy the benefits of the low cost of debt while the cost of equity and total cost of capital become less costly in the presence of a dividend tax shield and the absence of an interest tax shield.

2.5. Corporate Tax and Firm Growth

Generally, companies respond to tax increases more than tax decreases (Deng et al., 2020). Firm growth was found to have a negative and significant effect on corporate tax avoidance (Damayanti & Wulandari, 2021). Notwithstanding, firm growth significantly affects corporate tax avoidance (Rahmadani et al., 2020). The above exposition shows that the more a firm grows, the more it can scheme strategies to avoid paying taxes levied on corporate income. This position contradicts Damayanti & Wulandari's (2020) assertion that firm growth has a negative relationship with corporate tax avoidance. A study that used 19 firms drawn from Nigeria through random sampling to assess the effect of corporate tax on firm growth reveals that a positive association exists between corporate tax and firm growth (Abu, 2022). Conversely, Izevbekhai & Odion (2018) found an inverse relationship between firm growth and corporate tax. By the political cost theory, corporate tax and firm growth relate positively (Belz, von Hagen & Steffens, 2018). Similarly, Delgado, Fernández-Rodriguez & Marinez-Arias' (2020) study on the relationship between firm growth and corporate tax revealed similar findings. Consistent with theoretical prediction, Jacob (2021) maintains that corporate tax directly correlates with the rate companies grow. This study states that the higher the taxes levied on the income of corporate bodies, the greater it can impede the growth of firms in such an economy and slow GDP growth since firms cannot expand to increase production, which consequently discourages FDI, among others. This suggests that corporate tax rates have a direct bearing on firm growth both internally and externally. Surprisingly, capital taxation was found to have a significant positive relationship with growth in developed economies. However, in emerging economies, the association is not significant (Kate & Milionis, 2019). Studies conducted in U.S. and China unanimously concluded that tax reforms resulting in corporate tax cuts lead to firm growth by increasing investment levels (Ohrn, 2018; Zhang, Chen & He, 2018). The reviewed literature has unveiled

that an inconclusive discussion exists on the relationship between financial leverage and firm growth. Again, an insufficient investigation into how corporate tax influences this nexus makes it a problem. This calls for an empirical interrogation to unravel the actual relationship between financial leverage and firm growth and corporate tax influence in this relationship. Exploring this topic is necessary because findings would guide managers in choosing the optimal level of capital mix, it would aid policymakers in framing tax policies and finance providers in deciding on chargeable interest on their loans. Firm growth, as measured by sales growth, occurs when a company's turnover soars from the previous period of sales (Sumari, 2013; Mardones, 2021). Further, sales growth occurs when the total sales volume experiences an improvement compared to the earlier period as measured on either daily, weekly, monthly, quarterly, annually, or semi-annually basis. Kregar, Antončič & Ruzzier (2019) regard sales growth as the average yearly increase in sales over the preceding year. On the other hand, Tobin's Q as a measure of firm growth is regarded as the change in the market value of a firm at a specified time (Al-Hawary, 2011). Tobins's Q is the ratio of the total market value of equity and the total market value of debt to asset replacement cost (Singhal, Fu, Parkash, 2016). However, Mayur & Saravanan (2017); Mardones (2021) opined that Tobin's Q is the ratio of the market value of a company to the value of a firm's total assets.

2.6. Conceptual Framework

Financial leverage as an independent variable is related to firm growth since loans can be obtained to pursue an expansionary drive which, when efficiently applied, would increase sales and profit margins that signify firm growth (Kregar et al., 2019). Financial leverage relates to corporate tax as the causal variable. This connection is established when a firm borrows, the interest payment on the loan minimizes EBIT, which translates to lower tax as compared to similar companies that are unlevered. Corporate tax as a moderating variable would slow firm growth when net profit is used to measure growth due to higher taxes due to the absence of financial leverage and higher growth in the presence of financial leverage due to lower taxes. This is because levered firms would pay lower taxes, which would mean relatively higher profit and higher growth, other things being constant when profit is proxied as firm growth. Corporate tax rates, therefore, influence the extent to which financial leverage impacts firms' growth.

The interaction between the various variables, as discussed so far in the framework, is presented in the diagram below.

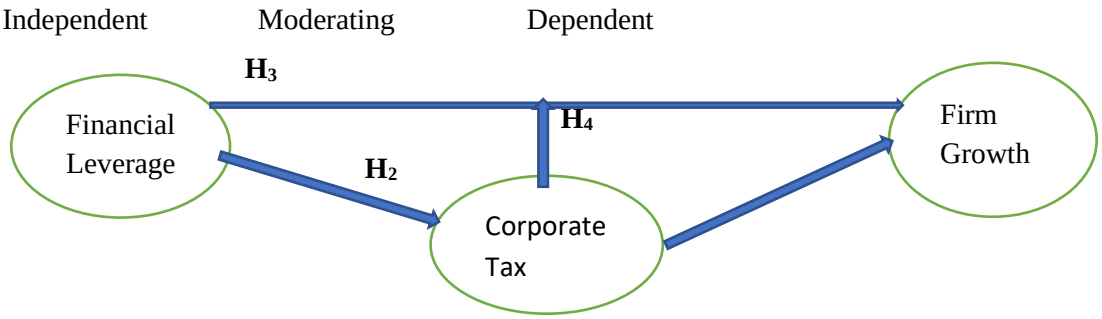

Figure 1: Conceptual Framework depicting the moderating effect of corporate tax rates on the relationship between financial leverage and firm growth in SSA.

Source: Author's own construction, 2022

2.7. Hypotheses:

Following differences in findings as discussed so far regarding the relationship between corporate tax rates, financial leverage, and firm growth, this study put forth the hypotheses below for testing as far as sub-Saharan firms are concerned;

$H_{1:}$ Financial Leverage significantly negatively affects the profit levels of firms in SSA.

$H_{2:}$ Financial Leverage significantly negatively affects the growth of firms in SSA.

$H_{3:}$ Corporate tax rate significantly negatively affects the profit levels of firms in SSA.

H_4 Corporate tax rate significantly negatively affects the growth of firms in SSA.

$H_{5:}$ In the presence of corporate tax, financial leverage negatively affects the profit levels of firms in SSA.

$H_{6:}$ In the presence of corporate tax, financial leverage negatively affects the growth of firms in SSA.

3. Methodology and Data

3.1. Data

Firm and country-level data for 327 firms in SSA were gathered for non-finance firms for the period 2007–2017 from the Bloomberg Terminal, while the country-level data were taken from the online edition of the Global Competitive Index of the World Economic Forum (WEF). The variables constituting the data for this study are described below.

3.2. Variables Description

i. Return on assets (ROAs) is defined as a firm's earnings as a total asset ratio (Chen, 2010). It demonstrates a firm's profitability as a result of the efficient application of its resources, which is measured as a ratio of net income to the asset of a company (Musah, Kong, Antwi, Donkor, Quansah & Obeng, 2019; Chen, Hung & Wang, 2018). Return on asset of a company is a crucial determinant of how effectively a company utilizes its assets to generate income, this income can influence the rate at which the firm grows when profit is used as a proxy for firm growth (Kregar et al., 2019). This shows the necessity for including return on the asset in the present study. Capturing of ROA in the study is a result of credence adduced by literature (Musah et a., 2019; Chen et al., 2019; Kregar et al., 2019).

ii. Tobin's Q (TOBINQ): Tobin's Q as a measure of firm growth is regarded as the change in the market value of a firm at a specified time (Al-Hawary, 2011). Tobins's Q is the ratio of the total market value of equity and the total market value of debt to asset replacement cost (Singhal, Fu, Parkash, 2016). The incorporation of this variable is as a result of the state this previous usage in the literature (Al-Hawary, 2011; Singhal, et al., 2016; Mardones, 2021).

iii. **Financial Leverage (FINN):** financial leverage is described as the use of externally sourced funds by a company to increase its operational capacity and consequently increase the profitability of a company (Rath & Kumah, 2021). The concept involves maximizing the returns to equity holders using external funds obtained at a fixed rate (Rely, 2018). The recent preference of managers for the inclusion of debt in their capital mix means leverage would exert substantial influence on the profitability of companies, hence its inclusion in the study.

iv. Corporate Tax Rates (CTAX): the term refers to the portion of an entity's earnings that is paid to the government. The percentage of a company's profit is set to defray the levies imposed by the government for the use of public goods or services by firms to aid the government in undertaking its developmental projects (IMF, 2019; Ahalem et al., 2017). Since every economy charges corporate tax, this variable greatly impacts the profitability of companies regardless of the percentage charged. Therefore, the present study deems it fit to incorporate corporate tax rates in its analysis.

v. Board efficiency (BODEFF): board of directors is the cornerstone of corporations and institutions tasked with several responsibilities in ensuring proper organization management. Members within and outside the organization constitute a typical board. A board is said to be efficient if it can steer an entity's affairs toward proper functioning for higher performance (Arora, 2015); Al-Hawary (2011). The inclusion of board efficiency in the study is justified by its indispensable nature in the affairs and performance of firms as cited by Hakhouf, Laili, Basah & Ramli (2017) and Arora (2015).

vi. Gross Domestic Product (GDP) is the monetary value n of goods and services produced in a country for a period which is measured as the annual percentage growth (Mardones, 2021). Inclusion of GDP as one of the control variables is necessary because it reflects the combined production of firms in a country. Investors depend on it to invest in companies operating in a country as well as determine the healthy nature of a country's economy, which can serve as a recipe for firms to grow, as used by Mardones (2021).

vii. Total Asset (TAs): Asset refers to resources that an entity holds from which future economic benefits are generated. Total asset represents the entire firm's asset, including tangible and non-tangible, current and non-current assets of a firm. The use of the total assets to measure company size is supported by its use in extant literature (Umar, Tanveer, Aslam & Sajid, 2012). Again, since the increase in asset size denotes expansion, the study deems it fit to proxy it for firm growth just as (Mohsin & Midra, 2015; Zaman, 2021).

The study analyzed the above firm and country-level variables based on the GMM technique that has been described in detail below to investigate the moderating effect of the corporate tax rate on the relationship between financial leverage and firms' growth in sub-Saharan Africa.

3.3. Generalized method of moments (GMM)

The GMM technique is used to examine the effect of corporate tax rates and financial leverage on the growth of firms in SSA. This approach is adopted for several reasons. Unlike static models, GMM is best suited for dynamic panel data. Most importantly, with GMM, one can account for country-specific and unobserved time effects and the endogeneity of independent variables (Calderon 2009; Loayza and Odawara, 2010). Among other benefits, unlike the maximum likelihood, econometricians do not need to make strong distributional assumptions (Arellano & Bond 1991; Arellano & Bover, 1995; Hansen & West 2002; Jogannathan, Skoulakis & Wang, 2002). The variables can be conditionally heteroscedasticity and serially correlated (Hansen, 1982). Moreover, it can be found that GMM estimators are more efficient than other popular estimators, like the two-stage least squares and Ordinary Least Squares (OLS) when auxiliary assumptions such as homoscedasticity fail (Woodridge, 2001). GMM in econometrics is among the most crucial advancement in the last 35 years, but surprisingly, its application is still thin. Given the above, GMM is the study's estimation technique.

3.4. GMM notion

Assume a regression model $y_t = Bx_i + \varepsilon_i$. Generally, the first two moments are E(y) and Var(y) = $E[(y-\mu)^2]$. OLS works under the assumption that the disturbance has a zero mean (E(ε) = 0) and it is not correlated with each explanatory variable (E(x_i, ε_i) = 0).

In non-linear dynamic models, this is unlikely but rather often characterized by heteroscedasticity

and correlation between the covariates and the disturbance ($E(x_i,\varepsilon_i) \neq 0$). OLS will not be appropriate in such cases, but other alternatives exist, including GMM. The application of GMM in the presence of heteroscedasticity was discovered by Cragg (1983), which requires the extraction of additional moment conditions (Woodridge, 2001). The GMM technique brings up the use of instrumental variables. For instance, z is an instrumental variable of covariate x if it is correlated with x but uncorrelated with the disturbance.

Therefore, we have ($E(x_i,\varepsilon_i) \neq 0$) but ($E(z_i,\varepsilon_i) = 0$). Assume X is n × k matrix of explanatory variables and Z is n × l matrix of instruments, the moment conditions are $E(Z', \varepsilon) = 0$, where Z' is a matrix of instruments. The GMM estimator chooses parameter estimates such that the correlations between the error terms and the instruments are as close to 0 as possible using an appropriate weighting matrix (EViews, 2015).

Note that the GMM is a step from the method of moments (MM), famously introduced in the field of econometrics by Hansen (1982) as a remedy to a situation where there are many moment conditions as there are parameters (Zsohar 2010). When the moment conditions are equal to parameters, then GMM=MM. Therefore, GMM is adequate to deal with both situations where the number of moment conditions equals the number of unknown parameters (just-identified) and where the moment conditions exceed the number of parameters (overidentified) (Imbens, 2002).

3.5. GMM framework

Panel data are well-suited for investigating dynamic effects (Greene, 2003). The study's estimation

is based on the following dynamic model:

$$Y_{it} = \psi y_{i,t-1} + \beta_i' x_{it} + \phi_i + \varepsilon_{it} \quad (1)$$

Introducing the variables of the study into the dynamic model in Equation (1) gives us the following specific dynamic models;

$$ROA_{it} = \beta_{it} + \beta_1 ROA_{it-1} + \beta_2 FINN_{it} + \beta_3 CTAX_{it} + \beta_4 TAs_{it} + \beta_5 BODEFF_{it} + \beta_6 GDP_{it} + \emptyset_i + \varepsilon_{it} \quad (2)$$

$$ROA_{it} = \beta_{it} + \beta_1 ROA_{it-1} + \beta_2 FINN_{it} + \beta_3 CTAX_{it} + \beta_4 (FINN_{it} * CTAX_{it}) + \beta_5 TAs_{it} + \beta_6 BODEFF_{it} + \beta_7 GDP_{it} + \emptyset_i + \varepsilon_{it} \quad (3)$$

$$TOBINQ_{it} = \beta_{it} + \beta_1 TOBINQ_{it-1} + \beta_2 FINN_{it} + \beta_3 CTAX_{it} + \beta_4 TAs_{it} + \beta_5 BODEFF_{it} + \beta_6 GDP_{it} + \emptyset_i + \varepsilon_{it} \quad (4)$$

$$TOBINQ_{it} = \beta_{it} + \beta_1 TOBINQ_{it-1} + \beta_2 FINN_{it} + \beta_3 CTAX_{it} + \beta_4 (FINN_{it} * CTAX_{it}) + \beta_5 TAs_{it} + \beta_6 BODEFF_{it} + \beta_7 GDP_{it} + \emptyset_i + \varepsilon_{it} \quad (5)$$

From Equation (1), y_{it} represents the dependent variables of ROAs and TOBINQ, x_{it} is a vector of explanatory variables (Corporate tax, Financial Leverage, GDP, Total Assets, and Board Efficiency). $y_{i,t-1}$ is the lagged dependent variable, ϕ_i is the unobserved country-specific effect parameter and ε_{it} is the disturbance. The involvement of $y_{i,t-1}$ in the dynamic model allows for additional information in the system. However, in both fixed and random effect frameworks, the challenge is that the lagged dependent variable and the disturbance are often correlated, which is more vivid in the random effects model (Greene, 2003). This study deals with the data's correlation and endogeneity problem by adopting a GMM approach developed by Arellano and Bond (1991) and Arellano and Bover (1995) that relies on instrumental variables. The following dynamic model is estimated:

$$In \triangle y_{it} = \psi In y_{i,t-1} + B_i' X_{it} + \phi_i + \varepsilon_{it} \quad (6)$$

where y_{it} represents ROA and TOBINSQ, X_{it} is a set of explanatory variables, B_i' is a vector of parameters, and $In \triangle y_{it} = In y_{i,t} - In y_{i,t-1}$.

In order to control for the endogeneity of the explanatory variables, Arellano and Bond (1991) suggested using appropriate lags of the explanatory variables as valid instruments. Endogeneity of the lagged dependent variable might be caused by heterogeneity (country-specific effects) (Hansen and West, 2002). In the spirit of Arellano and Bond (1991), heterogeneity can be eradicated by taking the first differences as follows:

$$In\Delta yit = (1+\varphi)\Delta yi, t-1 + \beta' i \Delta xit + \Delta \varepsilon it, i, t-1 = yit, t-1 - yi, t-2; \Delta xit = xit - xi, t - xi, t-1; \Delta \varepsilon it = \varepsilon it - \varepsilon i, t-1 \quad (7)$$

According to Arellano and Bond (1991), the covariates matrix may contain a combination of both predetermined (lags or internal instruments) and strictly exogenous variables. This study relies on internal instruments.

Following Arellano and Bond (1991), the study implements GMM (difference) to examine the corporate tax rates, financial leverage, and SSA firms' growth nexus. By

selecting suitable lagged values of x_{it} and $_{it}$ as valid instruments and assuming no correlation between them and the time-varying disturbance, we outline a set of moment conditions for the difference GMM as follows:

$$E\left[\begin{pmatrix} x_{i,t-1} \\ \downarrow \\ x_{i,t-p} \\ y_{i,t-1} \\ \downarrow \\ y_{i,t-p} \end{pmatrix}(\varepsilon_{it} - \varepsilon_{i,t-1})\right] = 0; \quad t \geq 3; \quad p \geq 2$$

(8)

Note: This is a condition for all valid instruments in the differenced equation for period *p*.

At times the lagged levels of the independent variables cannot be robust instruments when the variables are persistent over time (Blundell & Bond 1998). Therefore, one can apply a system GMM which allows for a combination of differences and levels of regressions (Arellano and Bover 1995; Blundell and Bond 1998; Calderon 2009). However, the study's instruments based on the difference GMM are sufficient to reveal the corporate tax rates, financial leverage, and firm growth relationship in SSA. It is imperative to carry out specification tests. This study employs the Hansen test (based on J-statistic) for overidentifying restrictions to inspect the validity of the instruments. In addition, the m-statistic test for second-order serial correlation in the first difference residuals is used.

4. Results and Discussion

4.1. Stationarity Test

This study adopted the Levin-Lin-Chu (LLC), the Augmented Dickey-Fuller (ADF) and Im, Pesaran, and Shin panel unit root test to analyze the stationarity of the various variables used in the study. Based on the stationary test, results are shown in Table 1 below. The results confirm that all the variables are stationary since the various unit root null hypothesis is rejected.

Table 1. Stationarity Test

Levin, Lin and Chu (LLC)		Im, Pesaran and Shin IPS		ADF-Fisher (ADF)	
VARIABLE	**LEVEL**	**FIRST DIFFERENCE**	**LEVEL**	**FIRST DIFFERENCE**	**LEVEL**	**FIRST DIFFERENCE**
ROA_{it}	-54.642***	-29.732***	-3.604***	-6.7875***	745.538***	929.823***
$TOBINQ_{it}$	-259.397***	-165.688***	-4.249***	-4.735***	-8.573***	-18.759***
$FINN_{it}$	-84.713***	-95.393***	-1.798***	-3.846***	653.249***	806.501***
GDP_{it}	-4.8469***	-45.196***	11.227***	-7.5374***	267.541***	1173.07***
$CTAX_{it}$	-336.784***	5.7E+14***	-10.24***	-	619.550	-
$BODEFF_{it}$	-2.229***	-24.995***	-5.129***	-9.9133***	772.974***	853.491***
TAs_{it}	-2.5709***	-64.402***	-5.129***	-9.9134***	664.965***	756.743***

*Notes: *** Significant at the 1% level. ** Significant at the 5% level * Significant at the 10% level*
Source: Author's construction, 2022.

4.2. Descriptive Summary Statistics.

Table 2 presents the descriptive statistics for all the variables used in the estimations. The average profit earned by SSA firms is 1.92%, while the minimum profit is (-4.6052%) and the maximum (is 6.1322%), indicating that profits do not show widespread profits for SSA firms. The average growth rate of firms in SSA is 0.5%, with the minimum and maximum growth rates being (-1.256) and (13.032), respectively. The mean level of debt that firms in SSA incur is in the neighborhood of 0.84% with a minimum of (-0.25%) and a maximum (7.89%), which is greater than the growth rate of these firms and their average profits. For CTAX, the minimum is 1.161% while the maximum is 1.696%, which is also greater than the average tax of 1.509% that firms in SSA pay. The standard deviation values for FINN and CTAX are 0.574% and 0.074%, respectively, suggesting that, on average, they deviate from their mean by about 50% and 7%, respectively. The average scores for the TAs (a proxy for firms' sizes), GDP and BODEFF are 3.399%, $224 billion, and 0.7% respectively. The mean GDP is quite large and indicates the significance of export and import activities to the economies in SSA. The standard deviation of FINN and CTAX are (0.574%) and (0.0743%), respectively, which show how the levels of debt vary among firms across the individual countries.

Table 2. Descriptive Summary Statistics

Variables	Mean	Maximum	Minimum	Standard Deviation	Observation
ROA	1.9165	6.1322	-4.6052	1.0741	2724
TOBINQ	0.5081	13.0324	-1.2563	1.2234	2564
FINN	0.8409	7.8926	-0.2497	0.5739	3270
CTAX	1.5093	1.6955	1.1614	0.0743	1635
*CTAX*FIN*	1.2889	11.9642	-0.0049	0.9518	1580
TAs	3.3987	7.2199	-1.1220	1.1234	3032
GDP	2.24E+11	5.68E+11	4.42E+09	1.72E+11	3270
BODEFF	0.7143	0.7973	0.6021	0.0551	3251

Notes: The table reports the descriptive summary statistics

Table 3 shows the correlation matrix. The observed a negative relationship between the CTAX (corporate tax rate) and FINN (financial leverage) and growth in SSA firms' profits. A similar observation is made for financial leverage, corporate tax rate, and growth of firms in SSA. Regarding the control variables of TAs (total assets, denoting firm size), GDP, and BODEFF (board efficiency), they are also negatively associated with the profitability levels of SSA firms. In contrast, apart from the GDP, which is negatively related to the growth of the firms, both firm size and board efficiency are positively correlated with the firm's growth.

Table 3. Correlation Matrix

VARIABLE	***ROA***	***FINN***	***TAs***	***CTAX***	***GDP***	***BODEFF***	***TOBINQ***
ROA	1.000						
FINN	-0.194	1.000					
TAs	-0.050	0.189	1.000				
CTAX	-0.005	0.028	0.296	1.000			
GDP	-0.031	0.056	0.192	0.189	1.000		
BODEFF	-0.007	-0.086	-0.178	-0.267	0.388	1.000	
TOBINQ	0.249	-0.015	0.042	-0.113	-0.007	0.016	1.000

4.3. Regression Results

This section summarizes the results of estimating Equations (3), (4), (5) and (6) using the dataset described in section 3.2.

4.3.1. Corporate Tax Rates, Financial Leverage and Firms' Growth in SSA

This section sheds light on the corporate tax rate, financial leverage and firm growth nexus. Table 4 reports GMM results of the different specifications of the moderating effect of the corporate tax rate on the relationship between financial leverage and firms' growth in SSA. Models 1 and 3 are based on Equations (3) and (5) (without an interaction term), which mainly consider the effects of financial leverage and corporate tax rates on firms' growth in SSA. These are the baseline results, which compare to subsequent results for Models 2 and 4 based on Equations (4) and (6), where an interaction term between corporate tax rates and financial leverage is included.

The results from Table 4 show that the lagged coefficient of ROAs (-1) is positive and statistically significant at 10% for Model 1, suggesting that the previous year's profit level is not a strong enough factor to explain the current profitability levels of firms in SSA. The possible reason could be that the firms enjoyed a change in corporate tax policy that significantly affected its disposal earnings in line with the views expressed by Zhang et al. (2018), Ohrn (2018), Rahmadari et al. (2020), corporate restructuring, diversification into the high volatile industry as well as structural break (Parpiev, 2016) that impact the economic fundamentals of SSA. This confirms the account of Kate and Milionis (2019), Belz et al. (2018), who found a positive and significant association between corporate tax and profitability in developed economies; however, they found a negative relationship between corporate tax and profitability (Jacobs, 2021; Izevbekhai & Odion, 2018).

For financial leverage, the study predicted a significant negative effect between financial leverage and firms in SSA profitability levels. However, the coefficient for the financial leverage is positive, implying that as the debt levels of firms in SSA increase, their profit levels also improve. The reason for this could be that the increase in debt levels reduces the amount paid in corporate taxes leaving considerably higher profit. Again, this could also arise due to these firms being given a moratorium on credit during the period under review. The above assertion agrees with Kregar et al. (2019), who documented that financial leverage encourages firm growth. Regarding GDP, the coefficient is negative and statistically significant at 1%, suggesting that as the sizes of economies SSA contract, the profitability levels of firms in SSA improve. This appears contrary to theoretical predictions. However, reduction in corporate tax rates, granting of a moratorium to firms on loans by creditors, and provision of business support services to cushion firms account for the observed relationship. This finding agrees with the position of (Zhang et al., 2018; Ohrn, 2018), who concluded that factors leading to a reduction in tax rate improve firm profitability. Conversely, the finding opposes the argument put forward by Kate and Milionis (2019). Concerning the sizes of firms in SSA, the coefficient is negative and statistically significant at 1%, implying that as firm sizes shrink, the profit levels of these firms

rise. This may be due to economic incentives given to smaller firms to support these firms to survive in times of economic crunch and contraction. Again, the decline in firm size means retrenching when measured with several employees, which would mean lower expenditure causing profit to rise with ceteris paribus. This result confirms the position of (Sanjaya &Jayasiri, 2018), who unveiled that a negative association exists between firm size as measured by sales growth and profitability. This account contradicts the argument championed by Fuertes-Callén and Cuellar-Fernández (2019); Coban (2014) that a positive statistically significant association prevails between firm size and profitability. Further, Model 1 hypothesizes that the corporate tax rate significantly negatively affects the profits of firms in SSA. Inconsistent with this hypothesis are the study's results, which show that the coefficient of the corporate tax rates is statistically insignificant and therefore implies that corporate tax rates do not influence the profit levels of firms in SSA.

From Model 3, the results of the study show that the coefficient of lagged TOBINQ representing the firms' growth opportunities is positive and statistically significant at 1%. This suggests that the previous year's growth rates of firms in SSA adequately influence their current growth rates, all other things being equal. This may be due to the sustained economic growth within SSA countries' economies coupled with the constant level of investment made by the understudied firms. The result is consistent with the findings of (Båtsvik, 2022). Model 3 again predicted that financial leverage significantly negatively affects firms' growth in SSA. Consistent with this prediction, the coefficient of financial leverage is negative and statistically significant at 1%, indicating that as the debt burden of these firms increases, their ability to grow reduces. Possibly, it could be that the interest charged by creditors on these loans is exorbitant that it ends up consuming a significant portion of firm's Earnings Before Tax (EBT), which reduces the growth prospects of firms in SSA. The finding confirms the result of (Båtsvik, 2022; Botta, 2020), who adduced that reliance on external funding from the credit market impact negatively on the growth of a firm. Increase in the debt component in the capital mix of a firm impact negatively on firm growth. However, Hamouri et al. (2018) revealed an insignificant relationship between financial leverage and firm growth. In opposition to the study's result was the argument by Gamlath (2019), whose empirical investigation revealed a significant positive relationship between debt and firm growth.

For the other control variables, such as GDP, firm size, and board efficiency, the study hypothesized a positive relationship between them and the growth of firms in SSA. Again, consistent with these hypotheses, the coefficients of the variables are all positive and significant at 1%, signifying that as economies in SSA expand, firms in these countries also grow well. Similarly, the increase in the firms' size also improves in line with the growth of the firms. The possible reason for this could be that increased size translates to a rise in operational scope leading to higher production. This also comes with economies of scale because the ascertained result suggests that in SSA,

bigger firms may be given incentives in various forms, such as tax holidays and industrial parks, to encourage firms' growth and compete with expatriate firms. Regarding board efficiency, the significant positive results suggest that improvement in the efficiency level of boards of firms in SSA contributes significantly to the growth of firms from this region. This may be ascribed to the fact that the boards of companies in SSA is constituted of high-profile members who are veterans in the field of operation and bring their expertise to bear in making strategic decisions that result in significant growth. This finding supports the views of (Makhlouf et al.,2017; Dhamadasa, Gamage & Herath, 2014), who conclude that an efficient board has a positive and significant relationship with firm growth and experienced boards undertake pragmatic decisions that result in corporate expansion.

4.3.2. Moderating effect of corporate tax on the relationship between financial leverage and firm growth in SSA

As the previous section captures the impact of corporate tax rates and financial leverage on profitability and firms' growth in SSA, this section examines whether, in the presence of corporate tax rates, financial leverage affects the profit levels and growth of SSA firms. Therefore, following the specifications in Equations (4) and (6), the study interacts with corporate tax rates and financial leverage and reports, as shown in Table 4. As before, the large P-values for the J-statistics confirm the validity of the study's instrumentation approach.

Model 2 incorporates an interaction term of corporate tax rates and financial leverage and shows that the coefficient is positive and statistically significant at 1%. This implies that in situations of high debt levels and increases in corporate tax rates, firms in SSA experience profit improvement, improving their growth. Although surprising, this result could be that credit agencies give enough moratorium and acquired funds are judiciously invested in high-earning businesses whose returns outweigh the interest and tax changes imposed on companies. This finding aligns with the account that corporate entities become irresponsive to changes in corporate tax rates (Deng et al., 2020; Zou et al., 2018; Suciarti et al., 2020). However, the findings contradict the argument that higher corporate tax negatively affects firm profit, and slows corporate growth (Choi et al., 2020; Chen et al., 2020). Model 4 predicted that, in the presence of financial leverage, corporate tax rates affect the growth of firms in SSA negatively. So, Model 4 shows an interaction term between financial leverage and corporate tax rate, which is positive and statistically significant at 1%, indicating that when firms in SSA have high levels of debt coupled with increased corporate tax rates, their profit margins and growth rates improve. Again, this result is quite strange since the expectation was to see a reduction in profit margins of highly geared, which eventually affects their growth adversely. Perhaps firms in SSA that may be highly indebted may experience growth despite high debt profile. Similarly, SSA firms in countries with

high corporate tax rates may be growing due to their unresponsiveness to corporate tax increases in such economies (Suciarti et al. 2020), which is in contravention with the account of (Limberg, 2020).

Table 4. Financial Leverage and Firm Growth in SSA: The Role of Corporate Tax Rates

VARIABLE	**MODEL 1**	**MODEL 2**		**VARIABLE**	**MODEL 3**	**MODEL 4**
ROAs (-1)	0.1033* (0.0615)	*0.1033* (0.0615)*		*TOBINQ (-1)*	0.7055*** (0.0011)	0.2564*** 0.0063
FINN	0.7702*** 0.2119			*FINN*	-175.229*** (37.7446)	
CTAX	0.5758 (0.4031)			*CTAX*	108.8072 (133.6804)	
*FINN*CTAX*		*0.5241*** (0.1281)*		*FINN*CTAX*		0.9050*** (0.0635)
GDP	-1.43E-12*** (6.68E-13)	*-1.43E-12*** (6.71E-13)*		*GDP*	1818.901*** (28.3221)	1.1167*** (0.1277)
TAs	-1.6345*** (0.3679)	*-1.6619*** (0.3608)*		*TAs*	253.8795*** (44.0354)	-1.0448*** 0.1268
BODEFF	-1.9794 (1.4767)	*-2.1992 (1.4844)*		*BODEFF*	3809.380*** (529.1336)	-0.9349 (0.7344)
No. of observations	823	823		*No. of observations*	718	717
No. of countries	327	*327*		*No. of countries*	327	327
Instrument Rank	35	35		*Instrument Rank*	23	26
DIAGNOSTICS						
J-statistic	36.7370	36.9932		*J-statistic*	24.8000	26.6472
Prob (J-statistic)	0.1531	0.1773		*Prob (J-statistic)*	0.0993	0.1828
AR2	0.6725	0.6534		*AR2*	0.3029	0.1559

*Notes: ROAs: Return on Assets; Tobin's q (TOBINQ): Growth Opportunities; GDP: GDP growth; Board Efficiency (BODEFF); Total Assets (TAs): Firm Size; Financial Leverage (FINN); Corporate Tax Rate (CTAX); Models 2 and 4 interacts financial leverage with corporate tax rates. ***, ** and *. denote significance at 1%, 5%, and 10%, respectively.*

4.3.3. Robustness Checks

So far, the study has used the return on assets (ROAs) and Tobin's q as proxies for firms' growth in terms of profitability and growth opportunities respectively. It is always essential to test the validity of the models and instruments used in dynamic panel analysis. Dynamic panel estimation techniques take care of issues of heteroscedasticity and endogeneity. Nevertheless, the differenced equations can produce serial correlation (Baum et al., 2013). The difference GMM estimation technique was used in this study. Two different measures of firms' growth, *ROAs, and TOBINQ*, denoting growth in Returns on Assets and Tobin's Q, are the lagged dependent variables for the estimated models. Standard errors are provided in parenthesis below the coefficients of estimates. AR (2) is used to test for autocorrelation, and the Hansen test is used to test for over-identification of the instrument.

The empirical performance of the difference GMM estimation in this study is reasonably satisfactory and robust. The test of second-order serial correlation AR (2) shows that all estimations have no problem of second-order serial correlation since the AR (2) test statistics are unable to reject the null of no second-order serial correlation (p-values of 0.6725, 0.6534, 0.3029 and 0.1559 for Model I, Model 2, Model 3 and Model 4 respectively). The Hansen test for over-identification indicates the null of exogenous instruments is not rejected with p-values of 0.1531 (for Model I), 0.1773 (for Model 2), 0.0993 (for Model 3), and 0.1828 (for Model 4) respectively.

5. Concluding Remarks

The study investigated the relationship between financial leverage measured as total debt to total equity, corporate tax rate measured as the effective tax rate levied on a company's profit, and SSA firms' growth proxied by ROA and Tobin's Q. The sparse empirical literature drives the motivation for the study on how corporate tax rates, and financial leverage impacts the growth of firms, particularly in sub-Saharan Africa. Generally, the finding indicates that financial leverage enhances profitability based on the positive relationship, which connotes that managers seeking profit growth should consider utilizing leverage before any other funding source. This is contrary to the prediction of the pecking order theory that managers consider internal funding to any other funding sources. However, it is consistent with existing studies because, just as discovered by the study, Kregar et al. (2019) also found a positive linkage between leverage and profitability, which translates that financial leverage enhances profit level and encourages firm growth. The result indicates that corporate tax rates do not influence firm growth in SSA. Increase in the debt level of firms in SSA leads to an improvement in profit. However, this discovery misaligns with that of Choi et al. (2020); Chen et al (2020), who concluded high corporate contract growth. The study

found that corporate tax significantly and positively moderates the leverage and growth nexus. Therefore, the conclusion is that during rising debt levels and increases in corporate tax rates, firms in SSA experience profit improvement, which improves company growth. The study's findings improve the existing knowledge on the relationship between financial leverage and firm growth and introduce into the discussion the topic of the role of corporate tax in the financial leverage and growth relationship. The study's novelty is that the authors explored the interaction of corporate tax in the leverage-growth nexus. This calls for various policy implications. Thus, the government should pursue tax policies that would have minimal effect on corporate earnings and persuade foreign investors. The study focused on selected firms in the SSA without considering specific sectors, and its data for chosen variables pre-date the Covid-19 pandemic period. Therefore, future studies should consider sectorial analyses and include data beyond the Covid-19 period.

References

Abu, M. M. (2022). The interplay of corporate tax planning and corporate governance on firm value: Evidence from listed NGX consumer goods firms. *Investment Management and Financial Innovations*, 19(2), pp. 130-142.

Adair, P. & Adaskou, M. (2015). Trade-off-theory vs. pecking order theory and the determinants of corporate leverage: Evidence from a panel data analysis upon French SMEs. *Cogent Economics & Finance*, 3(1), p. 1006477.

Ahalem, M. A. A.; Jabbar, A. A. & Mohammed, A. O. (2017). The Concept of Corporate Tax, Tax Reform and Comparison of Corporate Tax Rates in Some Countries. *International Journal of Advanced Research*, 5(4), pp. 1331-1338.

Al-Hawary, S. I. S. (2011). The effect of banks governance on banking performance of the Jordanian commercial banks: Tobin's Q model "an applied study". *International Research Journal of Finance and Economics*. 71, pp. 34-47.

Arora, A. (2015). Literature Review Assessing the Relationship between Corporate Governance and Firm Performance. *Paper presented at the Compendium of Research Papers of National Conference on Managing tomorrow: Issues and Challenges by DY Patil Institute of Management Studies*, Pune.

Båtsvik, L. D. (2022). *Tobin's q and Financial Constraints. Master's thesis in Economics*. Norwegian University of Science and Technology Faculty of Economics and Management Department of Economics.

Battisti, E.; Bollani, L.; Miglietta, N. & Salvi, A. (2019). The impact of leverage on the cost of capital and market value. *Management Research Review*, 43(9), pp. 1081-1096.

Botta, M. (2020). Financial crises, debt overhang, and firm growth in transition economies. *Applied Economics*, pp. 1-18. DOI: 10.1080/00036846.2020.1734184.

Chen, H. (2020). The Impact of Financial Leverage on Firm Performance – Based on the Moderating Role of Operating Leverage. *Advances in Economics, Business and Management Research*, 159, pp. 464-473.

Chen, Y. C.; Hung, M. & Wang, Y. (2018). The effect of mandatory CSR disclosure on firm profitability and social externalities: evidence from China. *Journal of Accounting and Economics*, 65(1), pp. 169-190.

Chen, Z.; Kemsley, D. & Sivadasan, P. (2020). The Comprehensive Tax Gain from Leverage. *European Accounting Review*, pp. 1-23.

Choi, P. M.; Chung, C. Y. & Kim, C (2020). Corporate tax policy and asset pricing. *North American Journal of Economics & Finance*, pp. 1-19. DOI: https://doi.org/10.1016/j.najef.2020.101264.

Coad, A. & Rao, R. (2006a). Innovation and Firm Growth in 'Complex Technology' Sectors: A Quantile Regression Approach. *Cahiers de la Maison des Sciences Economiques* no. 06050. University of France.

Coad, A. (2007). The Growth of Firms: A survey of Theories and Empirical Evidence. *Paper on Economics and Evolution*, pp. 1-56.

Coban, S. (2014). The Interaction Between Firm Growth and Profitability: Evidence from Turkish (Listed) Manufacturing Firms. *Journal of Knowledge Economy & Knowledge Management*, 9, pp. 40-50.

Delgado, F. J.; Fernández-Rodríguez, E. & Martínez-Arias, A. (2018). Corporation effective tax rates and company size: evidence from Germany. *Economic Research*, 31(1), pp. 2081-2099.

Deng, K.; Zhu, Y.; Smith, T. & McCrytal A. (2020). Tax and leverage: Evidence from China. *China Economic Review*, 62, pp. 1-38.

Devereux, M. P. & Sorensen, P. B. (2006). The Corporate Income Tax: International Trends and Options for Fundamental Reforms. *Economic Policy Research Unit*, University of Copenhagen.

Dhamadasa, P.; Gamage, P. & Herath, S. K. (2014). Corporate Governance, Board Characteristics and Firm Performance: Evidence from Sri Lanka. *South Asian Journal of Management*, 21(1), pp. 7-31.

Eisenhardt, K. M. & J. A. Martin, (2000). Dynamic Capabilities: What are they? *Strategic Management Journal*, 21, pp. 1105-1121.

Fuertes-Callén, Y. & Cuellar-Fernández, F. (2019). Inter-Relationship Between Firm Growth and Profitability in a Context of Economic Crisis. *Journal of Business Economics and Management*, 20(1), pp. 86-106.

Gamlath, G.R.M. (2019). Impact of Financial Leverage on Firm Growth of Sri Lankan Listed Companies. *Journal of Management and Tourism Research*, 2(1), pp. 64-83.

Hamouri, B.; Al-Rdaydeh, M. & Ghazalat, A. (2018). Effect of financial leverage on firm growth: empirical evidence from listed firms in Amman stock exchange. *Investment Management and Financial Innovations*, 15(2), pp. 154-164.

IMF (2019). Corporate Taxation in the Global Economy, *IMF*. https://www.imf.org/en/Publications/Policy-Papers/Issues/2019/03/08/ Corporate-Taxation-in-the-Global-Economy-46650. Retrieved on 26-07-22.

Izevbekhai, M. O. & Odion, A. O. (2018). Tax Planning and Firm Value. *Nigerian Academy of Management Journal*, 13(1), pp. 94-119.

Jacob, M. (2021). Real Effects of Corporate Taxation: A Review. *European Accounting Review*, pp. 1-28.

Kregar, T. B.; Antončič, B. & Ruzzier, M. (2019). Linking a multidimensional construct of networking self-efficacy to firm growth, *Economic Research*, 32(1), pp. 17-32.

Limberg, J. (2020). What's fair? Preferences for tax progressivity in the wake of the financial crisis. *Journal of Public Policy Journal of Public Policy*, 40, pp. 171–193.

Makhloulf, M. H.; Laili, N. H.; Basah, M. Y. A. & Ramli, N. A. (2017). Board of Directors' Effectiveness and Firm Performance: Evidence from Jordan. *Journal of Finance and Accounting*, 8(18), pp. 23-33.

Mayur, M. & Saravanan, P. (2017). Performance implications of board size, composition and activity: empirical evidence from the Indian banking sector. *Corporate Governance*, 17(3), pp. 466-489.

Mishra, S. & Deb, S. G. (2018) Predictors of firm growth in India: An exploratory analysis using accounting information, *Cogent Economics & Finance*, 6(1), pp. 1-26.

Mohshin, A. & Midra (2015). *Impact of Total Assets and Net Income on Return on Equity of Small Medium Enterprises of Pakistan.* Pakistan Institute of Learning and Living, Iqra University, Institute of Clinical Psychology, 1-7.

OECD (2019). *Corporate Tax Remains a Key Revenue Source*, Despite Falling Rates Worldwide.

Ohrn, E. (2018). The Effect of Corporate Taxation on Investment and Financial Policy: Evidence from the DPAD. *American Economic Journal: Economic Policy*, 10 (2), pp. 272-301.

Parpiev, Z. (2016). *Testing for Unit Root and Structural Breaks.* Regional Summer School. Retrieved from https://tinyurl.com/2vuc4wwz on 29/11/2022.

Penrose, E. T. (1959). *The Theory of the Growth of the Firm.* New York: Wiley.

Rahmadani, I.; Muda, I. & Abubakar, E. (2020). Pengaruh Ukuran Perusahaan, Profitabilitas, Leverage, dan Manajemen Laba terhadap Penghindaran Pajak Dimoderasi oleh Political Connection. *Journal Riset Akuntansi dan Keuangan* 8(2), pp. 375-392.

Rath, D. P. & Kumar, S. (2021). Reassessing Investment Dynamics-Newer Insights into Leverage and Investment of the Indian Corporate Sector. *RBI Working Paper Series* No. 05**.**

Rely, G. (2018). The Effect of Financial Leverage on Financial Performance Towards Firms Size. *South East Asia Journal of Contemporary Business, Economics and Law*, 17(5), pp. 11-19.

Sanjaya, R. A. A. & Jayasiri, N. K. (2018). The Cause-Effect Relationship between Growth and Profitability: Evidence from Listed Manufacturing Companies in Sri Lanka. *Conference Paper*.

Singhal, R.; Fu, L. & Parkash, M. (2016). Tobin's Q Ratio and Firm Performance. *International Research Journal of Applied Finance*, 7(4). Doi:10.0704/article-2.

Suciarti, C.; Suryani, E. & Kurnia, I. (2020). The Effect of Leverage, Capital Intensity and Deferred Tax Expense on Tax Avoidance. *Journal of Accounting Auditing and Business*, 3(2), pp. 76-83.

Sumari, G. (2013). Analysis of business growth strategies and their contribution to business growth; a Tanzania case study. *International Journal of Commerce, Economics and Management* 1.

ten Kate, F. & Milionis, P. (2019). Is capital taxation always harmful for economic growth? *International Tax and Public Finance*, 26, pp. 758–805.

Umar, M.; Tanveer, Z.; Aslam, S. & Muhammad Sajid. (2012). Impact of Capital Structure on Firms' Financial Performance: Evidence from Pakistan. *Research Journal of Finance and Accounting*, 3(9), pp. 2222-1697.

Williams, B. M. (2018). Multinational Tax Incentives and Offshore U.S Jobs. *The Accounting Review*, 93(50), pp. 293-324.

Xie, D.; Zhang, X. & Cui, C. (2019). Classification shifting between recurring and nonrecurring items: Evidence from performance-based equity incentive plans. *Management World*, 35(7), pp. 167–181.

Zaman, M. B. (2021). Influence of Debt to Total Asset Ratio (DAR) Current Ratio (CR) and Total Asset Turnover (TATO) on Return on Asset (ROA) and Its Impact on Stock Prices on Mining Companies on the Indonesia Stock Exchange. *Journal of Industrial Engineering & Management Research*, 2(1), pp. 114-132.

Zhang, L.; Chen, Y. & He, Z. (2018). The effect of investment tax incentives: evidence from China's value-added tax reform. *International Tax and Public Finance*, 25, pp. 913–945

Zhang, X.; Cui, C. & Xie, D. (2020). Are Dividends All for Rewarding Investors? Evidence from Payouts Induced by Return on Equity Targets, China. *Journal of Accounting Studies*, 8(3), pp. 470-494.

Zou, N.; Shen, G. &Gong, Y. (2018). The effect of value-added tax on leverage: Evidence from China's value-added tax reform. *Chieco*, doi:10.1016/j.chieco.2018.10.013.