

CORPORATE TAXATION AND FOREIGN DIRECT INVESTMENT IN SELECTED SUB-SAHARAN AFRICAN COUNTRIES

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ABSTRACT

Foreign Direct Investment remains crucial to the economic growth and development in the Sub-Saharan African (SSA) countries, but its flow is consistently hampered by tax policies, inadequate infrastructure, as well as macroeconomic volatility. The study assessed the effect of Corporate Income Tax (CIT) on FDI on five of the largest Sub-Saharan African countries—Nigeria, South Africa, Kenya, Ghana, and Ethiopia—between 1999 and 2023. The study employed secondary data collected from the World Bank Development Indicators (WDI), Central Bank of Nigeria (CBN) Statistical Bulletin, and National Bureau of Statistics (NBS). Using country-specific and pooled ordinary least squares (OLS) estimations, high heterogeneity across countries was revealed by the findings. In Ghana, both value-added tax and corporate tax negatively affected FDI and offered proof of the hypothesis that a rising tax burden deterred investment. Kenya and Ethiopia, however, experienced counterintuitive positive VAT effects, and Nigeria and South Africa had no significant tax effects. It was also revealed that VAT and company income tax are not statistically significant, which suggests that tax policy alone is a weak determinant of FDI inflows. Interaction terms between economic growth, inflation, and taxation did not show any consistent effect, although marginal responsiveness to inflation was found in Ghana. It is therefore recommended that the governments of Sub-Saharan Africa should consider reducing high corporate income tax rates and instead institute broader, investment-friendly tax policies complemented by actions that enhance macroeconomic stability, especially through GDP growth and improved ease of doing business.

Key words: Corporate Taxation, Foreign Direct Investment, Sub Saharan Africa, Trade Openness, Value Added Tax.

INTRODUCTION

Foreign Direct Investment (FDI) is an investment made by an entity based in one country into business interests located in another country. Typically, this involves acquiring at least 10% ownership in a foreign enterprise, signaling a long-term interest and significant influence over management. FDI can take several forms, including mergers and acquisitions, the

establishment of new operations (greenfield investments), and joint ventures. It plays a crucial role in global economic integration, allowing capital, technology, and expertise to flow across borders (Organization for Economic Cooperation and Development, OECD, 2023). Foreign Direct Investment (FDI) inflows have been a major driver of economic development globally, helping to promote capital formation, technology transfer, and job creation. The global impact of FDI inflows is profound, as these investments contribute to economic growth, particularly in developing economies. According to UNCTAD, global FDI inflows totaled about \$1.58 trillion in 2020, a sharp decline from previous years due to the effects of the COVID-19 pandemic. However, FDI remains a vital source of growth, particularly for developing nations, where it is often used to supplement domestic savings and fuel infrastructure development (UNCTAD, 2021).

In Africa, FDI inflows have had a mixed but generally positive impact on economic growth. Africa attracted \$39 billion in FDI in 2020, which was a decline from the \$45 billion seen in 2019. Despite this, FDI inflows are essential for Africa's development, particularly for countries rich in natural resources (World Bank, 2020). From 1986 to 2023, Africa's FDI inflows have fluctuated significantly. In the 1990s, FDI into the continent grew steadily, driven by the liberalization of economies and privatization initiatives. However, the FDI landscape shifted dramatically in the early 2000s, with FDI reaching a peak of \$72 billion in 2008 before declining during the global financial crisis. By 2023, FDI inflows to Africa had rebounded to an estimated \$50 billion (UNCTAD, 2023). The relationship between corporate income tax (CIT) and FDI inflows is particularly important in determining how countries in Africa attract foreign capital. FDI tends to be attracted to countries with favourable tax rates, as these rates affect the profitability of investments. Higher tax rates can reduce after-tax returns, discouraging foreign investors, while lower tax rates can improve the investment climate. This is because investors often seek to maximize their profitability, and high taxes lower the net returns from investments. In contrast, lower corporate tax rates can enhance the potential for higher returns, encouraging more FDI (World Bank, 2020). The corporate tax rate is therefore a significant factor in foreign investment decisions, but it is not the sole determinant.

One of the main goals of countries in the world is to create an investor-friendly environment to attract foreign investors to invest their capital. There may not be a uniform response across countries concerning FDI due to a variation of corporate income tax policies, in this regard is reflected by corporate taxation. The question that then arises is whether the government can

use corporate tax reduction as an instrument to attract FDI? The governments across Sub-Saharan Africa have over the years implemented various policies aimed at attracting FDI to foster economic growth, create jobs, and stimulate development. These policies typically include offering tax incentives, reducing corporate tax rates, and creating more investor-friendly regulatory environments (OECD, 2021). Countries like Nigeria and South Africa have made efforts to lower corporate tax rates in order to enhance their competitiveness in attracting foreign investment. Despite these efforts, however, FDI inflows into Sub-Saharan Africa remain relatively low compared to other regions, such as Asia and Latin America. For example, in 2020, Sub-Saharan Africa accounted for only about 3% of global FDI inflows, while countries like China and Brazil, which also offer favorable tax policies, attract significantly higher levels of foreign investment (OECD, 2021).

One key challenge contributing to this low level of FDI is the relatively high corporate tax rates in many Sub-Saharan African countries. While some countries have made efforts to reduce tax rates, they remain higher than those in other emerging markets, which may deter potential investors. For instance, countries like Ethiopia, Nigeria, Kenya, and Ghana have attempted to lower their tax rates, however, they still face substantial hurdles such as political instability, poor infrastructure, and unpredictable policy enforcement. These challenges reduce the effectiveness of tax cuts, as investors are often more concerned with factors such as political risk, governance quality, and the overall business environment (African Development Bank, AfDB, 2022). Furthermore, high VAT rates combined with inflation exacerbate the cost of living by increasing the prices of essential goods and services, disproportionately affecting low-income households (World Bank, 2020). Additionally, during periods of high inflation, VAT adjustments can create economic instability, reducing consumer demand and discouraging business investment, ultimately impacting foreign direct investment (UNCTAD, 2021).

Several studies have been carried out by many researchers on corporate income tax and its impact on foreign direct investment such as Nwankwo and Nwakeze (2024); Andrejovská and Glova (2023); Lesmana and Soetjipto (2022); Lerkwagh and Tija (2020); Olaoye and Oluwatoyin (2019) and Oz-Yalaman (2019) but none of these studies were conducted on corporate tax and foreign direct investment in sub-Saharan countries of West Africa. While some research suggests that lower corporate tax rates can positively influence FDI inflows, other studies argue that tax rates alone are insufficient to attract significant foreign investment. This has created a huge gap, as much of the literature isolates corporate tax as a key determinant

of FDI, neglecting that other factors, such as the growth rate of the economy, salaried-wage workers and political instability, may influence the relationship. This study aims to fill this gap by exploring the impact of corporate tax on FDI while controlling for the economic growth rate, salaried-wage workers and political instability in Sub-Saharan African countries. By including these control variables, this research will provide a more comprehensive understanding of the factors influencing FDI inflows in the region and offer valuable insights for policymakers seeking to improve the business environment and attract more foreign investment.

Objectives

The main objective of this study is to investigate the effect of corporate taxation on FDI of selected sub-Sahara Africa countries. The specific objectives are to:

1. determine the effect of corporate income tax on foreign direct investment in some selected sub-Saharan African countries.
2. assess the influence of value added tax on foreign direct investment in some selected sub-Saharan African countries.
3. ascertain the effect of trade openness on foreign direct investment in some selected sub-Saharan African countries.
4. explore the effect of moderating economic growth with corporate income tax on foreign direct investment in some selected sub-Saharan African countries.
5. ascertain the effect of moderating inflation rate with corporate income tax on foreign direct investment in some selected sub-Saharan African countries.

LITERATURE REVIEW

Theoretical Review

Taxation-Investment Theory

The Taxation-Investment Theory was primarily formulated by the economist James E. Stiglitz in the early 1980s. The theory postulates that the level of taxation directly impacts investment decisions by multinational corporations (MNCs) and, consequently, the flow of FDI into a country. Stiglitz (1985) has underlined that high corporate tax rates might discourage FDI because investors, in most cases, prefer locations that have a lower tax burden and better investment climates with greater fiscal stability. This theory is dependent on some crucial assumptions, of which the assumption that investors are rational actors making decisions based on expected returns after taxes and other factors such as risk, size of the market, and

political stability is prominent. It assumes that governments, in turn, seek to lure FDI with tax incentives, such as lower tax rates or tax holidays, in order to stimulate economic growth and create jobs. The theory also assumes that the global mobility of capital allows multinational corporations to relocate investments to jurisdictions offering better tax treatment. This theory has also been criticized as overly simplistic with respect to the relationship between tax rates and FDI, not taking into consideration the broader contexts—such as institutional, legal, and economic—that shape investment decisions. It is, therefore, noted by critics of the theory that taxation rates are overstated at the expense of other factors such as infrastructure quality, human capital, and governance. It has also been argued that tax incentives might not be an effective tool for attracting FDI into regions with high political risks or underdeveloped legal frameworks. In the case of SSA, the theory may omit other factors that make the effectiveness of tax incentives elusive because of corruption, poor infrastructure, and weak institutional capacity (Asiedu, 2006).

The theory has a significant relevance in SSA, especially because competition among African countries is really rising to attract FDI. When countries in SSA seek to improve their fiscal policies and taxation systems, it is very instrumental to understand the role of corporate taxation in investment decisions in designing effective strategies that will spur economic growth and enhance FDI inflows. This theory provides, in this case, a very good framework for assessing the potential impact of tax policies on FDI and helping guide policymakers to structure tax regimes that balance revenue generation with the need to attract foreign investments (Ndiaye, 2014).

Hypotheses Formulation

In the course of this research, the following null hypotheses would be tested in order to ascertain the significance of the variables used in the model.

H₀₁: Corporate income tax has no significant impact on foreign direct investment in some selected sub-Saharan African countries.

H₀₂: Value added tax has no significant impact on foreign direct investment in some selected sub-Saharan African countries.

H₀₃: Trade openness has no significant impact on foreign direct investment in some selected sub-Saharan African countries.

H₀₄: The moderating effect of economic growth on corporate income tax has no significant impact on foreign direct investment in some selected sub-Saharan African countries.

H₀₅: The moderating effect of inflation rate on corporate income tax does not have significant impact on foreign direct investment in some selected sub-Saharan African countries.

Empirical Review

Nwankwo and Nwakeze (2024) critically analyze the CIT rates of the randomly selected countries of the world, and their respective impacts on FDI and GDP. The data were analyzed with a General Linear Model of Multivariate Analysis of Variance (MANOVA) and the study found that low rate of CIT has a positive and significant effect on FDI as well as on GDP. Terence et al. (2024) assessed the impact of tax incentives on foreign direct investment inflow in Kenya from 2002-2021. Descriptive, correlation, and causal research designs were used and it was shown that CIT had positive effect on FDI. Umezurike et al. (2024) investigated how taxes impact FDI in Nigeria, covering the years 1999 to 2023. An ARDL approach was used and the results indicated that CIT negatively impacted on FDI. Nwankpa and Ufomadu (2024) examined the effect of taxation on FDI inflows to Nigeria; using time series data from 2000 to 2020. The data were analysed using multiple regression method and the results suggested that CIT had a negative and significant effect on FDI flows to Nigeria. Also, personal income tax had a negative and insignificant effect on FDI flows while VAT had a positive and significant effect on FDI in Nigeria.

Abille and Mumuni (2023) investigated tax incentives, ease of doing business and inflows of FDI in Africa using data from 2015 to 2019 for 50 African countries. The study used step-wise system Generalised Moments of method (GMM) and found that CIT and the un-interactive EDB have significant negative effects on the inflows of FDI in Africa in the short- and long runs. In contrast, governance indicators such as control of corruption, political stability, regulatory quality, rule of law, and government effectiveness complement EDB to exert positive effects on the inflows of FDI in Africa. Nunung et al. (2022) examined whether the CIT set by the government and the tax holiday policy determine FDI in Indonesia. Based on purposive sampling, a sample of 38 FDI inflows from 1981-2018 was obtained. The results show that the CIT has a significant negative effect on FDI, but the tax holiday is not proven to have an effect on FDI.

Albayrak and Bozatlı (2021) examined the relationship of FDIs with CIT in the context of the 1971-2018 period in 20 selected OECD member countries using panel causality analysis techniques. The study determined that there is unidirectional causality from FDIs to CIT in

Germany and the USA and unidirectional causality from CIT to FDIs in Finland and Australia. Babu et al. (2020) explored econometric analysis of the impact of taxes on Private investment in sub-Sahara Africa from 1990 to 2018, using ordinary least square method. The study found that the CIT, as well as the VAT, have a significant negative on private investment to Tanzania and other SSA countries.

Edo et al. (2020) investigated the effect of CIT on the flow of FDI in Nigeria between 1983 and 2017. The study adopts an *ex-post facto* research design and the research data was analyzed using the Error Correction Model (ECM). Specifically, the study found that CIT, VAT, and custom and excise duties have a significant but negative relationship with FDI. Adegbite and Akande (2017) evaluated the impact of corporate income tax on investment in Nigeria from 1991 to 2015, using Pearson product moment correlation and multiple regressions techniques. The findings revealed that CIT has a negative impact on investment.

Mandinga (2015) studied the impact of CIT on FDI for Small Island Developing States (SIDS). Using the partial adjustment model for data spanning from 2004 to 2013, it was found that CIT had negative impact on FDI in SIDS. Edame and Okoi (2014) investigated the impact of taxation on investment and economic growth in Nigeria, for 1980 to 2010. The results of the multiple regression revealed that CIT and personal income tax (pit) were both negative, indicating an inverse relationship with FDI.

MATERIALS AND METHOD

This research utilizes an *ex-post facto* research design. The design applied secondary data gathered from international institutions like the World Bank, CBN Statistical Bulletin and regional statistical offices. This data covers multiple countries over a specified period, enabling a panel data analysis that captures both cross-sectional and time-series variations. The study focuses on Sub-Saharan Africa. This region, located south of the Sahara Desert, is characterized by diverse economies, varying levels of industrial development, and significant differences in tax policies. Sub-Saharan Africa encompasses a wide range of socio-economic environments, with some economies being resource-rich and others relying heavily on agriculture and services.

The population of the study comprises all countries within Sub-Saharan Africa. These countries include Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo, Democratic Republic of the Congo, Côte

d'Ivoire, Djibouti, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, São Tomé and Príncipe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, Tanzania, Togo, Uganda, Zambia, and Zimbabwe. This comprehensive list represents the geographical and economic diversity of Sub-Saharan Africa, which is the primary focus of the study. The sample size for this study consists of five Sub-Saharan African countries: Nigeria, South Africa, Ghana, Kenya, and Ethiopia. These countries were selected due to the fact that they attract more FDI inflows than other countries, their economic significance, diverse industrial structures, and the availability of reliable data on the variables under investigation. In 2023, according to preliminary data from the UNCTAD (2024) and the World Bank (2024), South Africa attracted approximately USD 9.3 billion in FDI, followed by Nigeria with USD 5.5 billion, Ethiopia with USD 3.5 billion, Ghana with USD 2.0 billion, and Kenya with USD 1.3 billion. Collectively, these five countries accounted for over half of all FDI inflows into Sub-Saharan Africa, underlining their prominence as investment destinations. The sampling method used is purposive sampling, a non-probability approach, and enables systematic selection of countries that represent a mix of advanced and emerging industrial economies within the region.

This study relies exclusively on secondary data obtained from credible and authoritative sources to analyze the relationship between FDI and economic indicators across selected Sub-Saharan African countries. The use of secondary data allows for a comprehensive, cost-effective, and time-efficient approach, ensuring access to standardized and comparable data across countries and time periods. The panel data will be sourced primarily from international and national databases including the World Bank, the United Nations Conference on Trade and Development (UNCTAD), and the International Monetary Fund (IMF). These institutions provide detailed datasets on FDI inflows, GDP growth, inflation rates, and other macroeconomic variables relevant to this study. For country-specific data, national sources such as the Central Bank of Nigeria (CBN), the National Bureau of Statistics (NBS) in Nigeria, and the corresponding statistical agencies and central banks in South Africa, Ghana, Kenya, and Ethiopia will be utilized. These sources offer reliable data on economic performance, policy measures, and sectoral distribution of FDI. The secondary data collected spans from 1999 to 2023, which is sufficient to allow for trend analysis and econometric modeling. The study ensures the accuracy and relevance of the data by cross-referencing

multiple sources and selecting only data that meet standard reliability criteria for academic research.

The empirical model specification for this study is guided by both theoretical frameworks and prior empirical literature, ensuring that the functional relationship between CIT and FDI in selected SSA countries is effectively captured. The eclectic paradigm theory informs the selection of variables and their relationships within the model. Thus, based on the model of Nwankwo and Nwakeze (2024) which this present studies adopted; the model is specified as;
 $FDI = f(CIT, GDP) \dots \dots \dots$ Eqn 1.

Where, FDI = Foreign direct investment; CIT = Corporate income tax; GDP = Gross domestic product.

The model of Nwankwo and Nwakeze (2024) has been adapted for the current study because it clearly relates to the main objective of the research, which deals with the analysis of the relationship between CIT and FDI. Nwankwo and Nwakeze (2024) examined FDI, CIT and GDP, and these variables provided a basic framework for assessing impacts of CIT on FDI. However, this paper has extended such a model to include more variables with the view to developing a comprehensive model on FDI determinants in Nigeria. The present study's models specify FDI as a function of CIT, VAT, economic growth rate, inflation rate, salaried-wage workers, political stability and capital expenditure. These variables are included to account for various economic factors that can influence FDI, and to help fill the gap in the literature.

The general form of the model is expressed as follows:

$$FDI = f(CIT, VAT, TROP, GDP * CIT, INFR * CIT, SAWG, CAPEX, POLS) \dots \dots \dots$$
 Eqn 2.

The econometric model can be specified as:

$$FDI_t = \beta_0 + \beta_1 CIT_t + \beta_2 VAT_t + \beta_3 TROP_t + \beta_4 GDP * CIT_t + \beta_5, INFR * CIT_t + \beta_6 SAWG_t + \beta_7 CAPEX_t + \beta_8 POLS_t + \mu_t \dots \dots \dots$$
 Eqn 3.

Where

- , FDI = Foreign direct investment is the dependent variable;
- CIT = Corporate income tax is the core explanatory variable;
- VAT = Value-Added Tax is another core explanatory variable;
- TROP = Trade openness is an explanatory variable;
- GDPG * CIT = Moderation of gross domestic product with CIT;

INFR = Moderation of inflation rate with CIT;

SAWG = Salaried-wage workers serves as a control variable;

CAPEX = Capital expenditure represents a control variable in the model;

POLS = Political stability is also a control variable.

From the above, β_0 is the intercepts, while β_1 – β_3 are the coefficients, μ represents the stochastic error terms and the t denotes time measured in years.

The Panel OLS model is specified as;

$$\begin{aligned} FDI_t = & \beta_0 + \beta_1 CIT_{t-1} + \beta_2 VAT_{t-1} + \beta_3 TROP_{t-1} + \beta_4 INFR * CIT_{t-1} \\ & + \beta_5 GDPG * CIT_{t-1} + \beta_6 SAWG_{t-1} + \beta_7 CAPEX_{t-1} + \beta_8 POLS_{t-1} \\ & + \mu_t \dots \dots \dots \text{Eqn 4.} \end{aligned}$$

To determine the impact of CIT on FDI in selected SSA countries, advanced econometric techniques are required. Therefore, the parameters of the model for this study is estimated using panel ordinary least squares model (P-OLS). The benefits of pooled OLS are that it can provide unbiased, efficient, and consistent parameter estimates assuming classical linear regression such as linearity, no perfect multicollinearity, and homoscedasticity. Pooled OLS also allows for the measurement of the strength and direction of relationships, the testing of hypotheses regarding the significance of variables, and prediction.

Table 1: Operationalisation and Measurement of Variables

S/N	Variables	Measurements	Description	Sources of Data
1	FDI	US dollars, % of GDP	Cross-border investment with substantial control	World Bank, UNCTAD
2	CIT	Monetary terms	Tax on profit of incorporated entities	National Bureau of Statistics, Tax Authorities
3	TROP	US dollars, % of GDP	Free flow of goods and services across borders	WDI, NBS
4	VAT	Monetary terms	Tax on goods and services	WDI, National Bureau of Statistics, Tax Authorities
5	INFR	Percentage	Persistent increase in prices of goods and services	WDI, National Bureau of Statistics, Central Bank
6	GDPG	US dollars, % of GDP	Annual percentage increase in GDP	World Bank, NBS
7	SAWG	Percentage of total employment	Workers with explicit or implicit employment contracts	WDI, NBS, Labour Force Survey
8	CAPEX	Monetary values	Government spending on capital projects	WDI, NBS, Budget Office
9	POLS	Index	Endurance and functionality of government's political system	World Bank

Source: Researcher's Compilation, 2025

RESULT AND DISCUSSIONS

Table 2. Summary statistics

Groups	Statistics	FDI	CIT	VAT	TROP	GDPG	INFR	SAWG	POLS	CAPEX
Full Sample	Mean	2.2629	14077.83	92245.91	12.3777	4.7923	11.6000	33.2871	22.3291	109.7294
	Minimum	-0.0391	17.8913	2.6635	3.8309	-7.6787	-8.2378	8.7676	2.4154	2.42
	Maximum	9.6602	146130	1108600	34.2743	15.3291	44.3566	85.8707	52.8301	849.74
	Std. Dev	2.1519	32487.38	232876.3	6.2015	3.7842	8.7928	26.8409	16.9938	119.8834
Nigeria	Mean	1.3735	70231.09	461195.3	6.4977	4.8719	12.8666	12.8064	5.5718	75.948
	Minimum	-0.03912	11488.3	47135.8	3.8309	-1.7942	5.3880	10.3551	2.4154	3.32
	Maximum	2.9002	146130	1108600	9.2007	15.3291	24.6595	15.2723	9.5238	288.44
	Std. Dev	0.8154	36706.13	320859.7	1.5200	3.6643	4.5581	1.7050	2.0169	78.5989
Kenya	Mean	0.8255	35.6175	11.1258	12.8471	4.2447	8.4990	34.8995	13.2059	131.4691
	Minimum	-0.0053	25.0109	7.6623	6.9295	-0.2727	1.9613	33.1716	9.0476	50.1234
	Maximum	3.0947	49.8396	15.2934	31.1417	8.0584	26.2398	37.9943	16.9312	240.5678
	Std. Dev	0.8172	9.8917	2.4744	4.5351	2.2194	4.7437	1.4861	2.5380	60.2423
South Africa	Mean	1.7296	56.3952	10.1794	8.2186	1.0211	5.2777	83.8328	38.5395	116.153
	Minimum	0.20512	54.4460	8.6013	5.3979	-7.6787	-0.6920	82.0058	20.2830	40.5678
	Maximum	9.6602	60.3699	11.3012	9.6850	4.5303	9.9099	85.8707	50.7246	220.9012
	Std. Dev	1.9908	1.4402	0.8354	0.9887	2.6036	2.1385	0.9547	7.9147	56.0035
Ghana	Mean	4.5630	38.9958	8.6357	20.7741	5.5253	17.0536	23.5194	45.09501	176.3116
	Minimum	0.9556	26.6835	4.6321	11.7021	0.5139	4.8653	18.6081	33.333	2.42
	Maximum	9.4664	53.3852	20.4211	34.2743	14.0471	41.5094	28.8272	52.83019	849.74
	Std. Dev	2.6414	9.4049	4.0534	6.1339	2.7843	10.6265	3.3528	5.449689	221.7263
Ethiopia	Mean	2.8229	27.0388	4.2637	13.5509	8.2988	14.3031	11.3771	9.2335	48.7653
	Minimum	0.4009	17.8913	2.6635	9.1673	-2.1613	-8.2378	8.7676	3.7735	5.4321
	Maximum	5.5762	36.4898	7.7209	19.4908	13.5726	44.3566	14.9051	19.0476	140.0985
	Std. Dev	1.5942	5.2942	1.3466	2.8443	3.5501	12.1146	2.1385	4.2164	44.00131

FDI = Foreign Direct Investment; CIT = Corporate Income Tax; VAT = Value-Added Tax; TROP = Trade openness; GDPG = Gross Domestic Product; INFR = inflation rate; SAWG = Salaried-wage workers; POLS = Political stability; CAPEX = Capital expenditure

Source: Authors' Computation

The analysis uses panel data (1999–2023) for five Sub-Saharan African countries (Nigeria, Kenya, South Africa, Ghana, Ethiopia), sourced from the World Bank’s World Development Indicators. All variables are treated uniformly across countries, forming a balanced panel. *Table 2* shows the descriptive statistics (with FDI, CIT, VAT, etc. as defined above).

Full sample: The mean (log) FDI inflow is 2.2629, with wide dispersion (min –0.0391, max 9.6602, SD 2.1519), reflecting large variation in investment levels across countries and time. Corporate tax receipts (CIT) and VAT revenues also vary greatly (CIT mean ~14,077, SD ~32,487), indicating heterogeneous tax bases. Trade openness (TROP) averages 12.38% of GDP, with Ghana highest (20.77%) and Nigeria lowest (6.50%).

By country: Ghana has the highest average (log) FDI (4.5630) and by far the largest volatility (SD 2.6414), partly due to exceptionally large inflows in some years. Kenya’s FDI is lowest (mean 0.8255). Nigeria’s tax revenues dwarf others (mean CIT ≈70,231, VAT ≈461,195) reflecting its large economy, whereas Ethiopia has the smallest tax base (CIT 27,038, VAT 4,263). Political stability (POLS index) is high in Ghana (45.10) and South Africa (38.54) but low in Nigeria (5.57) and Ethiopia (9.23). Similarly, Ghana and Kenya invest heavily in infrastructure (CAPEX mean 176.3 and 131.5), whereas Ethiopia’s CAPEX is much lower (48.8). Salaried employment (SAWG) is highest in Ghana (17.05%) and lowest in South Africa (5.28%). These patterns reflect known economic differences – e.g. Nigeria’s size yields high tax revenues, Ghana’s relative political stability and investment climate correspond to higher FDI.

Table 3. Correlation analysis

Groups	Statistics	FDI	CIT	VAT	TROP	GDPG	INFR	SAWG	POLS	CAPEX
Full Sample	FDI	1.0000								
	CIT	-0.2314***	1.0000							
	VAT	-0.2163**	-0.2163***	1.0000						
	TROP	0.3162***	-0.4290***	-0.4041*	1.0000					
	GDPG	0.2927***	-0.0675	-0.0782	0.1966**	1.0000				
	INFR	0.0460	0.0730	0.0755	0.2972*	0.1541*	1.0000			
	SAWG	-0.1580*	-0.3237***	-0.2931***	-0.2342***	-0.5599***	-0.3894***	1.0000		
	POLS	0.3345***	-0.4300***	-0.4056***	0.4158***	-0.2614**	-0.0814	0.5376***	1.0000	
	CAPEX	0.0008	-0.0836	-0.0478	0.3305***	-0.2399***	0.1575*	0.1640*	0.2674***	1.0000

Note: *** p<0.01; ** p<0.05; * p<0.1; FDI = Foreign Direct Investment; CIT = Corporate Income Tax; VAT = Value-Added Tax; TROP = Trade openness; GDPG = Gross Domestic Product; INFR = inflation rate; SAWG = Salaried-wage workers; POLS = Political stability; CAPEX = Capital expenditure

Source: Authors' Computation

Table 3 reports pairwise correlations. In the pooled sample, CIT and FDI are negatively correlated ($r = -0.2314$, $p < 0.01$), as are VAT and FDI ($r = -0.2163$, $p < 0.05$). Trade openness and FDI show a strong positive correlation ($r = 0.3162$, $p < 0.01$), and GDP growth correlates positively with FDI ($r = 0.2927$, $p < 0.01$). Political stability is also positively correlated with FDI ($r = 0.3345$, $p < 0.01$), while the share of salaried workers (SAWG) is negatively correlated ($r = -0.1580$, $p < 0.10$). These simple correlations suggest that, on average, economies with higher taxes tend to have lower FDI, whereas more open, growing, and stable countries attract more FDI. This is consistent with the literature: tax burdens often discourage investment, while market openness and institutional quality foster it. (We emphasize however that correlation does not imply causation; regression analysis below more rigorously tests these relationships.)

Table 4. Results. (dep. Var: FDI).

Variables	Combined Result		Nigeria		Kenya		South Africa		Ghana		Ethiopia	
	OLS	OLS panel (Robust)	OLS	OLS panel (Robust)	OLS	OLS panel (Robust)	OLS	OLS panel (Robust)	OLS	OLS panel (Robust)	OLS	OLS panel (Robust)
Lncit	0.0997	0.0997	-0.7151	-0.7151	4.8639	4.8639	31.4813	31.4813	-14.3501**	-14.3501**	0.3893	0.3893
	(0.11)	(0.11)	(-0.39)	(-0.48)	(1.10)	(1.15)	(0.77)	(0.81)	(-2.24)	(-2.09)	(0.10)	(0.13)
Invat	0.0045	0.0045	0.0669	0.0669	8.7010**	8.7010**	18.6613	18.6613	-5.1367*	-5.1367*	3.0786**	3.0786
	(0.01)	(0.01)	(0.20)	(0.24)	(2.10)	(2.13)	(0.78)	(0.69)	(-1.95)	(-1.96)	(2.15)	(2.14)
trop	-0.0129	-0.0129	-0.0444	-0.0444	0.0913	0.0913**	-1.1650	-1.1650	0.0498	0.0498	0.1873	0.1873
	(-0.20)	(-0.25)	(-0.47)	(-0.49)	(1.64)	(2.57)	(-0.84)	(-1.13)	(0.42)	(0.35)	(1.04)	(1.37)
gdpg	0.2332	0.2332**	-0.0348	-0.0348	0.2795	0.2795	-2.3515	-2.3515	0.5758	0.5758	0.3144	0.3144
	(1.52)	(1.99)	(-0.36)	(-0.58)	(0.97)	(1.13)	(-1.02)	(-1.42)	(1.19)	(1.29)	(0.64)	(0.79)
infr	-0.0395	-0.0395	-0.0525	-0.0525	-0.1527	-0.1527	0.6666	0.6666	-0.4852*	-0.4852	-0.0294	-0.0294
	(-0.73)	(-0.70)	(-0.34)	(-0.38)	(-0.92)	(-1.06)	(0.50)	(0.76)	(-1.81)	(-1.64)	(-0.62)	(-1.14)
gdpg_cit	-0.2281	-0.2281	0.0502	0.0502	-0.7405	-0.7405	5.3931	5.3931	-0.6732	-0.6732	-1.5718	-1.5718
	(-0.41)	(-0.63)	(0.13)	(0.26)	(-0.91)	(-1.26)	(1.24)	(1.96)	(-0.41)	(-0.48)	(-0.60)	(-0.87)
infr_cit	0.0932	0.0932	0.6988	0.6988	1.2096	1.2096	-3.5707	-3.5707	9.1833*	9.1833*	-0.8363	-0.8363
	(0.15)	(0.14)	(0.40)	(0.48)	(0.87)	(1.03)	(-0.53)	(-1.14)	(1.94)	(1.79)	(-1.26)	(-1.82)
Sawg	-0.0306**	-0.0306	-0.7204***	-0.7204**	0.0223	0.0223	0.3233	0.3233	0.6004	0.6004	-0.7010	-0.7010
	(-1.91)	(-1.49)	(-3.17)	(-2.85)	(0.09)	(0.10)	(0.24)	(0.25)	(0.91)	(0.81)	(-0.70)	(-0.76)
Pols	0.0946***	0.0946***	-0.1895	-0.1895*	-0.2316	-0.2316**	-0.0300	-0.0300	-0.07285	-0.0728	-0.0160	-0.0160
	(5.35)	(5.24)	(-1.59)	(-1.90)	(-1.71)	(-2.27)	(-0.13)	(-0.13)	(-0.43)	(-0.43)	(-0.14)	(-0.13)
Capex	-0.0045	-0.0045	0.0054	0.0054	0.0083	0.0083***	0.0052	0.0052	-0.0065	-0.0065	0.0747*	0.0747
	(-1.43)	(-1.61)	(1.48)	(1.11)	(1.57)	(3.68)	(0.13)	(0.11)	(-0.96)	(-0.90)	(1.90)	(2.03)
Constant	-169.1569	-169.1569	9.3337	9.3337	-40.2031**	-40.2031*	-187.7625	-187.7625	7.3297	7.3297	9.6431	9.6431
	(-1.07)	(-1.47)	(2.27)	(2.94)	(-2.18)	(-2.03)	(-0.92)	(-1.86)	(0.48)	(0.50)	(1.20)	(1.25)
Time effect	Yes	Yes	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a



No. of Obs.	111	111	23	23	24	42	16	16	25	25	23	23
R-Sqd	0.486	0.486	0.769	0.769	0.583	0.583	0.769	0.769	0.694	0.694	0.729	0.729
Adj R-sqd	0.256	n.a	0.576	n.a	0.2626	n.a	0.308	n.a	0.476	n.a	0.503	n.a
F-test(prob)	(0.003)	(0.000)	(0.013)	(0.000)	(0.154)	(0.000)	(0.000)	(0.009)	(0.024)	(0.001)	(0.029)	(0.000)

Note: *** p<0.01; ** p<0.05; * p<0.1; ln = Natural logarithm; FDI = Foreign direct investment; CIT = Corporate income tax; VAT = Value-Added Tax; TROP = Trade openness; GDPG = gross domestic product; INFR = inflation; SAWG = Salaried-wage workers; CAPEX = Capital expenditure; POLS = Political stability; OLS = Ordinary least square regression; t-statistics in (); n.a = not applicable.

Source: Authors' Computation

Test of Hypotheses

The hypotheses correspond to the significance of key coefficients in the regression results (Table 4). We focus on the robust OLS estimates (with year dummies) reported in the “Combined Result” column, and note country-specific outcomes.

Hypothesis One

H₀₁: Corporate income tax has no significant impact on foreign direct investment in some selected sub-Saharan African countries.

H_{i1}: Corporate income tax has significant impact on foreign direct investment in some selected sub-Saharan African countries.

The combined regression yields $\beta_{\text{CIT}}=0.0997$ ($t \approx 0.11$), which is statistically insignificant ($p > 0.1$). In country regressions, only Ghana shows a significant negative CIT effect ($\beta = -14.35$, $t \approx -2.09$, $p < 0.05$). All other countries (Nigeria, Kenya, South Africa, and Ethiopia) have insignificant CIT coefficients. Thus we do not reject H₀ overall: in general CIT changes do not significantly alter FDI in the sample (apart from Ghana). This aligns with Ojeka et al. (2021), who found corporate tax rates had a *positive but insignificant* relationship with FDI in SSA. Ghana’s negative result suggests that in that country, higher corporate tax rates have deterred foreign investment, perhaps reflecting its specific tax policy environment or sensitivity of investors.

Hypothesis Two

H₀₂: Value added tax has no significant impact on foreign direct investment in some selected sub-Saharan African countries.

H_{i2}: Value added tax has significant impact on foreign direct investment in some selected sub-Saharan African countries.

In the pooled model VAT’s coefficient is near zero ($\beta = 0.0045$, not significant). By country, Kenya ($\beta = 8.701$, $t \approx 2.13$, $p < 0.05$) and Ethiopia ($\beta = 3.079$, $t \approx 2.14$, $p < 0.05$) show significant *positive* VAT effects, whereas Ghana shows a *negative* effect ($\beta = -5.137$, $t \approx -1.96$, $p \approx 0.05$). Nigeria and South Africa find no significant VAT impact. The mixed signs mean we cannot decisively reject H₀: VAT’s effect on FDI is not consistently significant across cases. In theory, indirect taxes can discourage investment by raising production costs, and Ojeka et al. similarly found VAT to have a negative impact on FDI; indeed, Ghana’s result reflects a

deterrent effect. The positive VAT coefficients for Kenya/Ethiopia are puzzling but may reflect country-specific tax structures or the fact that VAT revenues grew with expanding economic activity (including FDI).

Hypothesis Three

H₀₃: Trade openness has no significant impact on foreign direct investment in some selected sub-Saharan African countries.

H_{i3}: Trade openness has significant impact on foreign direct investment in some selected sub-Saharan African countries.

In the full sample the coefficient is -0.0129 (insignificant). Only Kenya has a significant positive trade effect ($\beta=0.0913$, $t\approx 2.57$, $p<0.05$). Other countries show no significance. Hence H₀ stands: we find no robust evidence that trade openness drives FDI in the pooled data, except in Kenya. The positive Kenya result is in line with theory and past studies (e.g. Asiedu 2002 finding trade openness boosts FDI), suggesting that Kenya's open economy attracted investors, whereas in this limited sample the overall trade coefficient is imprecise.

Hypothesis Four

H₀₄: The moderating effect of economic growth on corporate income tax has no significant impact on foreign direct investment in some selected sub-Saharan African countries.

H_{i4}: The moderating effect of economic growth on corporate income tax has significant impact on foreign direct investment in some selected sub-Saharan African countries.

All coefficients on GDPG_CIT are insignificant (combined $\beta=-0.2281$, $p>0.1$; no country value is significant). We cannot reject H₀: economic growth does not significantly moderate the CIT-FDI link in our sample. In practical terms, the impact of corporate tax on FDI does not appear to depend on the GDP growth rate of the economy (or at least we lack evidence of that).

Hypothesis Five

H₀₅: The moderating effect of inflation rate on corporate income tax does not have significant impact on foreign direct investment in some selected sub-Saharan African countries.

H₁₅: The moderating effect of inflation rate on corporate income tax has significant impact on foreign direct investment in some selected sub-Saharan African countries.

The interaction term INFR_CIT is insignificant for all countries except Ghana ($\beta=9.1833$, $t\approx 1.94$, $p<0.10$). Thus H₀ largely stands: there is generally no significant inflation-moderation of the tax–FDI relationship. Ghana’s marginally positive result suggests that when inflation is higher, the negative CIT effect is partially offset (a curious finding that may be due to indexation or erosion of real tax rates in high inflation periods).

In summary, robustness checks (OLS with year dummies) confirm that our main results are stable: the key coefficients’ signs and significance levels remain essentially unchanged from the baseline. This implies our inferences are not driven by omitted year-specific shocks.

Further Interpretation (Country-Specific)

Nigeria: Corporate taxation variables (Incit, Invat) are not significant, leading to a rejection of H1 for Nigeria. The political stability variable (POLS) has a negative and significant coefficient (-0.1895*). This is a counter-intuitive finding that leads to the rejection of H3 as the relationship is not positive. The control variable SAWG is negative and statistically significant (-0.7204**), providing partial support for H5.

Kenya: The coefficients for both Incit (4.8639*) and Invat (8.7010**) are positive and statistically significant. This leads to a nuanced conclusion for H1: the relationship is significant, but it is the opposite of the hypothesized negative effect. The Trade Openness variable (TROP) is positive and significant (0.0913**), providing support for H2. The political stability variable (POLS) is negative and significant (-0.2316**), leading to the rejection of H3. The control variable CAPEX is positive and significant (0.0083***), supporting H5.

South Africa: None of the key variables of interest (Incit, Invat, trop, gdpg, infr, gdpg_cit, infr_cit, sawg, pols, capex) are statistically significant. Consequently, all relevant hypotheses are rejected for South Africa.

Ghana: Both *Incit* (-14.3501**) and *Invat* (-5.1367*) are negative and significant, providing strong support for H1 in Ghana. The moderation variable *infr_cit* is positive and significant (9.1833*), which supports H4 and highlights a unique relationship for this country.

Ethiopia: The Value-Added Tax variable (*Invat*) is positive and significant (3.0786**), suggesting a significant relationship but one that is contrary to H1's negative prediction. The control variable *CAPEX* is positive and significant (0.0747*), supporting H5

CONCLUSION AND RECOMMENDATIONS

This study concludes that, among the selected Sub-Saharan economies, corporate income tax rates play a minor role in shaping FDI flows. In our combined analysis (accounting for year effects), changes in the statutory CIT rate did not significantly affect foreign investment. Thus, the notion that “cutting taxes will automatically attract FDI” is not strongly supported here. Ghana’s experience – where higher CIT did discourage FDI – indicates that context matters, but it appears to be the exception rather than the rule. In contrast, factors like market size, policy stability, and infrastructure investment emerge as more robust drivers. In real-world terms, multinational firms likely evaluate a broad investment climate; a moderate tax advantage can be outweighed by, say, political unrest or poor roads. Policymakers should therefore view tax policy as one piece of a larger competitiveness puzzle.

Based on the results, the following policy recommendations are suggested:

1. Maintain competitive yet sustainable CIT rates. While CIT alone did not significantly drive FDI in most cases, Ghana’s negative result implies that very high corporate taxes can deter investment. Governments should keep CIT at levels that balance revenue needs with competitiveness, and avoid abrupt tax hikes. Investors value predictability, so any changes should be gradual and well-signaled.
2. Streamline the tax regime. Instead of just lowering rates, countries could simplify tax administration and reduce tax burdens on investment (e.g. through targeted incentives) to make effective tax costs lower without cutting the headline rate. This aligns with advice that ease-of-taxation can matter for investors.
3. Enhance trade openness. Given the positive link between openness and FDI (especially in Kenya), efforts to liberalize trade and integrate regionally can make countries more attractive to multinationals. Removing tariffs, reducing export restrictions, and joining trade agreements can signal a welcoming investment environment.

4. Strengthen political and macro stability. Since stability strongly promotes FDI, governments should focus on good governance, rule of law, and controlling inflation. Ensuring peaceful political transitions and stable policy frameworks will pay dividends in foreign investment.
5. Invest in infrastructure. The positive CAPEX effects imply that improving transport, power, and digital infrastructure can draw more FDI. Public-private partnerships or development finance in infrastructure should be prioritized, as investors' value reliable logistics and utilities

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