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FISCAL POLICY AND FOREIGN DIRECT INVESTMENTS INFLOWS IN TANZANIA: 1991 – 2022

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Abstract

This study investigated whether Foreign Direct Investments (FDIs) inflow in Tanzania is significantly affected by fiscal policy tools such as Corporate Income Tax rate (CIT) and Government Expenditure (GEX) from 1991 to 2022. The study aimed to examine the causal link between the CIT rate and FDIs inflows and GEX and FDIs inflows. The study employed an Augmented Dickey-Fuller (ADF) Unit-root test to check on the stationarity of variables and then utilized the Co-integration and Error correction model (ECM) to calculate the short-term and long-term impacts of one-time series on another. The findings proved a negative short-run and long-run correlation between GEX and FDI but, the casual connection between CIT and FDI is insignificant. Therefore, we fail to reject the null hypothesis of the relationship between CIT and FDI because the observed outcome contradicts the expected results. The study revealed that fiscal policy incentives are not significant factors influencing FDI inflows. Therefore, the policy options are, that the government should rely mostly on non-fiscal policy incentives like dependable macro-economic policy, low startup and operating expenses for enterprises, high-quality infrastructure, and political stability in attracting FDI inflows in Tanzania.

Keywords: *Fiscal Policies, Foreign Direct Investments, Corporate Income Tax and Government Expenditure.*

1. Introduction

The inflow of FDI in the nation is influenced by a number of factors among them is fiscal policy. Other factors determining FDI inflows include; Human capital, Market size, Country Risky which is sometimes assumed to be political risks and Budget deficit/ surplus (Abudeltef, 2013). FDI inflow is one of the most important components of international investment into a country which constitute a large share of GDP in less developed nations such as East African countries like Tanzania (Philips and Obwana, 2000). FDI inflows have been making crucial contributions to economic development of many countries as a crucial source of finance for the advancement of the economy (Oman and Bolbo, 2003). Developing countries have to heavily rely on FDI for a variety of reasons, as exacerbated by Asiedu (2001).

FDI contribute to the development in the host nation by the transfer of technologies and skills, creating jobs, Transnational corporations (TNCs) increase access to global markets for manufactured products and increasing competition in the host nation, guaranteeing that local customers may obtain premium commodities at reasonable costs (Asiedu 2001 and Abudeltef 2013). It is important to note that, FDI inflows into developing countries (including Tanzania) have been influenced by fiscal policies such as taxation (corporation income tax rate), government expenditure, market size (GDP), human capital and country risk (Abudeltef, 2013). These policies are likely either to influence FDI inflows positively or negatively. Fiscal incentives/ rewards including tax holidays and tax reductions create a conducive environment for foreign investors. The provision of these incentives attracts many foreign investors which improve on gross domestic product (GDP) of a country and thus leading to economic growth and development. Other investment incentives have also been utilized by both industrialized and less industrialized nations (including Tanzania) to draw in additional Foreign Direct Investments (FDI). This is due to the fact that, attraction of FDI inflows is a major aim of East Africa as it results into increased performance of the economy as a result of the Gross Domestic Product (GDP). The effect of fiscal incentives on FDI inflows is anticipated to be positive to draw more inflows of FDI from both emerging and developed countries regarding all the advantages of FDI inflows.

In 2016 FDI inflows in Tanzania declined from 1560.8 million US Dollars in 2015 to 864.04 Million US Dollars, this forced many legislators to show the significance of increasing inflows of FDI. A number of incentives were used especially fiscal incentives including Tax exemptions, and Tax holidays among others (Assey, 2017). Despite increasing fiscal incentives over these years, researchers (such as Osama, 2000, Ratnasari 2016 and Well et al 2001) as well as politicians are worried that their effect to Foreign Direct Investment (FDI) inflows is limited. Regarding these incentives, there are mainly two points of view. First, backers (like Kokko, 2003, Bora, 2002, Boly, Coulibaly and Kéré, 2019) claim that they boost

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investment, generate jobs, and have other positive socioeconomic effects in specific circumstances. Secondly, rivals (like Osama, 2000 and Well et al 2001) argue that the costs of fiscal incentives to attract FDI exceed the benefits and that they may not be the optimal method for doing so. They contend that it would be preferable to stabilize the macro-economy and upgrade local infrastructure rather than use incentives, which could make issues like corruption and poor governance worse. Therefore, this paper aimed at addressing the effect of fiscal policy on FDI inflows in Tanzania by employing a broad range of data sets covering the years 1991 to 2022 in an effort to draw some insightful policy conclusions.

2. Literature Review

2.1 . Relationship between FDI and Corporate income tax

Anyawu (2012) investigated FDI's movements by a cross-country regression covering the years 1996–2008. The findings indicate that corporate tax rates adversely impact the inflows of FDI. Also, Klemm and Van Parys (2012) also found a negative impact of corporation tax and FDI inflows; that FDI is increasing in LAC rather than Africa due to lower CIT rates. However, Boly et al (2019) found evidence for Africa, reduced CIT rates have the potential to boost FDI influx into both host and neighboring nations. The study carried out by Kawano and Slemrod (2016) in East European nations on the connection between CIT rates and FDI revealed a negative and significant impact between CIT rates and FDI inflows. And that in an effort to draw in FDI, CIT rates should be lowered. This is supported by Annuar, et al (2018) indicated that a reduction in CIT rates have a direct effect on encouraging FDI inflows and vice versa. On contrary, the study of Ratnasari (2016) found no significant impact between CIT rates and FDI inflows.

2.2. Relationship between FDI and Government expenditure

Schoeman et al. (2007) estimate a long-run co-integration equation for FDI in South Africa over the previous 30 years in order to analyze how government policy (mostly taxes and deficits) affects FDI. Particularly significant are the relative tax burden on potential investors in South Africa and the deficit/GDP ratio, which signify fiscal restraint. The primary conclusion is that FDI flows to South Africa are negatively impacted by both fiscal policy variables. The authors claim that by modifying fiscal policy, the South African government can turn its economy into one that is welcoming to investors. Given that taxes are still comparatively high, careful consideration should be given to this matter. The study of Munene (2019), Olaoye and Afolabi (2021), Paul and Furahisha (2017), Kyissima et al (2017) and Okorie et al (2020) found no connection between the Government expenditure and FDI inflows. But

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Odim et al (2018) and Nketia (2002) revealed a negative impact of Government expenditure and FDI inflows and Economic growth.

2.3. Relationship between FDI, Corporate income tax and Government expenditure

According to Andersen et al (2017) they revealed that fiscal policy incentives are widely used to encourage FDI in most of the less industrialized nations. The study was done on 107 developing economies but out of which 49 to 72% offer the following types of fiscal incentives like; Tax holiday and tax allowances. The study also showed that between 2009 and 2015 there were more other tax incentive introduced in about half of the developing economies in the study. But it better to know the impact of these kinds of incentives on FDI. Dumba (2011) when carrying out a multi-country study, on the connection between fiscal policy and inflows of FDI, he found that tax incentives had been effective in attracting FDI inflows. Using simultaneous-equation model, Merceline (2012) did not discover enough proof to draw the conclusion that tax incentives had a positively major impact on FDI inflows in Philippines for the period 1996-2010.

Madete (2006) has carried out a study using both quantitative and qualitative data to analyse the effect of state decisions from 1961 to 1997 on the caliber and efficiency of FDI inflows into Tanzania. According to his research, annual economic growth significantly increases net inflows of FDI, suggesting that rapid economic expansion boosted FDI inflows. Furthermore, the findings demonstrate that FDI inflows are strongly discouraged by high corporate tax rates. The pace at which government decisions are made, bureaucracy, and corruption were found to be significant barriers to FDI inflows and their operations, according to qualitative findings. Besides, William (2010) noticed that reduction in corporation tax rate and other incentives in favour of foreign investors attract FDI inflows and increasing GDP growth. According to the study by Yonna (2009) FDI's correlation with other macroeconomic factors such as domestic investment, domestic consumption and changes in exports and imports, it is proven that there is a negative relationship between FDI and domestic consumption. However, the study shows no significance influence between FDI and domestic investment and also FDI does not influence changes in exports and imports.

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3. Methodology

3.1 Model Specification

Although there are many factors which determine foreign direct investment, this study only concentrates mainly on fiscal policy variables such as corporate income tax rate (CIT) and government expenditure (GEX). These variables have been chosen because they seem to have big influence on FDI inflows and are expected to give better results. In order to clearly identify the part of fiscal policy in influencing Foreign Direct Investment inflows we put forward the following model;

$FDI = f(CIT_t, GEX_t, \mu_t)$ (1)

Where;

FDI_t – is the Foreign Direct Investment inflows at time *t*.

CIT_t – is the Corporation Income Tax Rate at time *t*.

GEX_t – is the Government Expenditure especially government consumption at time *t*.

μ_t – is the Error term

Model (1) can be re-specified as follows in logarithmic form:

$LOGFDI = \beta_0 + \beta_1 LOGCIT_t + \beta_2 LOGGEX_t + \mu_t$ (2)

It should be noted that, in the above model (2) the study incorporated the stochastic error term μ_t which takes into consideration everything else, outside the variables listed in the model as independent variables, that affects the dependent variable.

In this we use natural logarithm because if variables are in logarithm, the coefficients of the co-integrating vector can be integrated as long-term elasticities.

Model (2) can be expressed as follows for the unrestricted ECM:

$$\Delta LOGFDI = \beta_0 + \beta_1 LOGFDIt_{-1} + \beta_2 LOGCIT_t + \beta_3 LOGGEX_t + \sum_{i=1}^{a} \beta_5 \Delta FDI_{t-1} + \sum_{i=1}^{b} \beta_6 \Delta LOGCIT_{t-1} + \sum_{i=1}^{c} \beta_7 \Delta LOGGEX_{t-1} + \mu_t \quad (3)$$

The anticipated indicators of the parameters are; β_0, $\beta_1 > 0$, $\beta_2 < 0$, $\beta_3 < 0$.

The stochastic error term (μ_t) is taken to be independently, identically and normally distributed i.e. $\mu_t \sim iid\ N(0,\sigma^2)$ and (*t*) index time. In order to analyze the long term connection of the Error correction Model of co-integration test based on Johansen test is employed with both null and alternative hypotheses are as follows;

H_0: $\beta_1 = \beta_2 = \beta_3 = 0$ (No long run relationship)

H_1: $\beta_1 \neq \beta_2 \neq \beta_3 \neq 0$ (A long run relationship exists)

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3.3. Study variables and data sources

Table 1: Shows the variables, Data, data sources and expected sign

Label	Variable	Data	Source	Exp. Sign
FDI	Foreign Direct Investment	FDI inflows (million US Dollars)	UNCTAD, BOT, World Bank, Economic and operation reports	
CIT	Corporate Income Tax rate	Taxes imposed on profits of registered companies or investments.	UNCTAD, IMF, NBS-Tanzania, Economic and operation reports	-
GEX	Government Expenditure	Government expenditure as a share of GDP and is measured by total government consumption on day-to-day government operations.	BOT, Economic survey reports Economic and operation reports (various issues),	-

3.4. Estimation method and data analysis

The study uses a time series analysis approach. The time series enables us to establish the correlation between FDI, CIT, and Government Expenditure. In the study Augmented Dick-Fuller approach is employed to test whether series are stationary or not, Johansen test for cointegration to measure the long-term connection, and ECM to check the short- and long-term connection among the series. The model formulated includes two independent variables to be estimated, these are; Corporation Income Tax rate (CIT) and Government Expenditure (GEX). Also, In order to reduce the series' oscillations and make it less autoregressive, the natural log of each variable has also been taken in this study.

4. Empirical results and discussion

4.1: Descriptive Statistics

Descriptive statistics are shown in Table 4.1 for the collected data of the selected variables from 1991 through 2022. It contains the mean values, standard deviations, Skewness probabilities, Kurtosis probabilities and the observations. The outcome reported in the table 4.1 shows positively skewed data indicating that the majority of data are centered to the right of the mean. In this instance, the data are therefore regularly distributed.

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Table: 4.1 Descriptive Statistics

FDI inflows (million US Dollars)		*Corporate income Tax (CIT) %*		*Government Expenditure (GEX) % of GDP*	
Mean	757.0628	Mean	26.35938	Mean	10.84687
Std. Dev.	594.0271	Std. Dev.	4.545885	Std. Dev.	3.424954
Variance	352868.2	Variance	20.66507	Variance	11.73031
Kurtosis	2.222041	Kurtosis	2.171311	Kurtosis	4.288027
Skewness	**0.4905414**	**Skewness**	**0.784205**	**Skewness**	**1.483586**

Source: Data Analyzed by the Researcher 2023

4.2: Variable Correlation

Table 4.2 shows the correlation of FDI inflows with Corporation income tax rate and Government expenditure. The correlation results show that spending by the government and inflows of FDI in Tanzania are inversely correlated. It should be noted that, correlation matrix does not show the causality of the variables but what is observed might be the outcome.

Table: 4.2 Variable Correlation Analyses

	FDI inflows (million US Dollars)	*Corporate Income Tax (CIT) %*	*Government Expenditure (GEX) % of GDP*
FDI inflows (million US Dollars)	1.0000		
Corporate Income Tax (CIT) %	0.5333	1.0000	
Government Expenditure (GEX) % of GDP	**-0.4225**	**0.2173**	**1.0000**

Source: Data Analyzed by the Researcher 2023

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4.3: Augmented Dickey-Fuller Test

Table 4.3, ADF Test results show that variables are tested for unit root and are significant at 5 percent. The absolute Test Statistics (-2.903) is more compared to the 5% critical value (-2.083). This means variables are stationary. Therefore, it is decided to reject the null hypothesis of non-stationarity.

Table: 4.3 Augmented Dickey-Fuller Unit Root Test Results

dfuller fdi, lags(0)

D-F test for unit root	Number of obs =		31
	Interpolated Dickey-Fuller		--------
Test Statistic	1% Critical	5% Critical	10% Critical
Z(t) -2.903	-3.709	-2.083	-2.023
MacKinnon's approximate p-value for	**Z(t) = 0.0000**		

Source: Data Analyzed by the Researcher 2023

4.4: Co-integration analysis results

In the study which utilizes time series data, the variables need to be checked for stationarity before the causality test is conducted. The co-integration analysis is very important as it prevents erroneous regression findings and indicates whether the time series variables may be used together in the long run. This study employed/ used the Johansen Test. Table 4.4 below, the results shows that the t-statistic in absolute terms is Z(t) 36.3288 which is greater than 29.68 at a 5 percent significant level, this concludes that our data are co-integrated and therefore, we can run the VECM. The co-integration analysis is very crucial in time series data because it can be applied in the long run to avoid spurious regression results. The reported outcomes in table 4.4 below show that the data have a long-run relationship and hence the presence of dependent and independent variables is not spurious.

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Table: 4.4 Co-integration analysis results

Johansen tests for cointegration

Trend: constant Number of obs = 28
Sample: 1995 - 2022 Lags = 4

Maximum rank	parms	LL	eigenvalue	trace statistic	5% Critical Value
0	30	-289.58756	.	36.3288	29.68
1	35	-275.04465	0.64611	7.2430	15.41
2	38	-272.25783	0.18050	1.6694	3.76
3	39	-271.42314	0.05788		

Source: Data analyzed by the Researcher 2023

4.5: Error Correction Model

This model is applied to compute both short- and long-term dynamics among variables, it estimates the short-run and long-run relationship of LOGCIT and LOGGEX on FDI as a dependent variable. The outcomes in the short- and long-term relationship among variables are availed in the Table 4.5 below;

Table: 4.5 Error Correction Model

Vector error-correction model

Sample (Adjusted): 1993 – 2022 No. of obs = 30
Log likelihood = -317.7104 AIC = 22.31403
Det(Sigma_ml) = 317128 HQIC = 22.56804
SBIC = 23.10804

Equation	Parms	RMSE	R-sq	chi2	P>chi2
D_fdiinflows	5	327.46	0.3795	15.29163	0.0092
D_cit	5	1.79499	0.4502	20.4688	0.0010
D_gex	5	1.3181	0.3252	12.04983	0.0341

	Coef.	Std. Error	Z	p>(z)	[95% Conf.	Interval]
_ce1 |L1	-.1053708	.093772	-1.12	0.261	-.2891606	.0784189
LOGFDI	-.4320011	.1709077	-2.53	0.011	-.766974	-.0970283
LOGCIT	17.84375	27.45485	0.65	0.516	-35.96677	71.65427
LOGGEX	54.16945	43.04838	1.26	0.208	-30.20383	138.5427
_cons	.0231083	89.51938	0.00	1.000	-175.4317	175.4779

Source: Data Analysed by the Researcher 2023

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From the above Table 4.5, Empirical results show that the ECM term has a coefficient of (-.1053708). This means that it is adjusting fast at a rate of 10% towards long-run equilibrium. The empirical findings of Error correction mechanism show that the variables have a long-term connection. The outcomes also indicate that relationship between variables Corporate Income Tax Rate (CIT), Government expenditure (GEX) and FDI in Tanzania is not significant. The observed results analyzed in Table 4.5 denies the initial hypothesis, which suggested there was a substantial link between CIT, Government expenditure (GEX) and FDI inflows. The failure to reject null hypothesis clearly shows that the observed outcome/ connection deviates from what was anticipated.

5 . Summary and Conclusion

The purpose of this paper was to assess whether Foreign Direct Investment inflows in Tanzania is affected by Fiscal Policy instruments for the period of 1991 to 2022. It has been realized that fiscal policy variables like CIT rate and government expenditure have insignificant effect on the FDI inflows into the country. This means that, the government should make emphasis on other factors such as improving infrastructure, and creating the social, economic and political climate which is favourable to attract more FDI and thus achieving all gains from FDI like technology transfer, employment for the citizens among others.

6 . Policy implications and Recommendations

The results of this study have led to many policy implications in Tanzania. It was proved that fiscal factors like CIT rate and government expenditure have insignificant effect on FDI inflows in Tanzania. Therefore, there is a need to revise on the tax incentives provided by the government to draw in FDI's. Instead, they should rely on investment incentives (non-fiscal policy incentives) like dependable macroeconomic policy, low startup and operating expenses for enterprises, high-quality infrastructure, and political stability, in attracting FDI inflows in Tanzania.

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