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The Moderating Role of Foreign Exchange Rate in the Relationship between Outward Foreign Direct Investment and Economic Growth in Kenya (1986-2021)

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Abstract

Purpose: The purpose of this study was to investigate the moderating role of foreign exchange rate in the relationship between outward foreign direct investments and economic growth in Kenya. The central purpose of any government is to formulate strategies that boost economic growth and correct capital flight. The Foreign Exchange Rate (FER) fluctuations generated by globalization are expected to leverage the effect of capital flight and boost economic growth, but this seems not to happen. Further, the loss of foreign exchange reserves resulting from capital flight demonstrates that some financial savings are lost to the economy. Since FER is a strong determinant of Gross Domestic Product (GDP), the effects of this scenario are a great economic concern. The dependent variable for this study was economic growth, while the independent variable was outward foreign direct investments. The general objective of this study was to investigate the moderating role of foreign exchange rate in the relationship between outward foreign direct investments and economic growth in Kenya. The specific objective was to determine and evaluate the effect of outward foreign direct investments on the economic growth in Kenya as well as to investigate the moderating role of foreign exchange rate in the relationship between outward foreign direct investments and economic growth in Kenya. The indicator of economic growth was the percentage change in GDP.

Methodology: This study adopted an ex-post facto research design with a sample size of 35 years from 1986 to 2021 and relied on secondary data from Kenya National Bureau of Statistics (KNBS), International Financial Statistics (IFS), Central Bank of Kenya (CBK), International Monetary Fund (IMF), World Development Index (WDI), United Nations Commodity Trade (UN Comtrade) and African Development Indicators (ADI).

Findings: Using a panel data model, the study found that outward foreign direct investments did not have any significant effect on economic growth when foreign exchange rate was included in the model as an interaction variable. Foreign exchange rates had a significant effect on economic growth. The relationship was inverse indicating that the foreign exchange rate affected economic growth negatively. The interaction variable had a positive and significant coefficient indicating that the foreign exchange rate moderated the relationship between outward foreign direct investment and economic growth.

Unique contribution to theory, practice and policy: From the empirical findings, we can infer that outward foreign direct investment did not constrain resources and did not affect economic growth.

Key Words: *Outward Foreign Direct Investments, Foreign Exchange Rate, Economic Growth, Panel Data*

Introduction

Foreign exchange rate is determined by the foreign financial transactions of a country (Joo, Shawl, & Makina, 2022). If the investors anticipate currency depreciation, they hedge against this risk by investing abroad where they will earn high returns and avert the risk of loss of purchasing power. As a result, this outflow of foreign direct investments and portfolio diversification exerts pressure on the exchange rate (Zakaree & Ayodeji, 2012). If capital flight is not regulated, it would cause the exchange rate movement uncontrollable, as it tends to remain high when the foreign exchange rate is depreciating (Auzairy et al., 2016). Foreign exchange rate is a strong determinant of economic growth and thus, its role on the relationship between outflow of foreign capital and economic growth is of great economic concern in Kenya.

An overvalued exchange rate leads to increasing expectations of depreciation in the near future (Egbe, 2015). Thus, to avoid impending future welfare losses, residents are motivated to hold at least part of their assets abroad (Sandra, 2015). On the downside, nevertheless, foreign trading has been often held to be culpable for acting as a main catalyst for destabilizing domestic capital markets of the host countries, most notably in the aftermath of the currency and financial debacles over the 1990s and 2000s (Ahmed, 2016). If the exchange rate is well managed, foreign currency reserve would be sufficient, foreign exchange rate would stabilize and economic growth realized (Khondker, Bidisha & Razzaque, 2012). Poorly managed exchange rates can be disastrous for economic growth. Its fluctuations create macroeconomic uncertainty, affect the mobilization of foreign capital and divert financial resources intended to fill the domestic resource gap and expand investments (Egbe, 2015). The anticipation of a devaluation of the national currency is a major cause of outward flow of foreign direct investments as speculators would be rational and choose to withdraw their funds from domestic economy to the foreign ones. Countries with a stable foreign exchange rate which is a basis for strong macro-fundamentals suffer lower flights and are able to attract more flows after a financial crisis (Fratzscher, 2012).

It has been widely acknowledged, both in academia and in the professional investment sphere, that the ardent curiosity of investors to unearth the potential portfolio investment opportunities domiciled in many developed and emerging countries is deemed to be a clear manifestation of the increasingly globalized nature of financial markets (Ahmed, 2016). As such, a financially healthy economy requires the right foreign exchange rate that does not stray too far from its equilibrium (Nag, Baksi, & Majumder, 2015). The regulation of outward flow of foreign capital helps to control foreign exchange rate movements as OFDI tends to remain high when the exchange rate is

depreciating (Auzairy et al., 2016). It is the responsibility of the existing government to develop effective policies that seek to regulate and control the flow of foreign capital and maintain a stable competitive real exchange rate that boosts a country's economic growth (Sandra, 2015; Cherop & Changwony, 2014; Ndikumana & Boyce, 2011).

Foreign direct investments involve a long-term relationship, which reflects a lasting interest of a resident entity in one economy in a firm or organisation that is resident in an economy outside that of the direct investor (IMF, 2022). An organizations lasting interest is determined when the direct investor acquires a minimum of 10% voting rights and powers in another organization (OECD, 2021). Outward foreign direct investments is widely believed among academicians, policy makers and international institutions that its retrogressive for the economic development of host countries as it leads to outflow of capital from the host developing countries (Joo, Shawl, & Makina, 2022). Compared to the other forms of capital outflows, outward foreign capital flow is viewed as the main reason for decreased economic growth of a country (Joo, Shawl, & Makina, 2022).

The debate on the outflows of foreign direct investments in international finance literature has attracted greater attention in the allocation of financial resources for developing countries in the recent past. Most developing countries have attempted to differentiate between recorded sources and use of financial resources in their respective economies (Gusarova, 2009). This has been in response to the realization that the outflow of foreign direct investments leads to lost domestic financial resources. This automatically translates to wasted opportunities for economic growth (Al-basheer, Al-Fawwaz, & Alawneh, 2016). Where it exists, the source country experiences macroeconomic instability, manifested through increased outward foreign direct investments as well as foreign exchange rate overvaluations (WESP, 2021).

The recent global turmoil has interrupted the flow of foreign capital into the country. Regionwide, economic growth is projected to slow down to 3.6 percent in 2022 and 3.7 percent in 2023. This is largely due to the muted investment and an overall worsening balance of trade more so occasioned by the war in Ukraine as well as the carried forward effects of the Covid 19 pandemic. Even with a drop in their terms of trade, diversified non-resource-intensive countries will remain to be among the region’s more dynamic and resilient economies, projected to have a continued growth of above 4.6 percent (IMF, 2022).

Outward foreign direct investment outflows if not well regulated often raise the probability of systemic sudden stops, i.e. large unexpected falls in capital inflows which if uncontrolled, can easily lead to a rapid increase to liquidity crises in the host country (Koskei, 2017). As inveators are rational beings, they would rapidly perform institutional shifts such as sovereign wealth fund, mutual funds, pension funds, and insurance companies who have created immense avenues for portfolio diversification. Rational investors would always seek risk free returns (Auzairy, Fun, Ching, Li, & Fung, 2016). Outward foreign direct investment outflows have a direct effect on the foreign exchange rate as well as the economic growth of a country (Ayala, Nedeljkovic, & Saborowski, 2015). Ceteris paribus, outward foreign direct investment outflows have positive role

in a country's economic growth, as it is a source of foreign exchange which would positively contribute to economic growth of a country (Ministry of Trade and Industrialization, 2021).

Since mid-1980s, the growth rate of world's foreign direct investment outflows has surpassed that of world's GDP and domestic investment, making it an economic concern. Further, these outflows from the developing countries have shown signs of volatility than that from advanced economies as the economies of most developing countries are small and as such a small amount of foreign outflow makes a big impact in these economies (World Bank, 2022). Between 2008 and 2009, FDI outflows from advanced economies declined by 46 percent, while, in the developing countries, the decline was only 22 percent. (UNDP, 2012.) The international financial institutions have influenced African countries through Structural Adjustment Programs (SAP), to adopt exports and open their markets to foreign trade (Gupta & Sengupta, 2013). Global growth in 2022 has been revised down by almost ½ percentage point, driven in large part by a drop for both advanced economies and China of about 1 percentage point. With the rapid pickup in global inflation, monetary policy normalization in advanced economies has sped up. In this context, capital flows have remained precarious.

In 2021, MNEs from developed economies more than doubled their investment abroad to $1.3 trillion, from $408 billion. Their share in global outward foreign capital inflows rose to seventy five percent of the global capital outflows. The strong volatility of conduit countries continued in 2021. Aggregate outward investment by European MNEs rebounded from the anomalously low level in 2020 of -$21 billion to $552 billion. Outflows from the Netherlands reversed direction, jumping back to $29 billion from -$191 billion in 2020, with the difference accounting for two thirds of the rise in investment by EU MNEs. A sharp increase in outflows from Germany to $152 billion (from $61 billion in 2020) made it the second largest investor home country in the world. Among the components, reinvested earnings of German MNEs abroad jumped to $66 billion – the highest level ever recorded. Outflows from Ireland increased also, to $62 billion from -$45 billion in 2020, mainly owing to several large acquisitions, such as the purchase of GE Capital Aviation Services (United States) by AerCap Holdings for $31 billion. Outward investments by MNEs from other European countries turned positive to $154 billion from -$87 billion in 2020. MNEs from the United Kingdom increased their investment abroad to $108 billion from -$65 billion in 2020, mainly in the form of reinvested earnings. Outward FDI flows from the Russian Federation increased to $64 billion from $7 billion, mostly directed to Cyprus. (UNCTAD, 2022).

The World Bank group in their 2022 annual report projected that growth in Eastern and Southern Africa will decelerate from 4.1 percent in 2021 to 3.1 percent in 2022 and is estimated at 3.4 percent and 3.8 percent in 2023 and 2024, respectively. This deceleration in 2022 growth reflects short-term headwinds, the slowdown in the global economy, existing effects of the covid 19 pandemic, increased and impacts of the war in Ukraine. It's worth factoring in that the magnitude of each countries' recovery will vary across the region. South Africa is projected to a growth decline by 2.8 percent in the year 2022, the fact that it continues to benefits from high commodity

prices while still being held back by structural challenges notwithstanding. (World Bank, 2022). For the first half of the year, outflows from sub-Saharan Africa rivaled those associated with the onset of the COVID-19 crisis or the 2015 commodity price shock, adding to pressure on exchange rates, with the largest depreciations observed in Ghana, Malawi, and Sierra Leone. (IMF, 2022)

Several studies have looked at the relationship between outward foreign direct investment, foreign exchange rate and economic growth. Those who have explored the nexus between outward foreign direct investment and economic growth argue that that outward foreign direct investments do not have an independent influence on a country's economic growth but affects growth only in presence of host country characteristics, which are known as the absorptive capacities possessed by countries to benefit from FDI outflows (Joo, Shawl, & Makina, 2022). The theoretical assumption that outward foreign direct investments decelerate growth has been tested by several empirical researchers from time to time using different samples and research methods. Several macroeconomic studies reveal a negative impact of OFDI on economic growth, other studies reveal that it has a positive effect on the economic growth of host economy. Foreign exchange rate is a strong determinant of economic growth and thus, its role on the relationship between outflow of foreign capital and economic growth is of great economic concern in Kenya. Against this backdrop, the present study makes an attempt to investigate the moderating role of foreign exchange rates on the relationship between outward foreign direct investments and economic growth in Kenya.

The paper is structured as follows; section two discusses the interrelationship between outward foreign direct investment, foreign exchange rate and economic growth. Section three covers methodology, section four discusses the results and section five concludes the study.

Literature Review

The Investment Development Cycle Theory

John Dunning (1993) designed this theory and demonstrated that a country's outward and inward foreign investments depend on its level of economic development, measured by its gross domestic product. This theory states that leading countries follow a predictable pattern consisting of five stages (Iacovoiu & Panait, 2014). Stage 1 demonstrates a less developed economy that does not attract, nor generate any FDI. Stage 2 shows industrializing developing countries seeking to attract FDI through improved location advantages and generate minimum outward foreign direct investment, leading to a negative net investment position (OFDI less inward FDI (IFDI)). Stage 3 shows that a country attracts significant FDI and generates OFDI based on its innovations and international specialization. The net investment position remains negative. In stage 4, OFDI is higher than IFDI and the net investment position is positive. Stage 5 demonstrates advanced countries, with a balanced net investment position and very high levels of IFDI and OFDI (Zang, 2012).

The proponents of this theory such as Duran and Ubeda (2005) poised that OFDI improves the local companies' ownership advantages and enhances OFDI in future. They associated stages 1-3

with developing countries while stage 4 and 5 with developed ones. Behbehani and Al Hallaq (2013) posited that if the home country uses OFDI as a substitute for its local investments, the increase in its OFDI may reduce the economic growth of the home country. Nayak and Choudhury (2014) in their study embraced the fact that Governments can influence a country's stage of economic growth by regulating OFDI.

This theory was critical to this study as it assessed the effect of outward foreign direct investments on economic growth in Kenya. The theory demonstrate that outward foreign direct investments increases with increased economic development, which offers firms more ownership advantage on economies of scale in production. This investment diversification yields a country locational advantage which goes to boost a country's economic growth (Zang, 2012). Wang and Wong (2007) suggested that economic growth is positively related to OFDI, and that its increase offers home country financial institutions more liquidity to lend to foreign investors, thus boosting a country's economic growth.

Purchasing Power Parity (PPP) Theory

Professor Gustav Cassel of Sweden propounded this theory in 1918 and postulated that the nominal foreign exchange rate should reflect the purchasing power of one currency against another (Stephen & Sanmi, 2011). Whenever a nation saves a dollar of income, it can use it to finance domestic capital or a foreign asset and promote its economic growth (Suranovic, 2012). This theory demonstrates that the transactions of a country in the form of capital outflows directly and indirectly determine its foreign exchange rates and ultimately affects its economic growth (Bohlin, 2010). Humphrey (1979) opined that the PPP doctrine in respect to disturbances to equilibrium, postulates an automatic self-correcting mechanism that keeps the actual exchange rate hovering close to its equilibrium level. PPP is frequently used in computing GDP and GDP per capita across countries. Although GDP per capita has often been criticized as an incomplete statistic of economic well-being, it explains a country's economic performance making the PPP a reliable tool to measure the relative size of economies (Schreyer & Koechlin, 2002). Radermacher and Durand (2012) described the PPP as an essential tool to compare the price and volume levels of GDP and other indicators globally.

The World Bank uses PPPs to measure a country's economic growth, which narrows the gap between the richer and poorer countries considerably (WEO, 2015). Ayadi (2008) opine that increased returns on foreign assets relative to domestic asset as well as the uncertainty about whether purchasing power parity holds encourages outflow of foreign direct investments in a country. In the foreign-currency exchange market, net capital outflow represents the source of the supply of dollars, making it the variable that links the two markets (Ellyne & Mbewe, 2015).

This theory demonstrated its importance in the moderating role of foreign exchange rate to the relationship between outward foreign direct investments and economic growth in Kenya. It demonstrated that when calculating gross domestic product per capita, PPP gives a more accurate picture about a country's overall standard of living, which is a reflection of its economic growth.

When capital flows out of a country, it simply offers a purchasing power against commodities and services in its own country (Taylor & Taylor, 2004). Most exchange rate systems have failed to purge the incidences of outward flow of foreign capital and the motivation to correct the growing foreign exchange rate has largely been missing (Stephen & Sanmi, 2011). Ultimately, when investors anticipate a real depreciation, being rational, they result to shifting their investments abroad to avoid the risk of loss of purchasing power. This affects the gross domestic product negatively and further depreciates the domestic currency (Ellyne & Mbewe, 2015).

Outward Foreign Direct Investment and Economic Growth

The movement of capital from a developing economy is viewed as an investment outflow that negatively affects economic growth (Obidike et al., 2015). Foreign direct investment outflows are a function of high uncertainty and risk with respect to returns on assets held domestically (Henry, 2013). Thus, investors often prefer to hold their assets abroad as a part of risk diversification (Obidike et al., 2015). This worsens a country's economic activity, more so if it heavily depends on internal financing (Uguru, 2016). The governing authority should seek to achieve an equilibrium state between the levels of foreign direct investment outflow and economic growth.
Foreign direct investment outflows have adverse effect on the growth rate of GDP. The stagnation and economic decline resulting from lack of regulating the foreign direct investment outflows are an indication that the government has lost control over the economy (Ndikumana & Boyce, 2008). For this reason, both licit and illicit capital outflows have found an easy escape out of the host country. Although there are numerous studies on the relationship between foreign direct investment inflows and economic growth, the number of studies on the relationship between outward foreign direct investment and economic growth is very limited (Ameer, Xu & Alotaish, 2017). Thus, there was need to investigate the effect of foreign direct investment outflow on economic growth in Kenya.

Outward Foreign Direct Investments, Foreign Exchange Rate and Economic Growth

The increase in a country's economic growth automatically attracts foreign capital, as investors seek to diversify their investments in a bid to benefit from higher returns on foreign invested capital. This accelerates growth of domestic economy (Ajayi and Ndikumana, 2015; Sibanda et al., 2013). Ultimately, a country may experience a competitive exchange rate that translates to a higher economic growth (Ndikumana & Boyce, 2011). Foreign exchange rate is determined by a country’s foreign financial transactions (Bohlin, 2010). If investors anticipate a currency depreciation, they hedge against this risk by investing abroad where they will earn high returns and avert the risk of loss of purchasing power. As outward foreign direct investments involves the demand for foreign currency, it tends to exert pressure on the exchange rate, replicated in the depreciation of a country's local currency (Zakaree & Ayodeji, 2012). If outward foreign direct investments are not well regulated, it would make the foreign exchange rate movement

uncontrollable, as outward foreign direct investments increases when domestic currency depreciates (Maana et al., 2015; Auzairy et al., 2016).

The early neo-classical economists ignored the exchange rate in their economic growth models but focused more on savings and investment as key determinants of growth. They emphasized more of closed economy models which assumed that exchange rate had no role in the growth process (Omankhanlen, 2011). Financial globalization has made the exchange rate a key determinant to economic growth as it has opened up international markets to foreign investors making foreign exchange rate a key determinant to economic growth (Ayala et al., 2015). Poorly managed exchange rates can be disastrous for economic growth, and that a competitive currency is a key factor to a successful growth strategy (Henry, 2013). The policy makers should seek to ensure effective policies exist to regulate capital flight, maintain a stable and competitive foreign exchange rate that boosts a country's GDP and controls the level of outward foreign direct investments (Sandra, 2015; Uguru, 2016). Thus, foreign exchange rate may explain the relationship between outward foreign direct investments and economic growth in Kenya.

Methodology

This study adopted an ex-post facto research design as well as a positivist research philosophical paradigm, which was epistemological and characterized by a theoretical belief that the independent variable affects the level of the dependent variable, from empirically testable hypotheses. Positivists believe that a reality is stable and can be observed and described objectively without interfering with the phenomena being studied (Levin, 1988). The study focused on both local and internationally licensed and recognized financial data collection agencies and institutions. Purposive sampling was used to select the data source as well as the period of study. The secondary data collected from these agencies on capital flight, foreign exchange rate and economic growth covered the period of 1986 to 2021. Purposive sampling method was employed because it enabled the researcher to select samples that gave sufficient information about the dependent and independent variables.

Descriptive statistics were essential in determining the statistical properties of the model so as to select the proper functional form of the estimable model. Therefore, the study sought to determine the spread of data which included calculating for the mean, standard deviation, maximum and minimum values of outward foreign direct investments, foreign exchange rate and economic growth over time. A correlation analysis was conducted to check for highly correlated variables and avoid the problem of multi-collinearity and serial correlation which is common in time series data. Multicollinearity is a statistical phenomenon in which two or more predictor variables in a model are highly correlated. Serial correlation is where the error term in a time series transfer from one period to another.

To find out whether foreign exchange rate moderated the relationship between outward foreign direct investment and economic growth in Kenya, the following panel regression equation was estimated:

$$GDP_{it} = \beta_0 + \beta_2 OFDI_{It} + \beta_2 FER_{It} + \beta_3(\text{FER} \times OFDI)it + \mu_{it} \quad (1)$$

Where GDP is economic growth, OFDI is outward foreign direct investment and FER is the foreign exchange rate. The interaction variable is (FER×OFDI) which measures the moderation effect. The data was converted to their natural logs in order to deal with the problems of dispersion or high values and also establish elasticity relationships between the variables. Unit root tests were also conducted on the variables to avoid the problem of having a spurious regression or white noise in the model. The Levin, Lin and Chu T- statistic test for stationarity which is suitable for panel data sets was used for this study. The test covers the most general specification for all the pooled variables with the inclusion of a constant, a trend and lag. A Hausman test was conducted to determine whether to use the fixed effects model or the random effects model to address the moderating role of foreign exchange rate on the relationship between outward foreign direct investments and economic growth in Kenya.

Table 1: Summary statistics

	LN_GDP	LN_OFDI	LN_FER
Mean	1.229575	21.75882	4.114706
Median	1.545507	21.91164	4.324849
Maximum	2.128503	28.02187	4.728636
Minimum	-1.461018	13.54338	2.775223
Std. Dev.	0.862899	3.158391	0.562751
Skewness	-1.661849	-0.415703	-1.433292
Kurtosis	4.844879	3.019288	3.804230
Jarque-Bera	119.2170	5.705758	73.12877
Probability	0.000000	0.057678	0.000000
Sum	243.4558	4308.245	814.7117
Sum Sq. Dev.	146.6850	1965.160	62.38775
Observations	198	198	198

GDP had a nominal mean of 1.22 and a standard deviation of 0.86 meaning that GDP was not volatile or deviate much during the period of study. The nominal mean of OFDI was 21.75 with a standard deviation of 3.15 signifying stability in OFDI. Foreign exchange rate did not deviate much during the period of study with a mean of 4.11 and a standard deviation of 0.6. None of the variables was normally distributed. All had probability values of less than 0.1 which means they were all significant at 10 percent level of significance.

Table2: Correlation analysis

Correlation	LN_GDP	LN_OFDI	LN_FER
LN_GDP	1.000000		
LN_OFDI	0.217508	1.000000	
LN_FER	-0.014005	0.199440	1.000000

OFDI had a correlation coefficient of 0.22 with GDP signifying a weak positive correlation. FER had a weak negative correlation with GDP with a coefficient of -0.01. None of the variable had a high correlation with GDP.

Unit root tests

Intercept and level I (0)

Gross Domestic Product (GDP)

GDP was found to be stationary at intercept and level I (0) because the Levin, Lin & Chu t* statistic had a probability value of 0.0000 which is significant at 5% level of significance. Therefore, we rejected the null hypothesis that GDP had a unit root.

Table 3: Unit root test for Gross Domestic Product (GDP)

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-6.12840	0.0000	7	203
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-8.24925	0.0000	7	203
ADF - Fisher Chi-square	90.2104	0.0000	7	203
PP - Fisher Chi-square	90.2485	0.0000	7	203

Outward Foreign Direct Investments (OFDI)

The Levin, Lin & Chu t* statistic for OFDI had a probability value of 0.0374 which is significant at 5% level of significance. Therefore, we reject the null hypothesis that FPIO had a unit root.

Table 4: Unit root test for Outward Foreign Direct Investments (OFDI)

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-4.91071	0.0000	7	229
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-3.45651	0.0003	7	229
ADF - Fisher Chi-square	34.5526	0.0017	7	229
PP - Fisher Chi-square	32.3975	0.0035	7	229

Foreign Exchange Rate (FER)

FER was found to be stationary at intercept and level I (0) because the Levin, Lin & Chu t* statistic had a probability value of 0.0000 which is significant at 5% level of significance. Therefore, we rejected the null hypothesis that FER had a unit root.

Table 5: Unit root test for Foreign Exchange Rate (FER)

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-6.32309	0.0000	7	244
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-3.70439	0.0001	7	244
ADF - Fisher Chi-square	36.6110	0.0008	7	244
PP - Fisher Chi-square	40.5121	0.0002	7	245

Panel Regression Equation

Hausman test

The Chi-square test statistic was 3.48 with an insignificant probability value of 0.32 which was insignificant at 5 percent level of significance. This therefore meant that the null hypothesis was rejected in favor of the random effects model. Therefore, we accept the random effects model as suitable for this study.

Table 6: Hausman test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	3.481541	3	0.3232

Table 7: Random Effects Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LN_OFDI	-0.171478	0.125456	-1.366838	0.1731
LN_FER	-1.311196	0.664430	-1.973414	0.0497
MOD2_FER	0.056683	0.030490	1.859088	0.0643
C	5.265621	2.712960	1.940914	0.0535
	Effects Specification			
			S.D.	Rho
Cross-section random			0.000000	0.0000
Idiosyncratic random			0.811245	1.0000
	Weighted Statistics			
R-squared	0.065441	Mean dependent var		1.244397
Adjusted R-squared	0.052697	S.D. dependent var		0.832950
S.E. of regression	0.810706	Sum squared resid		144.5937
F-statistic	5.135037	Durbin-Watson stat		1.924620
Prob(F-statistic)	0.001883			
	Unweighted Statistics			
R-squared	0.065441	Mean dependent var		1.244397
Sum squared resid	144.5937	Durbin-Watson stat		1.924620

The interaction variable MOD2_FER had a coefficient of 0.06 and a significant probability value of 0.0643 which is significant at 10 percent level of significance. This means that foreign exchange rate moderated the relationship between outward foreign direct investments and economic growth in Kenya during the period of this study. When the relationship with outward foreign direct investment was moderated by 0.06 units then GDP grew by 1 unit.

Conclusions

This study investigates whether the foreign exchange rate moderated the relationship between outward foreign direct investments and economic growth in Kenya. The study attempts to answer one question. Has the effect of capital flight on economic growth been influenced significantly by the foreign exchange rate for Kenya? The analytical results show that outward foreign direct investments did not have any significant effect on economic growth when foreign exchange rate

was included in the model as an interaction variable. Foreign exchange rates had a significant effect on economic growth. The relationship was inverse indicating that the foreign exchange rate affected economic growth negatively. The interaction variable had a positive and significant coefficient indicating that the foreign exchange rate moderated the relationship between outward foreign direct investment and economic growth.

From the empirical findings, we can infer that outward foreign direct investment did not constrain resources and did not affect economic growth. The results indicate that Kenya must pursue policies geared towards using the foreign exchange rate to control the effect of outward foreign direct investment on economic growth. The government needs to have deliberate bilateral agreements on foreign investments that have a 10% or more foreign control and seek to adopt policies that encourage re-investments of returns earned by the host countries. This is to avoid the repatriation of foreign earned returns in form of foreign currencies as it has a negative impact on economic growth. Further, the government through its data agencies should house a review and track all foreign owned enterprises in a bid to issue them tax rebates that would encourage them increase investments locally, and in the local currency.

Further research is invited on this nexus between outward foreign direct investments and economic growth in Kenya, with further emphasis on seeking to identify the best level of foreign exchange that would optimize the outward foreign direct investments and achieved an expanded economic growth in Kenya. More variables can be used in order to confirm the findings and the results of this study.

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