MACROECONOMIC VARIABLES, INSTITUTIONAL QUALITY AND FOREIGN PORTFOLIO INVESTMENT IN SUB-SAHARA AFRICA

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Abstract

This study examined macroeconomic variables, institutional quality and foreign portfolio investment in sub-Sahara Africa, using secondary data from the Central Bank of Nigeria, World Development Indicator and World Governance Indicator. The study adopted the Panel Autoregressive Distributed Lag Model (ARDL) technique to analyse the data obtained for the study. The results revealed that exchange rate fluctuations significantly affect foreign portfolio investment with p-value of (p<0.01). Capital openness is significantly related with foreign portfolio investment with a p-value of (p < 0.01). Foreign Reserves also significantly affects foreign portfolio investment with a p-value of (0.01). Finally, institutional quality significantly impacts foreign portfolio investment with a p-value of (p<0.05). Based on the findings, the study concluded that macroeconomic variables exert a substantial and measurable influence on foreign portfolio investment in sub-Sahara Africa. Therefore, the study recommended that policymakers should implement policies that enhance trade openness to create a more favourable investment climate and attract more foreign portfolio investment by reducing trade barriers, streamlining customs procedures, and fostering regional integration, to make their markets more accessible and competitive.

Keywords: Institutional quality, foreign portfolio investment, Capital flows, Foreign reserve

1.0 Introduction

The importance of international capital flows to any economy of the world, developed or developing, cannot be overlooked (Oke, Adejayan, Kolapo & Mokuolu, 2020). Going by the aforementioned, every economy across the globe puts in place mechanisms to attract foreign capital as much as possible. This is because no economy is sufficient on its own because there is a need to complement domestic savings and investment with foreign inflows to have pooled investment fund that builds liquid asset along with complex trading and risk management to stay competitive with the rest of the world. A developing economy recognises the importance of foreign capital to supplement domestic resources because most developing countries are characterised with a low level of domestic savings, which has impeded the much needed investment to bolster business activities and ultimately economic growth and development (Asongu, Akpan & Isihak, 2018). Thus, a desirable level of investment that would ensure development sustainability can be attained when developing countries are able to mobilise foreign savings to bridge the savings-investment gap (Okara 2023; Mayoshi, Epuran & Tescasiu, 2021).

All governments at country or regional level must therefore adopt investment-friendly policies to entice crucial resources for development. For instance, trade policies are created in growing markets and developing nations to promote domestically produced items with added value, diversify exports, and boost domestic industries' competitiveness (Njuguna & Nnadozie, 2022). Nevertheless, the degree of inflows of foreign capital varies from country to country. As such, developing countries do not attract much foreign capital like their developed counterparts. More specifically, inflows of foreign capital to sub-Sahara African (SSA) countries are much lower than inflows to countries in other regions of the world (Adelakun & Ogujiuba, 2023; Mayoshi, et al., 2021).

Despite various economic reforms implemented by developing countries to encourage the flow of foreign capital, these efforts have had limited success. This is evident from the low levels of foreign capital inflows, including FDI, FPI, remittances, foreign aids and grants, drawdown on foreign reserves, and foreign loans and credits. Additionally, these countries continue to face high unemployment rates and widespread poverty, leading to macroeconomic imbalances such as high inflation driven by rising costs of basic needs, weak currencies, sluggish investment growth, poor economic performance, and weak social indicators. For instance, Africa's economic growth dropped from 4.1% in 2021 to 3.6% in 2022 and it was forecast to drop further to 3.1% in 2023. The poor performance of these indicators could be attributed to unsustainable growth that could not boost shared prosperity to decrease extreme poverty over the long run (World Bank 2023; Abdulrahman & Ajayi, 2022; Omorokunwa & Mbaka, 2021).

Extant studies revealed that when compared to Asia and America, the African continent as a whole attracted the least amount of foreign investments (Koçak & Barış-Tüzemen, 2022; Mayoshi, et al., 2021). Various obstacles, including expropriations,

financial restraints, project approval requirements, nationalisation, ownership regulations, and trade barriers, affected the entry of foreign capital into certain African countries. Hence, there was a need to examine the impact of macroeconomic variables on foreign direct invest in Sub-Sahara Africa.

2.0 Literature Review

The monetary analysis theory underpins this study. Monetary Analysis Theory focuses on the role of monetary conditions in shaping investment decisions. Irving Fisher (1930) through the Fisher Effect and Milton Friedman (1956) and monetarist economics, emphasised that inflation, interest rates, and money supply significantly impact capital flows. Monetary analysis theory offers an alternative and complementary perspective on international capital flows by emphasising the role of monetary variables, particularly money supply, inflation, interest rates, and exchange rates, in influencing the movement of capital across borders. The theory is grounded in the classical and monetarist view that capital flows are, to a large extent, driven by macroeconomic and monetary policy conditions in both source and recipient countries. This theory was popularised by Harry in 1977. The whole status of the balance of payments is made up of internal and foreign capital flows.

At its core, the theory argues that differences in monetary conditions, such as the relative tightness or looseness of monetary policy, create incentives for capital to move between countries. When a country adopts tight monetary policies leading to higher domestic interest rates and lower inflation, it becomes more attractive to foreign investors, particularly those seeking stable, inflation-adjusted returns. Conversely, loose monetary policy characterised by low interest rates and rising inflation tends to drive capital outflows as returns become less attractive.

In this context, foreign capital flows to countries with sound monetary policy frameworks and macroeconomic stability. For sub-Saharan African countries, this means that stable monetary environments, marked by controlled inflation, predictable interest rates, and consistent exchange rate regimes, are more likely to attract foreign direct investment (FDI) and foreign portfolio investment (FPI). Investors look for nations where monetary conditions support real return preservation and do not erode capital value through inflation or currency depreciation. Furthermore, the theory also links exchange rate stability to investor confidence. Volatile exchange rates introduce currency risk that can deter foreign investors, especially in the case of FPI, which is typically more short-term and speculative. Stable exchange rates, supported by prudent monetary management and adequate foreign reserves, reduce uncertainty and increase a country's appeal to international investors.

Harry (1977) proposed a model of foreign capital flows based on monetary analysis:

Money demand function: $H_d = H(P^+, Y^+, i^-)$ (2.1)

Money supply function: $H_s = H\left(\frac{1}{\varphi}\right)(R + D)$ (2.2)

Where: P represents the price level; Y represents the total output; i represents the interest rate; D represents the domestic credit; R represents the international reserves; and φrepresents the statutory reserve ratio.

Balance of supply and demand for money: $(R + D = \varphi H(P, Y, i)$ (2.3)

Balance of income and expenditure of balance:

$\mathrm{d}R = H\mathrm{d}\varphi + \varphi H_1 \mathrm{d}P + \varphi H_2 \mathrm{d}Y + \varphi H_3 \mathrm{d}i - \mathrm{d}D$ (2.4)

According to monetary theory, increasing total output or raising the price level increases monetary demand and so improves the balance of payments. However, raising interest rates reduces monetary demand, and thus, worsens the balance of payments. This result is shown to be in conflict with the flow model. This inconsistency is elucidated by Frankel's (1991) general equilibrium model which states that short-term international capital flows are inclined by interest rate levels. Modification of currency volume and domestic lending policies also have an impact on long-term foreign capital flows (Hannan, 2018).

A major strength of monetary analysis theory is its ability to capture the dynamic interactions between domestic monetary policy and global financial conditions. For example, if the United States adopts expansionary monetary policy (low interest rates), capital may flow into sub-Saharan Africa in search of higher returns, particularly if African countries maintain relatively tighter monetary policies. This highlights the importance of push factors like global interest rates and economic growth differentials, which are key components in the model. In summary, monetary analysis theory provides a strong foundation for understanding how monetary conditions influence foreign capital flows, especially in terms of interest rate differentials, inflation expectations, and exchange rate stability. Its relevance to this study lies in its emphasis on the macro-financial environment as a determinant of capital mobility.

Empirical Review

Badawi *et al.* (2019) explored the determinants that encourage foreign investors to invest in the Saudi stock market, using the OLS cross-sectional regression model. The study used cross-sectional data of 2015 to explain foreign investors' decisions in 2016. The study showed that investors prefer to invest in privately owned firms and institutions with relatively higher levels of tangible assets while they disfavour firms that are government owned and have a high level of liquidity. The study investigated an issue that has not been previously addressed in this particular market. It also contributed to an understanding of foreign investors' behaviours in emerging markets. The finding aligns with

transaction cost theory which focuses on reducing costs and risks in investment decisions. The preference of foreign investors for privately owned firms with tangible assets indicates that investors aim to minimise transaction costs associated with investing in less transparent, government-owned firms. Additionally, investor behaviour in Saudi Arabia reflects flow theory by showing how domestic firm characteristics (such as ownership structure) impact the flow of foreign capital.

On the determinants of capital flows to Mexico, Ibarra and Tellez-Leon (2020) discovered that an increase in the foreign interest rate increase and global risk leads to lower portfolio investment while higher the United States of America GDP growth rate and exchange rate have a positive impact on portfolio investment. The variables that represent push factors were a global risk, the injection of liquidity, the inflation and interest rate (IIR) and the United State of America gross domestic product (USGDP) growth, while the pull factors were the growth rate of Mexican GDP, the interbank interest rate, the Mexican inflation and the exchange rate. The study concluded that capital flows to Mexico are mainly driven by global and domestic conditions rather than conditions in other emerging economies. A vector autoregressive model for the period 1995- 2015 was employed for analysis. The finding aligns with the flow theory by showing that capital flows to Mexico are primarily driven by economic factors such as global and domestic conditions. Additionally, monetary analysis theory posits that changes in interest rates significantly affect investor behaviour and capital allocation. Thus, maintaining stable inflation rates, interest rate, and exchange rate is crucial to create an attractive environment for foreign investors.

Oke et al., (2020) investigated the pull and push factors as determinants of foreign portfolio investment flows in the emerging market from 1986 to 2018. The study employed autoregressive distributed lag (ARDL) bound co-integration test and ARDL error correction model (ECM). This study was intended to explore the determinants of foreign portfolio investment (FPI) in Nigeria and compared the result explored by Kaur and Dhillon (2010) in India. The result revealed that of all the explanatory variables, only MCAP, DMINT, REER, USGS and USINFR have a positive effect on FPI, while GDPGR, USGDPGR, USGS and USINFR are significant. From the result of the analysis, the study agreed with past studies that the host country gross domestic product (GDP) growth rates and the United States of America (the USA) inflation rates are among the significant pull and push factors that determine FPI flows in the long run. The finding aligns with the flow theory by showing GDP growth rates and U.S. inflation as significant determinants of foreign portfolio investment. Thus, both domestic and international economic conditions are key drivers of capital flows.

Sani, Samuel and Ome (2021) examined the impact of foreign capital inflow on manufacturing sector growth in Nigeria using time series data from 1986 to 2019, using Autoregressive Distributed Lag (ARDL) estimation technique. The results of the study revealed that foreign capital inflows through the FDI had a significant positive impact on contributions of the manufacturing sector to gross domestic product (GDP). The study also revealed that foreign capital inflows through the FPI had a significant positive impact on contributions of the manufacturing sector to the GDP. The study further revealed that foreign capital inflows through the FOA had a significant positive impact on contributions of the manufacturing sector to the GDP. The finding aligns with the flow theory which posits that capital flows into sectors where it can generate higher returns, and drive economic growth. As such, inflow of FDI and FPI into the manufacturing sector's contribute extensively to the sector's growth.

Mazadu, Usman and Umar (2021) examined the determinants of foreign direct investment inflow in Nigeria from 1981 to 2018, using Autoregressive Distributed Lag (ARDL) estimation technique. The result confirmed the existence of co-integration and further revealed that foreign reserve, inflation rate, infrastructure and population growth are positive and significant determinants of foreign direct investment in both long run and short run. The findings also depicted that disequilibrium in the model is corrected at 97.8% adjustment speed annually. The diagnostic test confirmed that the co-efficients are stable, given that the CUSUM and CUSUMSQ lie within the 5% critical bound. The finding aligns with the monetary analysis theory by showing that inflation and foreign reserves are key determinants of FDI. This reflects the importance of stable macroeconomic indicators in attracting foreign capital.

Evans, Kariuki and Wafula (2022) assessed the impact of fiscal policies on Kenya's foreign direct investment inflows from 1998 to 2017, using regression analysis technique. The results showed that government expenditure on infrastructure and FDI are positive and significant. It was also revealed that external debt and FDI are negatively and significantly related. Domestic debt and FDI are negatively and significantly related. The results of the regression analysis showed that taxation measured as tax revenues and FDI are positively and significantly related. This finding aligns with the monetary analysis theory, suggesting that sound monetary policy and fiscal stability are essential for attracting foreign investment.

Haruna, Nwakoby and Okaro (2023) investigated the effect of private foreign capital on economic growth in Nigeria from 1999 to 2021, using the Autoregressive Distributed Lag approach. The result of the ARDL test revealed that FDI is

significant and positively influences economic growth. Likewise, remittances are significant but have a negative contribution to economic growth. FPI is found to not affect economic growth in Nigeria in the long-run. Also, the estimated co-efficients of the short-run relationship for the model revealed that FDI and remittances are significant in impacting economic growth with FDI contributing positively and remittances contributing negatively. FPI still failed to influence economic growth in Nigeria. This finding aligned with the portfolio theory's focus on optimising investment returns based on market performance. The finding that FPI does not affect economic growth shows that foreign investors prioritise other asset classes or markets. Additionally, flow theory posits that capital inflows drive economic development by enhancing productivity and output as reflected in the positive influence of FDI on economic growth.

Kazeem, Yu and Abeeb (2023) examined elements that serve as a key driver of high FDI inflows in Nigeria from 1980 to 2022 using OLS. Their findings from the study showed that the size of the Nigerian market and the level of their economy openness are major determinants of FDI inflows. The result further suggested that high inflation rate is a hindrance to FDI. This finding aligns with the flow theory which suggests that larger and more open markets attract more foreign capital due to the potential for higher returns. Thus, market size and openness are key determinants of FDI inflows.

Nguyen (2024) investigated the determinants of foreign direct investment in the agricultural sector into the Southern Key Economic Zone (KEZ) of Vietnam, using Partial Least Squares Structural Equation modeling (PLS-SEM) approach. Their findings indicated that FDI attraction policies have the strongest impact on FDI inflows. This was followed by infrastructure, regional agriculture policies, public service quality, natural conditions, and human resources. This finding aligns with the new institutional economics theory which highlights the importance of institutional quality in fostering foreign investment. Thus, given that infrastructure is identified as a significant determinant, investments in transportation, logistics, and technology infrastructure are crucial to facilitate smoother operations for foreign investors and enhance the overall efficiency and productivity of the agricultural sector. Additionally, investment in education and training programmes for the local workforce is vital to enhancing the skill level of employees in the agricultural sector, thereby making it more appealing for foreign investors looking for a capable labour force.

Anyanwu and Anyanwu (2024) examined the impact of capital liberalisation on economic performance, focusing on the relationship between foreign aid, governance, and capital flows in 41 countries from 1995 to 2013, using Three-Stage Least Squares (3SLS) estimation technique. The study found evidence of a revolving door relationship. Foreign aid has a negative impact on governance, thereby reduces capital inflows since bad governance hinders capital inflows. The need to fill the gap created by private capital outflows encourages inflow of foreign aid, which in turn harms governance. Therefore, capital liberalisation could grease a revolving door and undermine economic development in the aid receiving countries. This finding aligns with the new institutional economics theory's emphasis on the importance of effective institutions for economic development. Additionally, the revolving door relationship between foreign aid and governance suggests that poor governance can lead to higher transaction costs, deterring foreign capital inflows, which aligns with Transaction Cost Theory's focus on minimizing costs in economic activities.

3.0 Methodology

The nature of data employed for the purpose of this study is panel data. These are data observed for many panel units over a period of time. The panel data employed for this study was for sub-Sahara African countries over 1996 to 2018 period. The data sourced from secondary sources, particularly, from the World Bank's World Development Indicators (WDI) and World Governance Indicators (WGI), as well as International Monetary Fund's International Financial Statistics (IFS). The study adopted cross-sectional autoregressive distributed lag model (C-S ARDL) to analyse the data obtained.

3.2 Model Specification

Following the theoretical postulation on the effects of certain variables like domestic interest rate, exchange rate, foreign interest rate, net export, and domestic income, a linear econometric model for foreign capital flows is specified for the study as:

$$FPI_{it} = \beta_0 + \beta_1 GDPP_{it} + \beta_2 NX_{it} + \beta_3 TO_{it} + \beta_4 FR_{it} + \beta_5 EXR_{it} + \beta_6 IQ_{it} + \beta_7 CO_{\text{it}} + \beta_8 FD_{\text{it}} + \mu_{it} \quad \text{..... 1}$$

Where;

FPI = foreign portfolio investment measured by ratio of net inflows of FPI to GDP

GDPP = per capital GDP measured by natural log of GDP per capita at constant prices

NX = Net export measured by natural log of net export (i.e. total export minus total imports)

TO = trade openness measured by ratio of trade volume to GDP

FR =foreign reserves measured by foreign reserves as ratio of GDP

EXR = exchange rate measured by value of domestic currency to U.S. dollars

IQ =institutional quality computed by World Governance Indicators

CO =capital openness measured by Wang-Jahan Index of capital openness

FD = financial development measured by ratio of domestic credit to private sector to GDP

4. Data Analysis and Interpretation

Table 4.1: Results of Unit Root Test of Variables

	Fisher type-ADF				Fisher type-PP			
	Level		First difference		Level		First difference	
Variable	Stat	p-value	Stat	p-value	Stat	p-value	Stat	p-value
FPI	-5.105	1.000	5.844	0.000	-6.192	1.000	62.51	0.000
IQ	2.219	0.013	-	-	5.419	0.000	-	-
CO	12.67	0.000	-	-	11.73	0.000	-	-
FD	-1.336	0.909	27.0	0.000	-1.832	0.966	57.43	0.000
logGDPP	-0.787	0.784	14.98	0.000	0.18	0.428	57.08	0.000
logNX	4.781	0.000	-	-	12.41	0.000	-	-
logEXR	1.875	0.030	-	-	4.491	0.000	-	-
TO	-0.131	0.552	30.94	0.000	-0.591	0.722	73.28	0.000
FR	5.131	0.000	-	-	1.675	0.046	-	-

Source: Author's Computation, 2024.

Unit root tests are important for choosing the appropriate estimation technique for subsequent regression analysis. Since the variables integrated at various orders (I(0) and I(1)), techniques that assume all series are of the same order of integration, such as standard OLS, may not be appropriate. This mixture calls for methods such as ARDL model, which is fit for mixture of I(0) and I(1) variables, or more advanced panel co-integration approaches if long-run relationships are to be established.

4.2 Panel Regression Analysis

To examine the determinants of foreign portfolio investment in sub-Saharan Africa, regression analysis was carried out using three estimators within the panel autoregressive distributed lag (ARDL) framework: pooled mean group (PMG), mean group (MG), and dynamic fixed effect (DFE). These estimations were based on the results obtained from the unit root tests. The findings for each model employed in the study are presented in the following tables. Additionally, the Hausman specification test was conducted alongside the estimations to determine which of the three estimators provided the most appropriate fit. The outcome of this test is subsequently discussed and interpreted.

Additionally, the findings are presented here in a manner that aligns with the study's goals. In this instance, the first aim was covered in the first section of this chapter as the research's primary aim was to investigate the nature of foreign investment and the variables that drive and discourage it.

Regression analysis of macroeconomic variables influence on foreign portfolio investment in sub-Saharan Africa is provided here as part of the study's examination of its first goal. Table 4.2: Panel ARDL Error Correction Model (ECM) Estimates Assessing the Short- and Long-Run Influence of macroeconomic variables and institutional quality on Foreign Portfolio Inflows

	Pooled Mean Group (PMG)			Mean Group (MG)			Dynamic Fixed Effects (DFE)		
Variable	Coefficient	z	p-value	Coefficient	z	p-value	Coefficient	z	p-value
Long Run Estimates									
logGDPP	0.119	0.75	0.455	-0.965	-0.31	0.759	0.128	0.42	0.672
logNX	0.008	3.8	0.000	0.229	1.19	0.236	0.002	0.32	0.752
TO	-0.002	-2.11	0.035	0.019	1.29	0.198	-0.0007	-0.27	0.784
FR	2.166	3.4	0.001	2.560	0.45	0.656	-0.078	-0.1	0.924
logEXR	-0.021	-0.44	0.658	22466.0	1.0	0.317	-0.059	-0.57	0.569
IQ	-0.009	-2.44	0.015	0.034	0.7	0.486	0.0005	0.06	0.949
CO	0.172	2.57	0.010	0.005	0.02	0.987	-0.0001	0.0	0.999
FD	0.0002	1.07	0.283	-0.010	-0.19	0.850	0.0001	0.24	0.808
Short Run Estimates									
FPI(1st lag)	0.172	7.98	0.000	0.623	12.1	0.000	0.499	30.4	0.000
D.logGDPP	-0.312	-0.2	0.840	-1.012	-0.53	0.594	0.718	1.74	0.082
D.logNX	0.066	0.96	0.335	0.043	0.44	0.661	0.002	0.67	0.501
D.TO	0.001	0.46	0.648	0.003	0.78	0.437	-0.002	-1.19	0.234
D.FR	-0.412	-0.52	0.600	-0.605	-0.45	0.651	-0.189	-0.23	0.821
D.logEXR	11191.7	1.0	0.317	16792.6	1.0	0.317	0.303	1.67	0.094
D.IQ	0.0005	-0.14	0.889	-6.6E-05	-0.01	0.994	-0.001	-0.11	0.909
D.CO	-0.023	-0.47	0.636	-0.052	-0.66	0.512	-0.004	-0.04	0.968
D.FD	-0.008	-0.26	0.797	-0.017	-0.45	0.654	0.000	0.06	0.953
Constant	0.030	0.82	0.413	20284.1	1.0	0.317	0.241	0.24	0.810
Number of Observation	1123								
Number of Groups	45								
Hausman test				8.88		0.829	4.47		0.345

Source: Author's Computation, 2024.

Table 4.2 displays the findings on how pull factors influence foreign portfolio investment in sub-Saharan Africa. According to the Hausman test, the comparison between the pooled mean group (PMG) and mean group (MG) estimators yielded a test statistic of 8.88 with a p-value of 0.829. Since this result is statistically insignificant, the null hypothesis-that the PMG estimator is preferable to the MG estimator-cannot be rejected. This suggests that the PMG model is more suitable than its MG counterpart. Similarly, when comparing the PMG estimator with the dynamic fixed effects (DFE) model, the test statistic was 4.47 with a p-value of 0.345, which is also statistically insignificant. Again, the null hypothesis favouring the PMG estimator over the DFE model cannot be rejected. Based on these results, the pooled mean group approach is considered the most appropriate estimation method.

Table 4.2 presents the pooled mean group findings, indicating that over the long term, GDP per capita, net exports, foreign reserves, capital openness, and financial development all have positive coefficients of 0.119, 0.008, 2.166, 0.172, and 0.0002, respectively. Conversely, trade openness, exchange rate, and institutional quality display negative coefficients of -0.002, -0.021, and -0.009, respectively. Among these variables, net exports and foreign reserves are statistically significant at the 1% level, as their p-values are below 0.01. Additionally, the interaction terms involving trade openness, institutional quality, capital openness, and foreign portfolio investment are significant at the 5% level,

with p-values under 0.05. This implies that these factors have meaningful statistical relevance at 1% and 5% significance levels. However, GDP per capita, exchange rate, and financial development do not show statistical significance since their p-values exceed the 10% threshold. These results indicate that, in sub-Saharan Africa, net exports, trade openness, foreign reserves, institutional quality, and capital openness influence foreign portfolio investment in the long run, whereas GDP per capita, exchange rate, and financial development do not.

The positive and statistically significant co-efficient for net exports suggests that a one-unit increase in net exports is associated with a 0.008 percentage point rise in foreign portfolio investment over time. This means that improvements in net exports correlate with notable increases in foreign portfolio inflows. The evidence points to the fact that a robust trade surplus can strengthen economic stability by attracting foreign investment. Therefore, policymakers aiming to enhance foreign portfolio investment may consider measures such as promoting trade agreements, upgrading export-related infrastructure, and boosting the competitiveness of domestic products and services to increase exports. These initiatives can help achieve a favourable net export position. Consequently, focusing on policies that support and improve net exports could be an effective approach to creating a more attractive environment for portfolio investment.

Similarly, the positive and significant co-efficient of foreign reserves suggests that an increase of one unit in foreign reserves will result in a long-term growth in foreign portfolio investment in sub-Sahara Africa by 2.166 per cent points. Adequate foreign reserves are often seen as a sign of stability of a country's currency, a source of liquidity as well as economic stability, signaling a responsible fiscal management and the ability to meet international financial obligations. Foreign reserves act as a financial buffer that a country can use during times of economic uncertainty or external shocks. This stability can instill confidence in foreign investors, assuring them that the host country has the financial capacity to weather potential economic challenges. Thus, countries with substantial foreign reserves are better equipped to navigate economic crises, reducing the country's vulnerability to external economic pressures. For foreign investors, this signifies that the host country has the resources to address and mitigate the impact of economic downturns, making it a safer and more resilient investment destination. This finding correlates with the outcome of Mazadu, et al., (2021) who found that foreign reserve is confidently related to foreign direct investment in Nigeria.

Moreover, the positive and significant co-efficient for capital openness suggests that a one-unit increase in capital openness results in a long-term growth of foreign portfolio investment in sub-Saharan Africa by 0.172 percentage points. This means that as a country liberalises its capital flows and financial transactions, it generally attracts higher foreign portfolio investment. This finding implies that policies aimed at enhancing capital openness could effectively boost FPI in the region. Additionally, it highlights that reducing barriers to cross-border financial activities and fostering a more open financial system may encourage foreign investors to allocate more capital to sub-Saharan African nations. These results align with the research of Mahfoudi and Louail (2023) and Kazeem (2023), who also identified a positive relationship between capital openness and FPI.

Conversely, the notably negative interaction co-efficient between trade openness and foreign portfolio investment suggests that a one-unit rise in trade openness results in a long-term decrease in foreign portfolio investment across sub-Saharan Africa by 0.002 per cent points. This suggests that the degree of openness in a country's trade policies and practices has adverse impact on FPI. Thus, investors might be less inclined to allocate funds to countries with highly open trade policies. Several factors may contribute to this negative relationship. For instance, a very open trade environment could expose the local market to greater external risks, such as fluctuations in global commodity prices or international economic uncertainties. Additionally, investors may perceive that high trade openness could lead to increased economic volatility, making it more challenging to predict and manage investment risks. They might prefer markets with more controlled and regulated trade practices, where the impact of global economic conditions on local markets is perceived to be less pronounced. This aligns with the findings of Sahar (2020) who reported that trade openness is a relevant determinant of FPI.

Similarly, the notably negative co-efficient for the interaction between institutional quality and foreign portfolio investment suggests that a one-unit improvement in institutional quality will result in a long-term decrease in foreign portfolio investment in sub-Saharan Africa by 0.009 per cent points. This suggests that the strength and effectiveness of a country's institutions are associated with a striking and adverse impact on FPI. Thus, investors might be less inclined to allocate funds to countries with strong institutional frameworks. Several factors may contribute to this negative relationship. For case in point, in nations with high institutional quality, the legal and regulatory environment may be perceived as more stable and predictable. This stability might lead to lower perceived risks but also potentially lower returns on investment. Moreover, sophisticated and well-regulated financial markets in countries with high institutional quality may offer fewer arbitrage opportunities and less room for substantial gains compared to markets with less developed institutional frameworks. Investors may seek higher-risk, higher-reward opportunities in markets with lower

institutional quality. This aligns with the findings of Braiton and Odhiambo (2022) who submitted that institutional quality is a relevant determinant of FPI.
The co-efficient for GDP per capita, exchange rate, and financial development do not exhibit a significant long-term effect on foreign portfolio investment in sub-Saharan Africa.

Regarding the short-term estimates, positive co-efficients were observed for changes in the first-year lag of foreign portfolio investment, trade openness, net exports, exchange rate, and institutional quality, with values of 0.172, 0.066, 0.001, 11,191.7, and 0.0005 respectively. Conversely, changes in GDP per capita, foreign reserves, capital openness, and financial development showed negative coefficients of -0.312, -0.412, -0.023, and -0.008 respectively. It is important to note that among these variables, only the change in the first-year lag of foreign portfolio investment was statistically significant at the 1% level.

Other co-efficients are not statistically significant. This suggests that these pull factors do not have short run impact on foreign portfolio investment in sub-Sahara Africa. It also implies that a unit one-year lagged change in foreign portfolio investment can lead to a short-term increase in foreign portfolio investment in sub-Saharan Africa by 0.172 percentage points.

5. Conclusion and Recommendations

The study concluded that higher income per capita, increased foreign reserves, favourable foreign exchange rates, strong institutional quality, and greater capital openness-considered as pull factors-play a crucial role in attracting foreign direct investment to domestic economies in sub-Saharan Africa. These factors send encouraging signals to international investors, making the region more appealing for investment. Foreign investors within the sub-Saharan Africa area focus on countries with untapped opportunities or lower GDP per capita where market potential is higher for growth and returns as they develop and expand their economic activities. Policymakers should implement policies that enhance trade openness to create a more favourable investment climate and attract more FDI by reducing trade barriers, streamlining customs procedures, and fostering regional integration, to make their markets more accessible and competitive. Governments in the region should strengthen foreign reserves by emphasising prudent fiscal management to maintain and increase foreign reserves because adequate reserves signal economic stability and act as a financial buffer during economic uncertainties as well as promoting institutional quality by strengthening governance, reducing corruption, and enhancing regulatory frameworks.

Investors in the sub-Sahara African region should pay attention to global commodity prices which can present unique opportunities or risks for investment as changes in global commodity prices can significantly affect the economies of many countries in sub-Saharan Africa frequently depend largely on commodities like oil, minerals, and agricultural goods. Policymakers should promote alternative productive outlets to enable diversification so as to limit dependence on global commodity prices by investing in various domains like manufacturing, services, and technology to cushion the impact of volatile commodity markets. Governments should also implement counter-cyclical economic policies to buffer the effect of global financial crises by building fiscal reserves and reducing debt in times of economic expansion; and heightened government expenditure during economic downturns to stimulate the economy.

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