



The effects Foreign Capital Inflows on Financial Development of Sub-Saharan African (SSA) Countries

Akum Rene Nji¹, Visemih William Muffee², and Emmanuel Nwahanye³

¹PhD Research Candidate, Faculty of Social and Management Sciences, University of Buea-Cameroon

²Professor of Accounting and Finance Stalwart University Institute, Douala, Cameroon

³Associate Professor of Management, University of Buea, Cameroon

Abstract— Finance is a major pillar that supports economic efforts in any society and serves as life wire that accelerates economic endeavors. As such financial development is a concern to most societies due to the important role it plays, yet, SSA financial system remains weak as compared to their counterpart. This study therefore sought to investigate the effects of foreign capital inflows on financial development of Sub-Saharan African countries. In order to achieve our objectives, we adopted a panel research design using panel data collected from IMF financial access data, 2021, Global Financial Development (GFD) data, 2021, World Bank Development Indicators (WDI) of 2021, for the 43 selected countries of SSA. Due to issues of cross sectional heterogeneity and dependence, we employ the two-step system GMM estimation technique which accounts for cross sectional heterogeneity and dependence which cannot be taken care of by other estimation techniques. For robustness check, the two stage least square analytical technique was adopted. There was high degree of robustness of the results. The findings indicate that FDI and FPI have negative effects on financial development whereas remittances have a positive effect on financial development. When financial development is disaggregated, remittances flow is set to have a significant positive effect on financial development in financial institutions whereas foreign direct investment and portfolio investment are said to have a negative and significant effect on financial development in financial markets. The study recommends that African governments should take a practical measure through the promotion of trade and investments among SSA States whereby financial structures within will benefit diversity of activities. We also urge SSA nations to encourage citizens abroad willing to repatriate income back home through desire tax system favourable enough to permit them remit their income through formal financial structures that will enhance financial development.

Keywords— Financial Development, Foreign Capital Inflows, Sub-Saharan Africa.

INTRODUCTION

The role of financial development has become increasingly essential to countries across the globe especially to Sub-Saharan African economies with a poor financial architecture. This is why recent wave of literature have focused on identifying the sources of financial development across the globe especially in the African continent. For instance, Haque et al. (2022) have shown that foreign capital inflow is significant for financial market development. Other recent studies have also shown that financial development does not only require the development of the overall financial system but also requires the development at an institutional and market level (Ahmed and Jahanzeb 2021). As such, there is growing literature on the link between foreign capital inflows and financial development. Though recent wave of literature has claimed that foreign capital inflows matter for

financial development, statistics reveal that there are still unclear movements on the link between foreign capital inflows and financial development. For instance, statistics reveal that in 2020, extra-EU foreign direct investment relative to GDP was lower for inward flows (0.8%) than for outward flows (2.2%), while financial development in terms of domestic credit to private sector (% of GDP) in European Union was reported at 92.56 % in 2020 (WDI, 2021).

Theories have expressed the pathways through which foreign capital inflows affects financial development. For instance, Collison et al. (2017), has shown that the classical theories related to foreign capital inflows emerged during the 1960 to 1980 period, and the foreign capital inflows from developing and emerging nations have strongly advanced these theories. The theories argue that foreign capital inflows in developing and emerging nations is a newer phenomenon; as such, they suggested that these theories were insufficient to justify the recent increase in foreign capital inflows to developing markets due to their unique investment characteristics. This is why Vasyechko (2012) had argued that there was no doubt that foreign direct investment theory advanced our knowledge on the link between foreign capital flows and financial development in emerging markets.

The link of financial development and foreign capital inflow in developing economies is well established in the literature (Ahmed & Jahanzeb 2021; Islam et al. 2020; Chen et al. 2020; Sirag et al. 2018; Haque et al. 2022). Foreign capital inflow and financial development is still debatable especially in the Sub-Sahara Africa with poor financial architectures. Specifically in the context of Africa, statistics show that FDI to East Africa grew by 35 per cent to \$8.2 billion. Flows to Ethiopia reached \$4.3 billion, mainly due to a tripling of Chinese investment. FDI to the United Republic of Tanzania rose by 35 per cent to \$922 million while flows to Central Africa remained flat at \$9.4 billion. Within the same period, the development of the financial system in Africa shows that South Africa's private sector credit grew by 7.7 percent year-on-year in December 2022, below market expectations of 8.2 percent and slowing from an 8.3 percent gain in the previous month (World Bank Report, 2022). These statistics reveals more evidence in support of the empirical evidences that movements in foreign capital inflows are associated to movements in the degree of financial development (Sghaier, 2016; Acheampong, 2019; Duba, 2022).

Foreign capital inflows play a significant role in the host nation given that they do not only help to finance investments in host countries but also permit firms to be able to diversify their investment into profitable projects (Smith 2021; Shahbaz et al. 2021; Nguyen and Lee 2021; Asamoah et al. 2022). Sub Saharan Africa has recorded an increase of gross international capital inflows from approximately 2% of GDP in 1990 to about 6% of GDP in 2017. This increase has been driven by private direct capital flows such as foreign direct investment and portfolio investments (IMF, 2019). Moreover, in Africa, inflows of foreign direct investment have been incremental from US\$41 million over the period 1980 – 1985 to US\$1,064 million over the period 2005 – 2009, which represents an average growth rate of 99 per cent over the entire period (Gui-Diby, 2014). FDI has become an important and first source of external capital that complements domestic capital, mostly for African countries, whose economic development requires huge capital (Seetanah, 2009; Agosin and Machado, 2005). This shows that there have been significant capital movements into the African continent in the recent years.

The economies of the world are becoming more competitive and this competition has intensified since the liberation of international borders across the globe thereby facilitating the free movement of goods, services, and financial resources. To ensure this competition, the governments and other organisations are focus on improving their financial architecture as it is the engine that drive and guarantee a resilience economy. That is why there is growing literature that justifies that financial development lead to a positive and significant effect on the economic growth of a country (Beck et al., 2014; Chavula et al., 2017). However, the shallow and weak state of financial institutions and financial markets of Sub-Saharan African economies raise doubt on the competitive strength of this region in meeting its growth prospects given that the financial system expedite investment through the allocation of financial resources to productive units.

In an effort to improve Africa's financial system since the 1980s, major development partners like the World Bank and the International Monetary Fund (IMF) have implemented a number of policies and initiatives, most notably the structural adjustment programmes and sustainable development initiatives. However, there has been little progress to show for it (Daniel Press, 2017). Since independence, the aforementioned international financial organizations have worked hard to strengthen the financial sectors in Africa, and particularly Sub-Saharan Africa, but the region is still in poor shape as the financial sector of SSA countries still remains weak. At the same time, the level of financial development in many of sub-Saharan African countries is below the statistical benchmark. For instance, a report by IMF, (2022) have shown that in some SSA countries (Central African Republic, Cameroon, Chad, Sierra Leone), the current levels of financial development are actually lower than they were in the 1980s, partly reflecting the changed importance of state-owned enterprises.

Supporting the above statement, the region's median ratio of private sector credit to GDP has increased by approximately 10 percent points since 1995, to almost 21 percent in 2014 (IMF, 2016). These figures indicate that it remains only about half the size of that of the MENA and Latin America and the Caribbean caused by SSA's relatively high number of low-income countries. At the same time, the financial systems in Sub-Saharan African countries remain under-developed as compared to those of its counter-parts. The financial infrastructures of this continent remain light and the contribution of this sector to growth and poverty alleviation is still minimal. In this regard, the World Bank Report (2014), publishes that financial development in Sub-Saharan Africa is uneven and on average less advanced than in other low-income regions despite recent progress and reforms. For instance, in terms of the activeness of the banking sector, statistics reveal that we have 12, 3, 7, 5, 4, and 7 active banks in Cameroon, the Central African Republic, Chad, the Republic of Congo, Equatorial Guinea, and Gabon respectively. The distribution (in terms of number and financial capacity) is uneven and greatly influenced by foreign banks which hold a significant percentage (65 per cent) of the region's banking assets (IMF, 2020). This study has observed that, despite all the efforts put in place both within the SSA continent and by international organizations to strengthen the financial systems of Sub-Saharan African countries, but the financial system of the region remains highly underdeveloped and predominately overshadowed by the banking sphere. It is against this that this study sought to investigate the effect of foreign capital inflows on financial development of Sub-Saharan African countries.

This study is relevant as it add value to the empirical literature in the context of SSA. It is also realized that most of the empirical techniques were focused on the long-run and short-run effect with the use of auto-regressive distribution lag model (ARDL) technique; this study takes a different dimension by looking at effects through the use of generalized method of moments model (GMM). We also consider the study area as a gap since most of the studies are focused on emerging economies, developed economies, and/or mixed with only few studies being carried out in the context of developing economies especially in the context of SSA economies. That is why the researcher thought it reasonable to carry out this research.

Haven gone through the introduction section of this paper, the remaining parts of this paper consists of a review of literature in section II, the empirical strategy and data presentation in section III, the empirical findings are presented and discussed in section IV, and the conclusion and policy suggestion is drawn in section V.

LITERATURE REVIEW

The effects of foreign capital inflows on financial development have been reviewed across the globe. For instance, Ahmed et al. (2022) examine the effect of capital inflow components on Bangladesh's financial development. Using autoregressive distribution lag (ARDL) model to reveal short-run and long-run associations, the findings revealed that foreign direct investment and remittance flow do not exhibit a significant relationship with financial development in the long-run. However, foreign aid indicated a nexus with the financial progress of Bangladesh. The study therefore recommends that enacting policies to keep capital inflows under Bangladesh's financial system by repatriating foreign investors' profits and lessening remittance costs by facilitating and modernizing remittance management. On the other hand, a unidirectional relationship exists between FDI and financial development in Latin America. Keho (2020) examines the impact of remittances on financial development in some selected West African countries over a time horizon from 1980-2017. It uses an estimation method which controls both parameter heterogeneity and cross-sectional dependence among countries such as CIPS unit root test which takes care of both cross-sectional dependency and heterogeneity. The long-run relationships were investigated using common correlated effects mean group (CCEMG) estimator. Findings indicate that remittance inflows reduce domestic credit to private sector whereas they contribute to increasing money supply in the long-run. Country-level results reveal, however, considerable heterogeneity across countries. Agyapong (2019) assessed the role external debt and foreign direct investment play in influencing financial development in Africa. The data employed were analysed within causal research design and the dynamic panel using generalized method of moment estimation approach for a period from 2002-2015. The findings showed that external debt and foreign direct investment have a significant positive relationship with financial development in African economies. The study therefore, recommended that governments of the sampled economies should enact policies that would help attract high level of foreign direct investment as it contributes positively to financial development.

Contrary to the above literature, Majeed et al. (2021) carried out a study on the impact of foreign direct investment on financial development: new evidence from panel cointegration and causality analysis. The study assesses the effect of FDI on financial development for 102 Belt and Road Initiative countries on four continents i.e., Asia, Europe, Africa, and Latin America. Using a set of quantitative techniques such as feasible generalized least squares, and augmented mean group techniques, the findings revealed that FDI, have a statistically significant and positive



effect on financial development in Asia, Europe, and Latin America but a negative effect in Africa. Furthermore, the Dumitrescu-Haellin panel causality test confirms a two-way causality relationship among FDI, trade openness, and financial development in Asia and Europe. Moreover, Muhammad & Alam (2020) investigated the relationship between banking sector performance and FDI inflows to provide evidence from the South Asian context. The study selected five economies of the same region and employed a panel dataset for the period of 1998-2017 which was analysed with the help of different econometric techniques, including pooled least squares, fixed effects, generalized least square and two stages least squares. The findings indicate a significant negative relationship between banking sector performance and FDI inflows. Therefore, the results demonstrate a unique outcome from the perspective of the relationship between banking sector performance and FDI inflows.

Several studies have been carried out to establish the relationship between foreign capital inflows and financial development, with more focus on particular type of flows and these studies were so much concerned with cointegration and causation (Ahmed et al., 2022 and Majeed et al., 2021) which do not take care of the problem of cross sectional dependence in Panel data, which leads to bias results (Chudik and Pesaran, 2015). This recent study made use of the Two-Step System GMM methodology which takes care of the problem of cross-sectional dependence in panel data (Nchofoung and Asongu, 2021). This study differs from existing work because it focuses on private capital inflows on financial development since these inflows are less prone to mismanagement since they are profit centered. This work intends to add value to existing empirical literature especially in the context of Sub-Saharan African countries so that policymakers can design policies capable of limiting both internal and external shocks resulting from these factors. Most of the studies used domestic credit to private sector as the measure of financial development. In this study, we used the financial development index which measures financial development both in financial institutions and in financial markets in terms of depth, access, and efficiency (Sahay et al., 2015b; Svirydzhenka, 2016). This index has recently been used by Fozoh et al. (2022) in examining the effects of financial integration on financial development in the CEMAC zone.

ECONOMETRIC STRATEGY

Empirical model specification

The empirical model adopted in this study is inspired by the works of Asongu et al. (2018), and Nchofoung & Asongu, (2021) as specified below:

The functional model is presented as follows

$$FD = f(FCI, X) \dots \dots \dots (1)$$

The empirical model is presented as follows

$$FD_{it} = \alpha + \beta_i FCI_{it} + \rho_i X_{it} + \eta_i + \zeta_{ti} \dots \dots \dots (2)$$

Where *FD* is financial development, *FCI* is a vector of foreign capital inflow variables such as foreign direct investment (FDI), foreign portfolio investment (FPI) and remittances (REM), χ is a vector of control variables such as trade openness (OPEN), GDPPC, natural resource rent (NRR), inflation (Infl) etc, *it* is country *i* at time *t*.

Dependent variables

In order to measure financial development of Sub-Saharan African countries over time, we draw on the financial development index by Sahay et al. (2015b) which is a recently created financial development index. This index measures financial development and composed of data on different financial development parameters for a variety of financial agents (see Svirydzhenka, 2016). We adopt this financial development index constructed using a three-step approach seen in the literature on reducing multi-facet data into one summary index which follows the order; normalization of variables; aggregation of normalized variables into the sub-indices showing a particular functioning dimension; and aggregation of the sub-indices into the final index.

Independent variables of interest

The explanatory variables of interest are foreign capital inflow variables (which consists of mostly private flows such as foreign direct investment, foreign portfolio investment and workers remittances. These flows are private inflows which are chosen because they are based on efficiency.

Control variables

This study introduced the conditioning information set into the empirical model so that no important variable that is capable of influencing financial development is left out. Given that price fluctuations usually lead to changes in the saving behavior of the public while directly impacting financial development, inflation is controlled for in this study. Inflation reflects the macroeconomic stability of the host country (Aibai et al., 2019, Otchere et al., 2016, Soumaré et Tchana, 2015, Adjasi et al., 2012). Considering that a nation's imports and exports play a significant role in financial development, trade openness is also controlled for and is measured by the sum imports and exports divided by given country's gross domestic product (Fan et al., 2019). This is because a country that is open to cross border trade is expected to have many foreign and domestic investors which increase the number of transactions in financial institutions and markets. Population growth measures the labor force and demonstrates that active population enhances financial development through active participation in investments through borrowing from financial infrastructures. Real gross domestic product per capital is usually included as a measure for the income level of citizens (Nkoa, 2018) and as such a higher purchasing power indicates increased transactions in financial infrastructures. Domestic investment which proxy by gross domestic fixed capital formation. Natural resource rent is also controlled.

Data

This study was conducted using annual data for the period 1995 to 2020 across 43 SSA countries including giving a total sample size of about 1161. The countries and periodicity were selected on bases of data availability constraints at the time of the study. The data are obtained from different sources. Financial development is the IMF broad-based indicator of financial development in terms of depth, access, and efficiency in both financial institutions and financial markets (see Svirydzhenka 2016; Sahey et al., 2015). The information is obtained from the IMF Financial Development data set, which comprises information from the World Bank FinStats, IMF's Financial Access Survey, Bank for International Settlement (BIS) debt securities database, and Dealogic corporate



debt database. The data for foreign capital inflow variables are obtained from World Development Indicator (WDI). Moreover, data for control variables are also obtained from World Development Indicators (WDI)

In this study, we check the quality of the data/variables with the use of descriptive statistics wherein we examine the means, standard deviations, and the bounds of the variables which are represented by the minimum and the maximum to see if the variables are well behaved or not. We do not have interest in medians because we are dealing with open ended data where there is no natural mean. Table 4.1 below reports the summary statistics for financial development indices, foreign capital inflows, and some control variables. Results from the table shows that on average, financial development, financial institutions development, and financial markets development record 0.1375252, 0.2207667, and 0.050094 respectively in SSA. The results indicate that financial institutions' record an average greater than financial markets which implies that SSA economies are practically financial institutions inclined as compared to financial markets. Even though the standard deviations are closer to the mean but high range scores further explain that some few economies' financial systems are more advanced than others especially those of the middle income countries. With regards to the global scale, the mean value of financial development in SSA countries is far below the global average of other regions such as MENA, and Asia.

Table 1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
FD	1,161	.1375252	.1081935	.0173309	.679041
FI	1,161	.2207667	.1315932	.0316249	.7397121
FM	1,161	.050094	.0974302	0	.6028427
LFDI	1,051	18.74927	2.16008	9.706248	23.02867
LFPIC	1,161	15.28397	3.609806	7.578061	55.66472
LREM	1,161	18.32452	1.973155	9.347575	23.9142
INFL	1,053	17.21384	155.6171	-9.616154	4145.106
LGDPPC	1,147	6.872927	1.106462	4.630818	10.04075
LGKF	1,060	21.12823	1.686816	14.48867	25.56815
NRR	1,099	11.28293	11.20031	.0011713	62.03992
POPG	1,152	2.519452	.9727692	-2.628656	8.117947
OPEN	1,093	.7015382	.3699515	.0749815	3.113541

Sources: Authors' Computation, using Stata 14, 2024

Where we denote FD = Financial development, FI = financial institution development, FM= financial market development, LFDI = log of foreign direct investment, LFPI = log of foreign portfolio investment, LREM= log of remittances, INFL= inflation rate, LGDPPC= log of gross domestic product per capita, LGKF =log of gross capital formation, NRR= natural resource rent, POPG= population growth rate, OPEN= openness of the economy

Moreover, on average value of foreign direct investment, foreign portfolio investment, personal remittances, inflation rate, gross domestic product per capital, gross capital formation, natural resource rent, population growth rate, and the openness of the economy of SSA economies are, 0.0437593, 0.0017844, 0.0365582, 17.2138

per cent, 6.8729 per cent, 21.1282 per cent, 11.2829 per cent, 2.5195percent, and 0.70154 per cent respectively. As can be noted on the table, the variables are well behaved and are within close range.

Collinear explanatory variables are problematic in econometric analysis because they lead to rise of the problem of multicollinearity. As such failure to address the sources of such collinear variables will lead to bias econometric results. Within the ambit of this study, we study the relationship between the explanatory variables with the aid of the pair-wise correlation matrix.

Table 2: Pair-Wise Correlation Matrix

	LFDI	LFPI	LREMI	INFL	LGDPPC	LGKF	NRR	POPG	OPEN
LFDI	1.0000								
LFPI	0.0430	1.0000							
LREM	0.4338	0.0212	1.0000						
INFL	0.0116	0.0482	-0.0556	1.0000					
LGDPPC	0.3569	0.2188	-0.0028	-0.0668	1.0000				
LGKF	0.6817	0.1380	0.4543	-0.0148	0.4073	1.0000			
NRR	0.1456	-0.1271	-0.1661	0.1648	-0.1000	0.0732	1.0000		
POPG	0.0867	-0.1390	0.0165	0.0419	-0.3082	0.1024	0.3773	1.0000	
OPEN	0.1480	0.0212	-0.1844	-0.0521	0.4861	-0.0479	0.1485	-0.3073	1.0000

Source: Authors' Computation using Stata 14, 2024

The findings of table 2 show that the leading diagonal of the pair-wise correlations matrix table stands at 1.000. This shows that each of the explanatory variables is perfectly collinear to itself. As such there is a one by one relationship between explanatory variable and itself. At the same time we briefly note from the pair-wise correlation table that the correlations between an explanatory variable and others are less than 0.75 implying that there is the absence of problems of collinearity amongst the explanatory variables. As such these explanatory variables can be included in the same model to explain the degree of financial development of SSA.

Before we proceed to estimate how these explanatory variables explain the degree of financial development in SSA, non-stationary data poses a fundamental problem in econometric analysis because it rise to spurious regression results. As such data can only be valid for econometric analysis only when issues of stationarity have been properly addressed. Within the ambit of this study, we address this problem of stationarity with the aid of the Im, Pesaran and Shin unit root test whose results are reported in Table 2

Table 3: Unit-root IPS Stationarity Test

Variables	Levels		First Difference		Order of Integration
	Statistic	P value	Statistic	P value	
FD	-3.2289	0.0006	--	--	I(0)
FI	-4.6950	0.0000	--	--	I(0)



FM	2.7080	0.9966	-17.5859	0.0000	I(1)
LFDI	-9.3023	0.0000	--	--	I(0)
LGDPPC	-2.1160	0.0172	--	--	I(0)
LGKF	-0.6143	0.2695	-16.3951	0.0000	I(1)
LREM	-6.2545	0.0000	--	--	I(0)
LFPI	-14.1477	0.0000	--	--	I(0)
OPEN	-2.0840	0.0186	--	--	I(0)
NRR	-4.3702	0.0000	--	--	I(0)
POPG	-2.8688	0.0021	--	--	I(0)
INFL	-9.4625	0.0000	--	--	I(0)

Source: Authors' Computation using Stata 14, 2024

Based on the results, financial development index (FD), financial institutions index (FI), financial market index (FM), log of foreign direct investment (LFDI), log of gross domestic product per capita (LGDPPC), log of personal remittances, log of foreign portfolio (LREMI), openness of the economy to GDP, natural resource rent, population growth rate, inflation rate are stationary at levels I(0) whereas, financial markets and log of gross capital formation (LGKF) are stationary at first difference I(1) which therefore implies the data was fit to be used for the purpose of analysis and for the analytical technique. In panel data analysis, interdependence or inter-relationship between countries-panels suggests that the problem of cross-sectional dependence present itself. Chudik and Pesaran (2015) had earlier noted that failure to address this problem gives rise to spurious (bias) regression results. In this study we verify if this problem exist with the aid of the Pesaran (2015) second generation cross-sectional dependence test.

Table 4: Cross-sectional average Pesaran test

Variables	Levels	
	Statistic	P value
FD	-4.913	0.000
FI	-5.732	0.0000
FM	3.100	0.999
LFDI	-6.949	0.000
LGDPPC	-4.535	0.000
LGKF	-4.613	0.000
LREM	1.821	0.966
LFPI	-8.813	0.0000
OPEN	0.317	0.624
NRR	-2.495	0.006
POPG	-11.479	0.000
INFL	-10.205	0.000

Source: Authors' Computation using Stata 14, 2024

From table 4.4, financial development, financial institutions development, foreign capital inflows, foreign direct investment, foreign portfolio investment, inflation rate, gross domestic product per capital, gross capital formation, natural resource rent, population growth rate failed to reject the null hypothesis of no cross-sectional dependence while financial market development, remittances and openness of the economy reject the null hypothesis of no cross-sectional dependence. We noted that most of the variables present issues of cross-sectional dependence. Traditional techniques such as the Pooled OLS, the fixed effect model, the random effect model, the mean group and the pooled mean group that do not address the problem of cross-sectional dependence are therefore not suitable for estimating the parameters for this study. We therefore make use of the two step system GMM which is robust and account for the problem of cross-sectional dependence. Before we proceed to implement the two-step system GMM, we test the relationship between the variables with the use of fitted scatter plots.

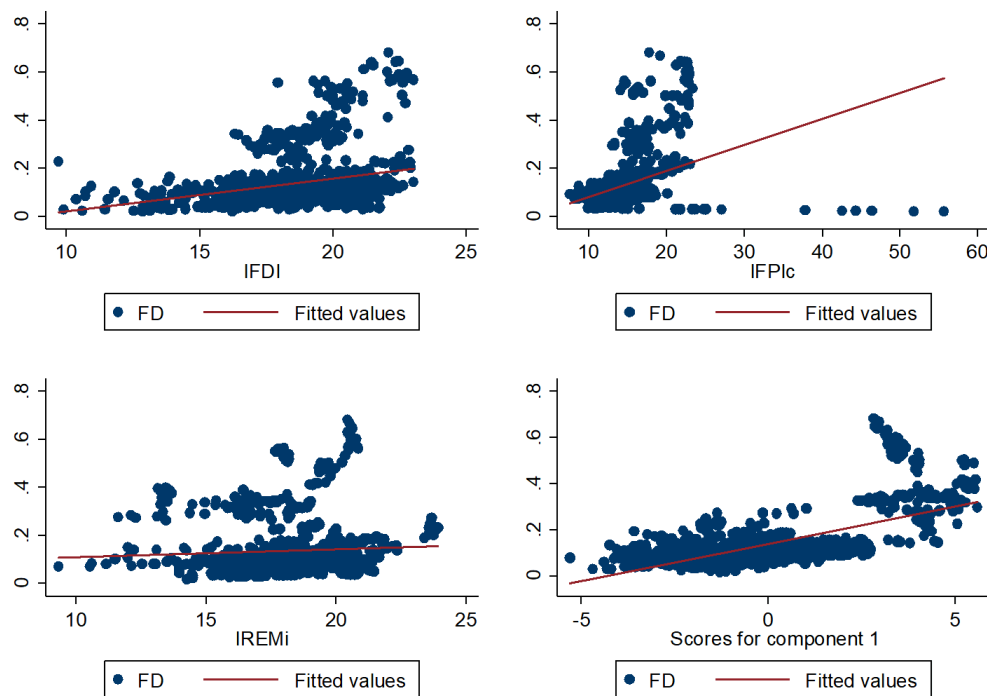


Figure 1: Fitted Scatter Plots Linking financial development and the components of foreign capital inflows

Source Author(s), 2024

Figure 1 presents the relationship that exists between foreign capital inflows, institutional quality and financial development. The relationship between financial development and foreign capital inflows in terms of foreign direct investment is apparently linear while the relationship between financial development and foreign portfolio inflow, and the relationship between financial development and remittances both present apparent non-linear relationship. However, the relationship between institutional quality and financial development is linear. As such, we ascertain the quantitative extent and the true direction of these relationships by implementing the two step system GMM regression model as earlier mentioned.



Estimation Method

We employ the system GMM in this study. The reasons for the choice of such an estimation technique include; firstly our dependent variable financial development is highly correlated with its first period lag; the correlation between the level and first different series of the outcome variables are greater than 0.800 which meets the standard rule in the establishment of persistence in a variable (Tchamyou et al., 2019). Secondly, our time dimension (27 years) is smaller than the cross sectional dimension (42 countries). Roodman (2009) presents that the first condition for GMM empirical approach to be used in any regression is due to the fact that the number countries or entities as in this research should be more than the number of time related observations from each entity. In the case of this study, the dataset is a panel form consisting 43 countries with 27 yearly observations. Thirdly, including the lagged dependent variable in the model correlates with the fixed effects in the error term and such a correlation causes a dynamic panel bias when estimation technique such as OLS is used (Nickell, 1981). With GMM estimation method, such an issue is resolved and it equally takes care of cross-sectional dependence across panels (Nchofoung et al., 2021).

We use the Holtz-Eakin, Newey, and Rosen (1988) system GMM technique to model the linkages, which was further enhanced by Arellano and Bond (1991), Arellano and Bover (1995), and Blundell and Bond (1998). This technique has been used in numerous research to simulate a variety of settings (See Edison et al. 2002; Bonfiglioli, 2008; Schularick and Steger, 2010; and Ekpo and Chuku 2017). When panel data with characteristic errors that are heteroscedastic and associated within but not across nations are taken into consideration, the system GMM is applicable. GMM empirical strategy is chosen because it builds on four main justifications which follow the contemporary GMM-Centric literature, seen in Tchamyou (2019, 2020).

The first condition for adopting this empirical approach is due to the fact that the number countries or entities as in this research should be more than the number of time related observations from each entity. In the case of this study, the dataset is a panel form consisting 30 countries with 21 yearly observations. This aspect actually is in accordance with the dataset given that the panel structure consists of 30 countries with 21 yearly observations.

The second rule is that the correlation between the level and first different series of the outcome variables are greater than 0.800 which meets the standard rule in the establishment of persistence in a variable (Tchamyou et al., 2019). The third condition is endogeneity which is resolved from two main dimensions including reverse causality or simultaneity which is addressed with the help of internal instruments. Meanwhile, the unobserved heterogeneity is handled by accounting for time-invariant omitted variables. Lastly, following the panel nature structure used in this study, cross-country differences are engaged in the estimation processes.

Hence, we begin with the next regression:

$$FD_{it} - FD_{it-1} = n + \tau + (\alpha - 1)FD_{it-1} + \rho FCI_{it} + \lambda \chi_{it} + \xi_{it} \dots \dots \dots \text{eqn(3)}$$

Where n is a time invariant country specific effect, and τ is a deterministic time trend which is used to account for period specific effects. We can simplify equation (3) in terms of the FD_{it} variable, so that:

$$FD_{it} = n_i + \tau + \alpha FD_{it-1} + \rho FCI_{it} + \lambda \chi_{it} + \xi_{it} \dots \dots \dots \text{eqn (4)}$$



We use a first difference transformation of equation 4 and exclude the temporal trend for notational simplicity in order to remove the country-specific effect n as follows;

$$(FD_{it} - FD_{it-1}) = \alpha(FD_{it-1} - FD_{it-2}) + \rho(FCI_{it} - FCI_{it-1}) + \lambda(\chi_{it} - \chi_{it-1}) + (\xi_{it} - \xi_{it-1}) \dots \dots \dots \text{eqn(5)}$$

We therefore apply the difference operator (Δ), to obtain equation 6 as follows;

$$\Delta FD_{it} = \alpha \Delta FD_{it-1} + \rho \Delta FCI_{it} + \gamma \Delta IQ_{it} + \lambda \Delta \chi_{it} + \Delta \xi_{it} \dots \dots \dots \text{eqn(6)}$$

In order to address endogeneity and the fact that equation 6's error term is correlated with the lagged dependent variable by design, which undermines the consistency of traditional estimators, we include instrumental variables into the GMM framework (see Arellano & Bond, 1991; Edison et al., 2002; and Ekpo, A., and C. Chuku 2017). The validity of the instruments employed in the model must be assessed because the dynamic panel data estimate approach is an instrument-based technique. We point out that only when the moment criteria are met and the instruments are valid are the computed coefficients considered to be effective and consistent. Only if the residuals from equation 6 are not second-order serially correlated will instrument validity persist. As a result, we use the Sargan-Hansen test of over identifying constraints, which is also a test of second-order serial correlation in the residuals, to confirm the model's estimates. We then give the test statistic together with the corresponding probability values.

RESULTS AND DISCUSSION

In actual fact, for our results to be valid, there is a need for the absence of both first and second order autocorrelation of residuals. In this case, the probability of $AR1 < 10\%$ and $AR2 > 10\%$ for first and second order autocorrelations tests, respectively. Moreover, the null hypothesis of Sargan and Hansen over-identification restrictions tests for the validity of instruments should not be rejected (in this case, $P\text{-value} > 10\%$). Also, the null hypothesis of the Fisher statistics for the overall significance of the model should not be accepted (in this case, $p\text{-value}$ should be $< 10\%$). Furthermore, the Difference in Hansen Test (DHT) for exogeneity of instruments is adopted to assess the validity of results from the Hansen test of overidentification restriction, in which case the null hypothesis of exogeneity should not be accepted. Finally, the number of instruments must be kept below the number of cross-sections as recommended in Roodman (2009).

From our results in table 5, we validate that there is non-existence of both first and second order serial correlation since the Arellano and Bond test is significant for the first order ($AR1 < 10\%$) and insignificant for the second order ($AR > 10\%$). In this regard, we accept the null hypothesis of no autocorrelation and conclude that there is no issue of autocorrelation.

The validity of the identification strategy is examined by rejecting the Sargan and Hansen overidentification restrictions test. We considered years here to represent the strictly exogenous variables while the predetermined variables are considered to be elements in the conditioning information set and the independent variables of interest. The null hypothesis corresponding to this test should not be rejected in order for the instruments to be valid. These conditions are fulfilled in table 5 where both tests are insignificant. At this junction, we do not reject null hypothesis and conclude that the instruments used both exogenous and predetermined in all the models are

valid. The number of instruments (33) is less than the cross-sections (42) which is a precondition for the system GMM to be valid. To test the validity of our instruments, we concentrated on the Hansen test and the difference in Hansen test over Sargan test. This selection is guided by the fact that Sargan is not robust and its power is not weakened by instrument proliferations. Therefore, the null hypothesis is rejected that foreign capital inflows have no effect on financial development of Sub-Saharan African countries. Lastly, the Fisher test estimated in all the models has values of 493.90, 1775.90, and 68.66 are all highly significant at 1%, thereby ascertaining the joint validity of the estimated coefficients.

Our results on the table below are presented in three columns whereby column one represents results of aggregate financial development index, column two is disaggregated financial development in financial institutions, and column three is disaggregated financial development in financial market.

Table 5: The Effect of Foreign Capital Inflows on Financial Development

	(1)	(2)	(3)
VARIABLES	FD	FI	FM
L.FD	0.976*** (0.0557)		
L.FI		0.795*** (0.0712)	
L.FM			0.774*** (0.0882)
LFDI	-0.0105*** (0.00273)	0.00142 (0.00398)	-0.0125*** (0.00413)
LFPIC	-0.00455*** (0.00139)	-0.000237 (0.00173)	-0.00564*** (0.00179)
LREMI	0.00489* (0.00247)	0.0105** (0.00450)	0.00515 (0.00443)
D.INFL	-8.94e-05 (0.000105)	0.000422*** (0.000115)	2.53e-05 (0.000190)
LGDPPC	0.0232** (0.0105)	0.0204** (0.00871)	0.0228** (0.0105)
L.LGKF	-0.00595 (0.00412)	-0.0160** (0.00630)	-0.00112 (0.00414)
NRR	-0.000669 (0.000473)	-0.000506 (0.000530)	-0.000174 (0.000429)
POPG	-0.00376 (0.0111)	0.0327** (0.0123)	0.00886 (0.0124)
Open	0.0400**	-0.0245	0.0147

	(0.0178)	(0.0309)	(0.0181)
Constant	0.142**	0.0392	0.0757
	(0.0568)	(0.0629)	(0.0554)
Time Fixed Effects	Yes	Yes	Yes
Observations	836	821	821
Number of Countries	42	42	42
Prop>AR1	0.000	0.000	0.040
Prop>AR2	0.683	0.568	0.938
Instruments	33	33	33
Prop>Sargan	0.793	0.213	0.801
Prop>Hansen	0.982	0.519	0.897
Fisher	493.90***	1775.90***	68.66***
DHT for Instruments [(a) In level]			
H excluding groups	0.910	0.914	0.967
Dif(null H=exogenous)	0.941	0.054	0.307
DHT for Instruments [(b) iv(years, eq(d))]			
H excluding groups	---	---	---
Dif(null H=exogenous)	---	---	---

Standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0$

Source: Authors' Computation using Stata 14, 2024

System GMM demands that we include the lag of the dependent on the estimated model. In this regard, we begin the discussion starting with the lag of the dependent variable to note its effect on its current value. Financial development is affected by its one year lag. This implies that past values of financial development predicts present value by 0.976 units and the finding is significant at 1% level. This suggests that improvement of current value of financial development is necessary for future financial development to improve. This result is consistent with financial institution development and financial market development.

The regression results from table 5 indicates that foreign direct investment has a negative effect on financial development and financial markets development with coefficients of 0.0105 and 0.00125 and the results are tenable at 1% level of significant and a positive and insignificant effect on financial institutions development. The negative coefficients are contrary to the a priori expectations and in line with the empirical study of Muhammad (2020), and Majeed et al. (2021). Our theoretical a priori suggest that capital inflows lead to higher financial development but the case of SSA economies seems to be different. Majeed et al. (2021) found FDI to have a negative impact on financial development in Africa. But previous literature has shown that FDI will lead to positive and growing effect on the receiving economy only when the host economy has a better absorptive capacity. Although this study expected a positive effect, the inflows could come when the economies are exposed to shocks and fail to grab the full advantage of potential FDI spillovers thereby further hampering financial development. Different aspect of foreign investments can exert sharply different and even opposing impact on the establishment of



financial development. Alfredo and Chen (2012) suggested that foreign investment can provoke more volatility in the financial market if the supply of foreign funds is not channeled properly, meanwhile Carluccioa and Fally (2012) advanced that it creates poor financial institutions linkage especially when trades involve complex goods, and fail to attract multinational firms which promotes industrialization via new technologies and better management practice (Narula and Pineli, 2017). The effect of FDI on financial institution development is positive but insignificant but negative and significant in financial market development.

The regression results from table 5 indicates that foreign portfolio investment have negative coefficients across all measure of financial development. The results are significant at 1% level for both financial development and financial markets development but insignificant for financial institutions development. It is not surprising that the coefficient of foreign portfolio investment is negative because this type of flow is characterized by stop and reversal in both developing and emerging economies and has severe repercussion on the stability as well as the development of the financial sector across the globe (financial stability review, 2011). Most financial sectors advancement is facilitated by investors' confidence seen in the form of investments in equity and bonds thereby providing firms with long term sources of financing projects. Nevertheless, when such investments in foreign portfolio are subject to stop and reversal in SSA countries, the region financial structures will offer limited access to financial products and risk diversification opportunities thereby further hindering development of the financial sector. This effect is consistent in financial institution development and financial market development.

Moreover, personal remittances have a positive coefficient of 0.00489, 0.0105, 0.00515 and the results are tenable at 10% and 5% level of significance for both financial development and financial institution development. The positive coefficient of remittances ties with the notion that these inflows are permanent to the host countries and are not subject to reversal as the case of foreign portfolio investment. This finding is in accordance with the a priori expectation and in line with the findings of Mohamed (2020) who established that workers' remittances have a beneficial long-run effect on financial development in Sri Lanka. Azizi (2019) stated that the positive impact of workers' remittances on financial development in developing economies is good particularly because financial development fosters long-run growth and decrease poverty. Aggarwal, Demirgüç-Kunt, and Pería (2011), and Misati and Nyamongo (2011) noted that formal channels of remittances enhances growth in the financial system. The benefits only occur when the recipients of such funds open accounts with depository financial institutions. This positive effect of remittances on the financial sector implies that upon receiving these funds, the recipients create accounts and start demanding bank's products and services. In this regard, credit outstanding may as well increase due to remittances as banks relax credit constraints on remittance recipients following the induced financial literacy hypothesis (Bhattacharya, Inekweb and Paramatic, 2018).

Our results are greatly improved when we control for GDPPC, openness of the economy. The coefficients of GDPPC and openness of the economy are positive and significant. This therefore implies that foreign capital inflows affect financial development when the economy is growing and open to foreign trade. Controlling for inflation, gross capital formation, natural resource rent, and population growth rate do not affect the results and their coefficients are negative.

For robustness check, we considered alternative empirical model like the two stage least square which is presented as follows

Table 6: The effects of foreign capital inflows on financial development using Two Stage Least Square model

	(1)	(2)	(3)
VARIABLES	FD	FI	FM
IGDPPC	0.0277*** (0.00313)	0.0520*** (0.00377)	0.00257 (0.00414)
IFDI	-0.00189** (0.000894)	-0.00240** (0.00108)	-0.00131 (0.00118)
IFPI	0.00104*** (0.000389)	0.00136*** (0.000468)	0.000696 (0.000513)
IREM	0.00317*** (0.000830)	0.000867 (0.001000)	0.00537*** (0.00110)
D.infl	-0.000109** (4.88e-05)	-0.000184*** (5.87e-05)	-2.99e-05 (6.44e-05)
D.IGKF	-0.00650* (0.00334)	-0.0113*** (0.00402)	-0.00148 (0.00441)
NRR	-0.000828*** (0.000197)	-0.00120*** (0.000237)	-0.000426 (0.000260)
Popg	0.000573 (0.00200)	-0.000245 (0.00241)	0.00137 (0.00264)
Open	0.0133** (0.00543)	0.0221*** (0.00654)	0.00410 (0.00716)
Observations	835	835	835
R-squared	0.221	0.319	0.051
Number of countries	42	42	42

Standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Source: Authors' Computation using Stata 14, 2024

It can be noted on table 6 that foreign direct investment has a negative effect on financial development and these results are consistent with that of the SGMM.

This therefore implies the degree of robustness of the results. We also noted that remittances have a positive and significant effect on financial development across all measures of financial development and is consistent with our SGMM results.

Contrary to our original results on SGMM, foreign portfolio investment exhibits a positive and significant effect on financial development. The intention of doing this check is verifying the direction of the results.



CONCLUSION AND POLICY SUGGESTIONS

We noticed in literature that much effort has been put to foster financial development of SSA nations, yet the financial systems of this region still remain weak as compared to those of its counterparts. Due to globalisation and technological advancement across the globe, this gap has to be closed in order that financial systems across countries of this region can be competitive and sustainable to boost the economic development of the respective nations within this region.

With regards to our results, we observed that a negative effect of FDI and FPI on financial development of SSA countries even though it is counter-intuitive, this study concludes that such an effect is due to the fact that profits generated are repatriated to the investors' home countries leaving behind little or nothing for future investments. Undoubtedly, remittances are observed to have a positive effect on financial development of this region due to their permanent nature and flow of this nature brings about financial literacy and inclusiveness among citizens. There would be significant benefits to SSA economies if the governments of these countries promote domestic firms so as to limit much dependency on foreign corporations.

Based on our findings, we recommend that in order to advance financial development in Sub-Saharan African countries, and achieve the desired government policy objectives therein, African governments should take a practical measure through the promotion of trade and investments among SSA States whereby financial structures within will benefit diversity of activities. The results show that workers' remittances have a positive and significant effect on financial development of SSA countries. This implies that SSA nations should encourage citizens abroad willing to repatriate income back home through desire tax system favourable enough to permit them remit their income through formal financial structures that will enhance financial development.

REFERENCES

- [1] Acheampong, K. (2019). The interaction effect of foreign capital inflows and financial development on economic welfare in sub-Saharan Africa. *Financial Innovation*, 5(1), 25.
- [2] Adjasi, C. K., Abor, J., Osei, K. A., & Nyavor-Foli, E. E. (2012). FDI and economic activity in Africa: The role of local financial markets. *Thunderbird International Business Review*, 54(4), 429-439.
- [3] Aggarwal, R., Demirgüç-Kunt, A., & Pería, M. S. M. (2011). Do remittances promote financial development?. *Journal of development economics*, 96(2), 255-264.
- [4] Agosin, M. R., & Machado, R. (2005). Foreign investment in developing countries: does it crowd in domestic investment?. *Oxford Development Studies*, 33(2), 149-162.
- [5] Ahmed, I., Seikdear, S. A., & Khatun, R. (2022). Effect of Capital Inflows on Financial Development: The Case of Bangladesh. *ABC Research Alert*, V2, 9-22.
- [6] Ahmed, K, and Jahanzeb, A. (2021). Does financial development spur environmental and energy-related innovation in Brazil? *International Journal of Finance & Economics* 26: 1706-23.
- [7] Aibai, A., Huang, X., Luo, Y., & Peng, Y. (2019). Foreign direct investment, institutional quality, and financial development along the belt and road: An empirical investigation. *Emerging Markets Finance and Trade*, 55(14), 3275-3294.



- [8] Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *The review of economic studies*, 58(2), 277-297.
- [9] Arellano, M., & Bover, O. (1995). Another look at the instrumental variable estimation of error-components models. *Journal of econometrics*, 68(1), 29-51.
- [10] Asamoah, M. E., Alagidede, I. P., & Adu, F. (2022). Exchange rate uncertainty and foreign direct investment in Africa: Does financial development matter?. *Review of Development Economics*, 26(2), 878-898.
- [11] Asongu, S., Uduak S.A., and Salisu R.I., (2018). Determinants of foreign direct investment in fast-growing economies: Evidence from the BRICS and MINT countries. *Financial Innovation* 4: 26. [CrossRef]
- [12] Azizi, S. (2019), "Why do migrants remit?", *The World Economy*, Vol. 42 No. 2, pp. 429-452
- [13] Beck, T., Demirgüç-Kunt, A., & Levine, R. (2003). Law and finance: why does legal origin matter?. *Journal of comparative economics*, 31(4), 653-675.
- [14] Bhattacharya, M., Inekwe, J., & Paramati, S. R. (2018). Remittances and financial development: empirical evidence from heterogeneous panel of countries. *Applied Economics*, 50(38), 4099-4112.
- [15] Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87(1), 115-143.
- [16] Bonfiglioli, A. (2008). Financial integration, productivity and capital accumulation. *Journal of International Economics*, 76(2), 337-355.
- [17] Carluccio, J., & Fally, T. (2012). Global sourcing under imperfect capital markets. *Review of Economics and Statistics*, 94(3), 740-763.
- [18] Chavula, H. K., Tefera, M. G., Kedir, A. M., & Awel, Y. M. (2017). Monetary and Other Financial Policies for Africa's Structural Transformation. In C. Lopes, A. Hamdok, & A. Elhiraika (Eds.), *Macroeconomic Policy Framework for Africa's Structural Transformation* (pp. 145-216). Palgrave Macmillan. https://doi.org/10.1007/978-3-319-51947-0_5
- [19] Chen, H., Hongo, D. O., Ssali, M. W., Nyaranga, M. S., & Nderitu, C. W. (2020). The asymmetric influence of financial development on economic growth in Kenya: evidence from NARDL. *Sage Open*, 10(1), 2158244019894071.
- [20] Chudik, A., & Pesaran, M. H. (2015). Common correlated effects estimation of heterogeneous dynamic panel data models with weakly exogenous regressors. *Journal of econometrics*, 188(2), 393-420.
- [21] Collison, P., Brennan, L. and Rios-Morales, R. (2017). Attracting Chinese foreign direct investment to small, developed economies: The case of Ireland. *Thunderbird International Business Review* 59: 401-19.
- [22] Daniele, V., & Marani, U. (2011). Organized crime, the quality of local institutions and FDI in Italy: A panel data analysis. *European Journal of Political Economy*, 27(1), 132-142.
- [23] Duba, G.J., (2022). The Impact of Foreign Capital Inflows and Property Rights
- [24] on Financial Development in SSA: Panel Dynamic Model. *International Journal of Development Research*, 12, (05), pp. 56347-56358.
- [25] Duba, G.J., (2022). The Impact of Foreign Capital Inflows and Property Rights
- [26] on Financial Development in SSA: Panel Dynamic Model. *International Journal of Development Research*, 12, (05), pp. 56347-56358.



- [27] Edison, H. J., Levine, R., Ricci, L., & Sløk, T. (2002). International financial integration and economic growth. *Journal of international money and finance*, 21(6), 749-776.
- [28] Ekpo, A., & Chuku, C. (2017). Regional financial integration and economic activity in Africa. *Journal of African Economies*, 26(suppl_2), ii40-ii75.
- [29] Fan, A., Grave, E., & Joulin, A. (2019). Reducing transformer depth on demand with structured dropout. arXiv preprint arXiv:1909.11556.
- [30] Fernandez Gonzalez, R., Arce Farina, M. E., & Garza Gil, M. D. (2019). Resolving conflict between parties and consequences for foreign direct investment: the Repsol-YPF case in Argentina. *Sustainability*, 11(21), 6012.
- [31] Fozoh, I. A., Njimanted, G. F., Akume, D. A., Forbe, H. N. (2022). Financial integration and financial development in the Cemac Zone: Does the fragility of the state matters? *Journal of Applied Financial Econometrics* Vol. 3, No. 2, 2022, pp. 133-158
- [32] Gui-Diby, S. L. (2014). Impact of foreign direct investments on economic growth in Africa: Evidence from three decades of panel data analyses. *Research in economics*, 68(3), 248-256.
- [33] Haque, M. A., Biqiong, Z., & Arshad, M. U. (2022). Sources of financial development and their impact on FDI inflow: A panel data analysis of middle-income economies. *Economies*, 10(8), 182.
- [34] Holtz-Eakin, D., Newey, W., & Rosen, H. S. (1988). Estimating vector autoregressions with panel data. *Econometrica: Journal of the econometric society*, 1371-1395.
- [35] Islam, M. A., Khan, M. A., Popp, J., Sroka, W., & Oláh, J. (2020). Financial development and foreign direct investment—The moderating role of quality institutions. *Sustainability*, 12(9), 3556.
- [36] Keho, Y. (2020) Impact of Remittances on Financial Development: Revisiting the Evidence for ECOWAS Countries. *Theoretical Economics Letters*, 10, 169-179.
- [37] La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1999). Investor protection: origins, consequences, and reform.
- [38] Majeed, A., Jiang, P., Mahmood, A., Khan, M. A., & Olah, J. (2021). The impact of foreign direct investment on financial development: new evidence from panel cointegration and causality analysis. *Journal of Competitiveness*, 13(1), 95.
- [39] Misati, R. N., & Nyamongo, E. M. (2011). Financial development and private investment in Sub-Saharan Africa. *Journal of Economics and Business*, 63(2), 139-151.
- [40] Mohamed Aslam, A. L., & Sivarajasingham, S. (2020). Empirical relationship between workers' remittances and financial development (an ARDL cointegration approach for Sri Lanka). *International Journal of Social Economics*, 47(11), 1381-1402.
- [41] Muhammad T., & Alam, B., (2020). "Does well banking performance attract FDI? Empirical evidence from the SAARC economies," *International Journal of Emerging Markets*, Emerald Group Publishing Limited, vol. 17(2), pa 413-432.
- [42] Narula, R., & Pineli, A. (2017). Multinational enterprises and economic development in host countries: What we know and what we don't know. *Development finance: Challenges and opportunities*, 147-188.

- [43] Nchofoung, T., Achuo, E. D., & Asongu, S. A. (2021). Resource rents and inclusive human development in developing countries. *Resources Policy*, 74, 102382.
- [44] Nchofoung, T., Asongu, S., S Tchamyou, V., & Edoh, O. (2021). Political inclusion and democracy in Africa: some empirical evidence.
- [45] Nguyen, C. P., & Lee, G. S. (2021). Uncertainty, financial development, and FDI inflows: Global evidence. *Economic Modelling*, 99, 105473.
- [46] Nickell, S. (1981). Biases in dynamic models with fixed effects. *Econometrica: Journal of the econometric society*, 1417-1426.
- [47] Nkoa, B. E. O. (2018). Determinants of foreign direct investment in Africa: An analysis of the impact of financial development. *Economics Bulletin*, 38(1), 221-233.
- [48] North, D. C. (1990). *Institutions, institutional change and economic performance*. Cambridge university press
- [49] Otchere, I., Soumaré, I., & Yourougou, P. (2016). FDI and financial market development in Africa. *The World Economy*, 39(5), 651-678.
- [50] Pesaran MH (2015) Testing weak cross-sectional dependence in large panels. *Econom Rev* 34:1089-117
- [51] Rodrik, D., Subramanian, A., & Trebbi, F. (2004). Institutions rule: the primacy of institutions over geography and integration in economic development. *Journal of economic growth*, 9, 131-165.
- [52] Roodman, D. (2009). How to do xtabond2: An introduction to difference and system GMM in Stata. *The stata journal*, 9(1), 86-136.
- [53] Sahay, R., M. Cihak, P. N'Diaye, and A. Barajas. 2015a. "Financial Inclusion: Can It Meet Multiple Macroeconomic Goals?" IMF Staff Discussion Note 15/17, International Monetary Fund, Washington
- [54] Schularick, M., & Steger, T. M. (2010). Financial integration, investment, and economic growth: evidence from two eras of financial globalization. *The Review of Economics and Statistics*, 92(4), 756-768.
- [55] Seetanah, B. (2009). "Is Foreign Direct Investment Growth Conducive? New Evidences from Sub-Saharan African Countries, 1980-2005." *Applied Econometrics and International Development* 9 (2): 185-201.
- [56] Sghaier, I.M., Abida, Z. (2016). Foreign direct investment, financial development and economic growth: Empirical evidence from North African Countries. *Journal of International Economics*, 73(2), pp.223-250.
- [57] Shahbaz, M., Miroslav, M., Salah A., Muhammad A.N., and Zhilun J. (2021). Determinants of FDI in France: Role of transport infrastructure, education, financial development and energy consumption. *International Journal of Finance & Economics* 26: 1351-74.
- [58] Sirag, A., Ahmed, S., & Ali, H. S. (2018). Financial development, FDI and economic growth: evidence from Sudan. *International Journal of Social Economics*, 45(8), 1236-1249.
- [59] Smith, F. (2021). Uncertainty, Financial Development and FDI Inflows: France Evidence. *Asian Business Research Journal* 6: 7-13.
- [60] Soumaré, I., & Tchana Tchana, F. (2015). Causality between FDI and financial market development: Evidence from emerging markets. *The World Bank Economic Review*, 29(suppl_1), S205-S216.
- [61] Svirydzenka, K. (2016). Introducing a new broad-based index of financial development. *International Monetary Fund*.



- [62] Svirydzienka, K. (2016). Introducing a new broad-based index of financial development. *International Monetary Fund*.
- [63] Tchamyou, V. S., Erreygers, G., & Cassimon, D. (2019). Inequality, ICT and financial access in Africa. *Technological Forecasting and Social Change*, 139, 169-184.
- [64] Tchamyou, V. S. (2021). Financial access, governance and the persistence of inequality in Africa: Mechanisms and policy instruments. *Journal of Public Affairs*, 21(2), e2201.
- [65] Trevino, L. J., Thomas, D. E., & Cullen, J. (2008). The three pillars of institutional theory and FDI in Latin America: An institutionalization process. *International Business Review*, 17(1), 118-133.
- [66] Vasyechko, O. (2012). A review of FDI theories: An application for transition economies. *International Research Journal of Finance and Economics* 89: 118–137.

