

RESEARCH ARTICLE

The effect of Foreign direct investment and financial development on economic growth: Evidence from global income countries

Robeena Bibi¹, Sumaira^{2*}

¹School of Public Administration, Hohai University, Nanjing China.

²College of Economics and Management, Zhejiang Normal University, Zhejiang, China

Corresponding Author: Sumaira, sumairakhan321321@gmail.com

Received: 01 January, 2022, Accepted: 03 February, 2022, Published: 06 February, 2022

Abstract

Prior researches have explored the role of FDI and economic growth or financial development and economic growth in a particular sample of countries or region while no collective studies on the effect of FDI, banks and stock market on economic growth in region or income-based groups have been conducted yet. Using a balanced panel data set of the globe of 193 upper middle income (UMI), lower middle income (LMI) and high income (HMI) countries for the period of 1998 to 2018, the study ever the first time explore the role of FDI, banks and stock markets financial development on economic growth by employing static methods and Dynamic approaches which contributes to the scarce literature on the collective and across income-based groups of countries. All model findings for the global panel indicates that FDI affect economic growth significantly and positively in the global panel, lower middle income (LMI) and upper middle income (UMI) countries where it's not true for high income (HI) countries. Banking sector development also affect economic growth significantly but negatively in the global panel, high income and upper middle-income countries while not significant for the lower middle income (LMI) countries. Stock market development also affects economic growth significantly but negatively in the global panel. Furthermore, the result concludes that FDI have a larger effect on economic growth than does banks or stock market financial development. This study suggest high income countries regards improving FDI attraction, lower middle income (LMI) countries in regards improve banking sector and collectively suggest to improve major driver and functioning of banking sector and stock markets to spur economic growth. This study is beneficial for the government channels and financial sector of the study countries to make further decision.

Keywords: FDI, Financial development; Income groups; Global panel; Dynamic model

Introduction

There have been conducted numerous studies on the association of financial development and growth and some studies have been conducted on the association of FDI and economic growth. Some of the prior studies have only focused on FDI and growth while some studies have examined whether development of financial sector enhance growth level while they have ignored FDI. Some studies have used only bank-based proxies for financial development and have ignored stock market indicators. No studies have yet focused on the association of FDI, financial development by banks and stock markets and economic growth. This association among financial development, FDI and economic growth has made special attention. Both

financial development and foreign direct investment are important in augmenting economic growth as financial development of a country plays very essential protagonist in a country economic growth. Financial intermediaries are important in investments monitoring and succor in increasing productivity level.(Schumpeter, 1911) have esteemed the role performed by financial intermediaries in economic development.

Similarly, FDI is an important accelerator of economic growth as well it is apparent that both financial markets and FDI are the imperative determinants of growth and capital investment fund source which are essential for manufacturers, and the relationship regarding substitutable between them are very crucial. The current study entirely focusses on the relationship between FDI and financial

devolvement with economic growth in the global panel of 193 countries and further the global countries are categorized into lower middle income (LMI) countries, high income countries and upper middle-income countries. These countries have been categorized according to the World Bank classification of Atlas method for the current fiscal year 2020. Theoretically, the technological changes enhancement through the spillover knowledge effects, new capital goods, however the magnitude of FDI's role is the business environment in the recipient countries (Chamarbagwala, Ramaswamy, & Wunnava, 2000).

It is believed that the role of FDI in economic growth is higher in the recipient countries where have a developed financial system (M. Alfaro, Jarvis, & Gregory, 2004); (Durham, 2004). Additionally, FDI also plays important part in a country national economy modernization and augmenting economic growth. For this purpose, most of the countries have focused on the issue which are obstacle to FDI attractions because high level of FDI inflow enhance growth level of the economic.

Similarly, a well-developed financial system of an economy works to absorb capital inflows efficiently, effectively and specifically the flows are fungible. Therefore, financial development including banks and stock markets may explore the divergent outcomes in countries with different level of incomes. Moreover, the importance of financial sector as a precondition to growth effect of FDI can be the change in technologies (Hermes & Lensink, 2003). Financial markets and foreign direct investment are the two corresponding terms which strengthen the technological diffusion process and in turn its augment the level of economic growth.

The importance of foreign direct investment and financial development motivate this study. Therefore the current study investigates the FDI inflow role and the role financial development on economic growth in the global panel of 193 countries. Preceding studies have inspected the role of FDI and economic growth or financial development and economic growth in a small sample while no collective studies on the effect of FDI, banks and stock market on economic growth in region or income groups have been conducted yet. The current study has used the global panel data set of 193 countries which have been categorized into lower middle income (LMI), high income (HI) countries and (UMI) upper middle income for the period of 1998 to 2018. This study ever the first time explores the importance of FDI, banks and stock markets financial development in economic growth by employ the static methods OLS, random effect, fixed effect and Dynamic approaches difference GMM and system generalized method of moment's which contributes to the scarce literature on the collective and across income groups and regions effect of FDI, banks and stock markets development on economic growth. The study further give reasons of non-similar results in the different income based grouped countries which is a new addition to FDI, banks, stock markets and economic

growth collectively relationship literature and also beneficial for these countries policy making regarding their financial systems, international trade and policies regarding FDI attraction. The rest of the study is structure in the following steps; section 2 describes the previous literature of similar studies, section 3 is composed of methodology, 4th section illustrates the results while the last section is composed of conclusion.

Objectives of the paper

This study is conducted to investigate the important role played by foreign direct investment, banks and stock market financial development in economic growth in global panel and categorized income grouped countries; high income (HI), lower middle income (LMI) and high-income countries of the world panel for the period of 1998 to 2018. The aim of the study is to give policy suggestions for the improvement of FDI attraction in augmenting economic growth. It's further giving suggestions regarding banking sector and stock market development role in enhancing economic growth of these income-based countries.

Literature review

Predicated on the past studies, the current study present literature review in the following two sub sections. The first position gives definition of foreign direct investment; the second portion gives definition of financial development while section 3 gives a short definition of economic growth. Similarly, section 4 illustrates a brief description of the prevailing literature of FDI and economic growth, the section fifth is composed of financial development by banks and economic growth while the last section is composed of financial development by stock market and economic growth.

Foreign direct investment (FDI)

Foreign direct investment (FDI) can be defied that it's an investment which involves the relationship in long run and the resident entity control of an economy which can be foreign investors or the parent enterprises in an economy other than foreign direct investors or foreign affiliates or enterprises affiliates (OECD 1990; IMF 1993). Foreign direct investment suggests that the investors influence the management of an enterprise resident in other economies. This investment is most of by the equity capital which may involve long term involvement. It is also preferred over other capital flows such as the flow of private capitals including portfolio investments which are short term investment and flows more easily. According to (Farrell, Friesen, & Hersch, 2008) foreign direct investment composed of capital, entrepreneurship and management, capital and technology which permit firms to provide

services and goods for the operations in a foreign market. Such type of companies are refer to multinational or transnational corporations. Foreign direct investment is very important in a country economic growth. Export, higher production and other improvements in infrastructure implies that it can be a contributor to economic growth. For instance, the portfolio investment are the flows of capital into a country where they are seeking return in finance in medium and short term through stock and bond markets investment. Flow of Portfolio investment is not preferred by countries generally due to the reason it is associated with fast outflows in crisis period, and disables the local financial markets operations.

Financial development

Financial sector composed of financial instruments, a set of institutions and financial markets which are working to reduce information acquisition cost, transaction and contact enforcements. Those countries where have a well operative systems of finance enjoy higher economic growth. According to prevailing literature, FDI effect growth progress positively in an economy where this positive association rely on the absorptive capacities of an economy specifically the level of financial development. According to (L. Alfaro, Chanda, Kalemli-Ozcan, & Sayek, 2004), later after the financial crisis in 1980, the turmoil of emerging markets in 1990, the 2000 bubble burst and the recession of 2009, the developed countries attitude have changed towards outward flow of FDI. Moreover, (Shah, 2013b) statutes that FDI is one of the efforts in a country development as it motivated by higher efficiency and lower costs of the host country. According to this, most of the countries trying to establish agencies for investment and improving their financial and fiscal policies which can attract foreign direct investment and in turn enhance economic growth. They further argued that the low level of financial markets or lack of financial markets lowers the country to attract FDI inflow.

Economic growth

According to (Todaro & Stephen, 2011), economic growth as a steady process where the capacity of production increase overtime of an economy and the level of national income rising. The level of available resources causes the growth rate of an economy as well the quantity and quality of resources also matter the potential of a country grows. According to neoclassical theory, the economic growth can be increased when there is an increase in the factors of production and efficient allocation of researches. In economics, the growth of output potential in a country is referred to economic growth. The potential output may include full employment production which triggered by economic growth in the aggregate demand. This can be

premeditated in terms such as the level of inflation in order to avoid negative inflation effect (Almfraji & Almsafir, 2014). The function of economic growth where it depend on GDP and directly on the net saving as well contrariwise on the capital output ratio (E. Domar, 1939; E. D. Domar, 1946). There are different factors which can enhance growth rate of a country such as foreign direct investment, well operative financial systems which includes banks and stock markets.

Foreign direct investment (FDI) and economic growth

The idea is grown out from the Keynesian Harrod-Domar growth model that FDI perform positive role of a country economic growth and then its extended to two gap models (Chenery & Strout, 1968). The growth theories of Harrod-Domar are related to saving function and induced investment in advanced economics. Where (Oladipo, 2010) investigated the different factors which effect FDI inflow in Nigeria. He found that human capital export orientation and market size is very important for foreign investors in Nigeria. Similarly, (Anyanwu, 2012) have studied FDI inflow in Africa and states that there are factors affecting the inflow of FDI is always lower in Africa. He further states that trade openness, foreign aid, market size, the exploration of natural resources and human capital affects the inflow of FDI positively. Moreover, (Sunde, 2017) have explored the FDI impact on economic growth for the south African country. His results indicate that export and FDI inflow positively affect economic growth. similarly, (Ridzuan, Ismail, & Che Hamat, 2017) studied FDI and growth in Singapore where he found that FDI enhance economic growth in Singapore. On the other hand, (Feeny, Iamsiraroj, & McGillivray, 2014), have found week association of economic growth and FDI while (Acaravci & Ozturk, 2012) studied FDI impact on growth and found mixed results.

Economic growth and Banking based financial development

Several studies on the relationship of economic growth and financial development have been conducted which indicates the positive association of finance and growth (A. J. Levine, 1997). If financial mediators including banks and other institutions of financing are driving a country's economy is referred to banking based system of financial development and the development of that system is called the bank based financial development (THL Beck, Demirgüç-Kunt, & Levine, 2001). The endogenous growth favors the crucial role performed by financial development in economic growth (Bencivenga & Smith, 1991). Endogenous literature indicates that a well-structured financial system mobilize savings in a proper way and efficiently allocate resources which in turn accelerate the flow of liquidity and reduce transaction costs (Bencivenga & Smith, 1991). The bank-

based financial system enhances the level of productive investment because it's less exaggerated by unsteady financial markets. Bank based system allow firms to remain with investment deprived of foremost them into insolvency so there for is good for economic growth (Demirguc-Kunt & Levine, 2001). By using private sector credit and domestic credit proxy of financial development (Adu, Marbuah, & Mensah, 2013) have found positive relationship of the two in Ghana while negative relationship when financial development proxies by broad money. Similarly, (Kargbo11 & Adamu, 2009) have also found positive association of financial development and economic growth in Sierra Leone by employing ARDL approach. Moreover, (Guryay, Safakli, & Tuzel, 2007) have examined finance and growth in Northern Cyprus. They have applied OLS approach and have found positive negligible relationship between financial development and economic growth.

Stock market development and economic growth

The stock and bond markets work as a motivator with banks and driving the economic activity through resource allocation and saving mobilization as well the managing of corporate side and risk management, that system of the economy is called a market-based financial system and financial market development is called the market-based financial development (Demirguc, Kunt and Levine, 2001). When the control of financial system is holding by stock market activities in the market based system and the monetary progress completely depends on the fluctuation of stock market accomplishments ((Jain, Trehan, & Trehan, 2013). If they system of an economy is market based, so the banks dependency are lower upon interest of gain or loans of their income over fee-based facilities as the checking financial records of accounts. In the market based financial system of a country, the wealth is not contributed equally. It's changing continuously and each single individual of an economy has the chance to lose or gain at any given time period (Trehan, 2013). Specifically, Schumpeter (1911) identified the prominence of financial sector contribution to economic progress by emphasizing that financial sector is an energizer of economy growth. (Sanusi, 2011) states that financial system performs a vital part in economic growth though the way of mobilizing an economy resource for investments and a channel for the amplification of regulatory policy. (R. Levine, 2004) argues that capital providers can control and effect the capital allocation of savings along with the national level decision effectively (Levine, 2004). Furthermore, (Morck & Nakamura, 1999) states that financial institutions of a country are debt providers are biased to farsightedness. Levine (2004) identified that the firms which have a main bank method and don't grow faster than those companies without a central bank. (R. Levine & Zervos, 1999) states that stock market

influence growth positively and robustly. Likewise, (Caporale, Howells, & Soliman, 2004) have identified the role of market development in economic growth. Their results evidence the strong and positive link between the two in the sample study countries. (Adjasi & Biekpe, 2006) indicates that there is positive link between stock market and economic growth. (Ujunwa & Salami, 2010) studied stock market advancement and its effect on economic growth in long run by using OLS estimation in Nigeria. In this study they have used, turnover ratio, value of stocks trades and market capitalization to proxy for financial development. Form the regression, they have got result which shows that the two variables that is stock market size and turnover ratios effect economic growth positively in Nigeria. On the other hand, (Bernard & Austin, 2011) have explored the relationship of stock market development with economic growth in Nigeria. They have found positive association between growth and development in presence of turnover ratio proxy of stock market development. Bernard and Austin (2011) have found positive association between market-based financial development and economic growth. Furthermore, (Morck & Nakamura, 1999) states that financial institutions of a country are debt providers are biased to farsightedness. Levine (2004), identify those markets gives some better tools to manage the risk and these tools allow high customization of risk-ameliorating appliances (Levine, 2004). Furthermore (Greenwood & Smith, 1997) states that Stock market minimize saving mobilization costs which works to improve the investment. (Diamond, 1984) states that markets give information about specialization and also acquisition which ease the level of further investments. The literature of endogenous growth supports the positive role of financial development in economic growth (Bencivenga & Smith, 1991). (Caporale, Gil-Alana, & Tripathy, 2019) and (AYAYDIN, KARAKAYA, & Fahrettin) have studied trade openness and financial development and its impact on growth and have fount positive and significant results. To know whether banks or financial markets have influence on growth and yet this debate is going on for a long time. While (Arestis, Demetriades, & Luintel, 2001; FUINHAS, FILIPE, BELUCIO, & MARQUES, 2019) have found that banks have a governing role in economic growth rather than stock markets.

Methodology

Variables and data

This paper employs annual dynamic panel data for the period 1998–2018 of 193 countries of the globe and world income countries. The data include GDP per capita which is our main independent variable, FDI inflow as a percent of GDP, financial development by bank (Constructed of three indicators broad money, private sector credit by banks, and domestic credit provided by financial sector as a percent of

GDP), financial development by stock market (constructed of three market indicators, stock turnover ratio, stock market capitalization, and stock value traded as a percent of GDP) and the control variables which included trade openness, saving, investment and inflation are obtained from world governance indicators (WDI) for the global panel of 193 countries. Beginning period based on the availability based on the availability of data. The descriptive statistic for different variables for the whole panel is given in table 1.

Empirical and Econometric Models

The current study investigates the effects of foreign direct investment and financial development on economic growth in the global income countries from 1998 to 2018. This study uses dynamic panel approach for the examination of the role of FDI and both banks and stock markets development in economic growth. The analysis has been done for categorized countries of upper middle-income economies, high income (HI) countries and (LMI) lower middle income. The current study apply the proposed GMM model of (Arellano & Bond, 1991) because the simple OLS or fixed effects models are not efficient and may lead to several econometric problems. Where the GMM in difference used the first differences of the dependent variables and the regressor which can transform the regression for the country specific effect abstracting and make the regressor time invariant. Here withal the first differenced lagged dependent variable is with instrumented

with precedent levels, therefor autocorrelation problem can be eliminated. However, in some cases the lagged levels of regressor poor instruments in the first difference regressor which lower the efficiency. For bringing better efficiency in assessment, Sys-GMM estimator’s deals better for simultaneity biasness and country specific effects perception. For the better results with efficiency, this study could apply system GMM estimator of (Arellano & Bover, 1995) and (Blundell & Bond, 1998). In our study model we incline to transform the model into first difference for dispensing country categorical effect and employ the independent variables lagged levels as instruments for avoiding simultaneity biasness (Arellano & Bond, 1991).

However, there is arguing debates still continuing that this model may give doubtful results and conclusions when there the independent variables are conscientious in nature (Arellano & Bover, 1995). However, (Arellano & Bover, 1995) suggests system GMM estimator caliber as well as there are merged different equipollence. Sys-GMM suitable for this study because of two reasons. The first is; GMM utilized for controlling country categorical effects and endogeneity as well as omitted variables. Second, it is proposed for that situation where the duration is short in a study has quite a consequential number of individuals (Roodman, 2006) Consequently, we are utilizing two step GMM and system-GMM. The association between FDI, financial development by banks, stock market and economic growth are empirically observed by utilizing two equations in the following.

$$EC_{it} = a_1 EC_{i,t-1} + a_2 FDI_{it} + a_3 FDB_{it} + a_4 X_{it} + \varepsilon_{it} \dots \dots \dots 1)$$

$$EC_{it} = a_1 EC_{i,t-1} + a_2 FDI_{it} + a_3 FDM_{it} + a_4 X_{it} + \varepsilon_{it} \dots \dots \dots 2)$$

In the above given equations (1), (2), EC is economic growth proxied by per capita GDP, FDI, FDB, FDM represent direct foreign investment inflow, financial development by banks and financial development by stock market respectively. EC_(i,t-1) is the first lag of all variables of the left hand side given in equation (1) and (2) are utilized as an explanatory variable to quantify the effect of the anterior year’s on the current year., INF is inflation, INV

is used to represent the level of investment which is calculated as fixed capital formation and TO is trade openness, . X it represents control variables that hypothetically affects our left-hand side variable. It includes, saving, trade openness, investment and inflation, whereas subscripts i (i = 1 . . . N) And t (t = 1998 2018) index country and time, respectively.

Table 1. Descriptive statistics

Variable	Mean	Std. Dev.	Min	Max
GDPPC	0.993	0.999	-6.187	4.802
FDI	5.211	14.311	-58.322	451.716
Private sector credit	45.294	39.039	0.185	308.978
Broad Money	54.312	37.835	2.857	258.831
Credit by financial sector	58.302	52.552	-114.694	316.613
Stock turnover ratio	49.024	81.263	0.000	1721.54

Stock traded	30.160	47.615	0.000	372.26
Market capitalization	56.638	52.961	0.0534	352.445
Saving	21.715	11.830	-70.263	67.982
Inflation	6.691	19.188	-18.108	513.907
Investment	23.850	8.011	0.000	67.910
Trade Openness	88.083	49.265	0.167	437.327

In the prevailing literature two step and one step GMM have been recommended where the Two step GMM estimators is preferred by different researchers such as (Law & Azman-Saini, 2012). The reason of not preferring to consider one step GMM is the inefficiency which is showed theoretically as compared the two-step estimator GMM. Moreover, GMM of two step is beneficial estimator for analysis of such kind of studies as it employs optimum weighted matrices. Its further used the cross sections diminutive dimension which can lead to unequal estimator parameters (Law and Azman-Saini 2012; and (Windmeijer, 2006). Consequently, the current study used two step GMM system estimators for the purpose to examine the effects of FDI, financial development (both bank based and market based) on economic growth. The consistency or reliability of the GMM methods depends on two designation tests, serial correlation test (Arellano and Bond 1991) and a test of (Hansen, 1982) for over-identifying restrictions. In test of a serial correlation, the absence of the first order serial correlation (AR1) should be abnegated and accept the alternative hypothesis that shows the nonappearance of the second order serial correlation (AR2). On the other hand, for Sargan test the Null hypothesis should be accepted.

Results and Discussions

In order to evaluate the rationality of results and confirm that the best method is selected for the analysis, we associate different approaches Ordinary least square (OLS), fixed effect (FE) regression, random effect regression, Generalized method of moment of (Arellano & Bond 1991; Arellano and Bover 1995) and system-GMM model (Blundell & Bond 1998) for the global panel of 193 countries. Our main focus is on the generalized method of moments (GMM) and system-GMM approach because it gives us efficient and unbiased, while other methods are included for comparison purposes. We employed fixed and random effect to compare our results with the previous studies. We also admit that the results are potentially biased and unpredictable due to the dynamic panel bias and endogeneity problem that this method is incapable of

solving. Difference GMM is used for comparison and robustness purposes with system GMM and the results coefficient sign of difference GMM are corrects with system GMM results and confirm the results validity. The constancy or consistency of the GMM methods depends on two designation tests, serial correlation test of (Arellano and Bond 1991) and a Hansen (1982) J test of over-identifying restrictions. In a serial correlation test, the absence of the first order serial correlation (AR1) should be abnegated and accept the alternative hypothesis that shows the nonappearance of the second order serial correlation (AR2). On the other hand, for Sargan test the Null hypothesis should be accepted which designates that the instruments are valid and the model is correctly identified. In our analysis, the AR1, AR2 and Sargan test values are given which confirm the validity of our models. The results of pooled OLS, random effect, fixed effect, Dynamic GMM and Arellano–Bover/Blundell–Bond system GMM estimation are given in table below.

The effect of FDI and financial development by banks on economic growth of all models for the Global panel of 193 countries

In order to study the role of foreign direct investment and financial development by banks on economic growth for the global panel, we employ the static and dynamic approaches and the results are reported in table 2.

Table 2, column 1 shows the study variables, column 2 illustrates model 1 (OLS) results, column 3 and 4 illustrates random effect (RE) and fixed effect (FE) outcomes for different versions of the model while column 4 and 5 gives the GMM and system GMM results respectively. As discussed previously that OLS estimates might be biased and RE and FE provide comparatively unswerving parameter estimates, OLS estimates are given for comparison only. According to Huasman results the probability value (0.000) indicates that fixed effect is appropriate model. However, our findings focus on System generalized method of moments because it's the most efficient model as discussed in methodology portion above.

Table 2. The effect of FDI and financial development by banks on economic growth for Global Panel

Dependent Variable: E-growth	Model.1 OLS	Model.2 FE	Model.3 RE	Model.4 GMM	Model.5 Sys-GMM
FDI	0.103*** (0.023)	0.148*** (0.0300)	0.133*** (0.027)	0.176*** (0.011)	0.133*** (0.009)
FDB	-0.171*** (0.033)	-0.571*** (0.079)	-0.341*** (0.053)	-0.566*** (0.062)	-0.235*** (0.016)
Saving	0.233*** (0.050)	0.297*** (0.071)	0.254*** (0.060)	0.370*** (0.029)	0.275*** (0.018)
Inflation	0.024 (0.024)	-0.111*** (0.029)	-0.065** (0.027)	-0.192*** (0.0095)	-0.042*** (0.005)
Investment	0.0208*** (0.003)	0.0201*** (0.0052)	0.017*** (0.004)	0.0059*** (0.002)	0.016*** (0.0009)
To	0.0013** (0.0005)	0.0026 (0.0016)	0.0012 (0.0009)	0.009*** (0.001)	0.0007** (0.0003)
L.gdppc				-0.004 (0.010)	0.206*** (0.008)
Constant	0.115 (0.184)	1.447*** (0.349)	0.806*** (0.261)		0.298*** (0.077)
Observations	1,642	1,642	1,642	1,058	1,371
R-squared	0.088	0.074			
Number of id		133	133	122	132
AR1				-4.78(0.000)	-4.89(0.000)
AR2				-1.64(0.101)	0.13(0.896)
Sargan test				119.57(1.000)	124.25(1.000)
Hausman test					

Note: Standard errors in parentheses. *** = Significant at 0.01, ** = significant at 0.05 and * = 0.10 percent levels respectively. FDI is foreign direct investment, FDB is bank based financial development, OLS is ordinary least square, GMM and SGMM are the generalized method of moments and system generalized method of moments respectively.

In table 2, the lagged dependent variable is highly statistically significant at 1 percent level, the results of all models OLS, FE, RE, GMM and system GMM for FDI are also highly statistically significant at 1 percent level and positive which indicates that foreign direct investment is very important and contribute to economic growth in the global panel of 193 countries. Its further indicates that an increase in foreign direct investment increase economic growth positively in the global panel. The finding of our study is reinforced by (Lee & Chang, 2009) and (Olofin, Aiyegbusi, & Adebayo, 2019) who have also found positive impact of FDI on economic growth in a sample of 37 countries. The positive impact of FDI in the panel may be due to the high facilitated FDI and international trade policies. The level of foreign direct investment can also be high if there are good quality institutions, good governance and political stability in the countries which protect foreign investors.

Similarly, financial development by banks is also highly statistically significant in all models at 1 percent level but negative which indicates that banking sector development

influence economic growth significantly but negatively in the global panel. These findings are similar to the findings of (Lasbrey et al., 2018) and (Lee & Chang, 2009) who have also found positive impact of FDI on economic growth. The negative effect of FDB may be due to lower income countries in the global panel because these countries may have low level of banks development. The results suggest that there is a passionate need of the development of financial sector to strengthen growth rate specifically in the lower income economies including in the panel. Establishments and promotion of microfinance institutions are the complements to commercial banks will play a precious part in saving mobilization and providing access for funds which can help upsurge economic growth.

Moreover, the control variables saving is also at a 1 percent which is very highly significant in the models and positive which designates that saving affect economic growth positively and significantly which signifies that an increase in saving level enhance economic growth positively in the global panel. Moreover, inflation is also highly statistically significant most of in all models but negative which indicates that inflation affect economic growth negatively in

the panel of 193 countries. Similar results to our findings are found by (Caporale et al., 2019) and also (Effiong, Odey, & Nwafor, 2019). These results states that increase in the inflation level cause to affect decrease economic growth in the study sample. Inflation is negative consistently with is used for the macroeconomic stability proxy in all study models. The result which is negative is similar to the macroeconomic instability argument which is harmful to economic growth. the high rate of inflation rises the risk and uncertainty in a country which in turn reduce investment in the long run. Conversely it is stated that inflation is an important factor to explain economic growth.

Likewise, the investment is also significant highly and positive which shows that the rate of investment positively and significantly affects economic growth in the global panel. Investment is measured by the fixed capital formation which exerts positive affect and shows that investments which can be public or private are essential in productive sector for economic development in the economy. The findings are similar to the standard theory of growth which emphasizes that investment is important through capital accumulation which spurs economic growth. Similar result to our findings are found by (Nyasha, 2014), (Effiong et al., 2019) and (Bist, 2018).

Moreover, the coefficient of trade openness is also highly statistically significant and positive in OLS, GMM and system GMM which indicates that trade openness also contributes to economic growth positively. it has been also considered that the country openness is essential source for augmenting economic growth by different researchers such as author (Thorsten Beck & Levine, 2004), (BANDA, 2005), (R. Levine & Zervos, 1998). Similar result of trade openness is found by (Deyshappriya, 2016) and (Mamingi & Martin, 2018) which reinforced our study findings for trade openness. According to an author, Banda (2005) who states that the level of freed trade and liberalization of

economic augment the efficient allocation of an economy which in hence upsurge economic growth. The result further proves that the trade of sampled countries has been enhanced at high level and states about the financial system, governance, corruption. it can be positive and significant also due to high amount FDI inflow which can be the result of high economic growth.

The effect of FDI and stock market development on economic growth for all models in the global panel of 193 countries

In table 3, the lagged dependent variable is significant highly at 1 percent, the results of all models OLS, FE, RE, GMM and system GMM for FDI are also highly statistically significant at 1 percent level and positive which states that FDI is crucial for economic growth in the panel of 193 countries. Its further indicates that an increase in foreign direct investment increase economic growth positively in the global panel. The finding of our study is reinforced by Nlandu Mamingi and Kareem Martin (2018) who have also found positive significant impact of FDI on economic growth. The finding also indicates that FDI have been improved in the counties. Similarly, financial development by stock market is also highly statistically significant most of in all models at 1 percent level. For instance, model 1 (OLS) and model 5 (system GMM), the coefficient of financial development by stock market is highly statistically significant and negative which indicates that stock market financial development influence economic growth significantly but the relationship is negative. On the other side the result of FE and GMM are also highly statistically significant which indicates that financial development by markets influence economic growth positively in the panel of 193 countries. Which further indicates that an increase in

Table.3 FDI, stock market based financial development on economic growth in the global panel

Dependent Variable: E-growth	Model.1 OLS	Model.2 FE	Model.3 RE	Model.4 GMM	Model.5 Sys-GMM
FDI	0.0835*** (0.031)	0.161*** (0.042)	0.145*** (0.0371)	0.141*** (0.021)	0.0518*** (0.016)
FDM	-0.093*** (0.033)	0.225*** (0.071)	0.014 (0.049)	0.298*** (0.036)	-0.156*** (0.016)
Saving	0.211** (0.094)	0.533*** (0.162)	0.275** (0.122)	0.256** (0.104)	0.143** (0.062)
Inflation	0.073** (0.036)	-0.062 (0.043)	-0.012 (0.040)	-0.118*** (0.011)	0.009 (0.008)
Investment	0.042*** (0.006)	0.013 (0.010)	0.0271*** (0.008)	0.0166** (0.006)	0.034*** (0.002)
Trade openness	0.0002 (0.0006)	-0.001 (0.002)	-0.001 (0.001)	-0.0029*** (0.0006)	0.0001 (0.0004)
LGdppc				-0.0563*** (0.014)	0.327*** (0.013)

Constant	-0.698** (0.279)	-1.867*** (0.549)	-0.780** (0.386)		-0.182 (0.186)
Observations	867	867	867	560	730
R-squared	0.104	0.061			
Number of id		82	82	74	78
AR1				-3.42(0.012)	-3.71(0.101)
AR2				-2.01(0.045)	0.51(0.613)
Sargan test				571.12(0.020)	122.2(0.275)

stock market development contribute positively to economic growth. (Nyasha & Odhiambo, 2015), (Alimi, 2015), (Sahoo, 2014), (Adu et al., 2013) have also found similar results to our findings. Furthermore, stock market development also assists in capital accumulation which can allow small investors which invest financial assets in the capital markets such as investment in bonds, stocks and debenture. According to the results of this study, well performing and developed of stock markets are key indicators of macroeconomic development because it can motivate domestic and foreign investors for investment into the country which is an energizer for industrialization (Coskun, Seven, Ertugrul, & Ulussever, 2017), (Petros, 2012) (Pohoață, Socoliuc, & Bostan, 2013), (Cooray, 2010). Moreover, the control variables saving is also highly significant at 5 percent level in all models, while significant at 1 percent level in fixed effect model and the relationship is positive which indicates that saving affect economic growth positively and significantly which means that increase in saving rate enhance economic growth positively in the global panel. Likewise, inflation is statistically significant in OLS and GMM models where the relationship is positive in OLS while negative in GMM which implies that 1% increase in inflation cause to decrease economic growth -0.118 in the study sample. However, inflation has become an insignificant factor in explaining economic growth in other models which indicates that higher inflation rates as an indicator of macroeconomic condition lowers the economic performance of the countries. Deyshappriya (2016) has also got the negative impact which states that inflation effect economic growth considerably low and it may die at the time completely in long run. Inflation is one of the critical parameters concerning policy decisions of a country government. Changes in inflation influences economic policies to tighten that lead to increasing the nominal risk-free rate and affects the bank. The efficiency of the financial sector gets worse due to the high rate of inflation through financial market frictions and slows the economic performance down.

Likewise, the coefficient of investment is also highly statistically significant and positive mostly in all models which indicate that the rate of investment positively and significantly affects economic growth in the global panel.

www.jescae.com

Our results empirically proved that gross capital formation (investments) are positively correlated with economic growth which indicates that higher amounts of investments carried out by investors enhance the goods and services produced and thus lead to economic growth. this finding confirms that the investment is an important motivator which enhance economic growth where this result is similar with the findings of (Caporale, Rault, Sova, & Sova, 2009), (Ahmed et al., 2013). Rising investment levels have accounted for a significant part in the increase in growth rates achieved by those countries (Roemer, 2013). Moreover, the trade openness coefficient is statistically significant while negative in GMM model which indicates that trade openness affects economic growth negatively while the result for trade openness is insignificant in other models.

Income based grouped countries analyses

Meanwhile some sets of emerging countries are on diverse income brackets, I separated the sample into Upper-middle-income, High-income, lower-middle-income countries. FE, GMM and system GMM models for each income group re run separately with both bank based financial development and stock market based financial development and FDI role on economic growth.

The effect of FDI and banks development on economic growth in income based grouped countries (Upper middle income (UMI) countries, High income (HI) countries, lower middle income (LMI) countries)

Table 4 represents the results of FE, GMM and SGMM for all income based grouped countries. The lower middle income (LMI) countries results are given in group 1st where the result of FE, GMM and SGMM of FDI are highly statistically significant at 1 percent in FE and GMM while significant at 10 percent in the S-GMM which indicates that FDI affect economic growth significantly and positively in the (Lower middle income) LMI countries. The positive results indicates that FDI in the lower middle-income countries have been improved which can be the reason of improved governance, institutional quality, control of corruption and political stability in the LMI countries.

The result of financial development by banks for LMI countries in all models are insignificant which indicates that banks does not contribute to economic growth in the lower income countries. It can be concluded from the results that only FDI accelerate economic growth in the lower middle income (LMI) countries while banks don't play any role in the growth of lower income countries. The insignificant effect of banks on economic growth maybe the low level banking sector in the LMI countries.

Similarly, saving is significant and positive in FE and S-GMM models indicates that saving affect economic growth

positively in the lower income countries. The investment is significant and negative only in GMM model while trade openness is negative and significant in GMM and SGMM indicates that investment and trade openness affect economic growth negatively while inflation is insignificant in all models for the lower middle income (LMI) countries. (Mamingi & Martin, 2018) have also found the negative impact of inflation on economic growth. Similarly, Ireland (1994) and Deyshappriya (2016) also got the same findings which confirm the inflation effect growth considerably low.

Table 4: FDI, Financial development by banks on economic growth in lower middle income (LMI) countries, Upper middle income (UMI) countries and High income (HI) countries

Dependent Var.	Lower middle-income countries			Upper Middle-income countries			High income Countries		
	FE	GMM	SGMM	FE	GMM	SGMM	FE	GMM	SGMM
Growth									
FDI	0.155** (0.0603)	0.170*** (0.0567)	0.0601* (0.0323)	0.200*** (0.055)	0.358*** (0.0674)	0.312*** (0.0954)	0.0381 (0.068)	0.0865 (0.0846)	0.0610 (0.0586)
FDB	0.227 (0.161)	0.0922 (0.185)	0.0781 (0.0941)	-0.0148*** (0.00316)	-0.0170 (0.0102)	-0.0143* (0.00735)	-1.526*** (0.260)	-1.823*** (0.386)	-0.434*** (0.124)
Saving	0.424*** (0.146)	0.120 (0.142)	0.118*** (0.0419)	0.0109 (0.00683)	0.0385*** (0.012)	0.041*** (0.0127)	1.072*** (0.301)	1.327*** (0.363)	0.268* (0.158)
Inflation	-0.0101 (0.0675)	0.200 (0.127)	0.0747 (0.0608)	-0.00150 (0.00235)	0.00893** (0.00391)	-0.00503 (0.00432)	-0.115* (0.0696)	-0.255*** (0.0811)	-0.105 (0.0668)
Investment	-0.00540 (0.00917)	-0.0198* (0.0103)	0.0107 (0.00693)	0.0190** (0.00814)	-0.0307* (0.0154)	-0.0137 (0.0250)	1.477*** (0.435)	1.535** (0.774)	0.675** (0.292)
Trade openness	-0.000441 (0.00301)	-0.00928** (0.00385)	-0.00311* (0.00154)	0.00132 (0.00254)	0.00969 (0.00576)	0.00568 (0.00404)	1.414*** (0.429)	1.300** (0.583)	0.0846 (0.121)
L.gdpcc		0.0237 (0.0817)	0.308*** (0.0482)	0.793*** (0.295)	-0.00552 (0.0679)	0.269*** (0.0541)		0.00255 (0.0731)	0.295*** (0.0663)
Constant	-0.645 (0.783)		0.231 (0.421)	570		0.143 (0.577)	-7.027*** (2.550)		-0.966 (1.035)
Observations	345	226	301	0.086	392	477	337	205	277
R-squared	0.087			43			0.209		
Number of id	31	27	31		41	42	29	26	29

In case of upper middle-income countries, the results shows that both FDI and financial development effect economic growth. For instance, the result of FDI is highly statistically significant and positive at 1 percent level in all models which indicates that FDI affect economic growth positively. When there is an increase in FDI inflow will increase economic growth positively at 0.31 percent. The positive impact of FDI on economic growth may be due to high level of FDI inflow in the upper middle-income countries which further indicate that the level of institutional quality, governance and political stability is good in these countries which can attract high level of FDI.

Likewise, the financial development index is statistically significant but negative in the FE and SGMM models which indicate that bank based financial development have negative impact on economic growth in the upper middle-income countries. Mamingi, N., & Martin, K. (2018) have also found negative impact of financial sector on economic

growth. The negative impact may be due to the low-level banking sector in the countries which need to be improved to facilitate economic growth.

Moreover, the control variables such as saving and investment also affect economic growth positively. For instance, the coefficient of saving in GMM and system GMM is highly significant at 1 percent level and positive which indicates that saving affect growth positively. Similarly, investment is also significant and positive in the fixed effect model while negative in the GMM model which statues that investment effect growth positively in FE while negatively in GMM model. Furthermore, inflation affect economic growth negatively and significantly only in GMM model while trade openness is insignificant in all models which indicates that trade openness has no effect on economic growth of the upper middle-income countries.

In case of high-income countries, it's interesting to know that FDI does not contribute to economic growth while only banks development affects economic growth. For instant,

the table below shows the result of high-income countries in the third group where the FDI is insignificant in all models. Mamingi, N., & Martin, K. (2018) have also found that FDI does not affect economic growth in the sample of 34 countries in their study. The insignificant result of FDI regarding economic growth is due to low level of FDI inflow in the countries. The low level of FDI attraction can be the reason of poor institutional quality, governance and political instability in the countries because these issues can't protect foreign investors in the countries.

On the other hand, financial development by banks is highly statistically significant at 1 percent level in all models but negative which indicates that financial development by banks affect economic growth negative significantly. This negative impact is due to the low-level banking sector in the countries because of poor banking performance, banks will not contribute to economic growth.

The coefficient of saving is also significant for all models for high income countries where the FE and GMM is significant at 1 percent level while SGMM is significant at 10 percent. Inflation is negative and significant in FE and GMM models indicates that inflation lowers economic growth in the high-income countries. Trade openness in the FE and GMM model is significant and positive which reveal

the trade openness is performing well in the high-income countries. The GMM result indicates that a 1 percent increase in the trade openness will increase the growth rate by 1.3 percent. In additions, the economy openness has been thought out that it's the source of growth such as the study of Banda (2005), Beck and Levine (2004) and Levine and Zervos (1998). In addition, (Helpman, Krugman, & Krugman, 1989) and (Krueger, 1997) emphasized the inadequacies of import rules and policies, and states that trade openness move resources from inefficient to efficient comparative advantage ones activities.

System GMM Results for Global Panel, high income (HI) countries, lower middle income (LMI) countries, upper middle income (UMI) countries

Table 5 report the system GMM results for high income countries, lower middle income (LMI) countries, upper middle-income countries and global panel 193 countries, with economic growth as the dependent variable. The lagged dependent variables for all categorized countries have significant effect on FDI inflow.

Table 5: System GMM Results for Global panel, high income, lower middle income (LMI) and upper middle-income countries of FDI, financial development by banks and economic growth

Dependent var.	(SGMM)	(GMM)	(GMM)	(SGMM)
Economic Growth	Global Panel	High Income Countries	Lower Middle Income	Upper Middle Income
FDI	0.133*** (0.009)	0.0610 (0.058)	0.0601* (0.032)	0.312*** (0.095)
FDB	-0.235*** (0.016)	-0.434*** (0.124)	0.078 (0.094)	-0.014* (0.007)
Saving	0.275*** (0.018)	0.268* (0.158)	0.118*** (0.041)	0.041*** (0.012)
Inflation	-0.042*** (0.005)	-0.105 (0.066)	0.074 (0.060)	-0.005 (0.004)
Investment	0.016*** (0.0009)	0.675** (0.292)	0.010 (0.006)	-0.013 (0.025)
Trade openness	0.0007** (0.0003)	0.084 (0.121)	-0.003* (0.001)	0.0056 (0.004)
L.gdppc	0.206*** (0.008)	0.295*** (0.066)	0.308*** (0.048)	0.269*** (0.054)
Constant	0.298*** (0.077)	-0.966 (1.035)	0.231 (0.421)	0.143 (0.577)
Observations	1,371	277	301	477
R-squared				
Number of id	132	29	31	42

Note: Standard errors in parentheses. (***) , (**) and (*) indicate statistical significant at the 1, 5 and 10 percent levels respectively. SGMM stand for Dynamic system generalized method of momentums.

The impact of FDI on growth in the global panel for system

GMM is highly statistically significant at 1 percent level indicates that FDI in the global panel is high and most of the countries in the global panel have improved FDI inflow while the impact of banking sector development on economic growth for the global panel is significant but negative which indicates that banks affect economic growth negatively in the global panel. The results regarding FDB in the global panel further indicates that there is need to enhance the level of banking sector to enhance economic growth as banks are very important in economic growth. The impact of FDI in high income countries is insignificant which indicates that FDI in these countries doesn't contribute to economic growth while the banking sector effect economic growth for these countries. The reason can be that the countries have ignored to facilitate FDI attraction as well the negative significant impact of banks on economic growth shows the low level banking sector in the countries. The impact of FDI on economic growth in the lower middle income (LMI) is positive and significant while the impact of banking sector on economic growth is insignificant which indicates that these countries have good level of FDI attraction but have ignored the banking sector growth which does not contribute to economic growth. In case of the upper middle income the impact of FDI on economic growth is significant which indicates that these income-based countries have also good level of FDI inflow while the results of banking sector effect economic growth significantly but the relationship is negative which indicates that these countries have low level banking sector which

need to be improved to achieve high level of economic growth.

Other control variables such as saving effect economic growth positively and significantly in all groups as well in the global panel which indicates that saving has very important role in economic growth. The coefficient of inflation is statistically significant but negative in the global panel which indicates that inflation lowers economic growth in the panel while the results for all other groups regarding inflation is insignificant. Trade openness in the global panel in significant and positive which indicates that trade openness is important in economic growth while negative and significant in the lower middle-income countries which means that the level of trade openness in these countries are poor. The impact of trade openness for other groups countries are insignificant which indicates that trade openness has no impact on economic growth.

Summary of system GMM for global panel, High income countries, lower middle-income countries, and upper middle-income countries

Table 6 present the short summary of system GMM of the global panel, High income countries, lower middle-income countries, and upper middle-income countries with regards to the impact of FDI, financial development by banks, financial development by stock markets and economic growth.

Tables 6: Summary of the System GMM Results for FDI, FDB and FDM on economic growth

Dependent variable: Economic growth	Global panel	High income Countries	Lower middle-income countries	Upper middle income countries
FDI	Sig(+)	InSig(+)	Sig(+)	Sig(+)
FDB	Sig(-)	Sig(-)	InSig(+)	Sig(-)
FDM	Sig(-)			
Saving	Sig(+)	Sig(+)	Sig(+)	Sig(+)
Inflation	Sig(-)	InSig(-)	InSig(+)	InSig(-)
Investment	Sig(+)	Sig(+)	InSig(+)	InSig(-)
Trade openness (MT)	Sig(+)	Insig(+)	Sig(-)	InSig(+)

Note: Sig (+) represent positive significant relationship, Sig (-) negative significant relationship while Insig (-,+) show no relationship with economic growth.

Conclusion and policy implication

Prior researches have explored FDI, FD and economic growth but very rare studies have explored the collective association between FDI, FDB, FDM and economic growth. Moreover, the previous findings are exclusive on the clear-cut association between FDI, financial development and

economic growth across income groups and regions. While some of the studies have only found FDI and economic growth or financial development and economic growth in a small sample or region. This is ever the first conducted on the global panel of 193 countries where it further categorized the panel into upper income (UI), lower middle income (LMI) and high income (HI) countries which contribute to the scarce literature on the collective and

across income groups and regions effect of FDI, FDB and stock markets and economic growth. Using a balanced panel data for 193 countries for the time period of 1998 to 2018, the study explore the role of FDI and financial development on economic growth by employ the static methods pooled OLS, fixed effect, and random effect approaches and Dynamic approaches difference generalized method of moments and system generalized method of moment's approaches where all models results for the global panel indicates that both FDI affect economic growth positively in the global panel, lower middle income and upper middle income countries where the result is insignificant for high income countries. on the other side, banking sector financial development affect economic growth negative and significantly in the global panel, high income and upper middle-income countries while not significant for the lower middle-income countries. Stock market development also affects economic growth significantly but negatively in the global panel. The governments of high-income countries suggest to facilitate and accelerate the rate of foreign direct investment through the sectors which are favor by foreign investors as foreign direct investment augment economic growth and increase the level of capital formation as well decrease the level of unemployment. This can be achieved by providing better institutional environment to foreign investors, to stable political instability and control corruption level as well to provide some incentives to foreign investors. Moreover, the government of the countries should provide sound macroeconomic environment, to create good infrastructure and reduce or remove trade barriers. Moreover, central banks of the countries should use the monetary policy which increase the level of market capitalization in the economy because it helps the volume of exports, FDI and in turn economic growth. Besides, high income (HI) countries, other grouped countries of this study are also suggested to further facilitate foreign direct investment to achieve higher economic growth.

The lower income countries of this study are suggested regarding banking sector development as the banking sector of these countries performance is low as compared to other income group countries. These countries may bring improvements in the banking sector. This can be done

References

- Acaravci, A., & Ozturk, I. (2012). Foreign direct investment, export and economic growth: empirical evidence from new EU countries. *Romanian Journal of Economic Forecasting*, 2, 52-67.
- Adjasi, C. K., & Biekpe, N. B. (2006). Stock market development and economic growth: The case of selected African countries. *African Development Review*, 18(1), 144-161.

www.jescae.com

through the fortification of competition in banking in the economy. Our study is good for policy markets of the lower income (LMI) countries which aspire them to develop their financial system especially banking sector, opening their capital accounts which may provide effectiveness and augment financial development.

The global panel is suggested to improve stock markets to avoid negative impact on economic growth. This can be done through such as by the market capitalization, limitation in credit expansion and the limitation of financial public sector of private financial markets. the global panel suggest to enhance the stock market development and consider capital markets as a source of financing as well as to lower saving and investment barriers globally.

Our study is ever the first one analyzed FDI, financial development by banks, financial development by stock markets and economic growth in the income grouped countries. Future study should examine this relationship in other level or region such as developing and developed countries as well can include other measure of proxies. The future studies can also try to include economic freedom and institutional quality along these measures to deeply investigate this association.

Acknowledgment

The authors are grateful to the anonymous referees of the journal for their extremely useful suggestions to improve the quality of the paper.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

Funding

No financial support received for the research, authorship and/or publication of this article.

- Adu, G., Marbuah, G., & Mensah, J. T. (2013). Financial development and economic growth in Ghana: Does the measure of financial development matter? *Review of Development finance*, 3(4), 192-203.
- Ahmed, W., Zaman, K., Taj, S., Rustam, R., Waseem, M., & Shabir, M. (2013). Economic growth and energy consumption nexus in Pakistan. *South Asian*

- Journal of Global Business Research*, 2(2), 251-275.
- Alfaro, L., Chanda, A., Kalemli-Ozcan, S., & Sayek, S. (2004). FDI and economic growth: the role of local financial markets. *Journal of international economics*, 64(1), 89-112.
- Alfaro, M., Jarvis, S., & Gregory, P. (2004). Factors affecting potassium leaching in different soils. *Soil Use and Management*, 20(2), 182-189.
- Alimi, R. S. (2015). Financial Deepening and Economic Growth in 7 Sub-Saharan Africa: An Application of System GMM Panel Analysis. *Journal of Empirical Economics*, 4(5), 244-252.
- Almfraji, M. A., & Almsafir, M. K. (2014). Foreign direct investment and economic growth literature review from 1994 to 2012. *Procedia-Social and Behavioral Sciences*, 129, 206-213.
- Anyanwu, J. C. (2012). Why Does Foreign Direct Investment Go Where It Goes?: New Evidence From African Countries. *Annals of Economics & Finance*, 13(2).
- 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.
- Arellano, M., & Bover, O. (1995). Another look at the instrumental variable estimation of error-components models. *Journal of econometrics*, 68(1), 29-51.
- Arestis, P., Demetriades, P. O., & Luintel, K. B. (2001). Financial development and economic growth: the role of stock markets. *Journal of Money, credit and Banking*, 16-41.
- AYAYDIN, H., KARAKAYA, A., & Fahrettin, P. TRADE OPENNESS, FINANCIAL OPENNESS, AND FINANCIAL DEVELOPMENT IN EUROZONE: EVIDENCE FROM DYNAMIC PANEL DATA. *Global Journal of Economics and Business Studies*, 7(14), 1-17.
- BANDA, O. D. (2005). *Foreign investment inflows, government institutions, external openness, and economic growth in developing countries: A theoretical and empirical investigation*.
- Beck, T., Demirgüç-Kunt, A., & Levine, R. (2001). The financial structure database. In *Financial structure and economic growth: A cross-country comparison of banks, markets, and development* (pp. 17-80): MIT Press.
- Beck, T., & Levine, R. (2004). Stock markets, banks, and growth: Panel evidence. *Journal of Banking & Finance*, 28(3), 423-442.
- Bencivenga, V. R., & Smith, B. D. (1991). Financial intermediation and endogenous growth. *The review of economic studies*, 58(2), 195-209.
- Bernard, A. U., & Austin, A. (2011). The role of stock market development on economic growth in Nigeria: A time-series analysis. *African Research Review*, 5(6), 213-230.
- Bist, J. P. (2018). Financial development and economic growth: Evidence from a panel of 16 African and non-African low-income countries. *Cogent Economics & Finance*, 6(1), 1449780.
- Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of econometrics*, 87(1), 115-143.
- Caporale, G. M., Gil-Alana, L. A., & Tripathy, T. (2019). Volatility persistence In the Russian stock market. *Finance Research Letters*.
- Caporale, G. M., Howells, P. G., & Soliman, A. M. (2004). Stock market development and economic growth: the causal linkage. *Journal of economic development*, 29(1), 33-50.
- Caporale, G. M., Rault, C., Sova, R., & Sova, A. (2009). Financial development and economic growth: Evidence from ten new EU members.
- Chamarbagwala, R., Ramaswamy, S., & Wunnavara, P. V. (2000). The role of foreign capital in domestic manufacturing productivity: empirical evidence from Asian economies. *Applied Economics*, 32(4), 393-398.
- Chenery, H. B., & Strout, A. M. (1968). Foreign assistance and economic development: Reply. *The American Economic Review*, 58(4), 912-916.
- Cooray, A. (2010). Do stock markets lead to economic growth? *Journal of Policy Modeling*, 32(4), 448-460.
- Coskun, Y., Seven, Ü., Ertugrul, H. M., & Ulussever, T. (2017). Capital market and economic growth nexus: Evidence from Turkey. *Coskun, Y., Seven, U., Ertoğrul, HM, and Ulussever*.
- Demirguc-Kunt, A., & Levine, R. (2001). Financial structure and economic growth: perspectives and lessons. *Financial structure and economic growth: A cross-country comparison of banks, markets, and development*, 3-14.
- Deyshappriya, N. R. (2016). The Causality Direction of the Stock Market–Growth Nexus: Application of GMM Dynamic Panel Data and the Panel Ganger Non-causality Tests. *Margin: The Journal of Applied Economic Research*, 10(4), 446-464.
- Diamond, D. W. (1984). Financial intermediation and delegated monitoring. *The review of economic studies*, 51(3), 393-414.
- Domar, E. (1939). Progress and Declining Population,”. *American economic review*, 29(1).
- Domar, E. D. (1946). Capital expansion, rate of growth, and employment. *Econometrica, Journal of the Econometric Society*, 137-147.

- Durham, J. B. (2004). Absorptive capacity and the effects of foreign direct investment and equity foreign portfolio investment on economic growth. *European economic review*, 48(2), 285-306.
- Effiong, C. E., Odey, F. I., & Nwafor, J. U. (2019). Globalization, Foreign Direct Investment and Industrial Sector Performance Nexus in Nigeria. *International Journal of Social Sciences and Management Research*, 5(2), 58-70.
- Farrell, K. A., Friesen, G. C., & Hersch, P. L. (2008). How do firms adjust director compensation? *Journal of Corporate Finance*, 14(2), 153-162.
- Feeny, S., Iamsiraroj, S., & McGillivray, M. (2014). Growth and foreign direct investment in the Pacific Island countries. *Economic Modelling*, 37, 332-339.
- FUINHAS, J. A., FILIPE, M. D., BELUCIO, M., & MARQUES, A. C. (2019). The Nexus between Financial Development and Economic Growth: Evidence from European Countries.
- Greenwood, J., & Smith, B. D. (1997). Financial markets in development, and the development of financial markets. *Journal of Economic dynamics and control*, 21(1), 145-181.
- Guryay, E., Safakli, O. V., & Tuzel, B. (2007). Financial development and economic growth: Evidence from Northern Cyprus. *International Research Journal of Finance and Economics*, 8(2), 57-62.
- Hansen, L. P. (1982). Large sample properties of generalized method of moments estimators. *Econometrica: Journal of the Econometric Society*, 1029-1054.
- Helpman, E., Krugman, P. R., & Krugman, P. (1989). *Trade policy and market structure*: MIT press.
- Hermes, N., & Lensink, R. (2003). Foreign direct investment, financial development and economic growth. *The Journal of Development Studies*, 40(1), 142-163.
- Jain, N., Trehan, M., & Trehan, R. (2013). *Indian economy*: VK Publications.
- Kargbolli, S. M., & Adamu, P. A. (2009). Financial development and economic growth in Sierra Leone.
- Krueger, R. A. (1997). *Developing questions for focus groups* (Vol. 3): Sage Publications.
- Lasbrey, A., Enyoghasim, M., Tobechei, A., Uwajumogu, N., Chukwu, B., & Kennedy, O. (2018). Foreign Direct Investment and Economic Growth: Literature from 1980 to 2018. *International Journal of Economics and Financial Issues*, 8(5), 309-318.
- Law, S. H., & Azman-Saini, W. (2012). Institutional quality, governance, and financial development. *Economics of Governance*, 13(3), 217-236.
- Lee, C.-C., & Chang, C.-P. (2009). FDI, financial development, and economic growth: international evidence. *Journal of applied economics*, 12(2), 249-271.
- Levine, A. J. (1997). p53, the cellular gatekeeper for growth and division. *cell*, 88(3), 323-331.
- Levine, R. (2004). *The corporate governance of banks: A concise discussion of concepts and evidence*: The World Bank.
- Levine, R., & Zervos, S. (1998). Stock markets, banks, and economic growth. *American economic review*, 537-558.
- Levine, R., & Zervos, S. (1999). *Stock market development and long-run growth*: The World Bank.
- Mamingi, N., & Martin, K. (2018). Foreign direct investment and growth in developing countries: evidence from the countries of the Organisation of Eastern Caribbean States. *CEPAL Review*.
- Morck, R., & Nakamura, M. (1999). Banks and corporate control in Japan. *the Journal of Finance*, 54(1), 319-339.
- Nyasha, S., & Odhiambo, N. M. (2015). The impact of banks and stock market development on economic growth in South Africa: an ARDL-bounds testing approach. *Contemporary Economics*, 9(1), 93-108.
- Oladipo, O. S. (2010). Foreign direct investment (FDI): determinants and growth effects in a small open economy. *The International Journal of Business and Finance Research*, 4(4), 75-88.
- Olofin, O. P., Aiyegbusi, O. O., & Adebayo, A. A. (2019). Analysis of Foreign Direct Investment and Economic Growth in Nigeria: Application of Spatial Econometrics and Fully Modified Ordinary Least Square (FMOLS). *Foreign Trade Review*, 54(3), 159-176.
- Petros, J. (2012). The effect of the stock exchange on economic growth: a case of the Zimbabwe stock exchange. *Research in Business and Economics Journal*, 6, 1.
- Pohoatã, I., Socoliuc, O., & Bostan, I. (2013). The economic impact of religious tourism on the North East region of Romania. *European Journal of Science and Theology*, 9(2), 195-204.
- Ridzuan, A., Ismail, N., & Che Hamat, A. (2017). Does foreign direct investment successfully lead to sustainable development in Singapore? *Economies*, 5(3), 29.
- Roemer, J. E. (2013). Economic development as opportunity equalization. *The World Bank Economic Review*, 28(2), 189-209.
- Roodman, D. (2006). How to do xtabond2: An introduction to. "Difference" and "System" GMM in Stata." *Working Paper*, 103.
- Sahoo, R. (2014). Month of the year effect on stock market return and volatility. *Paripex-Indian Journal of Research*, 3(7), 1-2.

- Sanusi, S. L. (2011). Banking reform and its impact on the Nigerian economy. *CBN Journal of Applied Statistics*, 2(2), 115-122.
- Schumpeter, J. (1911). The theory of economic development. Harvard Economic Studies. Vol. XLVI. In: Cambridge, MA: Harvard University Press.
- Sunde, T. (2017). Foreign direct investment, exports and economic growth: ADRL and causality analysis for South Africa. *Research in International Business and Finance*, 41, 434-444.
- Todaro, M. P., & Stephen, C. (2011). *Smith, Economic Development*. UK: Pearson Education Limited 2003.
- Ujunwa, A., & Salami, O. P. (2010). Stock market development and economic growth: Evidence from Nigeria. *European Journal of Economics, Finance and Administrative Sciences*, 25, 44-53.
- Windmeijer, F. (2006). GMM for panel count data models.