

Foreign direct investment and economic growth in Sub-Saharan Africa: The role of institutions

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Abstract. In this paper, we examine the impact of FDI on economic growth condition on the role of quality of institutions. To address our objective, we use the fixed effect and GMM models for analysis. A sample of 36 countries from Sub Saharan Africa was used for period from 2001 to 2015. The empirical results show that FDI has a significant negative effect on economic growth. Institutional quality on the other hand has a positive influence on economic growth. Considering the interaction term between FDI and institutional quality, the empirical evidence show that institutional quality enhances the spillover effect from FDI and therefore do matter for economic growth. Using the GMM model the results confirm that good institutions are necessary for mediating the effects of FDI for economic growth.

Keywords. FDI, Institutional quality, GMM, Economic growth.

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1. Introduction

The enormous increase in foreign direct investment (FDI) flows across countries in recent years has motivated many researchers and academicians to investigate the impact of FDI on economic growth. The main argument is whether the increase in capital flows to developing and emerging economies is relevant to the economic welfare of the recipient countries. The FDI flows to developing countries have been facilitated by the improvement in communication and transportation system, elimination of trade barriers, liberalization policies and privatization of State-owned commodity assets. The multinational corporations (MNCs) have been acknowledged to be the main agents of international production expansion. However, development economists have continued to debate on whether the increase in foreign capital inflows contributes to economic growth of the host countries.

Literatures on FDI explicitly acknowledge that, host countries are deemed to benefit from FDI in different ways; first, it is an important source of funding for development purposes and second, it allows transfer of superior technology and management skills, third, it stimulates investment and growth through efficiency spill-overs, enhance job creation and assist in infrastructure development. In view of the above potential benefits attached to FDI, many countries have resolved to policy reforms geared towards creating enabling environment for attracting more foreign investments.

Theories on FDI – growth nexus confirm the multiplier effects of FDI spillover to domestic firms, which leads to positive effects on aggregate productivity and economic growth (Grossman, & Helpman, 1991; Barro, & Sala-i-Martin, 1997).

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Despite of theoretical explanations on FDI – growth relationship, empirical studies on the other hand have found ambiguous and controversial results. A study conducted by Bruno & Campos (2013) show that 50% of empirical studies report a significantly positive effect of FDI on growth, 11% find a negative effect while 39% find growth to be independent of FDI. It thus seems that FDI plays an important ambiguous role in generating economic growth, with a little support for an independent positive effect.

Different from the previous research works, we study FDI and economic growth on a perspective of institutional quality. Our objective is to test whether the interaction between FDI and institutional quality impact on economic growth. Our argument is that better institutions provide better business environment and induce a growth enhancing effect. In addition, strong institutions reduce transaction costs related to risk of expropriation and ensure rule of law as well as good governance. Indeed, weak institutions render poor quality of both civil and commercial law, whereby most disputes are settled informally through direct negotiation or informal payment to secure the desired outcome.

Apart from the introduction, the remainder of this paper is organized as follows: section 2 of provides a review of literature while section 3 presents methodology and model specification. In addition, section 4 presents the empirical results and section 5 provides conclusion and policy recommendations.

2. Theoretical review

Theories explaining why FDI flow from one country to another and provide reasons why MNCs select a particular entry mode started to emerge in 1950s. Below we provide a review of these theories to have a good understanding of the theoretical views of foreign direct investment.

Product life cycle theory. The product life-cycle theory is an economic theory that was developed by Raymond Vernon, (1966) in response to the failure of the Heckscher-Ohlin model to explain the observed pattern of international trade. The theory suggests that early in a product's life-cycle all the parts and labour associated with that product come from the area where it was invented. After the product becomes adopted and used in the world markets, production gradually moves away from the point of origin. In some situations, the product becomes an item that is imported by its original country of invention. According to Vernon, products follow a life cycle that is divided into three stages. The first is known as the “innovation” stage. In order to compete with other firms and to have a lead in the market, the firm has to innovate a product with the help of research and development. The product is manufactured in the home country primarily to meet the domestic demand, but a proportion of the output is also exported to other developed countries. The quality of the product, and not the price, forms the basis of demand because the demand is price- inelastic at this stage. The second stage is known as “maturing product” state. At this stage, the demand for the new product in other developed countries grows substantially and it turns price-elastic. Rival firms in the host country itself begin to appear at this stage to supply similar products at a lower price owing to lower distribution cost, whereas the product of the innovator is often costlier as it involves the transportation cost and tariff that is imposed by the importing government. Thus, in order to compete with rival firms, the innovator decides to set up a production unit in the host country itself, which would eliminate transportation cost and tariff. This leads to internationalization of production.

The strengths of the model helps organizations that are starting their international expansion to understand how the competitive market changes over time. The model can also be used for product planning purposes in international marketing. Secondly, new product development in a country does not occur by chance; a country must have a ready market, an able industrial capability and enough capital or labour to make a new product flourish.

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Industrial organisation theory. The industrial organization theory is based on an oligopolistic or imperfect market in which the investing firm operates. Market imperfections arise in many cases, such as product differentiation, marketing skills, proprietary technology, managerial skills, better access to capital, economies of scale, government-imposed market distortions, and so on. Such advantages confer on MNCs an edge over their competitors in foreign locations and thus, help compensate the additional cost of operating in an unfamiliar environment. One of the earliest theories based on the assumptions of an imperfect market was propounded by Stephen Hymer (1976). To Hymer, a multinational firm is a typical oligopolistic firm that possesses some sort of superiority and that looks for control in an imperfect market with a view to maximizing profits. Despite the fact that the international firm is posted disadvantageously in a foreign host country where it has not intimate knowledge of language, culture, legal systems and consumers' preference, it possesses certain specific advantages that outweigh the disadvantages. The firm-specific advantages in Hymer's view are mainly the technological advantages that help the firm to produce a new product different from the existing one. It is in fact related to the possession of knowledge, which helps in developing special marketing skills, superior organizational and management set-up, and improved processing. What is significant in this theory is that these advantages are transmitted more effectively from one unit to the other irrespective of their geographical distance. Since the market is imperfect, rival firms do not avail of the technological advantage as a result international firm harvests huge profits.

Eclectic Theory. Dunning's Eclectic paradigm (1981) explain the reason why multinational corporations (MNCs) invest in foreign countries through their subsidiaries. In this theory Dunning identified three factors to be considered by MNC's when making decisions to invest abroad. The factors include ownership advantages, locational advantages and internalization. These factors are popularly known as OLI framework which stands for "Ownership advantages", "Locational advantages" and "Internalization". Ownership advantages are all firm specific capital in terms of knowledge, human capital (managers), patents, brand name, and reputation. This capital can be replicated in different countries without losing its value, and easily transferred within the firm without high transaction costs. Locational advantage is the ability of producing close to final consumers. Saving transport costs and obtaining cheap inputs. Internalization advantages imply transferring the specific capital outside the firm and revealing the proprietary information (eg. how to use the technology or the patent).

The theory suggest that the greater the O and I advantages possessed by firms and the more the L advantages of creating, acquiring and exploiting these advantages from a location outside its home country, the more FDI will be undertaken. On the other hand, where firms possess substantial O and I advantages but the L advantages favour the home country, then domestic investment will be preferred to FDI and foreign markets will be supplied by exports.

2.1. Empirical studies

Previous studies have pointed out that FDI spillover effect on the host countries do not occur automatically, but depend on the host countries' absorptive capacity which is largely determined by multiple factors, such as degree of technology gap, the level of per capita income, level of infrastructure development, human capital development, trade openness, and financial market development. The absorptive capacity hypothesis has been tested in a number of different studies with mixed results.(see for example Yamin & Sincovics 2009; Kinshita & Lu 2006; Colen *et. al.*, 2008; Borensztein *et. al.*, 1998; Massoud, 2008).

Although there are voluminous studies to investigate the impact of FDI on economic growth, the available evidences are still inconclusive. However, the recent empirical studies have acknowledged the role of institutional quality in fostering economic growth of host countries. A study by Bonnie *et. al.*, (2012)

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examines the impact of institutional quality of 164 countries from 1996 to 2006 on foreign direct investment (FDI) levels and volatility. They find that good institutional quality matters to FDI. They provide evidence that institutional quality has a positive and significant effect on FDI. Their results suggest that, if there are institutional determinants of FDI volatility, and if such volatility is associated with lower economic growth, then the usual policy prescription of attracting FDI into countries by offering the “correct” macroeconomic environment would be ineffective without an equal emphasis on institutional reform. In a similar view, empirical literature on the growth effect of institutional quality provides that first; institutions shape a nation’s productivity prospects and therefore may attract more foreign investors, secondly; poor institutional quality induce poor business environment and whereby increase the cost of doing business, thirdly; FDI are generally involve high sunk cost and therefore they are highly sensitive to uncertainty including uncertainty due to poor government efficiency (Tun *et. al.*, 2012).

Agbloyor *et. al.*, (2016) examined the relationship among FDI, institutions and economic growth in Sub-Saharan Africa. Their findings reveal no evidence showing FDI promote economic growth. In addition, their results indicate no significant relationship between institutions and economic growth. They also found no convincing evidence to indicate that institutions alter favourably the effect of FDI on economic growth. Further, in a sub sample which excludes countries with developed financial markets, they found evidence suggesting that institutions play a direct role in spurring economic growth. Furthermore, the quality of institutions seems to alter favourably the relationship between FDI and economic growth. However, Okada (2013) suggests that financial openness alone may not be sufficient to attract foreign investments. Indeed, they show that the effect of financial globalization on international capital inflows depends on a country’s institutional quality. They find that although financial openness and institutional quality do not individually have a significant impact on international capital inflows, their interaction effects are found to be significant. Therefore, countries with stronger institutions seem to benefit more from financial openness and globalization.

Ajide *et. al.*, (2014) investigate whether the quality of institutions matter for the relationship between FDI and economic growth in SSA. Their results show that control of corruption, political stability and government effectiveness matter for the influence of FDI on economic growth in SSA. In a similar view, Fabro & Aixala (2012) found that property rights, civil liberties and political stability were all relevant institutional factors. They showed that the three dimensions of institutional quality are important for economic growth either through a better allocation of resources or, indirectly, through the stimulation of investment in physical and human capital. Furthermore, Bissoon (2012) uses data for 45 developing countries in the African, Latin American, and Asian regions and finds that the quality of institutions matters for inward FDI in host countries. Another study by Azman-Saini *et. al.*, (2010) point out that FDI has no direct impact on growth but that the effect of FDI on growth is contingent on the level of economic freedom in host countries. When they unbundle the aggregate economic freedom index, they find that the legal system and protection of property rights; the freedom to trade internationally; and regulations governing credit, labor and business are most important in capturing the beneficial effects of FDI.

Buchanan *et. al.*, (2012) investigate the institutional antecedents of FDI volatility. They find that institutional quality has a positive and significant effect on FDI, whereby a one-standard-deviation change in institutional quality changes FDI by a factor of 1.69. Further, they show that institutional quality has a negative and significant effect on the volatility of FDI. Therefore, Buchanan *et. al.*, (2012) confirm that institutions promote FDI flows while identifying a new realization that institutions reduce the volatility of FDI flows. Additionally, a more recently work

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of Nawaz (2015) has found that the improvement of institutional quality leads to acceleration in economic growth.

Compton *et. al.*, (2011) used the measure of EF representing the following areas: size of government, takings and discriminatory taxes, and labor market freedom and found the positive association between EF and economic growth for US states (but not all components of EF affect growth equally). To support this, Ajide & Raheem (2016) examine the causal linkage between institutions and FDI with a special focus on ECOWAS countries. They find that countries with better institutions are able to attract FDI more than countries with poorer institutional infrastructure. Again, Samimi & Ariani (2010) used annual aggregate data for 16 countries to determine the impact of good governance on FDI in Middle East and North Africa (MENA) region for the period 2002 to 2007. They used three governance indicators, which are political stability, control of corruption, and rule of law. They found that political stability and control of corruption supported the hypothesis that better governance has a positive impact on FDI in flows.

Although numerous research works has been undertaken in this area, there is little agreement on how a host country is likely to benefit from FDI. This is because the spillover effect from foreign direct investment does not accrue automatically and evenly across countries. Different from other scholars, we have use a composite measure of institutional quality constructed by using principal component analysis technique. Thus, a further investigation of the ongoing debate is important to fill the gap in literature.

3. Data and methodology

3.1. Variables and data sources

Our paper uses a sample of 36 countries from Sub Saharan Africa using panel data for the period from 2001-2015. The data were obtained from World Development Indicators database (WDI) as provided by the Word Bank for all variables except for institutional quality indicators. The data for institutional variables were taken from World Governance Indicators (WGI) and as per Kaufmann, *et. al.*, (2005).

GDP is used as our dependent variable and is measured as real growth rate per capita. Other traditional determinants of economic growth are included in the regression as control variables. The choice of these variables is based on numerous previous growth theories (see for example Barro, 1991). The variables used include initial level of GDP per capita to control for the effects of conditional convergence, FDI which is our variable of interest and is measured as foreign direct investment inflows in percentage of GDP, Gross fixed capital formation is a proxy for the ratio of investment to GDP. A positive coefficient is expected as greater investment related to positive effect on growth (Mankiw *et. al.*, 1992). In addition, inflation is also used as a control variable and is proxed as annual change in percentage point of consumer price index (CPI). In an economy, high inflation is a sign of macroeconomic imbalances and reduces economic growth.

In order to measure institutional quality, we use governance indicators from the WGI which comprise of six different indicators. These indicators are based on some opinion and perception-based surveys of various governance measures from investment consulting firms, non-government organizations, think tanks, governments, and multilateral agencies; and classified as voice and accountability, rule of law, control of corruption, regulatory quality, political stability and government effectiveness. Based on these indicators, we establish a composite governance index that summarises the above six governance indicators into a comprehensive measure using Principal Component Analysis (PCA). According to Dey (2008), PCA is a more appropriate measure of corporate governance since it identifies the governance indicators and removes the problem of multicollinearity among variables.

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3.2. Model estimation

To determine the effect of FDI and institutional quality on economic growth, we estimate a baseline model using an OLS regression. The panel data specification of this model is presented in equation (1) and is given as:

$$GDP_{it} = \beta_0 + \beta_1 FDI_{it} + \beta_2 INST_{it} + \beta_3 GCF_{it} + \beta_4 INF_{it} + \mu_t + \eta_i + \varepsilon_{it} \quad (1)$$

Where, i is country index and t is time index, μ_t is the time specific effects, η_i , the unobserved country - specific effect term and ε_{it} the error term. Other variables include GDP growth, FDI is foreign direct investment, INST is institutional quality, GCF is the gross capital formation and INF is inflation.

In the second step, we add the interaction term between foreign direct investment and institutional quality (FDI*INST) to determine whether institutional quality influence the impact of FDI on economic growth and the model becomes;

$$GDP_{it} = \beta_0 + \beta_1 FDI_{it} + \beta_2 INST_{it} + \beta_3 GCF_{it} + \beta_4 INF_{it} + \beta_5 (FDI * INST)_{it} + \mu_t + \eta_i + \varepsilon_{it} \quad (2)$$

4. Empirical results

4.1. Descriptive statistics

In Table 2, we display the summary statistics of the variables used in this study. It reveals a significant variation in GDP growth rate ranging from -38.231 to 30.342. The institutional quality minimum value is - 3.653 while its maximum value is 5.187.

Table 1. Summary statistics

Variable	Observations	Mean	Standard Deviation	Minimum	Maximum
GROWTH	540	2.13383	4.813071	-38.2311	30.34224
FDI	540	4.90448	8.265645	.0013049	89.47596
INST	540	.04352	1.954368	-3.653039	5.187218
GCF	540	20.59389	8.127351	2.000441	59.72307
INF	539	57.92193	1052.438	-35.8367	24411.03
INSTFDI	540	-1.127389	16.45276	-275.2468	38.72657

4.2. Robutness analysis

To test the robustness of our results, we use the generalized method of moments (GMM) (Blundell, & Bond, 1998). The GMM estimator can address the issue of simultaneous bias from the plausible endogeneity of the explanatory variables. The estimator also controls for the presence of unobserved country-specific effects. Besides, the GMM procures parameter estimates that are robust to heteroskedasticity of unknown form (Blundell, & Bond, 1998).

The difference GMM and System GMM approaches are often used (Arellano, & Bover, 1995; Blundell, & Bond, 1998). However, the difference GMM can present some bias (Blundell, & Bond, 1998). If the dependent variable is close to a random walk, then lagged levels of the dependent variable are only weakly correlated with subsequent first differences of that series, and thus they are only weak instruments (Roodman, 2009). The system GMM estimator then proposes a new set of instruments for the levels of the lagged dependent variable based on the stationarity restriction on the dependent variable (Arellano, & Bover, 1995 and Blundell & Bond, 1998). It, thus, exploits a new set of instruments from within the system that was not available for the difference GMM estimator. It combines the difference equations and the level equations to one greater system of equations. The Hansen J-test explore whether the lagged values of covariates are valid instruments. The Arellano–Bond test of first-and second-order autocorrelation checks whether the first and second-serial order of the differenced error term are correlated.

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4.3. Effect of FDI and institutions

In the first stage, we estimate equation (1) of the model and performed a Hausman test. Our decision based on Hausman test indicates that the fixed effects model is suitable. The fixed-effects model controls for all time-invariant differences between the individuals. The results show that FDI is negative and significant negative at 1 percent level. This may suggest that the spillover effect from FDI have negative externalities to the host economy. There is a possibility that recipient countries have not attained a minimum level of development necessary to exploit the benefits from FDI in terms of human capital, infrastructure, financial development, level of technology etc. which are necessary to increase factor productivity. However, institutional variable shows a positive and significant influence on economic growth. The implication is that institutions matter for economic growth. Both inflation and gross capital formation are significant at 1 percent level. Although Inflation has a negative effect on growth and GCF shows a positive this is consistency with previous studies.

We introduce a new variable in the model (2), as an interaction term between foreign direct investment and institutions quality as shown in table 2 column 2 below. The interaction term is found to be positive and significant. Its implication is that, the impact of FDI on economic growth enhanced with institutional quality. This is in line with other studies (see [Azman- Saini et al., 2010](#) and [Nawaz, 2015](#)). Furthermore, the coefficients of FDI and institutional quality respectively are not significant. The absence of direct impact indicates that the relationship between FDI and growth is channeled through the interaction term. The interpretation is that improving the institutions' quality in Sub-Saharan Africa countries is crucial for foreign direct investment spillovers. The finding is consistent with other previous studies (see for example [Ajide et al., 2014](#) and [Bonnie et al., 2012](#)).

Table 2. Effect of FDI and Institution quality on GDP growth

Dependent variable = GDP	Equation (1) ^a	Equation (2)
FDI	-0.1037*** (-2.26)	0.025 (0.68)
INST	1.2717* (1.80)	-0.1721 (-1.00)
FDI*INST	-	0.098*** (5.41)
GCF	0.1023*** (3.01)	0.0968*** (2.82)
INF	-0.0001*** (-5.58)	- 0.0001 (-0.03)
Constant	0.4888 (0.74)	0.0737 (0.10)
Observations	539	539
R ²		
Hausman test (FE vs. RE)	9.62	6.43
P-value	0.0221	0.1693

Notes: t-statistics in parentheses, *, **, *** Significance at the 10%, 5% and 1% levels. ^a The values reported are corrected from heteroskedascity (detected by the Wald test).

$$GDP_{it} = \alpha + \beta_0 GDP_{it-1} + \beta_1 FDI_{it} + \beta_2 INST_{it} + \beta_3 GCF_{it} + \beta_4 INF_{it} + \beta_5 (FDI * INST)_{it} + \mu_i + \eta_t + \varepsilon_{it} \quad (3)$$

where, i refers to the country and t refers to the time period from 2001 to 2015 and $|\beta_0| < 1$.

It is acknowledged that there exists a relationship between GDP growth and inflation. Since a high level of inflation can reduce economic growth, we employ one lag of the levels values of GDP growth and inflation, instead of their contemporaneous values in our GMM analysis. For [Arellano & Bover \(1995\)](#), we need to consider the potential lagged effects of these two variables and prevent reverse causality issues.

Table 3 reports the results of the system GMM analysis. The Arellano-Bond serial correlation test at the second order is verified, meaning that the instruments

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used are valid and the error term does not exhibit any serial correlation. The Hansen test of over identifying restrictions also indicates that the model is correctly specified and therefore accepts our specifications. This implies that the model specification is valid. The GMM results confirm the robustness of the previous regressions by supporting our findings that FDI increases growth in countries having a minimum level of institutional quality. In table 4 column 3, FDI and institutional quality shows negative effect on growth. However, column 4 of the same table indicate that the interaction term between FDI and institutional quality is statistically and positive significant, confirming the results in table three. In addition, the gross capital formation similar to previous studies indicate significant in influence on economic growth.

Table 3. System GMM data estimation (two-step estimation)

Dependent variable = GDP	Equation (3) ^a	Equation (4)
GDP _{it-1}	0.3819*** (3.98)	0.3425** (2.58)
INF _{it-1}	-0.0006 (-1.49)	
FDI	-0.2951*** (-6.27)	0.1125 (0.89)
INST	-0.047 (-0.41)	-0.4143* (-1.84)
FDI*INST		0.1462** (2.23)
GCF	0.1723*** (5.41)	0.0714 (1.44)
Constant	-1.0524* (-1.80)	0.0737 (0.10)
Observations	502	502
Number of instruments	19	19
Number of countries	36	36
AR(2) test p-value	0.491	0.283
Hansen test P-value	0.416	0.257

Table 4 below presents the correlation matrix results of the variables. From the table, institutional quality and the capital formation are positively correlated with economic growth while Inflation is negatively correlated with growth. Surprisingly, Our FDI variable (net inflows) is negatively correlated with GDP growth. But this correlation is not significant. The interaction term (institution and FDI) is positively and significantly correlated with economic growth.

Table 4. Correlation matrix

	1	2	3	4	5	6
	GDP	FDI	INST	GCF	INF	INST*FDI
1. GDP	1					
2. FDI	-0.0432	1				
3. INST	0.1324***	-0.0832*	1			
4. GCF	0.1790***	0.3363***	0.3183***	1		
5. INF	-0.0722*	-0.0197	-0.0708	-0.0908**	1	
6. INSTFDI	0.2303***	-0.5484***	0.4804***	0.0025	-0.0088	1

Notes: t-statistics in parentheses, *, **, *** Significance at the 10%, 5% and 1% levels respectively.

5. Conclusion

FDI is an integral part of an effective international economic system and a major catalyst to development. However, the benefits of FDI do not accrue automatically and evenly across countries. National policies and the international investment architecture matter for attracting FDI to developing countries and for exploiting the full benefits of FDI for development.

The objective of this paper was to assess the impact of FDI on economic growth within an institutional quality framework. Using fixed effect model, results show a significant negative effect on economic growth. On the other hand, institutional quality seems to be positively enhancing economic growth by providing enabling environment necessary for FDI realize the spillover effects on the host country economies. The results from the GMM model confirm the findings obtained using fixed effect model. Thus, institutional quality is important in mediating FDI the result of which enhances positive spillovers and increase factor productivity and therefore economic growth.

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In view of the above, policy recommendation is provided that recipient countries establish and seriously implement appropriate policies aimed at creating enabling environment for investment both foreign and local investors should be given equal opportunity. Indeed, governments have to ensure that the basic level of development is available to allow for full exploit of the benefits attached to FDI. Notwithstanding, institutions should be strengthened such that corruption, rule of law, political stability, and government effectiveness play a big role in creating better and more competitive business environment.

References

- Agbloyor, E.K., Gyeke-Dako, A., Kuipo, R., & Abor, J.Y. (2016). Foreign direct investment and economic growth in SSA. The role of institutions, *Thunderbird International Business Review*, 58, 479-497. doi. [10.1002/tie.21791](https://doi.org/10.1002/tie.21791)
- Ajide, K., Adeniyi, O., & Raheem, I. (2014) Does governance impact on the Foreign Direct Investment–growth nexus in Sub-Saharan Africa? *Zagreb International Review of Economics & Business*, 17(2), 71-81.
- Ajide, K.B., & Raheem, I.D. (2016), Institutions-FDI nexus in ECOWAS countries, *Journal of African Business*, 17(3), 319-341. doi. [10.1080/15228916.2016.1180778](https://doi.org/10.1080/15228916.2016.1180778)
- Arellano, M., & Bover, O. (1995). Another look at the instrumental-variable estimation of error components models. *Journal of Econometrics*, 68(1), 29-52. doi. [10.1016/0304-4076\(94\)01642-D](https://doi.org/10.1016/0304-4076(94)01642-D)
- Azman-Saini, W.N., Baharumshah, A.Z., & Law, S.H. (2010). Foreign direct investment, economic freedom and economic growth: International evidence. *Economic Modelling*, 27(5), 1079-1089. doi. [10.1016/j.econmod.2010.04.001](https://doi.org/10.1016/j.econmod.2010.04.001)
- Barro, R. (1991). Economic growth in a cross-section of countries, *Quarterly Journal of Economics*, 106(2), 407-443. doi. [10.2307/2937943](https://doi.org/10.2307/2937943)
- Barro, R., & Sala-i-Martin, X. (1997). Technological diffusion, convergence, and growth, *Journal of Economic Growth*, 2(1), 1-26. doi. [10.1023/A:1009746629269](https://doi.org/10.1023/A:1009746629269)
- Bissoo, O. (2012). Can better institutions attract more foreign direct investment? Evidence from developing countries, *International Research Journal of Finance and Economics*, 82, 142-158.
- Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87(1), 115-143. doi. [10.1016/S0304-4076\(98\)00009-8](https://doi.org/10.1016/S0304-4076(98)00009-8)
- Bonnie, G.B., Quan, V.L., & Rishi, M. (2012). Foreign direct investment and institutional quality: some empirical evidence, *International Review of Financial Analysis*, 21, 81-89. doi. [10.1016/j.irfa.2011.10.001](https://doi.org/10.1016/j.irfa.2011.10.001)
- Borensztein, E., De Gregorio J., & Lee J.W. (1998). How does foreign direct investment affect economic growth? *Journal of International Economics*, 45(1), 115-135. doi. [10.1016/S0022-1996\(97\)00033-0](https://doi.org/10.1016/S0022-1996(97)00033-0)
- Bruno, R., & Campos, N. (2013). Reexamining the conditional effect of foreign direct investment', *IZA Discussion Paper*, No.7458. [Retrieved from].
- Buchanan, B., Le, Q., & Rishi, M. (2012). Foreign direct investment and institutional quality: Some empirical evidence, *International Review of Financial Analysis*, 21(C), 81-89. doi. [10.1016/j.irfa.2011.10.001](https://doi.org/10.1016/j.irfa.2011.10.001)
- Colen, L., Maertens M., & Swinnen, J.F.M. (2008). Foreign direct investment as and engine for economic growth and human development: A review of the arguments and empirical evidence. *Working Paper*, No.IAP VI/06. [Retrieved from].
- Compton, R.A., Giedeman, D.C., & Hoover, G.A. (2011). Panel evidence on economic freedom and economic growth in the United States. *European Journal of Political Economy*, 27(3), 423-435. doi. [10.1016/j.ejpoleco.2011.01.001](https://doi.org/10.1016/j.ejpoleco.2011.01.001)
- Dey, A. (2008). Corporate governance and agency conflicts. *Journal of Accounting Research*, 46(5), 1143-1181. doi. [10.1111/j.1475-679X.2008.00301.x](https://doi.org/10.1111/j.1475-679X.2008.00301.x)
- Dunning, J.H. (1981). Explaining the international direct investment position of countries: Towards a dynamic or developmental approach, *Weltwirtschaftliches Archiv*, 119, 30-64. doi. [10.1007/BF02696577](https://doi.org/10.1007/BF02696577)
- Grossman, G., & Helpman, E. (1991). Quality ladders in the theory of growth, *The Review of Economic Studies*, 58(1), 43-61. doi. [10.2307/2298044](https://doi.org/10.2307/2298044)
- Kaufmann, D.C. et al. (2005). Governance matters IV: Governance indicators for 1996-2004. *World Bank Policy Research Working Paper*, No.3630. Washington. [Retrieved from].
- Hymer, S.H. (1976), *The International Operations of National Firms: A Study of Direct Foreign Investment*, Cambridge, MA: MIT Press.
- Kinshita, Y., & Lu, C. (2006). On the role of Absorptive capacity FDI Matters to Growth. *William Davidson Institute Working Paper*, No.845. [Retrieved from].
- Mankiw, N.G., Romer, D., & David, W. (1992). A Contribution to the empirics of economic growth, *Quarterly Journal of Economics*, 107(2), 407-437. doi. [10.2307/2118477](https://doi.org/10.2307/2118477)

Turkish Economic Review

- Massoud, N. (2008). Assessing the employment effect of FDI inflows to Egypt: Does the mode of entry matter?. *International Conference on The Unemployment Crisis in the Arab Countries*, Cairo, Egypt.
- Nawaz, S. (2015). Growth effects of institutions: A disaggregated analysis, *Economic Modelling*, 45, 118-126. doi. [10.1016/j.econmod.2014.11.017](https://doi.org/10.1016/j.econmod.2014.11.017)
- Okada, K. (2013). The interaction effects of financial openness and institutions on international capital flows. *Journal of Macroeconomics*, [10.1016/j.jmacro.2012.11.003](https://doi.org/10.1016/j.jmacro.2012.11.003)
- Roodman, D.M. (2009). A note on the theme of too many instruments. *Oxford Bulletin of Economics and Statistics*, 71(1), 135-158. doi. [10.1111/j.1468-0084.2008.00542.x](https://doi.org/10.1111/j.1468-0084.2008.00542.x)
- Samimi, A.J., & Ariani, F. (2010). Growth and FDI in OIC countries. *Australian Journal of Basic and Applied Sciences*, 4(10), 4880-4882.
- Tun, Y.L., Azman-Saini, W.N.W., & Law, S.H. (2012) International evidence on the link between foreign direct investment and institutional quality, *Engineering Economics*, 23(4), 379-386. doi. [10.5755/j01.ee.23.4.2569](https://doi.org/10.5755/j01.ee.23.4.2569)
- Vernon, R. (1966). International investment and international trade in the product cycle. *Quarterly Journal of Economics*. 80(2), 190-207. doi. [10.2307/1880689](https://doi.org/10.2307/1880689)
- Yamin, M., & Sinkovics, R.R. (2009). Infrastructure or foreign direct investment? An examination of the implications of MNE strategy for economic development. *Journal of World Business*, 44(2), 144-157. doi. [10.1016/j.jwb.2008.05.004](https://doi.org/10.1016/j.jwb.2008.05.004)



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