

# LINKAGES AMONG INSTITUTIONS, INVESTMENT AND GROWTH: THE CASE OF DEVELOPING COUNTRIES

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#### ABSTRACT

The study explores the impact of institutions on foreign and domestic investment as well as analyze the combined effect of institutional quality and investment in fostering economic growth of developing countries. We took the data of 29 developing countries from the list provided by the World Bank, spanning over 2000 to 2018. Six institutional indicators have been employed i.e. political stability, government effectiveness, regulatory quality, rule of law, control of corruption and voice and accountability. The other determinants along with institutional indicators are GDP, trade openness, inflation rate, tariff rate and mobile phone subscribers. The findings show that government effectiveness, regulatory quality, rule of law and control of corruption have significantly positive influence on FDI while all the institutional indicators positively contribute to domestic investment. Moreover, findings show that FDI exert substantially positive effect on economic growth with association to better institutional quality. We evaluated twofold impact of domestic investment on economic growth, independently and via through the channel of institutions. Domestic investment has a considerable impact on economic growth individually, but greater impact with the existence of better institutional quality. We infer from our findings that policy makers should give priority to institutional reforms while formulating policies in order to augment FDI influxes in developing countries, and providing suitable environment for domestic investors. It is the need of hour; governments of developing countries should work on to make their institutional quality better as it is the only way to overcome their development disparities across countries.

**Keywords:** institutional quality, security of property rights, foreign direct investment, mean tariff rate **JEL Codes:** E02, E22

#### I. INTRODUCTION

Institutions as "rules of the game" regulates human interactions (North, 1990). The developing countries are poor because the institutional limitations may restrain to economic activities which further discourage productive activities. Institutions are of two types i.e., formal and informal. Formal institutions are constitutions, laws and regulations whereas informal institutions are conventions, traditions and norms in the society. They are modeled to bring down the uncertainty related to human dealings and trade, and to regulate the code of conduct about individuals, providing societies with conventional structure for interaction. A huge amount of literature has been found that argued quality of institutions as a main supporting element to economic growth (Knack & Keefer, 1995; Rodrik et al., 2004; Abdiweli, 2003; Doucouliagos & Ulubasoglu, 2006 and Casson et al., 2010). Adam Smith emphasized the importance of economic policies, economies of trade and scales of production. Modern growth theory is based on Solow's dynamics (1956). But the recent development in this regard is made up by Lucas 1988 and Romer 1990. In their framework of production function, growth depends upon inputs. So, accumulation of physical capital, refining skills of workers by educating them and innovation in technology are the measures which will lead to economic growth of any country. In the last decade, "new growth theory" is regenerated by Bauer (1972) and North (1990). They stressed the prominence of an economic environment that is coherent with the development and effective use of resources. They focused on the effects of institutions and policies on economic growth.

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According to IMF (2003) and World Bank (2002), effective and well-organized institutions provide appropriate atmosphere for investment and revolution for growth-boosting activities and allow individuals of the society to do their job smoothly, and allocate their time in fruitful activities. Moreover, provision of property rights in a society encourages capitalists to embrace new and efficient technologies that augment economic growth in the long run. Thus, undoubtedly not only institutional quality but also the safety of property rights, is a substantial element of economic evolution. On the other hand, suboptimal institutional quality, permits and assists futile activities as a result resources are ejected from the productive activities and ultimately slow down economic growth (Ali and Rehman, 2015; Ali and Senturk, 2019; Ali and Zulfigar, 2018; Ali et al., 2016; Ali et al., 2021; Ali et al., 2021; Ali et al., 2015; Audi et al., 2021). Economic institutions have implications for long run growth in particular they provide the stimulus to investment and technology. Better rule of law, lower corruption, secure property rights, contract enforcement and better citizen access to justice all foster growth. Political institutions affect the economic institutions and vice versa. Institutions enhance the return of private investment by reducing the risk of doing business. Institutions also act as a securing device for foreign investors. Institutions put checks and balances on the government, restricting the desirability to abuse its own power, enforce property rights. Developing countries' institutions are characterized by poor legal structures, corrupt governments, lack of property rights and weak contract enforcement. The East Asian crisis has highlighted the importance of strong institutions in enabling countries to successfully integrate with global world. It needs improved financial market transparency and a strong financial system that ensure financial stability and market discipline. Developing countries have made progress towards a well-developed financial system in the past few years (Roussel et al., 2021; Sajid and Ali, 2018; Senturk and Ali, 2021; Mehmood et al., 2022; Ali et al., 2022; Ahmad et al., 2022; Sulehri and Ali, 2020; Ali et al., 2021; Khan et al., 2021).

As described above that institutions are widely regarded as a crucial determinant of foreign investment. The literature proved that quality of formal institutions is positively related to FDI. Empirical results advocate that richer countries attract more FDI, not because they are wealthy but due to better institutional quality. More over reduction in corruption, improved bureaucracy, transparent political system may lead to inflate FDI influxes and inspire multinationals to invest in developing countries. Empirical literature proved that institutional quality has a vital role to play in appealing FDI inflows (Pares, et al. 2018; Kurul and Yalta, 2017; Ali and Audi, 2016; Ali and Audi, 2018). Reduction in corruption and excessive burden on bureaucracy, improved and transparent political system may lead to enhance FDI invasions and inspire multinational firms to invest into under developed countries (Arshad and Ali, 2016; Ashraf and Ali, 2018; Audi et al., 2022; Audi and Ali, 2017; Audi and Ali, 2017; Audi et al., 2021; Audi and Ali, 2016; Audi et al., 2021). FDI inflows are considerably lower in Asian countries like India and China, due to limited local markets, enhanced international competition, lack of economic and trading reforms and political and economic instability (Siddica and Angkur, 2017; Jadhav, 2012; Julio, Alves, and Taveres, 2011; Busse, and Hefeker, 2005 Ali and Naeem, 2017; Ali, 2011; Ali, 2015; Ali, 2018; Ali and Bibi, 2017; Ali and Ahmad, 2014; Khan et al., 2021). As far as the importance of institutions in determining domestic investment is concerned, good governance has a great deal of influence on economic outcomes and entrepreneurial activities. Evidence shows that difference in institutional quality may cause difference in entrepreneurial activities across developed and under developed countries (Levie and Autio, 2008). Institutional indicators like control of corruption, efficient establishment, free and fair judiciary, security of property rights as well as a comprehensive system of taxes support significantly to investment decision of the firms. Private economic activities are largely affected by the set of institutional variables over a large span of time (Aysan and Varoudakis, 2016). Empirical literature provides the evidence that political institutions affect private investment. Political stability positively affects the domestic investment describes that in developing countries, low private investment is mainly due to poor quality of political governance. Institutional quality, governance, entrepreneurial efficiency etc. are favorable precondition for investment (Lobanova, Kracun and Kavkler, 2016 Audi et al., 2021; Haider and Ali, 2015; Kaseem et al., 2019; Khan et al., 2021).

The main theme of the study is to evaluate the effect of institutions on domestic investment and FDI. We have taken the data of 29 developing counties to investigate the development disparities across countries. Large amount of literature has been found on the importance of institution as an important determinant of economic growth. This study provides an insight that how institution may affect and stimulate domestic and foreign investment and ultimately enhance economic growth. The more promising feature of the study is to evaluate the impact of interactive forces of institutions and FDI on developing economies. This study would have been of the great deal of value for the government and policy maker of developing countries while formulating policies, reforms and regulations to overcome their development disparities across country.

# **II. LITERATURE REVIEW**

This section is comprised of relevant prior literature on the impact of institutions on foreign and domestic investment as well as economic growth. Siddica and Angkur (2017) revisited the relationship of institutions and the FDI for 40 countries including both developing and developed economies. As far as institutional variables are concerned investment profile and law and order positively correlated to FDI but bureaucratic quality is negatively correlated to FDI. Higher growth outcomes rely not only on private investment but also on FDI for which institutional reforms are necessary. Akpo and Hassan (2015) evaluated that institutional quality is dynamic factor in fostering FDI inwards in Nigeria. They strongly support the joint effect of institutions and trade openness to robust FDI inflows in short run as well as in long run. They emphasized that reduced corruption, stabilized government, enhancing administrative quality and enforcement of rule of law, as a pre-requisite for attracting foreign investors in developing countries like Nigeria. Whereas Esew and Yaroson (2014) investigate the impact of institutional quality in defining FDI in Nigeria. Political stability has significant and explicit effect on FDI. Fiodendji (2013) explored the importance of FDI inflows in emerging and developing countries. Institutional quality varies in accordance with the potential of host country i.e. whether it is resource intensive country or non-resource intensive country. In resource intensive country, institutions are the key determining factors in attracting FDI inflows. Luca and Spatafora (2012) found a significant association between capital inflows and institutional quality. Empirical results show significant effect of institutional quality on capital inflows. Jadhav (2012) explores the role of political, economic and institutional factors in determining FDI in BRICS economies. Political stability, government effectiveness, regulatory quality, control of corruption, voice and accountability and rule of law are considered as contributing factors of FDI. Julio, Alves and Taveres (2011) explored the effect of various economic and institutional elements of FDI influxes in European Union countries. Empirical evidence shows that the countries having better policies, institutions and better economic outcomes attract more FDI. Daniele and Marani (2006) analyzed the keystone factors of FDI in MENA countries. They found that FDI inflows are considerably lower than countries of Eastern Europe or in Asian countries like India and China, due to political and economic instability. Busse and Hefeker (2005) built up a link between institutions and FDI for 83 under developing nations. Government constancy, rule of law, setting of establishment, democracy and accountability are contributing factors in attracting FDI inflows. Stein and Daude (2001) shows nonlinear positive and significant relationship between institutions and FDI.

Patrick and Herve (2019) revisited the relationship between institutions and domestic investment for seven West African countries. Governance exert indirect impact on domestic private investors in these countries. Aysan and Varoudakis (2016) examined 32 developing countries. Empirical evidence reveals that political institutions affect private investment decision. In MENA countries investment decisions remained low due to poor administrative quality, political instability and lower accountability. Lobanova, Kracun and Kavkler (2016) analyzed the 22 European transition countries. They observed impact of institutions as mediator between mergers and attainments on domestic investment. Ntouko (2012) concluded that in developing countries, low private investment is mainly due to poor quality of political governance. Empirical evidence shows that political stability and administrational quality have significant and positive effect on private investment. However, Zouhaier (2012) examines the impact of institutional aspects on investment and economic development for a cluster of 11 nations of MENA state. He focuses on the fact that sound institutional environment provides a suitable climate to economic driving forces, both internal and external agents for further financing. In contrast, poor institutions enhance vagueness, ambiguity, impulsiveness, irregularity and cost of trade. Such situation discourages domestic investors to invest. Amoros (2009) focuses on the importance of role of entrepreneurship in developed and under developed countries. It is observed that the quality of institutions may affect entrepreneurial dynamics in view of developed and undeveloped countries. There is impact of governance on economic outcomes as well as entrepreneurial activities. Moreover, Khan and Khan (2007) concluded that institutional quality, governance, entrepreneurial efficiency etc. seems favorable precondition for investment. In case of Pakistan evidence reveals that poor institutional quality is a key factor for lower investment.

Jilenga and Helian (2017) concluded that quality of institutions plays dynamic role in economic growth by examining five Eastern African economies. Empirical findings show that political stability, government effectiveness, rule of law, control over corruption exert significant and positive impact on economic growth. They emphasized on good governance through which effective policies should be formulated. Sarwar and Butt (2013) compared formal and informal institutions of selected Asian countries. They confer that latter are more effective to foster economic growth. Empirically it is proved that all institutions play positive role in the development process. Rodrik, Subramani and Trebbi (2002) also discussed cross country role of institutions, geography and trade in determining income outcomes. Institutional quality has primacy over everything else. Barro (1991) analyzed 98

cross countries. Study reveals that there exists negative relationship between political instability and growth and investment. Revolutions, coups and political assassinations used as proxies for measurement of political instability. Gwartney, Lawson and Holcombe (1999) examined that economic liberties have substantial impact on economic development. Income grows rapidly in free economy with secured property rights. Economic freedom boosts entrepreneurial skills which ultimately lead to economic growth. Knack and Keefer (1995) are of the view that security of the property rights and efficient government are the major determinants of economic growth of any country. They are of the view that inefficient government who makes less public investment and ineffective policies will lead to lower steady state income level.

#### **III. DATA AND METHODOLOGY**

In this section we describe our econometric model first then we explain the variables. Latter we discuss the time span and countries, methodology and list of sample countries. The following model is applied to empirically probe into the role performed by institutions in determining FDI:

$$FDI_{it} = \beta_0 + \beta_1 Inst_{it} + \beta_2 GDP_{it} + \beta_3 Open_{it} + \beta_4 Mob_{it} + \beta_5 Tariff_{it} + \beta_6 Inf_{it} + \varepsilon_{it}$$
(1)

Inst represent institutional quality index. GDP is employed to comprehend the impact of market size of the country. Empirical literature suggests that market size has positive influence on FDI. Open represents to trade openness which takes into account the impact of trade openness on FDI. An economy which is open can generate more investment both domestic and foreign. Mob, cellular mobile per 100 people, proxy of quality of physical infrastructure in the country. Mob is expected to be positively associated to FDI, as better quality infrastructure enhances investment and in such a way efficiency-seeking FDI is attracted to host country. Tariff is employed to describe the impression of trade strategy on FDI. Literature reveals that policy of trade openness and decrease in rate of tariff enhances FDI. Inf, represents inflation rate, measures macroeconomic stability which reduces insecurity and encourages FDI inflows. Following is the model used to estimate the importance of institutions for domestic investment.

$$DI_{it} = \delta_0 + \delta_1 Inst_{it} + \delta_2 GDP_{it} + \delta_3 Open_{it} + \delta_4 Tariff_{it} + \delta_5 Inf_{it} + \varepsilon_{it}$$
(2)

DI is domestic investment. Other variables are same as in previous equation. Institutional quality and market size depicted by GDP enhance domestic investment as well. Literature reveals that the policy of trade openness and decrease in tariff enhance domestic investment. Inflation rate depicts economic steadiness which reduces insecurity and encourages domestic investment.

First taking into consideration, the interaction of institutions and FDI and its impact on growth, the model forms as follows:

$$Growth_{it} = \gamma_0 + \gamma_1 DI_{it} + \gamma_2 Sch_{it} + \gamma_3 Open_{it} + \gamma_4 Mob_{it} + \gamma_5 FDI_{it} + \gamma_6 (FDI_{it} * Inst_{it}) + \varepsilon_{it}$$
(3)

Growth represents growth in GDP per capita. DI shows domestic investment, it's an important determinant of growth, increasing trends in domestic investment always boost economic growth. Sch, is average years of secondary schooling, a proxy for human capital. Human capital is an important contributing factor of economic growth which frequently appears significant in growth literature. Open represent to trade openness. Openness increases the economic growth through externality effect. Mob, cellular mobile per 100 people as a proxy for infrastructure, increases the growth by attracting investment both domestic and foreign. FDI represents FDI inflows while FDI\* Inst, is the interaction term. Institutional quality enhances economic growth through its effect on investment. Apart from being considered individually the FDI variable the model also includes an interaction term along with institutional quality. This makes us able to evaluate, how FDI combined with institution quality effect the economic growth. Secondly, by indulging the domestic investment and the interaction term of domestic investment and institutions, it takes the following form:

$$Growth_{it} = \gamma_0 + \gamma_1 DI_{it} + \gamma_2 Sch_{it} + \gamma_3 Open_{it} + \gamma_4 Mob_{it} + \gamma_5 FDI_{it} + \gamma_6 (DI_{it} * Inst_{it}) + \varepsilon_{it} (4)$$

All the variables are same as in the previous equation except the interaction term. Our study, particularly draws attention on the aspect of institutional quality, that's why we have included interaction term in this regard to see the combined effect of institutional quality and domestic investment.

tt inflows percentage of GDP. of corruption (COC), government effectiveness, political stability	WDI WGI
	WGI
ality (RQ), rule of law (RL), and voice and accountability (VA).	
present the market size)	WDI
	WDI
people), representing the infrastructure development	WDI
	WDI
ces (annual %)	WDI
% of GDP.	WDI
(annual %)	WDI
ary schooling in the total population.	WDI
e j	<ul> <li>ality (RQ), rule of law (RL), and voice and accountability (VA).</li> <li>epresent the market size)</li> <li>D people), representing the infrastructure development</li> <li>ices (annual %)</li> <li>% of GDP.</li> <li>(annual %)</li> <li>dary schooling in the total population.</li> </ul>

# Table 1: Data and Sources of variables

Note: WDI represents world development indicators whereas WGI represents world governance indicators.

# **III.I. DESCRIPTION OF INSTITUTIONAL VARIABLES**

## **III.I.I.** Voice and Accountability

It denotes to which extent people of state have right to elect their representatives, it includes liberty of choice, independence of judiciary, and a freedom of media.

## **III.I.II. POLITICAL STABILITY**

Political stability can be defined through democratic or non-democratic governments.

## **III.I.III. GOVERNMENT EFFECTIVENESS**

It denotes the role of state in provision of goods and services in public welfare and to which extent it is independent from political pressures. The formulation of policies, and to capture how much government is committed to implement such policies.

# **III.I.IV. REGULATORY QUALITY**

It depicts the proficiency of the state to originate rules and policies and their compliance in a country. Improved regulatory framework supports to stimulate private sector investment in the host country.

#### **III.I.V. RULE OF LAW**

It comprehends the extent to which agents of the society abide by the rules of society. It includes the quality of contract enforcement, property rights, free and fair law enforcement agencies, and the courts, and control over crime and violence.

## **III.I.VI. CONTROL OF CORRUPTION**

It captures how civil authority is exercised for personal benefits. The empirical analysis of the research is established on the sample of 29 developing nations. Data is taken of the period 2000-2018. In this study Generalized Method of Moments (GMM) is adopted as estimation technique for exploring the influence of the institutions on the investment and economic outcomes. The Generalized Method of Moments (GMM) is employed by Easterly and Levine (1997) and Nawaz (2011). Siddiqui et al. (2009) and Mijiyawa (2008) used GMM, as this technique has capacity to overcome the riddle of endogeneity between institutions and economic growth. The list of countries is given below.

	Table 2: List of Developing C	ountries
Argentina	Egypt, Arab Rep.	Mauritania
Armenia	Ghana	Malaysia
Bangladesh	India	Mauritius
Botswana	Indonesia	Mexico
Brazil	Iran	Nigeria
Bhutan	Jamaica	Pakistan
Cambodia	Jordan	Paraguay
China	Kenya	Sudan
Colombia	Lebanon	Thailand
		Turkey

Table 2: List of Developing Countries

Source: World Bank, March 2013

# **IV. RESULTS AND DISCUSSION**

The main purpose of the research is to analyze the influence of institutions on FDI. We employed six indicators of institutions i.e. political stability, regulatory quality, government effectiveness, rule of law, voice and accountability and control over corruption. For each institutional indicator, we regressed separate equation, found our results and interpret it in detail with empirical evidence from the literature accordingly. First, we test the reliability of data using descriptive statistics.

Before estimation we test the reliability of our data through descriptive statistics. This process makes us to better understand our data and to draw better conclusions from it and this will lead us to logical reasoning. Mean is used to measure central tendency. However, standard deviation measures the dispersion or variability of data. Low values of standard deviation show less variation which indicates consistency of data. Max and Min represent maximum and minimum values of the present sample. Results of the table below show that there is less variation in data as the values of standard deviation are smaller.

Table 3: Descriptive Statistics of Data							
Variables	Obs	Mean	Std. Dev.	Min	Max		
VA	522	3594	.6733	-1.830	1.007		
Pol Stab	522	6299	.8894	-2.810	1.283		
GE	522	2255	.6078	-1.775	1.267		
RL	522	3885	.5762	-1.685	1.077		
RQ	522	2913	.6053	-1.720	1.127		
COC	522	4335	.5910	-1.544	1.568		
FDI	514	.8003	1.096	-3.621	3.615		
GDP	522	7.381	1.807	-1.823	9.588		
DI	522	23.456	2.247	16.392	29.273		
Inf	505	1.731	.9749	-2.769	4.391		
Trade	519	3.852	.5995	1377	5.258		
Mob	522	3.498	1.585	-3.708	5.170		
Sch	522	4.145	.4139	2.850	4.792		
Tariff	522	2.303	.5514	.2231	3.711		

Diagnostic test comprises over two specification tests. One is Sargan test of over identifying restrictions, this examines the reliability of the instruments. Second is Arellano Bond test for auto correlation. Our results accomplish that there is no evidence of auto correlation in either case. Values of R-squared show goodness of fit of model.

Diagnostic Tests	Eq1(VA)	Eq 2(PS)	Eq3(GE)	Eq 4(RL)	Eq 5(RQ)	Eq6(COC)	
R-Squared	0.584	0.464	0.718	0.591	0.704	0.644	
Sargan test	20.872(0.723)	27.168(0.856)	20.828(0.432)	22.630(0.628)	18.684(0.824)	22.137(0.956)	
AR (1) Prob.	0.002	0.004	0.003	0.002	0.004	0.004	
AR (2) Prob.	0.3435	0.4191	0.3494	0.4201	0.3528	0.3826	

Table 4: Results of Diagnostic Test (FDI Model)

Results of GMM show that institutional variables; government effectiveness (GE), rule of Law (RL), regulatory quality (RQ) and control of corruption exert positive and significant influence on FDI. Our findings endorse the previous findings that countries with better institutional quality tend to attract more FDIs than others [Siddica, and Angkur, 2017; Fiodendji, 2013]. Government effectiveness is significant and positively related to FDI. Empirical evidence reveals that the countries having poor governance have lower investment inflow rather than other countries. Governance indicator plays a main function in inviting FDI inflows in both developing and developed countries (Pares, et al., 2018). Our findings show positive relationship between regulatory quality and foreign direct investment (Siddica, and Angkur, 2017). Rule of law shows significant and positive association with foreign direct investment. Law and order is a contributing factor in attracting FDI inflows (Busse and Hefeker, 2005). Regarding the control of corruption our findings show that higher the corruption lower will be the rate of foreign investment. Corruption reduces the efficient allocation of resources because individuals engage in rent-seeking activities rather than socially productive activities (Mauro, 1995; Mauro, 2004). Regarding the control variables trade openness, increases the FDI while tariff rate, reduces the FDI. Literature reveal that policy of trade openness and low level of tariff attracts FDI as both are complement to each other. Inflation rate has inverse relation with FDI as higher inflation raises the cost of borrowing by reducing both domestic and foreign investment moreover it loses the

confidence of investors. Mob (infrastructure development) is positively related to FDI following the empirical literature. A better infrastructure enhances the productivity of investment, and efficiency-seeking FDI is attracted to host country (Pares, et al., 2018).

Variables	Eq 1	Eq2	Eq3	Eq4	Eq5	Eq6
С	7.5771(3.685)	-22.317(-2.682)	-10.265(-3.478)	-17.608(-3.317)	-7.3672(-3.692)	-8.4375(-3.455)
Pol Stab	0.1876(1.145)					
GE		1.4273*(2.335)				
RL			0.4987*(2.121)			
RQ				2.0341*(3.371)		
COC					0.1647**(1.840)	
VA						0.4721(1.552)
GDP	0.0488(1.112)	0.0787(0.717)	0.0513(0.963)	0.1442(1.340)	0.0423(1.003)	0.0166(0.345)
Open	0.6084*(4.823)	0.9250*(2.677)	0.6980*(4.359)	0.6042*(2.185)	0.6218*(5.047)	0.7000*(4.727)
Tariff	-1.164*(-2.039)	-7.5246*(-2.365)	-3.123*(-3.168)	-0.6907*(-4.386)	-2.6543*(-3.208)	-2.5460*(-3.022)
Inf	-0.504*(-3.458)	-1.0345*(-3.150)	-0.584*(-3.150)	0.6417*(-2.006)	-0.5052*(-3.517)	-0.6133*(-3.365)
Mob	0.4661*(4.727)	1.0590*(2.932)	0.5608*(4.229)	0.9765*(3.725)	0.4554*(4.776)	0.4962*(4.381)

# Table 5: Results of GMM Test (FDI Model 1)

Note: t values are in parenthesis where \* shows the significance at 5 and 1 % level of significance while \*\* shows the significance at 10 % level of significance.

Our results show that we reject the null hypothesis of auto correlation. So, there is no evidence of auto correlation in each case. Values of R-squared show goodness of fit of model.

Table 6: Results of Diagnostic Test (DI Mo
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Test	Eq 1(VA)	Eq 2(PS)	Eq 3(GE)	Eq 4(RL)	Eq 5(RQ)	Eq 6(COC)
R-squared	0.496	0.576	0.514	0.698	0.523	0.482
Sargan Test	23.607(0.824)	21.679(0.907)	21.059(0.863)	22.730(0.759)	21.110(0.692)	23.164(0.925)
AR (1)Prob.	0.0212	0.0174	0.0162	0.017	0.020	0.021
AR (2)Prob.	0.108	0.73	0.145	0.145	0.119	0.219

 Table 7: Results of GMM Test (DI Model)

Table 7: Results of Givini Test (DI Model)						
Variables	Eq 1	Eq2	Eq3	Eq4	Eq5	Eq6
С	25.6103(17.311)	2.2687(0.199)	28.7136(7.223)	45.0318(9.0015)	21.5443(19.024)	23.0560(21.773)
GE	0.6310*(3.195)					
Pol Stab		0.7123*(2.204)				
RL			0.4940*(3.183)			
VA				1.4561*(2.951)		
RQ					0.7295*(2.792)	
COC						0.6038*(2.697)
GDP	0.4303*(7.583)	3.1115*(4.796)	0.4977*(6.641)	0.2895*(2.476)	0.4195*(5.861)	0.5633*(9.921)
Open	-0.9193*(-5.838)	-4.390*(-2.776)	-0.513*(-2.784)	-0.6686*(-2.479)	-0.7609*(-4.317)	-0.8550*(-5.193)
Tariff	-1.1102*(-2.404)	3.9043(1.138)	-0.747*(-2.203)	-0.4749*(-3.296)	-0.1071*(-0.453)	-0.4361*(-1.952)
Inf	-0.5375*(-3.025)	-1.935*(-2.259)	-1.374*(-2.189)	-0.7266*(-2.223)	-1.3238*(-3.250)	-0.6210*(-2.021)

Note: t values are in parenthesis where \* shows the significance at 5 and 1 % level of significance.

GMM results show that each institutional aspect i.e. government effectiveness, political stability, rule of law, voice and accountability, regulatory quality, control of corruption has positive association with domestic investment. Effective government helps to provide healthy induced environment for domestic investment. Literature provides evidence of significant positive relation of government effectiveness and domestic investment [Patrick and Herve, 2019; Amoros, 2009] Political stability increases the domestic invest by raising the confidence of private investors on government policies (Zouhaier, 2012). Regarding rule of law our findings support empirical literature, which is positively associated with domestic investment. Knack and Keefer (1995) and Goldsmith (1995) infer that rule of law ensuring the property rights exert greater impact on investment. Voice and accountability is positively and significantly associated with domestic investment. Regulatory quality plays vital role in providing suitable

environment for private sector to invest. Our findings show positive association between regulatory quality and private domestic investment. Regarding corruption our findings also support the previous findings i.e. 1% increase in control of corruption increases the domestic investment by 0.603818%. Governance and well developed socioeconomic system play significant role in attracting domestic investment [Ntouko, 2012; Akanbi, 2010]. Khan, and Khan, (2007) explicate that institutional quality, governance, entrepreneurial efficiency etc. are the favourable precondition for investment. Ntouko, (2012) and Feddereke and Luiz, (2008) deduce that political stability is related to development of property rights which has significant effect on investment.

As far as other variables are concerned GDP (market size) exert positive impact on domestic investment. A 1% increase in GDP raises the domestic investment by 0.563302%. However, trade openness, tariff and inflation rate are inversely related to domestic investment.

Table 8: Results of Diagi	nostic Test (Grow	th Model)
Diagnostic Test	Eq1	Eq2
R squared	0.674	0.523
Sargan Test	25.036(0.915)	21.110(0.692)
AR (1) Prob.	0.0298	0.0162
AR (2) Prob	0.3016	0.3528
1 . 1 . 1 . 1	CD 1.1	1

Table 8: Results of Diagnostic Test (Growt	h Model)	
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Findings show that there is no auto correlation. Values of R-squared show goodness of fit of model. Table 9: Result of GMM (Growth Model)

Table 9: Result of GIVINI (Growth Widdel)						
Variables	Interaction of Institutions and FDI		Interaction of Institutions and FDI Interaction of Institutions and		stitutions and DI	
	Coefficient	T-stat	Co-efficient	T-stats		
С	-4.606	-3.63	-5.173	-4.33		
DI	0.299	6.59*	0.016	3.89*		
Open	0.081	3.56*	0.074	3.76*		
Sch	0.466	2.28*	0.084	2.48*		
Mob	0.083	2.71*	0.052	1.86**		
FDI	0.049	1.75**	0.044	1.84**		
FDI*Inst	0.327	2.31*				
DI*Inst			0.330	7.37*		

Note: t values are in parenthesis where \* shows the significance at 5 and 1 % level of significance while \*\* shows the significance at 10 % level of significance.

In the first specification domestic investment has explicit and noteworthy impact on the outcome variable. Trade openness has a definite and significant effect on economic growth. Trade openness effects the economic growth through externality by creating employment opportunities, expanding the market size, better resource allocation and technological spillover etc. (Greenaway et al., 2002). Human capital appears as a significant contributing factor of growth, which is significant and positively related to growth. Human capital accumulation raises the output of both labor and asset market and eventually stimulates output [Islam, 1995; Freire-Seren, 1999; Bosworth and Collins, 2003; Chang et al., 2009]. Mob, as a proxy of infrastructure development, exert positive effect on economic growth. Our findings are relevant to economic theory which exerts that in short run gains in GDP can only be achieved when investment focused on core infrastructure i.e. roads, bridges and railways (Jeffrey, 2018). FDI is another important factor which has a great deal of impact on economic growth. FDI leads to enhance economic outcome through better human capital and managerial skills and technology (Zhang, 2007). Our findings are consistent with previous findings as increase in FDI, leads to increase economic growth. Interaction term (Inst\*FDI) is used to explore the joint effect of institutional quality and FDI which is positively related to economic growth. Better institutional quality complements FDI inflows in the host country (Mody and Murshid, 2005).

In the second specification domestic investment shows positive affect on economic growth. Human capital, is highly significant contributing factor of economic growth, and commonly seems substantial in growth literature. Trade openness again positively contribute to economic growth. Mob, as a proxy of infrastructure development, exert positive effect on economic growth as in first equation. FDI is another important factor which has a great deal of impact on growth. Our findings are consistent with previous findings as increase in FDI increases the economic growth. Interaction term (Inst\*DI), the collaboration of institutions and domestic investment is used to examine the joint effect of institutional quality and domestic investment on economic growth. It has meaningful and contributing impact on economic growth. Our findings are consistent with previous literature (Bakari, 2017; Soetan, and Oke, 2018).

#### V. CONCLUSION AND POLICY IMPLICATIONS

The conclusion of the whole study depicts that how the thesis is able to justify its objectives. In this section firstly, we make conclusion of the entire work. Secondly, we discuss policy recommendations for the policy makers taking into consideration while making policies and reforms for the developing countries to overcome their problems in a better way. The central focus of the research is to explore the impact of institutions on foreign and domestic investment and then to analyze the combined effect of institutional quality and investment in fostering the economic growth. Selection of countries is based on the accessibility of statistics of the developing nations from the list provided by the World Bank. The sample period is spanning over 2000 to 2018. In the light of our first objective, we analyzed the impact of institutions on FDI, by taking six institutional indicators one by one. Government effectiveness, rule of law, regulatory quality and control of corruption have positive and significant impact on FDI. The findings show that trade openness positively contributes to FDI while tariff rate is negatively associated to FDI. Inflation rate has negative impact on FDI. Mobile (infrastructure development) is positively associated with FDI invasions in host country. In view of second objective we evaluate the impact of institutions on domestic investment. We regress equation with each institutional indicator where all the six indicators are significantly associated with domestic investment. GDP (market size) is directly related to domestic investment. Moreover, trade openness, tariff rate and inflation rate are inversely related to domestic investment. Last objective was to analyze the impact of interaction of institutions and FDI as well as domestic investment on economic growth. In first case, we regress equation by employing interactive term of institutions and FDI along with other variables. Here domestic investment, human capital, trade openness and Mob (infrastructure development) have significant impact on economic growth. We estimate dual impact of FDI on economic growth, independently and via the channel of institutions. The results reveal that FDI has little influence on economic growth but with the collaboration of better institutional quality, FDI exert affirmative and considerable effect on economic growth. In the second case, we regress equation by using interactive term of institutions and domestic investment by incorporating other variables too. Domestic investment, human capital, trade openness, infrastructure development and FDI have positive and substantial effect on economic growth. We again estimated dual impact of domestic investment on outcome variable, independently and via through the channel of institutions. The independent impact of domestic investment is positive and considerable on economic growth but our results infer greater influence of domestic investment on economic growth in the existence of better institutional quality.

Apart from the contribution, numerous policy implications can be strained from the verdict of the study. Influence of institutional indicators in appealing FDI invasions is significant, affirmative and vigorous. Empirical evidence proves the fact that FDI inflows are considerably lower in Asian countries like India and China than countries of Eastern Europe, due to limited local markets, enhanced international competition, lack of economic and trading reforms and political and economic instability. Policy makers should give priority to institutional reforms while devising strategies in order to invite FDI influxes in developing countries. As far as developing economies are concerned, they suffer from acute deficiency of capital formation and domestic investment. This study explores, institutions as a key determinant for enhancing domestic investment in a country. Thus, policy makers should concentrate on institutional aspects to be the contributing factor of business activities. Institutions foster the economic growth. Quality of institutions has primacy over everything else. It is the need of an hour, governments of developing countries should work on to make their institutional quality better as it is the only way to overcome their development disparities across countries.

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