

Question of Threshold in the Triptych Quality of Institutions, FDI and Economic Growth in Sub-saharan Africa: An Estimation Using the GMM Method in a Two-step System.

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Abstract

The objective of this study is to analyse the role of institutional quality in the relationship between FDI and economic growth in sub-Saharan Africa. To do this, we used annual data from 30 sub-Saharan African countries covering the period 2000-2020. Using the Generalized Moment Method (GMM), the results reveal that FDI has positive effect on growth in sub-Saharan African. This effect becomes more pronounced when host countries have good institutional qualities. Furthermore, in terms of control variables, domestic investment has a positive effect on economic growth. Trade openness and inflation have no significant effect on economic growth in sub-Saharan African.

Keywords: FDI, institutional quality, economic growth, GMM, sub-Saharan Africa.

1- Introduction

Globalization has led to greater openness of world economies to foreign trade and investment. Africa has recorded significant FDI inflows. Valued at 2.84 billion USD in 1990, they reached 59.37 billion USD in 2016, (CNUCED, 2018). The endogenous growth model, which suggests a spillover effect of FDI on domestic firms and a positive effect on productivity and growth (Helpman et Grossman, 1991; Barro et Sala-i-Martin, 1997), provides support the oretical to these policies. According to (Simionescu, 2016), these financial flows can play an important role in the economic development of these countries. Indeed, foreign direct investment is a major channel for the transfer of modern technology and innovation, thus promoting sustained economic to achieve levels of investment higher than the levels of domestic savings,(Ionescu, 2015).

The results of the metadata study of 1102 estimates by (Bruno and Campos, 2013) find that about 44% of the research papers discover positive and significant impact of FDI on growth, 44% are insignificant, while 12% Studies report a negative and significant effect of FDI on the economic growth of the host country.

Furthermore, many recent studies have concluded that the FDI-growth relationship depends on other factors: economic stability and liberal markets (Bengoa et Sanchez-Robles, 2003), the technological gap between the host country and the of origin (Havranek et Irsova, 2011), human

capital; trade openness (Sakyi et al., 2015), institutions buy (Agbloyor et al., 2016) and the financial sector.

This paper agrees with the idea of absorption captivity and its importance in defining the FDI-growth relationship. However, it focuses on another essential link and slightly less explored in the literature, namely the role of institutional quality in defining the FDI-growth relationship. (James and Yanikkaya, 2006) found that countries with better institutions have better economic performance. In a similar study, (Stephen and Keefer; 1995) concluded that property rights are strongly associated with investment and economic growth. Different institutional quality variables such as corruption, rule of law, political rights and civil liberties are regularly found to have a significant impact on economic growth.

The analysis of the relationship between FDI, the quality of institutions and economic growth in sub-Saharan Africa seems ambiguous. In view of this ambiguity, questions emerge as to the capacity of institutions to regulate the link between FDI and economic growth. These questions can be broken down into specific questions as follows:

- To what extent does FDI contribute to improving economic growth in sub-Saharan Africa?
- Does institutional quality improve the effect of FDI on economic growth?
- Is there a minimum threshold of institutional quality beyond which FDI improves economic growth in sub-Saharan Africa?

The central question that we will try to answer is the following: to what extent does the quality of institutions interact in the FDI-economic growth relationship in sub-Saharan Africa?

Thus, the objective of this study is to analyze the role of institutional quality in the relationship between FDI and economic growth in sub-Saharan Africa.

This paper is of interest both at the theoretical and empirical level. At the theoretical level, it will make it possible to disprove or confirm the different theories that address the relationship between FDI, quality of institutions and economic growth. At the empirical level, several studies buy (Andesta., 2022; Nondo, 2016; Hayat, 2019; Smolo, 2021) have shown that institutional quality plays a central role in the relationship between FDI and economic growth.

However, to our knowledge, no such study has been conducted in sub-Saharan Africa. In addition, few studies have focused on determining the threshold of institutional quality beyond which it favors the effect of FDI on economic growth. This paper then attempts to fill this void in the case of sub-Saharan African countries.

We use the two-step system GMM estimator to verify your assumptions. We justify this choice by the fact that we have a micro panel and that our estimation technique has numerous advantages. The dynamic panel GMM makes it possible to correct the existing potential endogeneity of the explanatory variables. In this way, this method makes it possible to overcome the limit of traditional instrumental variable techniques such as double least squares (2sls) and triple least squares (3sls). In addition, the two-step system GMM that we use is more efficient than its single-step counterpart (Xiao et al., 2007).

The rest of the paper will be organized as follows. Section 2 presents the methodology adopted, while section 3 will present the empirical results. Section 4 will conclude the paper.

2. Methodological framework

This section first presents the econometric model and the estimation technique. Then, it presents the results of the estimations and their interpretations.

2.1. Specification of study design

The study is based on that of (Hayat,2019) which focused on the role of the quality of institutions in the relationship between FDI and economic growth in 104 countries. To do this, he used a multiplicative interaction model specified from the generalized method of moments (GMM).

The equation looks like this:

$$Y_{it} = \alpha Y_{it-1} + \gamma FDI_{it} + \theta Inst_{it} + \varphi(FDI_{it} * Inst_{it}) + X_{it} \beta + \eta_{it} \quad (1)$$

Where $\eta_{it} = \mu_i + \delta_{it}$; Y_{it} is the annual growth rate of real GDP per capita; Y_{it-1} is the lagged value of the annual growth rate of real GDP per capita, FDI is the ratio of net foreign direct investment inflows to GDP, $Inst_{it}$ is the institutional quality and $FDI_{it} * Inst_{it}$ is the interaction term between FDI inflow and institutional quality. This equation quantifies the impact of institutional quality, FDI, lagged economic growth value and control variables on economic growth.

The dynamic nature of the equation with the lagged value of the dependent variable included as an explanation variable allows us to capture any relevant variables excluded from the model.

X represents the variables of controls of determinants of economic growth, including the rate of population growth, the real initial GDP per capita, the inflation rate (IPC), the ratio of interior investments to GDP, the public spending ratio to GDP, the average number of years of secondary education, the ratio of trade volume to GDP and the ratio of money supply (M2) to GDP.

α, γ and θ are the respective effects of the lagged variable of economic growth, FDI and institutions on economic growth. β is the vector of the respective coefficients of the control variables. φ is the effect of the interaction between FDI and the quality of institutions on economic growth. η_{it} is the error term.

In accordance with (Hayat,2019), we will use the multiplicative interaction model. We will use institutional variables such as: Corruption control, Voice and responsibilities, regulatory qualities, rules and laws, political stability, government effectiveness.

Since economic growth is not only explained by FDI and the quality of institutions, based on the literature, we selected other variables that also explain economic growth. These include inflation, trade openness, investment. Thus the study model takes the following functional form after rearrangement:

$$PIB = f (IDE, INST, INFL, TAUXOUVC) \quad (2)$$

In econometric form, the regression model is as follows:

$$PIB_{it} = \beta_0 + \beta_1 IDE_{it} + \beta_2 INST_{it} + \beta_3 INV_{it} + \beta_4 INFL_{it} + \beta_5 TAUXOUVC_{it} + \varepsilon_{it} \quad (3)$$

β_0 is a constant.

$\beta_1, \beta_2, \beta_3, \beta_4,$ and β_5 represent the respective coefficients of the explanatory variables.

ε_{it} is the error term;

i is the index relating to the different countries;

t is the temporal index (numbers of years).

In the economic literature, it is generally accepted that the relationship between FDI and economic growth is far from linear. It is in this sense that some authors claim that the link between FDI and economic growth may depend on a level of institutional quality. Taking into account the quality of institutions interacting with FDI therefore allows us to obtain the following non-linear specification, deduced from the previous model:

$$PIB_{it} = \beta_0 + \beta_1 IDE_{it} + \beta_2 INST_{it} + \beta_3 (IDE_{it} * INST_{it}) + \beta_4 INV_{it} + \beta_5 INFL_{it} + \beta_6 TAUXOUVC_{it} + \varepsilon_{it} \quad (4)$$

Since we have six (6) institutional variables, we rewrite the equation in disaggregated form. We obtain six (6) equations which are as follows:

Model 1:

$$PIB_{it} = \beta_0 + \beta_1 IDE_{it} + \beta_2 Eff_Gov_{it} + \beta_3 (IDE_{it} * Eff_Gov_{it}) + \beta_4 INV_{it} + \beta_5 INFL_{it} + \beta_6 TAUXOUVC_{it} + \varepsilon_{it} \quad (5)$$

Model 2:

$$PIB_{it} = \beta_0 + \beta_1 IDE_{it} + \beta_2 Quati_Regn + \beta_3 (IDE_{it} * Quati_Regn_{it}) + \beta_4 INV_{it} + \beta_5 INFL_{it} + \beta_6 TAUXOUVC_{it} + \varepsilon_{it} \quad (6)$$

Model 3:

$$PIB_{it} = \beta_0 + \beta_1 IDE_{it} + \beta_2 Voix_Resp + \beta_3 (IDE_{it} * Voix_Resp_{it}) + \beta_4 INV_{it} + \beta_5 INFL_{it} + \beta_6 TAUXOUVC_{it} + \varepsilon_{it} \quad (7)$$

Model 4:

$$PIB_{it} = \beta_0 + \beta_1 IDE_{it} + \beta_2 Cont_Corrup + \beta_3 (IDE_{it} * Cont_Corrup_{it}) + \beta_4 INV_{it} + \beta_5 INFL_{it} + \beta_6 TAUXOUVC_{it} + \varepsilon_{it} \quad (8)$$

Model 5:

$$PIB_{it} = \beta_0 + \beta_1 IDE_{it} + \beta_2 Regle_Loi + \beta_3 (IDE_{it} * Regle_Loi_{it}) + \beta_4 INV_{it} + \beta_5 INFL_{it} + \beta_6 TAUXOUVC_{it} + \varepsilon_{it} \quad (9)$$

Model 6 :

$$PIB_{it} = \beta_0 + \beta_1 IDE_{it} + \beta_2 Stab_Po + \beta_3 (IDE_{it} * Stab_Po_{it}) + \beta_4 INV_{it} + \beta_5 INFL_{it} + \beta_6 TAUXOUVC_{it} + \varepsilon_{it} \quad (10)$$

Or

β_3 is the marginal effect of the interaction between FDI and the quality of institutions on economic growth.

IDE * INST is the interactive term between FDI and the quality of institutions which measures the effect of FDI on economic growth depending on the level of quality of institutions. Clear, $(IDE_{it} \times Eff_Gov_{it})$, $(IDE_{it} \times Quati_Regn_{it})$, $(IDE_{it} \times Voix_Resp_{it})$, $(IDE_{it} \times Cont_Corrup_{it})$, $(IDE_{it} \times Regle_Loi_{it})$, $(IDE_{it} \times Stab_Po_{it})$, are the interactive terms between economic growth and each institutional variable.

2.2. Empirical analysis

This subsection describes the variables used for the econometric review of the article. In addition to the FDI variables, the quality of institutions and economic growth, other variables will be retained from the literature.

2.2.1. Data and sources

The dependent variable is measured by Real Gross Domestic Product (GDP). Real Gross Domestic Product (GDP) is the wealth created in a country over a given period. It is obtained by summing the added values. According to the production perspective, we have:

$$PIB = \sum Va \tag{11}$$

Real GDP per capita is often used as an indicator of improvement in individual wealth, equated with standard of living. It therefore represents the indicator of the performance of the economy.

- Foreign direct investment (FDI)

Foreign direct investment is the international movement of capital made in order to create, develop or maintain a subsidiary abroad or to exercise control over the management of a foreign company (OECD, 2002). FDI consists of equity, reinvestment of profits and other short and long term capital.

In mathematical terms:

$$IDE = CP + RB + AC \tag{12}$$

Where, CP denotes equity; RB is the reinvestment of profits and AC represents other short and long term capital.

A large number of FDI inflows into a country generates economic growth (Kurtishi-Kastrati, 2013). Moreover, economic theory often assumes that the influx of foreign capital affects the economic growth of the host country. A positive sign is expected for the coefficient of the IDE variable.

- The quality of institutions (INST)

There are several indicators of institutional qualities. These include: Control of Corruption, Voice and Responsibilities, Regulatory Qualities, Rules and Laws, Political Stability, Government Effectiveness.

- According to theoretical predictions, a reliable institutional framework is The indicator control of corruption refers to the use of power or one's position to obtain personal advantages and or the possibility of illegal payments from officials.
- The voice and accountability indicator shows participation in elections, freedom of expression as well as freedom of media and committees.
- The regulatory quality indicator shows the government's capacity to codify policies and discipline that enable the expansion and development of the private sector.
- The rules and laws indicator shows the confidence of civil servants in the rules and especially in the execution of contracts, property rights, policies, courts and also the possibility of crime and violence.
- The political stability indicator is the possibility for the government to repress using illegal or violent tools.
- The government effectiveness indicator index showing the quality of public and social services and its level of independence from political pressures, codifica

According to theoretical predictions, a reliable institutional framework is essential to stimulate economic growth. Institutions can create a framework for economic activities across the country by forming a motivational structure and promoting productive activities in the community buy(Siong et Muzafar, 2009). Therefore, they can provide a better bed for investment, growth and economic development buy (Butkiewicz et Yanikkaya, 2006). Therefore, effective institutions are crucial for economic growth, as they promote economic factors and affect technological, humanistic and physical investments, as well as the organization of production. Therefore, we expect a positive sign of the coefficient of the institutional quality variable.

- The commercial opening rate (TAUXOUVC)

The trade openness rate is the degree of openness of the country's economy to international trade. It measures the share of trade in a country's GDP and is obtained by the ratio of the sum of exports and imports divided by 2 times the GDP.

The mathematical formula is written:

$$TAUXOUVC = \frac{X + M}{2PIB} \times 100 \quad (13)$$

Furthermore, countries open to trade have the opportunity to export their raw materials, natural resources, other goods and services buy (Agbloyor et al. 2016), particularly developing countries. This is particularly the case for ECOWAS member countries. Also, greater commercial openness offers new investment opportunities and strengthens the link between national and international markets buy (Tintin, 2013). As a result, trade openness promotes economic growth. A positive sign is then expected for the coefficient of this variable.

- The inflation rate (INFL)

It is measured by the GDP deflator. The GDP deflator is determined from the following formula:

$$INFL = \frac{PIB_{nominal}}{PIB_{réel}} \times 100 \quad (14)$$

In addition, economic theory shows that inflation has a negative influence on growth, in the sense that an increase in prices leads to a reduction in demand and therefore supply. However, a low inflation rate is desirable because it represents positive growth and vice versa. The expected sign is negative.

- Inward Investment (INV)

Investment is the acquisition of durable goods and services in order to use them as means of production. Domestic investment is measured by gross fixed capital formation (GFCF). GFCF is the sum of investments, essentially material, made over at least one year.

According to Keynes, domestic investment promotes economic growth to the extent that it makes it possible to develop infrastructure, strengthen the productive capacities of a country and create jobs (UNCTAD, 2013), A positive sign is expected for the coefficient of the variable INV.

The data used in this study are annual and come mainly from the World Bank (WDI, 2022) and (WGI, 2022). The analysis covers a sample of 30 countries in sub-Saharan Africa. Due to the unavailability of data, the study period goes from 2000 to 2020, i.e. 21 years of observations.

The table below summarizes the variables used in this study, their sources as well as the expected signs.

Table 1: Variables, data sources and expected signs

Variables	Variable descriptions	Data sources	Expected signs
Explained variable: GDP	Economic Growth Rate	World Bank (2022)	
Explanatory variables			
<i>IDE</i>	Foreign direct investment	World Bank (2022)	Positive(+)
INST	Quality of institutions	WGI (2022)	Positive (+)
INV	Gross fixed capital formation	World Bank (2022)	Positive (+)
TAUXOUVC	Degree of openness of the economy	World Bank (2022)	Positive (+)
INFL	Inflation rate	World Bank (2022)	Negative (-)

Source: Author, from literature

After the specification of the model, we will now discuss the choice of the model as well as the estimation technique.

2.2.2- Specification tests on panel data

This will involve presenting the various econometric tests preceding the estimation of the model. The results of the econometric tests of this study are essentially composed of homogeneity tests, independence test (preliminary tests), unit root test.

Preliminary tests

• Fisher’s homogeneity test and the Hausman test

The table below presents the results of the homogeneity test.

Table 2: Result of Fisher’s homogeneity test

Modèle 1	
F(5, 624)	4,36***
Prob > F	0,0007

Source: Author, based on data from the World Bank (2022), WGI (2022).

Note: (***) represents the significance threshold at the 1% level.

The p-value is below the threshold of 5%. We then reject the null hypothesis and conclude that the panel is heterogeneous. There is then the presence of a specific effect. The Hausman test is then performed to determine the nature of the specific effect.

• Haussmann test

Table 3: Result of the Hausman test

chi2(5)	1,36
Prob>chi2	0,928

Source: Author, based on data from the World Bank (2022), WGI (2022).

The Hausman test reveals that the p-value is greater than the threshold of 5%. There is therefore the presence of random effects

• Interindividual dependence test

The results of the Pesaran [27] interindividual dependence test are recorded in the table below. The use of this test is justified by the fact that our panel has a low temporal dimension (T=21) and a large individual dimension (N=30).

Furthermore, the results of this test confirm the presence of interindividual dependence. Second generation tests will therefore be implemented to test the presence or absence of a unit root.

Table 4: Pesaran interindividual dependence test (2004)

Variable	CD-test	P_value	Corr	abs(corr)
ols_res	17.33***	0.000	0.181	0.254

Source: Author, based on data from the (World Bank, 2022), (WGI, 2022).

Note: (***) represents significance at the 1% level.

The p-value of the (Pesaran, 2004)test is below the 5% threshold, so we reject the null hypothesis of independence.

The results of this test then confirm the presence of an interindividual dependence. Therefore, the second generation tests will be implemented to test the presence or not of a unit root.

• Unit root test

The first step in the estimation process is to examine the properties of the different series to find out whether the variables are stationary and in what order they are integrated. Thus, after having highlighted the presence of an interindividual dependence, we turn to the determination of the degree of integration of our series using the second generation unit root tests of (Pesaran, 2004) then (Pesaran, 2007).

The results of the unit root tests of (Pesaran, 2004) then (Pesaran, 2007) are presented in the table below.

Table 5: (Pesaran, 2004)and (Pesaran, 2007) unit root tests

VARIABLES	Pesaran (2004)		Pesaran (2007)		Decision and order of integration
	Level	Difference (1)	Level	Difference (1)	
PIB	-10,910*** (0,000)	-	-10,910*** (0,000)	-	Stationary I (0)
IDE	-6,580*** (0,000)	-	-6,580*** (0,000)	-	Stationary I (0)
Eff_Gov	-0,749*** (0,000)	-	-0,749*** (0,000)	-	Stationary I (0)
Stab_Po	-2,670*** (0,000)	-	-2,670*** (0,000)	-	Stationary I (0)
Quati_Regn	0,135*** (0,000)	-	0,135 *** (0,000)	-	Stationary I (0)
Règle_Loi	-0,836*** (0,000)	-	-0,836*** (0,000)	-	Stationary I (0)
Voix_Resp	0,569*** (0,000)	-	0,569 *** (0,000)	-	Stationary I (0)
Cont_Corrup	1,085*** (0,000)	-	1,085 *** (0,000)	-	Stationary I (0)
TAUXOUVC	-11,227 *** (0,000)	-	-11,227 *** (0,000)	-	Stationary I (0)
INV	-1,180 *** (0,000)	-	-1,180 *** (0,000)	-	Stationary I (0)
INFL	-10,714 *** (0,000)	-	-10,714 *** (0,000)	-	Stationary I (0)

Source: Author, based on data from the (World Bank, 2022), (WGI, 2022).

Note: (***) represent the significance levels respectively at the 1% threshold.

The results of the stationarity tests allow us to reject the null hypothesis of the presence of unit root for all variables. The variables are then all stationary in level.

The results of the preliminary tests thus presented, we now move on to the presentation and interpretation of the results obtained after regressions.

3- Presentation of results and economic interpretations

This section will be devoted to the presentation of the estimation results followed by the economic interpretation of the regression results. It will be done in two stages. This will firstly involve presenting the results of the estimation and secondly, making the economic interpretation and verifying the hypotheses.

3.1- Presentation of the results of the estimation of the GMM model

The results of the estimations, from the GMM in a two-step system, are recorded in table 6 below:

Table 6: Results of GMM model estimations

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<i>PIB</i>	0,215*** (0,000)	0,201*** (0,000)	0,205*** (0,000)	0,207*** (0,000)	0,214*** (0,000)	0,296*** (0,000)
<i>IDE</i>	0,196* (0,058)	0,244*** (0,003)	0,132** (0,042)	0,227*** (0,014)	0,210** (0,037)	-0,018 (0,816)
<i>Eff_Gov</i>	-0,789* (0,081)					
<i>Quati_Regn</i>		-1,075** (0,010)				
<i>Voix_Resp</i>			-0,583 (0,124)			
<i>Cont_Corrup</i>				-0,830** (0,046)		
<i>Regle_Loi</i>					-1,005*** (0,022)	
<i>Stab_Po</i>						0,194 (0,630)
<i>IDEEff_Gov</i>	0,233** (0,018)					
<i>IDEQuati_Regn</i>		0,301*** (0,000)				
<i>IDEVoix_Resp</i>			0,218*** (0,003)			
<i>IDECont_Corrup</i>				0,268*** (0,002)		
<i>IDERegle_Loi</i>					0,259*** (0,009)	
<i>IDEStab_Po</i>						-0,013 (0,902)

<i>INF</i>	-0,008*** (0,000)	-0,009*** (0,000)	-0,008*** (0,000)	-0,008*** (0,000)	-0,008*** (0,000)	-0,015*** (0,035)
<i>Ouverturcom</i>	0,048 (0,816)	0,045 (0,824)	0,061 (0,766)	0,070 (0,732)	0,064 (0,756)	0,314 (0,329)
<i>Investiss</i>	0,683*** (0,002)	0,635*** (0,003)	0,633*** (0,004)	0,647*** (0,003)	0,676*** (0,002)	0,576*** (0,015)
<i>Cons</i>	2,589*** (0,000)	2,462*** (0,000)	2,908*** (0,000)	2,546*** (0,000)	2,488*** (0,000)	3,073*** (0,000)
Institutional quality thresholds	-0,841	-0,651	-0,899	-0,731	-0,757	-

Source: Author, based on data from World Bank (2022), WGI (2022).

Note: (***), (**) and (*) respectively represent significance at the 1%, 5% and 10% level.

The p-values are in ().

The analysis reveals that FDI has a positive and statistically significant effect on growth at the threshold of 10%, 5%, and 1%. As for the institutional variables, the effectiveness of government, the quality of regulation, control of corruption, rule of law and Voice and Accountability have a negative and statistically significant effect on growth at the threshold of 10%, 5%, and 1%. On the other hand, political stability has a positive, but not significant, effect on growth. The interactions between FDI and institutional variables except political stability, have a positive and statistically significant effect on economic growth at the respective thresholds of 5% and 1%.

Moreover, at the level of the control variables, domestic investment and trade openness have a positive and statistically significant effect on economic growth at the 1% level. As for inflation, it has no significant effect on economic growth.

3.2- Economic interpretation of the results

This will involve economically interpreting the variables that significantly explain economic growth.

- The effect of foreign direct investment on economic growth

Foreign direct investments positively influence economic growth in sub-Saharan Africa. Indeed, according to the neoclassical perspective, economic growth requires foreign investment capital buy (Firebaugh, 1996). Thus, if FDI can increase domestic capital accumulation, it could also increase growth potential. Clearly, this growth-generating effect results in the adoption of new technologies and foreign know-how in the production process thanks to technological spin-offs, thus stimulating the economies of host countries. Thus, for a long time, foreign capital was seen as a means of stimulating economic growth. They are seen as a tool to circumvent certain obstacles to development such as insufficient financial, technological and skills resources. In addition to overcoming these shortcomings, FDI helps create new business opportunities, which improves business development (OECD2002).

These results are consistent with those of (Gui-Dybi, 2016); (Tafirenyika, 2017), who argue that foreign direct investment generates economic growth.

Although FDI stimulates economic growth in sub-Saharan Africa, its effect is amplified when the recipient countries have good institutional quality. The effect of FDI on economic growth becomes more pronounced when Sub-Saharan African countries reach an institutional quality level of -0.84 (for government effectiveness), -0.65 (for regulatory quality), -0.89 (for voice and accountability), -0.73 (for corruption control), and -0.76 (for rule and law). Institutional quality therefore plays a significant role in modifying the link between FDI and growth. This could be explained by the fact that stronger institutions, such as good and effective governance, the rule of law and the absence of corruption, can accelerate the process of diffusion of technologies to national companies and institutions. weaker ones, such as the presence of corruption, absence of rule of law and property rights, could prevent domestic firms from benefiting from knowledge diffusion by FDI firms buy (Hayat, 2019). This result corroborates those of (Hayat, 2019).

- The effect of domestic investment on economic growth

Domestic investment has a positive and significant effect on economic growth. These results assume that domestic investment promotes economic growth in sub-Saharan Africa. Indeed, an increase in investment expenditure will have the effect of increasing production. This level of production will generate new jobs, thereby promoting economic growth. According to Keynesian theory, investment plays a central role in economic growth, because it has a multiplier effect on national production. Indeed, increased investment initially increases employment. Then, this level of employment generated will lead to an increase in demand and therefore improved economic growth. This result confirms the results of (Adams,2009) and (Fauzel, 2016).

- The effect of inflation on economic growth

Inflation has a negative influence on economic growth in sub-Saharan Africa. This implies that inflation leads, all things being equal, to a decline in economic growth and therefore constitutes an obstacle to economic development. Indeed, inflation leads to a reduction in household consumption through a reduction in purchasing power. This reduction in consumption leads to a drop in production, which also leads to a drop in employment. Furthermore, inflation, which reflects a high nominal rate, will create uncertainty among savers and lead them to reduce their savings to the detriment of consumption. Savings thus reduced lead to a drop in investment and consequently a reduction in economic growth. Our results are consistent with those of (Gui-Dybi, 2016)).

4- Conclusion and recommendations

4.1- Conclusion

The main objective of this study was to analyze the role of institutional quality in the relationship between FDI and economic growth in sub-Saharan Africa. Given the unavailability of data in certain countries, the study focused on a sample of 30 countries, covering the period from 2000 to 2020. This study favored the use of sequential regression in order to determine the individual role economic and political institutions in the relationship between FDI and economic growth.

Using the two-stage GMM, the estimation results show that FDI has a positive and statistically significant effect on growth. Although FDI stimulates economic growth in sub-Saharan Africa,

its effect is amplified when the recipient countries have good institutional quality. The effect of FDI on economic growth becomes more pronounced when Sub-Saharan African countries reach an institutional quality level of -0.84 (for government effectiveness), -0.65 (for regulatory quality), -0.89 (for voice and accountability), -0.73 (for corruption control) and -0.76 (for rule and law). Institutional quality therefore plays a significant role in modifying the link between FDI and growth. Furthermore, in terms of control variables, domestic investment and trade openness have a positive and statistically significant effect on economic growth at the 1% threshold. As for inflation, it has no significant effect on economic growth.

4.2- Recommendations

If we consider these results, the major lesson that we can draw is that FDI alone is not enough to improve economic growth in Sub-Saharan Africa, they must be accompanied by better institutional quality. Therefore, we can draw several economic policy implications. Sub-Saharan African countries must work to further strengthen the institutional framework in order to guarantee inclusive growth, favorable to the well-being of the populations. More precisely, it is a question of fighting corruption in all sectors of activity, of improving the system for managing property rights, both in terms of their establishment and their respect. These States must also increase freedom of investment by facilitating business creation at the national level. At the political level, States would benefit from making their government more efficient, by fighting against administrative burden and bad governance. Also, we should guarantee political stability, by working for democratic governments, by fighting against coups and terrorism in the region. Countries must also commit to improving respect for the rule of law in order to combat inequality, insecurity and also poor governance. In addition to this, Sub-Saharan African states would benefit from integrating African values into their institutions and thinking more about their operationalization, in order to make them more effective. Furthermore, Sub-Saharan African states must pursue lax investment policies, with the aim of creating jobs and increasing physical capital. It is also necessary to improve inflation targeting policies in the area, in order to reduce these harmful effects on household purchasing power.

Regarding domestic investment, Sub-Saharan African countries need to invest more in order to stimulate economic growth. As for inflation, Sub-Saharan Africa must take measures to control inflation and also respect these measures in order to reduce its negative effects on economic growth.

Although this study analyzed the relationship between FDI, the quality of institutions and economic growth in sub-Saharan Africa, it does not take into account the role that differences in natural resource endowment can play in the link between FDI and growth. Future studies may be devoted to this line of research.

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