

Foreign Direct Investment in Anglophone and Francophone African Countries

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Abstract

Foreign Direct Investment plays a very significant role both in the economic and social development of a country. Its potential benefits to developing countries has increased in recent years. The main objective of this paper is to examine the determinants which can attract or deter Foreign Direct investment in Anglophone and Francophone African countries. We used Panel Data from 37 countries covering the period 2004-2012. Results from a Hausman test indicated that the Random effect model is appropriate in performing the estimation. The regression results show the strength to protect investors, the time required to start business, human resources, domestic credit to private sector have significant influence on FDI. We also employ interactive variables, allowing for interaction effect between time required to start a business and strength to protect investors. Further, interaction effect is allowed between electricity production and economic growth. The results indicate that the interactive variables have a great influence on FDI inflows to these countries. Electricity production is still a big challenge for most Anglophone and francophone countries. We suggest that African governments should direct their efforts towards production of power in order to maintain the long- run sustainability of FDI in Anglophone and Francophone African countries.

Keywords: Foreign Direct Investment (FDI), Panel data, Random effects, Anglophone and Francophone African Countries.

Introduction

FDI plays a significant role as a source of financing to a lot of developing countries (Moosa, 2002). FDI encourages opening up of markets and changing the market structure. FDI will normally cause the economy to shift into the hands of the private sector. Moreover, FDI is very crucial for economic growth to host countries as it provides both financial and technical support to increase stiff competition in developing countries' firms. This in turn makes the firms to conduct their economic activities very efficiently. The gloomy of African economic

situation affects the attractiveness of its countries to foreign investors. Despite this problem, every country in Africa either Anglophone or Francophone has many advantages to capture foreign direct investment, which mainly come from the United States, France, Germany, England and China. To mitigating the lack of confidence and cohesion in the African economic construction, it is really important for African countries to improve their business environment in order to benefit from FDI in flows advantages would require making business climate a key element in public policy. With globalization, borders between countries almost do not exist. Countries, regions interact with each other's in the form of trade (exports and imports). The wonderful aspect of development in global business is realized by foreign direct investment which gives new opportunity such as low cost of production, technology, and financing. Based on the previous studies and observations, many researchers think the capacity of African countries to attract foreign direct investment is largely determined by their natural resources and the size of their domestic market: for instance the case of Nigeria and Angola which succeed in oil despite their political instability; but now the country which receives the investment, must demonstrate its ability in the domain of new technologies, management of skills, political stability, capital and economic growth. There is not a lot of literature discussing about FDI in Francophone and Anglophone Africa countries. Although many studies on FDI in Africa were conducted by some scholars and researchers, for instance the study by (Avom and Ongo Nkoa, 2013) in the paper "why foreign direct investment goes towards central Africa", (Meier and Selhausen, 2009) paper titled on "geography institution as determinants of foreign direct investment", (Sandrina, 2009) on "the determinants of foreign direct investment, evidence of Africa" and Asiedu (2004) on "policy reform and foreign direct investment in Africa". However, there is the lack of literature to explain the FDI in Anglophone African Countries and Francophone African countries. Besides, most countries in Africa are still developing, but it can be observed that, Anglophone African countries tend to attract more FDI than Francophone countries. FDI is acquired as a lasting interest in our effective control over an enterprise operating outside of the economy of the investor. The volume of FDI that flows to Francophone countries is very low despite the efforts made by their governments to attract FDI to them through setting up policy frameworks and despite economic regional integration in Africa. Francophone African countries account for only 19 percent of the average GDP of Subs-Saharan Africa while the Anglophone African countries boast 47 percent (excluding South Africa). Moreover, African countries which use French language, predominantly located in West Africa grew at an average rate of 3.4 percent per year over the last ten years, while those predominantly Anglophone East Africa community (EAC) recorded a growth rate of 5.4 percent (Jeune Afrique news, 2012). It is also known that the FDI percentage continues to rise in the Anglophone African countries. This work will examine the determinants of foreign direct investment in Francophone and Anglophone countries even if there is a big gap between these two groups of countries. There have been a relatively few studies that have focused on FDI in Anglophone countries in Africa. This work can be considered as an extension while at the same time, amplifying a new approach to the research of previous scholars who did not include power to protect foreign investors and time required to start a business in their research due to absence of the official measurement of doing business which was established in 2004. Further incorporating the interactive variables effects by linking some variables of research such as: time required to start business and strength to protect investors ($Tsb*sp$) and also electricity production and growth ($Ep*gr$) to see how they interact with the rest of the variables and the domestic credit to private sector. Although African Francophone countries are a part of Africa countries, it can be observed that

these countries have some specific problem that a lot of researchers have yet to study. Most Francophone countries face energy and political stability challenges. Under normal circumstances African countries should not suffer from hydropower crisis considering that these countries have huge networks of rivers. The electricity problems in most of these countries is very clear to understand with delay in electrification being the major cause. Establishment of specialized industries according to the potential of each country or regions which can develop the area in question, reduce the local unemployment, contribute in economic growth, attract FDI, ensure physical and economic rebalancing, with all these being dependent on availability of power. Based on this problem, therefore, it is very vital to include those variables to see to what extent they can affect and attract FDI in these countries. Further in examining the credit to domestic private sector In Africa, banks granting loans to government, but no repayment of loan made on time as scheduled .It creates the bank's shortfall or liquidity problems at banks. The best orientation to grant the credit policy is to create an activity that generates income. If the banks cannot meet all the requests, the state must help them by creating such a public investment to consolidate private initiatives. Outside these aspects, many variables will be tested to understand the determinants of FDI attractiveness in Anglophone and francophone countries. Therefore, Availability of FDI contributes positively to economic growth in the host economies. This is mostly seen to be true where FDI bring in investible financial resources and fill the gap between desired investment and domestically mobilized savings, technology transfer, employee training, international production network, facilitate entry into export markets, promoting and strengthening export capabilities, and access to markets.

Overview of Foreign Direct investment in Anglophone and Francophone African Countries

FDI is an evolving notion. It is an element of the rapid globalization process that has made rapid increase in the recent years. Its definition differs with the nature of the source which appreciates it. For Tersen and Briscout (1996), the main difficulty that arises is that FDI is a complex phenomenon so that it is difficult to understand all aspects, but it is dangerous to try to isolate its definition. We retain two official definitions of FDI, those of the IMF and the OECD. The report by IMF (1993) and OECD(1996) state that "direct investment is a movement of capital from an economy to another economy in order to create a business or to acquire at least 10% of the share capital of an existing enterprises in order to influence the economic activity". FDI can play a significant role in achieving economic growth in developing countries such as Francophone African countries. FDI have increased in Africa by 4% representing a total of \$ 57 billion in 2013, which can be explained by international and regional investments to take merits of new opportunities as well as by investments in infrastructure, according to the investment Report in the world (UNCTAD, 2014). The report subtitled investing in the sustainable development goals: An Action Plan presents the latest data on investment in the world and is interested in realization of future durable development goals. It is expected that the economic and population growth in Africa remains strong and continues to attract investors looking for new business opportunities in the consumer goods sectors. Intraregional investment are up, the bulk of FDI outflows are destined for other African countries. The Distribution of FDI inflows among economies by range 2011 in Anglophone and Francophone African countries is divided in six parts which are: Above \$3.0 Billion, to \$2.0 to \$2.9 Billion, \$1.0 to \$1.9Billion, \$0.5to 0.9Billion, \$0.1 to 0.4billion and below \$0.1 Billion (Table1, 2).

Table 1:

Anglophone countries

Distribution of FDI inflows among economies by range 2011	
Range(inflows in USD)	Inflows (recipient countries)
Above\$3.0 Billion	Nigeria, South Africa, Ghana
\$2.0 Billion to \$2.9 Billion	Zambia
\$1.0 to \$1.9Billion	Sudan , Tanzania
\$0.5 to \$0.9Billion	Uganda , Botswana , Liberia , Mauritius
\$0.1 to \$0.4 Billion	Zimbabwe, Kenya, Ethiopia
Below \$0.1billion	Eritrea, Sierra Leone, Gambia, Malawi

Source: author's construction based on UNCTAD data, 2011

Table 2:

francophone countries

Distribution of FDI inflows among economies by range 2011	
Range(inflows in USD)	Inflows(recipient countries)
Above \$3.0 Billion	
\$2.0 Billion to \$2.9 Billion	Republic of Congo
\$1.0 to \$1.9Billion	Chad, Democratic Republic of the Congo, Guinea, Niger
\$0.5 to \$0.9Billion	Madagascar, Gabon
\$0.1 to \$0.4 Billion	Cameroon, ivory coast, Senegal , Mali , Seychelles , Benin, Central African Republic , Rwanda
Below \$0.1billion	Djibouti, Togo, Burkina Faso, Comoros, Burundi

Source: author's construction based on UNCTAD data, 2011

In Anglophone countries such as South Africa, Nigeria and Ghana, the amount of FDI that flows exceed 3 billion of USD which is totally opposite to francophone countries. South Africa is an open trading economy; it encourages foreign investment in both the public and private sectors. According to UNCTAD (2013), the potential attractiveness for foreign investment in South Africa is high compared to other countries of the world, but performance is relatively low in terms of FDI attraction. Since the global financial crisis of 2008-2009 which resulted in a decline of FDI. In Africa, the country is third after Nigeria and Mozambique in terms of FDI inflows. South Africa is also the 15th largest in the world's most attractive economies for transnational companies for the period 2013-15. In addition to structural handicaps in the areas of electricity supply and logistics, strikes affecting regular production are brakes to potential investors. The factors that attract FDI in the country are a transparent regulatory

system, a large population, access to raw materials and political stability. Nigeria was the second, with 76 billion USD (12% of the total of the continent), behind Egypt (75 billion USD) and South Africa (139 billion USD). This is mainly due to the fact that the country is the largest oil producer on the continent. Nigeria has signed many bilateral investment agreements with other countries such as: China, Algeria, Germany, Egypt, France, Finland, Italy, Bulgaria, Jamaica, Turkey, Spain South Africa North Korea, the Netherlands, Montenegro, Serbia, Romania, Taiwan, Sweden, Switzerland, Uganda, the United Kingdom and South Korea. Ghana was ranked 67th out of 189 countries in the 2014. Doing Business ranking of the World Bank, Ghana was ranked fourth destination of FDI in Sub-Saharan Africa. FDI flows to Ghana have been rising steadily in recent years. In Francophone country on republic of Congo have FDI inflows range between 2.0 to 2.9 billion. East Africa countries attracted more FDI inflows of \$3.9b in 2012, \$1.8billion increase from \$2.6billion in 2011. With a combined total inflow of \$3.4 billion, the two main energy rich countries of Uganda and Tanzania received 90% of the investment inflows into the region (EY's attractiveness survey Africa, 2014). Since discovery of gases in Mtwara-southern part of Tanzania recently, more investors are attracted to inject FDI inflows to Tanzania, more foreign investors inject their funds to this viable project. Tanzania also is third leading gold producer in Africa. However, Tanzania still has poor infrastructures lead to high cost location for business operations. For such case, Tanzania's Government invites private investors to finance in the infrastructure sector especially in the road construction in order to remedy the problem. This in turn, will pave a way for business location at lower cost. Uganda is another east Africa country in which the GDP has had a solid growth. Uganda has been ranked in the list of the top ten countries by FDI projects. Poor per capital consumption and higher population, has led Uganda to look for FDI injections through having discovery of oil fields and attractive agriculture land, which has caused investors to pay attention. Rwanda also made major changes to her economy by attracting more FDI through her efforts to improve its business environment. This attraction is mostly caused by establishment of fiber-optic cable covering the entire country during 2010. Other areas that have attracted more FDI inflow in Rwanda result from the improvement of infrastructure to develop her industries sector such as tourism, transport, education, and ICT and logistics.

Literature Review

The study by Moyo (2013) titled "on impact of FDI on economic growth in Zimbabwe" showed that Foreign Direct Investment had a very significant consequence on Zimbabwe's economic growth. Moreover, the study by Simeo (2004) also pointed out the effect of FDI on economic growth. Simeo (2004) argued that human capital is significant for positive of FDI on economic growth as advocated by others researchers and scholars. In addition to that, Simeo (2004) advocated that such effect on FDI resulting from a recipient country having well-skilled and qualified labour force to make use of FDI spillovers. Apart from Zambia being regarded as one of the few as least developing country low FDI is influenced by having low level of capital and as well as per capital income. The study by Roy and Van den Berg (2006) showed that benefits accruing from FDI are very important in the long-run and the positive effect of FDI on productivity may offset the sustainability of the United States current account deficit. According to Chenery and Strout (1966), they advocated that most countries were able to attain economic revolution by screaming for foreign aid and foreign direct investment in particular during 1966. But, since most of the developing counties such as francophone countries lack enough domestic saving and skills, this has led them to seek and attract FDI from rich and developed countries to Africa as whole to overcome poor growth and economic

development resulting from having low capital. This was advocated by previous scholars such as Hans (1948), and Nurske (1953) who also claimed that FDI is idly a solution to overcome the above stated problem. FDI is mostly dependent on infrastructure development as shown in the studies of Musila and Sigue (2006) and Dupasquier and Osakwe (2006). Some studies have also shown that there is a vital role played by infrastructure in paving a way to attract more FDI inflows to less developing countries (Mengistu and Adams (2007), Cotton and Ramachandran (2001), Zhang (2001), Kersan-Skabic and Orlic (2007), Botric and Skulfic (2006). However, studies by Nnadozie and Osili (2004) have different ideas with the above researchers and scholars on the role of infrastructure development. They argued that they found less robust facts on the role of infrastructure development on FDI. The study by Anyanwu and Erhijakpor (2004), argued that telecommunications of infrastructures, economic growth, and openness were also found to be significant in accelerating FDI inflows to Africa. In the study of Gholami, et al., (2006) used a sample of 23 developed and developing countries observed for the period 1976–99 based on ICT data availability showed that existing ICT infrastructures in developing countries also contributed to effect of FDI inflows to Africa. Moreover, higher levels of ICT investment could also result in attracting more FDI inflows to the developing countries. According to the study by Sekkat and Veganziones-Varoudakis (2007), they showed that availability of infrastructure, openness and sound economic and political conditions are very vital and significant for South Asia, Africa and the Middle East in attracting more FDI inflows. The study by Younus et al. (2014) showed that trade openness has been considered as one of the vital channel through which positive effects of FDI can be exploited by a host country. For this case, developing countries are required to make trade liberation in order to gain more FDI inflows. Moreover, Nunnenkamp and Spartz (2003) argued that trade openness can only be significant for growth of FDI inflows if foreign direct investors can use complex integration strategies that require unlimited imports of intermediate goods at all stages of the production process. Availability of good infrastructure such as reliable power supply, transport, water and communication are also some of the significant factors that determine the levels of FDI attracted or deterred in Anglophone and Francophone African countries (Barnet and Brooks, 2006).

Review of Recent Empirical Literature

Yapatake kossele et al., (2015) by using panel data from 25 African francophone countries over the period 2004 to 2012 found that: time required to start a business in the country, domestic credit, strength to protect investors and exports in goods and services have greater influence on the FDI. Dauti (2008) in his study argued that ICT infrastructure market was the major factor positively influencing FDI inflows while other factors such as GDP growth, GDP per capital, GDP level have showed significantly negative effect on FDI inflows. Daude and Stein (2007) found in their study that FDI have a big role in the institution variable. They argued that the better institutions have an overall a positive and economically significant effect on FDI inflows. They also signaled some factors such as excessive regulatory burden and policies, lack of government stability and commitment, etc., played a major role in discouraging attraction for FDI inflows. Other factors found to discourage FDI inflows in developing countries are corruption and low transparency as advocated by Voyer and Beamish (2004); Habib and Zurawisci (2002), therefore these variables were affecting FDI inflows. Moreover, in the study of Khamfula's (2007), the results showed that corruption was more risky in import substitution than an in export promotion. These results were the same as those revealed by Al-Sadig (2009) who uses panel data from 117 countries. However , their

results showed that after controlling of others factors such as quality of institutions, corruption is declining after negative effect fade away and sometime have a positive sign but statistically significant. Generally, the higher the corruption level, less FDI inflows will be attracted to the developing countries. As (Disdier and Myer ,2004) and Kinda (2010) stated that if there is political stability, lack of corruption and secure property rights, these factors will give a way to markets to properly function to attract more FDI inflows in the country. However, in the findings of Kim (2010) a different argument is put forward. He argued that if a country has a high degree of corruption in the government and low level of democracy this could result to high levels of FDI inflows while being lower for those countries with greater political rights. Yasin (2005) urged that ODA had a significant and positive effect on FDI when examined the relationship between ODA and FDI inflows. Moreover, the independent variables such as growth rate in GDP per capita and index for political freedom did not have a statistically significant effect on FDI inflows. Goodspeed, Martinez-Vazquez and Zhang (2006) advocated that the government may use the FDI inflows revenue either for government consumption expenditure or to provide and maintain infrastructure. According to study of Ratha (2007), FDI inflows also can be used to improve and stimulate the economic growth and development of the country resting in the expansion to access international capital market and FDI inflows as a whole. The study conducted by Reiter and Steensma (2010) argued that FDI inflows are more strongly related to improvement in human development when FDI policy limit overseas investors from entering the market for some economic sectors. Moreover, it also discriminates against overseas investors relative to domestic investors. The same results for improvement in human development has more strongly positive relationship when corruption is low. Dupasquir and Osakwe (2008) examined the performance, promotion and prospects for FDI in Africa. Their result showed that some factors such as weak low growth, weak-infrastructure political instability, macro-economic instability, poor governance were caused and reported for FDI failure Africa. The study by Anyanwu (2012) on 'analysis of factors that influence FDI inflows Africa found that market size, openness to trade rule, foreign aid, rule of law and past FDI inflows had a positive effect on FDI inflows while higher financial development as a negative effect on FDI inflows. Markusen (2001) found that knowledge capital is very important for FDI inflows as well as in the findings of Rodríguez and Pallas (2008) who stated that human capital is the most determinants of inward FDI inflows. From In the study of Nonnemberg and Cardoso de Mendonca (2004) argued that FDI inflows is correlated to the levels of schooling, the economy's degree of openness, risk and macro-economic variable such as inflation, risk and average rate of economic growth. The study by Alsan et al., (2006) showed that FDI inflows are strongly and positively influenced by population as a proxy for human capital development in low-and-middle income countries the same results were also revealed by the study of Miyamoto (2008) which showed there is a positive relationship between human capital on FDI. The study by Anyanwu (2012) showed that that the result had important key policy implication for countries. Both Market size and openness to trade. The study by Dupasquir and Osakwe (2006) and Kyereboah-Coleman and Agyire -Tettey (2008) showed that political stability is inversely related to FDI.

Research methodology and data description

The study will use panel Data analysis .The adopted model is inspired by the works of Avom and Ongo Nkoa (2013), Asiedu (2002), and Wang (2012). The model to be used in this study is shown as follows:

$$NI = \beta_0 + \beta_1 GR_{it} + \beta_2 RIE_{it} + \beta_3 PSAV_{it} + \beta_4 CC_{it} + \beta_5 RL_{it} + \beta_6 EP_{it} + \beta_7 EH_{it} + \beta_8 TSB_{it} + \beta_9 SP_{it} + \beta_{10} RC_{it} + \beta_{11} DC_{it} + \beta_{12} GDP_{it} + \beta_{13} I_{it} + \beta_{14} TSB * SP_{it} + \beta_{15} EP * GR_{it} + \varepsilon_{it}$$

With $\varepsilon_{it} = U_i + V_t + n_{it}$.

Where:

T= 20042012 represents the time period

NI= represents FDI inflows of the country in terms of billions USD

GR = growth rate for the country

GDP= GDP in terms of billions USD

I = inflation rate based on the annual CPI,

RIE = ratio of total trade import-export in relation to the GDP

RL= ratio of the length of the country's total road network includes all roads in the country: motorways, highways, main or national roads, secondary or regional roads, and other urban and rural roads.

EH= human resources in the tertiary education defined by the enrolment per 100, 000 in habitants: tertiary education both sex in the country

DC= financial development defined domestic credit to the private sector in terms of USD

EP= energy defined by the total electricity production in the host country, different sources.

CC= control of corruption estimate and the political stability and absence of violence Terrorism (PSAV) from World Bank data rating from -2.5 to 2.5

RC= return of capital defined by $\ln(1/GDP)$ per capita

TRSB and SPI= Time required to started business and strength of protecting investors are from doing business website.

We based our study on published articles in economic journals and data collection from different sources such as: World Bank, International Monetary Fund (IMF), United Nations conference on Trade and Development (UNCTAD), the Observatory of Economic Complexity (OEC), The United Nations Educational, Scientific and Cultural Organization (UNESCO), Doing Business website. Two new variables: the strength to protect investor in the country (SP), the time required to start business (TSB) and two interactive variables TSB*SP and EP*GR were introduced in the model to outline the impact of these variables in Anglophone and francophone countries. We use 11 empirical determinants of FDI such as: growth rate of country (GR), the gross domestic product (GDP), the ratio of total import-export (RIE), the ratio of length of the country's total road network includes all roads in the country(RL), the human resources in the tertiary education(EH), the financial development defined by the domestic credit private sectors(DC), the energy defined by the total electricity production in the host country(EP), the control of corruption (CC) and the political stability and absence of violence and terrorism (PSAV), the return of the capital (RC). Interactive variables TSB*SP and EP*GR enable us to outline the impact of this two variables in Anglophone and Francophone countries. Secondary data will be collected where data will be taken from different sources. It is retrospective analysis from 2004-2012, based on data availability. All the explanatory variables as specified in the econometric functions are expected to be significant elements in explanation of factors of FDI attraction. The target population for this study will be conducted in Anglophone countries : Zimbabwe, Zambia, Uganda, Tanzania, Sudan, South Africa, Sierra Leone, Nigeria, Mauritius, Malawi, Liberia, Kenya, Ghana, Gambia, Ethiopia, Eritrea, Botswana and francophone countries: Togo, Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Comoros, Democratic of Congo, Djibouti, Gabon, Guinea, Madagascar, Niger, Republic of Congo, Rwanda, Senegal, Seychelles, ivory coast , Mali. Besides the area of the study being bound to the FDI in Anglophone and Francophone African countries, there are

some other limitations. First, because of the lack of data and the short time period of the study it may not possible to generalize, secondly only selected variables were studied while there can be a lot of others factors which can affect FDI in Anglophone and Francophone African countries. These are such as relation between those countries with their colonizing countries and also many treaties they have signed before their independence. Third the Lack of technology has also the greater influence on FDI, whereas this study is not considering this factor. For this study we have 15 independents variables, NI is the dependent variable determined by the value of FDI inflows in the host country in terms of billions USD.

Findings and discussion

Table 3:

Panel data estimates: Random effects (37 countries x 9 years (2004-2012), Dependent variable Net inflows = (NI in terms of USD)

Variable	Regression 1	Regression 2	Regression 3	Regression 4
Constant	-2.17 (0.03)**	1.62 (0.10)*	-2.32 (0.020)**	-3.17 (0.002)***
GR	1.23 (0.21)	0.58 (0.56)	1.00 (0.319)	1.30 (0.193)
RIE	0.70 (0.481)	0.58 (0.56)	0.80 (0.426)	0.62 (0.533)
PSAV	-0.59 (0.55)	-0.40 (0.69)	-0.64 (0.525)	-0.41 (0.682)
CC	-0.41 (0.680)	0.28 (0.77)	-0.69 (0.489)	0.16 (0.872)
RL	-0.46 (0.64)	-0.69 (0.48)	-0.34 (0.732)	-0.65 (0.513)
EP	0.65 (0.51)	0.52 (0.60)	-0.60 (0.550)	-1.34 (0.179)
EH	8.76 (0.000)***	8.93 (0.000)***	10.19 (0.000)***	10.76 (0.000)***
TSB	1.32 (0.188)	2.95 (0.003)***	1.65 (0.099)***	3.90 (0.000)***
SP	1.78 (0.07)**	2.86 (0.004)***	1.89 (0.059)**	3.45 (0.001)***
RC	-0.88 (0.37)	-0.64 (0.521)	-0.85 (0.393)	-0.49 (0.622)
GDP	1.05 (0.296)	0.61 (0.544)	1.18 (0.240)	0.69 (0.488)
DC	3.53 (0.000)***	3.52 (0.000)***	3.48 (0.000)***	3.46 (0.001)***
I	0.03 (2.17)	-0.70 (0.481)	0.05 (0.964)	-0.95 (0.341)
TSB*SP		-2.75 (0.006)***		-365 (0.000)***

			2.08 (0.0037)***	3.13 (0.002)***
EP*GR				
R²	0.80	0.81	0.81	0.82
Number of observation	148	148	148	148
Number of groups	30	30	30	30
Prob>Chi2	0.0000	0.0000	0.0000	0.0000
Hausman test:	<i>Prob>Chi2 :0.0000</i>			
Breush-Pagan test (LM)	<i>Prob>Chi2 : 0.0000</i>			

Source: author construction from Stata 12.0 software.

Significant p-values at *10%, **5% and *1% the robust Z of the random effects model without parentheses.**

The random effects assume that the entity's error is not correlated with the NI which allows for time –invariant variables to play a role as explanatory variables. In random-effects we need to specify those individual characteristics that may or may not influence the predictor variables. The problem with this is that some variables may not be available therefore leading to omitted variable bias in the model. By testing the time fixed effects using the command in Stata `testparm.i.t`, with `t= years`, we found that the `Prob>F` is > 0.05 so we cannot reject that the coefficients for all years are jointly equal to zero, therefore no time fixed-effects are needed in our study. To decide between fixed and random effects, a Hausman test was performed. The results showed that the `Prob>Chi2` is greater than 5% indicating that the random effects model is appropriate in the estimation. The table above, shows the results of the regression of the dependent variable (NI) with the 15 independent variables (including the interactive effects) of the research. The results indicate that the FDI inflows in Anglophone and francophone countries determined by the independent variables mentioned above, with the coefficient of 82% ($R^2=0.82$) in the regression 4, that demonstrated that these variables significantly account for 82% variation in foreign direct investment for the period under study(2004-2012). The regression 1 shows us the results of the interactive effects without including variables of the research. The regression 2 shows the influence of time required for business and strength of protecting investors which expected to increase investors' confidence. The FDI regulations have a positive impact. They promote the non-discriminations between local and foreign private investors, increase the profits, protect against expropriation and strengthen the standards of treatment. Model 3 does the same with electricity production and growth expected to attract foreign direct investment. EH (human resources) the strength of protecting investors appears to be very significant in the four models. The domestic credit to private sector have been increasing in recent years due to most government policies aiming at reducing the investment risk in Anglophone and francophone countries enhance the local business environment and increase regional FDI inflows . Human capital (EH) is positive and highly significant. This result confirms the improvement by the diversification of education and vocational training and construction of schools. However, this is a result of human potential in most Anglophone and Francophone

African countries. To encourage private investment and the attractiveness of FDI, the strength of protecting investors and the time required to start business are improving even if it is slow but affect positively the FDI. Corruption (0.68%) is still a big challenge for francophone and Anglophone countries despite a lot of efforts conducted by the authorities. The control of corruption (CC) is not significant in our model. High level of corruption leads to the high investment cost and low profits to investors. Moreover, its prevalence doesn't encourage FDI inflows, this being the reason it is not significant in all the four models. The Gross domestic product (GDP) doesn't have influence on FDI in our study, different from previous studies conducted by the researchers such as: Avom and Ongo Nkoa (2013), Sandrina (2009), Wang (2012) who found that GDP and Growth encourage foreign direct investment. This difference result can be explained by our short time of study and from the global financial crisis which affected most of African countries' economies. Infrastructure is still a Problem in Francophone and Anglophone African countries and requires improvement. Likewise, inflation problem which decrease the stiff competitiveness of business firms and purchasing power of customers hence causing competition to collapse. The openness defined by (RIE) is not significant in our study totally different from previous studies made by: N'guessan Bi Zambe (2010), (Cuadros et al., 2001), Baharom et al. (2008) and Zaheer and Bashir (2011) advocated that liberal trade policies encourage FDI. This difference can be explained by the fall in import and export for those countries affected negatively in the trade balance during the global crisis and the short time of our study. The ratio of the length of the country's total road network includes all roads in the country (RL) and the electricity production (EP) don't contribute positively in the attraction of foreign direct investment specially francophone countries who faced electricity challenges , many initiatives must be encouraged in this domain because without electricity , the country cannot develop. The shortage of electricity production reduces the firm's production and expected profits. Anglophone and francophone African countries need to improve their business climate by improving the political stability and absence of violence (PSAV). Political stability such as: government crises, constitutional changes, coups, revolutions, negatively affect foreign direct investment, because it increases the costs to investors, in another turn a negative effect is from the economic variables such as: inflation, budget deficits, and problems due to currency, which are not sustainable and decrease the investment (Krugell, 2005). Kolstad and Tondel (2002) demonstrated also the countries which have low risk attract more FDI per capita. So it is very primordial for Anglophone and francophone countries to make a lot of effort in the improvement of their business environment. The interactive variables TSB*SP and EP*GR are statically significant at 1% level, their P-value value in the regression 4 is (0.0000) and (0.0002) which is lower than 1%. The robust Z indicate that TSB*SP have a negative relationship with investment, and the P-value still at 0.0000, which is lower than 1%. Thus, arising from this results we rejected the null hypothesis which that there is no significant relationship between the NI and TSB*SP and conclude that there is not enough evidence to suggest a significant relationship between NI and the interactive variable TSB*SP. This result is totally different for the interactive variable EP*GR, the robust z have positive relationship with the net inflows foreign direct, statistically significant result at the level of 1% of significance with the robust z (3.13), we do not reject the null hypothesis which stated that there is a significant relationship between EP*GR and NI and conclude that there is significant evidence of relationship between NI and EP*GR. This result is similar with the work of (Avom and Ongo Nkoa, 2013) who introduce the interactive variables such as human capital and innovation (HC*INV) and openness and infrastructure (OPEN*INFR) in their model. During the regression run, we introduced the dummy variable

language, the value of which is 1 for Anglophone African countries and 0 otherwise but it was not significant. The language barrier would have been a deterrent for foreign investors in the past however in recent times; English training has become quite prominent in the region's corporate world. "A lot of the businessmen that you deal with can communicate in at least two business languages, which are French and English. If they don't speak English, they usually have an associate who can so I don't think that it's an obstacle that can't be overcome," added Sarah Warren, Structured Trade Transactor from RMB Private Bank. While the "There is still quite a significant French influence in francophone Africa but the influence is declining year by year," said Lopes. Warren argued that although these French speaking countries are grouped together, there are certain factors that do differentiate them such as their primary sources of income as well as trading partners.

Conclusion

In this paper we investigate, whether the growth rate for the country, the gross domestic product, inflation, the openness, ratio of the length of the country's, human resources, domestic credit to the private sector, electricity production, corruption, the political stability and absence of violence etc, affect the FDI. It is based on a sample of 37 countries over the period 2004-2012. Using panel data, results from analysis shows that the time required for business, the strength of protecting investors, the domestic credit to private sector, and the interactive variables are important factors which attract FDI in the Anglophone and francophone African countries. FDI has become a major key for economic development and poverty reduction. It provides employment, stimulate domestic investment, contribute to economic growth and improve the implantation of technology to the host economy. FDI as a part of international private capital flows; and is very important complements to national and international development efforts. FDI has proved an almost inexhaustible source of international private capital flows. However it is important for Anglophone and francophone African countries to have a significant influx of this type of investment. We must encourage FDI because it causes in terms of development, beneficial effects that can confer other sources of funding.

Recommendations

The foreign direct investment has the potential to act as a reliable and equitable factor of sustained economic development and poverty alleviation. Despite the efforts of African governments to attract FDI by improving their business environment and despite renewed activities in Africa, Anglophone and francophone African countries FDI inflows remains low. First to enhance FDI inflows first Francophone and Anglophone African Countries need to improve their business climate because conflict in general is shown to have a negative effect on the FDI. African citizens must be conscious that their economic development depends largely for their political stability. Despite the many efforts made by African government, corruption still have a negative impact on the FDI inflows. It is very important for the authorities continue fight against corruption and reduce inflation, develop mechanisms to enhance the credibility of Africa continent because Africa overly is perceived as overly risky and therefore receive less FDI in the purpose to stimulate gross domestic product, growth after this general economic crisis. Many efforts must be done in the domain of infrastructures specially the construction of roads to facilitate transactions and stimulate transport of products. Electricity production is still a big challenge for most Anglophone and francophone countries, African governments must really think how to deal with this problem. As we know

the energy played a major role in human development, economic development as well as the welfare of society. Modern societies are using more and more energy for industry, services, housing and transportation. This is particularly true for oil, which is now the most commercialized product but also for electricity that is essential in modern economies with the omnipresence of information technology, communication and digital. Economies of African countries have already suffered much on electricity availability. It is the appropriate time to solve the problem if the continent wants to attract FDI inflows. African governments must value the important sources of energy, which the continent have but still unexploited to improve its energy services in the purpose to stimulate the economic growth, because a lot of studies demonstrated it exist in the long term the positive relation between power and economic growth. Idirssa Yaya Diandy (2007). Anglophone and francophone African countries must know which potential investors they must deal with in purpose to have an equitable advantage which will lead them to sizeable economic development. In order to speed up the attractiveness of FDI, as well economic growth in the continent, African countries must improve in the various scenarios like skills and technical, know how to mobilize domestic savings, foreign exchange earnings, and infrastructures improvement. Lastly, we make a call to the developed countries and other international developing partners and foreign investors to provide more support to the various economic and social development projects especially in the domain of energy.

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References

- Al-Sadig, A. (2009), "The Effects of Corruption on FDI Inflows", *Cato Journal*, Vol. 29, No. 2, Spring/Summer.
- Alsan M., Bloom, D. E. &Canning, D. (2006), .The Effect of Population Health on Foreign Direct Investment Inflows to Low- and Middle-Income Countries. *World Development* 34(4), 613.630.
- Anyanwu, J. C and Erhijakpor, A. O. (2004), "Trends and Determinants of Foreign Direct Investment in Africa", *West African Journal of Monetary and Economic Integration*, Second Half, 21-44.
- Anyanwu, J.C. (2012). "Why Does Foreign Direct Investment Go Where It Goes?: New Evidence from African Countries
- Asiedu, E. (2002), on the determinants of foreign direct investment in developing countries: is Africa different? , *World development*, Vol 30, No.1, pp. 107-119, 2002.

- Asiedu, E. (2004), policy reform and foreign direct investment in Africa: absolute progress but relative decline, *development policy review*, 22(1): 41-48.
- AVOM, D., & ONGO NKOBA B. E. (2013), Why Foreign Direct Investment Goes towards Central Africa, *Journal of Economics and Sustainable Development* www.iiste.org ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online) Vol.4, No.9, 2013.
- Baharom, A. H., Habibullah, M.S. & Royfaizal, R. C (2008), the relationship between trade openness, foreign direct investment and growth: case of Malaysia.
- Barnet, S. and Brooks, R. (2006) what is Driving Investment in China? International Monetary Fund working paper, No. WP/06/265
- Botric, V. and Škuflic, L. (2006), "Main Determinants of Foreign Direct Investment in the Southeast European Countries", *Transition Studies Review*, 13(2), 359–377.
- Chenery, H. and Strout, A.M (1996), "Foreign Assistance and Economic Development", *American Economic Review*, 56 (4); 6-19.
- Cuadros, A., Orts V. & Alguacil, M. T. (2001), Openness and Growth: Re-Examining Foreign Direct Investment, Trade and Output Linkages in Latin America, Centre for Research in Economic Development and International Trade, School of Economics, University of Nottingham, University Park, Nottingham, NG7 2RD, UNITED KINGDOM.
- Cotton, L. and Ramachandran, V. (2001) "Foreign Direct Investment in Emerging Economies Lessons from sub-Saharan Africa", World Institute for Development Economics Research Discussion Paper No. 2001/82.
- Daude, C. and Stein, E. O. (2007), "The Quality of Institutions and Foreign Direct Investment", *Economics and Politics*, Volume 19, No. 3, November, 317-344.
- Disdier, A. C. and Mayer, T. (2004), "How Different in eastern Europe? Structure and Determinants of Location Choices by French Firms in eastern and Western Europe", *Journal of Comparative Economics*, Vol. 32, No. 2, 280-296.
- Dupasquier, C. and Osakwe, P. N. (2006), "Foreign direct investment in Africa: Performance, challenges, and responsibilities", *Journal of Asian Economics*, 17, 241–260.
- Gholami, R. Lee, S-Y. T. & Heshmati, A. (2006), "The Causal Relationship between Information and Communication Technology and Foreign Direct Investment", *The World Economy*, Vol. 29, No. 1, 43-62.
- Goodspeed, T. J., Martinez-Vazquez, J. & Zhang, L. (2006) "Attracting FDI: Are Other Government Policies More Important than Taxation in Attracting FDI?," *Economics Working Paper Archive at Hunter College 414*, Hunter College Department of Economics.

Habib M., and Zurawicki, L. (2002), "Corruption and Foreign Direct Investment", *Journal of International Business Studies*, 33(2), 291-307.

Hans, M. (1948), *Politics among Nations*, New York: Knoph

United Nations Conference on Trade and Development. (2015). Retrieved from [http://unctad.org/en/Pages/DIAE/Foreign-Direct-Investment-\(FDI\).aspx](http://unctad.org/en/Pages/DIAE/Foreign-Direct-Investment-(FDI).aspx)

United Nations Conference on Trade and Development. (2013). *World Investment Report*. Retrieved from <http://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=588>,

United Nations Conference on Trade and Development. (2011). *The Distribution of FDI inflows among economies by range*. Retrieved from http://unctad.org/en/PublicationChapters/wir2013ch2_en.pdf

United Nations Conference on Trade and Development. (2014). *World Investment Report*. Retrieved from http://unctad.org/en/PublicationsLibrary/wir2014_en.pdf

Ernest and Young. (2014) *Africa Business Attractiveness Survey*. Retrieved from <http://www.ey.com/ZA/en/Issues/Business-environment/EY-africa-attractiveness-survey-2014>

International Monetary Fund (1993). *Foreign Direct Investment*. Retrieved from <http://www.imf.org/external/>

Jeune Afrique news, (2012). *Développement : pourquoi les pays d'Afrique francophone sont à la traîne*. Retrieved from <http://www.jeuneafrique.com/Articles/Dossier/ARTJAJA2659p0136-140-bis.xml0/d-veloppement-pnudafd-u-moad-veloppement-pourquoi-les-pays-d-afrique-francophone-sont-la-tra-ne.html>

Kersan-Skabic I. and Orlic E. (2007), "Determinants of FDI in CEE, Western Balkan Countries (Is Accession to the EU Important for Attracting FDI?)", *Economic and Business Review*, 9(4), 333-350.

Krugell, W. (2005), "The Determinants of Foreign Direct Investment in Africa", in: Gilroy, B., Gries, T. and Naude, W. (eds), *Multinational Enterprises, Foreign Direct Investment and Growth in Africa: South-African Perspectives*, Physica-Verlag GmbH & Co, Berlin.

Kolstad, I. and Tondel, L. (2002), *Social Development and Foreign Direct Investments in Developing Countries*, Chr. Michelsen Institute, Development Studies and Human Rights, Bergen.

Khamfula, Y. (2007), "Foreign Direct Investment and Economic Growth in EP and IS Countries: The Role of Corruption", *The World Economy*, Vol. 30(12), December, 1843-1854.

Kim, H. (2010), "Political Stability and Foreign Direct Investment", *International Journal of Economics and Finance*, Vol. 2, No. 3, August, 59-71.

Kinda, T. (2010). "Investment Climate and FDI in Developing Countries: Firm-Level Evidence.

KRUGELL, W.F. & NAUDÉ, W.A. (2005). "The geographical economy of South Africa". *Journal of Development Perspectives*. 1(1): 85-124.

- Kyereboah-Coleman, A. and Agyire-Tettey, K. F. (2008), "Effect of exchange-rate volatility on foreign direct investment in Sub-Saharan Africa: the case of Ghana (Case study)" *Journal of Risk Finance*, 9(1), 52 – 70.
- Markusen, J. (2001), "Contracts, intellectual property rights, and multinational investment in developing countries", *Journal of International Economics*, Vol. 53, 2001, pp. 189-204.
- Meier, F & Selhausen, Z. (2009), on geography and institutions as determinants of foreign direct investment. A cross country comparative analysis of sub-Saharan African relative to developing countries.
- Mengistu, B. and Adams, S. (2007), "Foreign Direct Investment, Governance and Economic Development in Developing Countries", *Journal of Social, Political and Economic Studies*, 32(2), 223-249.
- Miyamoto, K. (2008), *Human Capital Formation and Foreign Direct Investment in Developing Countries*. Development Centre on Financing Development.
- Moosa, I. A. (2002). *The Determinants of Foreign Direct Investment in Mena Countries: An Extreme Bounds Analysis*. Research Report, 1-13.
- Moyo, T. (2013). The impact of foreign direct investment on economic growth: the case of Zimbabwe (2009 – 2012). *International journal of economics, finance and management sciences* 1 (6), page 323 – 329.
- Musila J. W., and Sigue S. P. (2006), "Accelerating foreign direct investment flow to Africa: from policy statements to successful strategies", *Managerial Finance*, 32(7), 577-593.
- N'guessan Bi Zambe, S. C. (2010), The relationship between foreign direct investment, trade openness and growth, *International Journal of Business and Management*, vol.5, No.7; July 2010.
- Nnadozie, E. and Osili, U. O. (2004), *U.S. Foreign Direct Investment in Africa and its Determinants*. UNECA Workshop of Financial Systems and Mobilization in Africa, Nov 2nd 2004.
- Nonnemberg, M. B and Cardoso de Mendonça, M. J. (2004), *The Determinants of Foreign Investment in Developing Countries*.
- Nunnenkamp, P. and Spatz, J. (2003). *Foreign direct investment and economic growth in developing countries: how relevant are host countries and industry countries?* Kiel working paper 1175, page 3 – 38.
- Nurkse, R. (1953) *Problems of Capital Formation in Underdeveloped Countries*. New York: Oxford University Press.
- Organization for Economic Co-operation and Development. (1996). *OECD Benchmark Definition of Foreign Direct Investment, Third Edition*. Retrieved from <http://www.keepeek.com/Digital-Asset-Management/oecd/finance-and->

investment/oecd-benchmark-definition-of-foreign-direct-investment_9789264064805-en#page1 DOI:10.1787/9789264064805-en

- Roy, A. G. & Van den Berg, H. F. (2006). Foreign direct investment and economic growth: a time series approach. *Global economy journal* 6(1), page 1 – 13.
- Ratha, D. and Mohapatra, S. (2007) Increasing the Macroeconomic Impact of Remittances on Development, Development Prospects Group, the World Bank, Washington D.C. 20433.
- Reiter, S. L and Steensma, H.K. (2010), “Human Development and Foreign Direct Investment in Developing Countries: The Influence of FDI Policy and Corruption”, *World Development*; December, Vol. 38, Issue 12, 1678-1691.
- Rodríguez, X. and Pallas, J. (2008). Determinants of Foreign Direct Investment in Spain, *Applied Economics*, 40, 2443-2450. Rugman, A.
- Sandrina, B.M. (2009), the determinants of foreign direct investment what is the evidence for Africa *Unisul, Tuburao*, v.2, n.1, p.83-104.
- Sekkat, K. and Veganzones-Varoudakis, M-A. (2007), “Openness, Investment Climate, and FDI in Developing Countries”, *Review of Development Economics*, 11(4), 607–620.
- Simeo, F. (2004). Foreign direct investment and its impact on economic growth and gross domestic savings – the case of Zambia, 1970 – 2000 (unpublished masters’ thesis). University of Zambia, Zambia. Sub-Saharan Africa,” *African Development Review* 17 (1): 23-40.
- Tersen, D. & Briscout, J, L. (1996), « l’investissement international », Collection « U » - série Economie.
- Voyer, P.A., Beamish, P.W. (2004) “The effect of corruption on Japanese foreign direct investment”, *Journal of Business Ethics* 50 (3):211-224.
- The observatory of Economic Complexity (OEC). (2015) Import and export. Retrieved from <http://atlas.media.mit.edu/en/>
- The United Nations Educational, Scientific and Cultural Organization (UNESCO). (2015) Human resources in the tertiary education retrieved from <http://data.uis.unesco.org/>
- World Bank (2015), Retrieved from <http://www.worldbank.org/>
- Wang, Y. (2012), openness and productivity: the role of imports, FDI and international telecommunications, *journal of economics* vol.49 No.1 125-145.
- Yapatake kossele, T.P., Riti, J.S., & Anning, L. (2015) “Determinants of Foreign Direct Investment Flows to Francophone African Countries: Panel Data Analysis”, *Journal of Economics and Sustainable Development*, Vol.6, No.13.
- Younus, H. S. Sohaj, A., Azeem, M., (2014) “Impact of foreign direct investment on economic growth in Pakistan”, *World journal of economics and finance* 1(1), page 02 – 05.
- Yasin, M. (2005). “Official Development Assistance and Foreign Direct Investment Flows to Sub-Saharan Africa, *African Development Review*, 17 (1), pp. 23-40.

Zaheer, K.K. and Bashir A.K. (2011) the impact of FDI and trade openness on economic growth: a comparative study of Pakistan, and Malaysia theoretical and applied economics, volume XVIII, No. 11(564), pp.53-58.

Zhang, K. H. (Jul 2001), "What Attracts Foreign Multinational Corporations to China?" Contemporary Economic Policy, 19(3), 336-346.