Master's Thesis of Public Administration

Foreign Direct Investment in Sub-Saharan African Countries: Does the Business Regulation Matter?

Lessons for DR Congo

사하라 이남 아프리카에서 외국인 직접투자에 대한 연구: 규제가 중요한가?

DR 콩고에 주는 시사점

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Abstract

Foreign Direct Investment in Sub-Saharan African Countries: Does the Business Regulation Matter?

Lessons for DR Congo

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For years, studies have generally accepted Foreign Direct Investment as having a positive influence on the host economy. And governments in Sub-Saharan Africa, seeking to attract more private investments have been committed into reforms aimed at improving their business regulation.

This study is meant to possibly connect these government actions, for which the World Bank's 'Ease of Doing Business Indicators' were used as a proxy, to foreign direct investment inflows in Sub-Saharan Africa.

Through a panel data analysis, the research was done by running a random effects model to find a relationship between changes in inward foreign direct

investment and the Doing Business Indicators, namely, *time to start a business, cost to start a business, time to register property, and cost to register property, time to impor*t, and *time to export*, for a set of forty Sub-Saharan Countries.

Results suggest that, on average, the time for starting a business and the cost for property registration have a negative and significant correlation with Foreign Direct Investment. In other words, by reducing the number of days to start a business, and reducing the cost for property registration, a country can attract a large amount of FDI. However, results suggest an insignificant (albeit negative) association between the *cost to start a business, time to register property, time to import, time to export* and FDI.

However, this result should be taken with caution given that it refers to forty Sub-Saharan African Countries, using data across a seven-year time period, suggesting that a more refined study, with a longer time period will help fix this problem.

Key Words: Foreign Direct Investment, Fragile States, Starting a Business, Registering Property, Trading Across Borders

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I. INTRODUCTION

Sub-Saharan Africa, the World's poorest region, has witnessed a dramatic surge in Foreign Direct Investment over the past decade, with FDI increasing from USD 6,813 million in 2000 to USD 36,902 million in 2011. This increase in FDI inflows to the Region was supported by factors, including, among others, reform of policy frameworks for FDI.

However, the share of FDI in Sub-Saharan Africa remains lower compared to other regions such as South America (excluding Brazil), where the amount of FDI has increased from USD 24,277 million to USD 54,812 from 2000 to 2011, or in the ASEAN (Association of South-East Asian Countries), where it has increased from USD 22,696 million to USD 116,539 million during the same period.

One reason behind the Sub-Saharan Africa poor performance as a location for foreign direct investment is that the region is often associated with pictures of economic disorder, starvation or civil unrest, which, to some extent, has given many investors a negative picture of the region as a whole. At the same time, while these unfortunate conditions do not necessarily prevail in all of the African countries, it turns out to be a true picture of many countries in the region. For instance, countries such as the Democratic Republic of Congo and others, identified as States in fragile or conflict affected situation, are usually associated with various combinations of factors mentioned earlier, which include weak governance, high level of inequality unemployment, security

threats, economic disorder, and so on.

In most of these countries, official development assistance (ODA) and remittances have always been the biggest financial inflows (UNCTD 2011), followed by foreign direct investment (FDI), which is assumed to provide a package of financial capital, technology, managerial skills, jobs opportunities, information, goods and services, and other factors susceptible of making Sub-Saharan African economies more competitive in the world market place.

However, the poor business environment that characterizes the majority of Sub-Saharan African countries generates a lack of economic opportunities and higher unemployment in the region. To illustrate, the costs of poor infrastructure, regulatory challenges (such as excessive licensing fees, bribes, and so forth), low labor productivity, weak governance, and institutions failing to provide basic services, enforce contracts, and reduce corruption, are disincentives for potential foreign investors.

In view of this situation, a large number of Sub-Saharan African countries, especially those in fragile situation, have been committed, for about a decade, into policies aimed at improving their business regulatory frameworks, in an effort to attract more Foreign Direct Investment. For instance, the World Bank's Doing Business Report (2013) points out that out of 50 economies throughout the world, African Countries in fragile situation were among those that have the most improved their business regulations since 2005.

In addition, over the last 10 years, some Sub-Saharan African fragile states such as Rwanda and Ethiopia have been able to make remarkable progress in terms of making it easier to do business, whereas countries such as the D.R.

Congo, Republic of Congo, Central African Republic, and Chad, albeit some improvement, remain among the worse places for doing business in Africa (Doing Business Report, 2013). At the same time, other countries such as South Africa, Botswana, Mauritius or Ghana, which are among the most stable in the region, turn out also to have the most business-friendlier regulations in the region.

This research therefore seeks to measure the impact of improvements in business regulation on Foreign Direct Investment over the past seven years in a set of forty Sub-Saharan African Countries (including fragile and non-fragile states).

Traditional literature on FDI highlights various factors including, among others, the market size, country location, human capital, infrastructure quality, availability of natural resources, quality of institutions, regulatory framework, and security, as determinants for foreign investment. However, in most Sub-Saharan African countries, markets are small, and infrastructures, institutional and regulatory frameworks are generally poor. Moreover, given the fact that the majority of these factors are generally unchangeable at short-run, it is difficult when it comes to measuring improvement in the Business Environment.

Accordingly, the Doing Business Report of the World Bank, for about a decade, offers business policy makers a benchmarking tool which has an advantage to study the determinants of FDI by putting aside each country's comparative advantage. This consists on a set of indicators affecting a

business' life: starting a business, dealing with construction permits, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts and closing a business. Other areas important to business such as the quality of infrastructure services, the transparency of government procurement, macroeconomic conditions or the underlying strength of institutions are not studied, making it easier to compare the data across economies. Therefore, given the fact that many countries in Sub-Saharan Africa have been committed to making it easier to do business by reforming their business regulation based on the frame provided by the World Bank, there is a need to measure the actual impact of the Doing Business Indicators on Foreign Direct Investment. In like manner, we argue that regulations are more crucial to FDI, to the extent that they can be reformed in the short run, while other factors (market size, country location, Security, natural resources, etc.) mentioned earlier, change in the long run or remain unchanged. In other words, improving the investment regulations offers an excellent opportunity for countries seeking to attract foreign direct investment.

In addition, while a large amount of existing empirical studies discusses the impact of the traditional determinants on FDI, there are few works done on the real association between the Doing Business Indicators and FDI, and there is not any updated study at all about the impact of the Doing Business Regulations on Foreign Direct Investment in Sub-Saharan African Countries. That is, this study is necessary to fill this gap, and successfully identify

appropriate policies to foster foreign investment in this region, and in particular, in fragile states.

Therefore, this research seeks to deal with the following questions:

- What is the impact of the Doing Business Indicators on FDI inflows in Sub-Saharan African countries?
- What lesson can the D.R. Congo (and others countries) learn for investment policy reform?

The thesis is going to posit that the Doing Business Indicators have a significant impact on FDI inflows in Sub-Saharan African countries in general, and in Fragile States in particular.

Thus, the paper is organized as follows: the first section, which consists on the introduction, briefly explains the goals set for this study. Section 2 gives an overview of the business regulation in Sub-Saharan Africa, and put an emphasis on the Doing Business regulations in some fragile states in the region. Section 3 makes a brief review of the previous literature on the determinants of FDI. Section 4 briefly explains the research approach, and specifies the econometric model used for this study. Section 5 provides the empirical results and makes some policy recommendations, and the final section concludes.

II. DOING BUSINESS IN SUB-SAHARAN AFRICAN FRAGILE STATES

2.1. Theoretical Review on Fragile States in Sub-Saharan Africa

The OECD defines fragile states as those having weak capacity to carry out basic governance functions, and lack the ability to develop mutually constructive relations with society. Also, they are more vulnerable to internal or external shocks such as economic crisis.

According to a harmonized list by the World Bank, the African Development Bank, and the Asian Development Bank, in 2012, thirty three countries and territories were classified as fragile and/or in conflict situation, among which 26 are located in Sub-Saharan Africa (Table 1).

Table 1: List of States or Territories in fragile situation FY 2012

Low-Income Fragile States	Lower-middle-Income Fragile States	Upper-middle-Income Fragile State
Afghanistan	Cameroon*	Angola*
Bangladesh	Congo, Rep*	Bosnia
Burundi*	Cote d'Ivoire*	Iran
Central African Republic*	Georgia	
Chad*	Iraq	
Comoros*	Kiribati	
D.R.Congo*	Kosovo	
Eritrea*	Marshall Islands	
Ethiopia*	Micronesia	
Guinea*	Nigeria*	
Guinea-Bissau*	Pakistan	
Haiti	Solomon Islands*	
Kenya*	South Sudan*	
Korea, Dem. Rep.	Sri Lanka	
Kyrgyz Republic	Sudan*	
Liberia*	Timor-Leste	
Malawi*	West Bank Gaza	
Myanmar	Yemen	
Nepal		
Niger*		
Rwanda*		
Sierra Leone*		
Togo*		
Uganda*		
Zimbabwe*		
(*) Sub-Saharan Africa		

Source: World Bank, African Development Bank, Asian Development Bank, harmonised list of fragile and post-conflict countries for the year 2012: http://siteresources.worldbank.org/EXTLICUS/Resources/FCS_List_FY12_External_List.pdf

There are many ways the South-Saharan African Countries in this list can be considered fragile. For instance, several are post-conflict or have undergone some of the most appalling civil conflicts of recent decades (Burundi, Liberia, Sierra Leone, Rwanda, Angola, Cote d'Ivoire, etc.). Others remain caught up in serious crisis (D.R. Congo, Sudan, Somalia, Chad, Mali, and Niger). And finally, others are subject to low-intensity but chronic violence and poverty (Central African Republic, Nigeria, Congo, Comoros, Togo, Kenya, and Cameroon).

Conversely, when it comes to the (economic) performance of the Sub-Saharan African Fragile States over the past decade, data paint a mixed picture, showing both diversity and notable common patterns and trends for those countries (OECD, 2013): first, in terms of economic growth, some countries including Ethiopia (8.4 percent), Rwanda (7.6 percent), Chad (7.9 percent), Mozambique (7.9 percent), Angola (11.1 percent) and Nigeria (8.9 percent), have been among the fastest growing countries of the past decade. Further, Rapid growth has allowed Angola and Nigeria to graduate to middle-income status[1].

At the same time, it is argued that most of the Sub-Saharan African Fragile States will not be able to achieve a single Millennium Development Goal (MDG) (World Bank, 2011). Second, in terms of financial flows in those countries, as already pointed out, foreign direct investment is increasingly important for the economies of South-Saharan African Fragile States, where net foreign investment has risen in volume over the last decade (Figure 1).

[1] See "FRAGILE STATES 2013: Resource flows and trends in a shifting world" OECD

Consequently, FDI can be seen as a tool for reducing fragility, by creating jobs and growth. However, the flows of foreign direct investment are concentrated in a small group of countries, which are typically resource-rich[2] (table 2).

2.2. Foreign Direct Investment

The Fifth Edition of the Balance of Payments Manual of the International Monetary Fund (1993) defines FDI as "an investment made to acquire lasting interest in enterprises operating outside of the economy of the investor. Moreover, the investor´s purpose is to gain an effective voice in the management of the enterprise".

In addition, as pointed out earlier in this paper, for a large body of researches, FDI is supposed an engine of growth for countries, for it provides a package of financial capital, technology, managerial skills, jobs opportunities, goods and services that can make an economy more competitive in the world market place (E. Borensztein at al. 1998; Samuel Adams 2009; Makki and Somwaru, 2004; Ewe Ghee-Lim, 2001). Thereby, FDI is a crucial source of capital and technology for Sub-Saharan African Countries in general, given the fact that they face either numerous limitations on international credit markets, or do not have the resources necessary to set about domestic Research and Development, or both.

More specifically, the impact of FDI on economic growth is supposed to run through two channels. First, FDI is expected to induce economic growth by

[2] See OECD (2013), Fragile States: Resource flows and trends in a shifting world.

stimulating the incorporation of new inputs and foreign technologies in the production function of the host country through capital accumulation. Second, FDI is likely to augment the level of knowledge in the host country through labor training, skill acquisition, and the introduction of alternative management practices and organizational settlements. In addition, FDI has a positive impact on the local economy in, for instance, the fact that, everything else equal, establishment of foreign firms increases labor demand in the host economy. There is therefore an indirect effect, as the foreign firm links up with the local economy by demanding intermediate goods and producer services from local suppliers. This indirect effect also adds to labor demand, and is likely to lead to reduced unemployment or increased wages or a combination of the two.

In view of this, FDI has desirable features that can affect the development process, with significant implication for poverty reduction, critical to Sub-Saharan African Countries. As G. Kochendorfer-Lucius and B. Pleskovic (2005) pointed out, "in developing countries, Foreign Companies are confronted with the failure of public services, which often induces them to engage in projects that support their employees and local communities". This includes the provision of housing, teaching, and environmental and health services. Moreover, given the insufficient domestic capital investment and outdated technologies that characterizes most Sub-Saharan African Countries, Foreign Companies can transfer management skills and technological knowledge that can easily spread among local business communities.

However, benefits of FDI do not accrue automatically and evenly across

countries, sectors and local communities as pointed out by many authors (Sylwester, 2005; Kumar and Pradhan, 2002; Laura Alfaro, and Areedam at al. 2010). They suggest that FDI have differential effects in respect with regions, and that the spillovers effects of FDI on economic growth are associated with country-specific characteristics, particularly when host countries adopt liberalized trade regime, improve education and thereby human capital conditions, encourage export-oriented FDI, and maintain macroeconomic stability (K.H Zhang, 2001).

Table 2: Top 5 FDI recipients (percent of total net FDI inflows to Sub-Saharan African Fragile States) 2011

Country name	FDI Rank in 2011	Percent of total FDI to SSAFS	Ratio of mineral/exports (2010)
Nigeria	1	41.80%	90.5
Congo, Rep	2	13.90%	81.3
Sudan	3	9.10%	88.5
Chad	4	8.80%	90.8
D.R. Congo	5	7.50%	78.3

Source: Our calculations are based on: The World Development Indicators, website accessed Marsh 2013 at http://databank.worldbank.org/ddp/home.do?Step=12&id=4&CNO=2.

As can be seen on this table, in 2011, five of the most resource-rich countries captured over 75% of the total FDI inflows to Sub-Saharan African Fragile states. This leads us to challenge the actual impact of proactive investment policies the governments in most African States have been engaged into over the recent years. In other words, one might conclude that FDI inflows are driven by natural resources, and are not significantly impacted by business

regulations in Sub-Saharan African Fragile States.

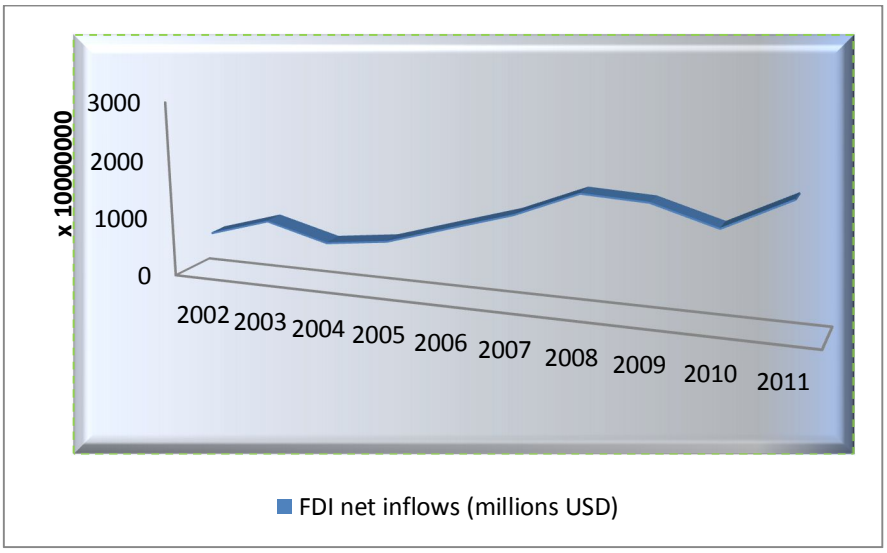
2.3. FDI and Regulations in Sub-Saharan African Fragile States

2.3.1. Brief overview

Earlier, it was perceived that Sub-Saharan African Countries in general had complex business rules, with several barriers in setting up a business. But for about a decade, most governments in the Region have pursued proactive FDI policies, and implemented reforms aimed at making it easier to do business for local as well as foreign investors.

These policies can be considered as the major factor explaining the increase in FDI inflows since early 2000s (see figure 1), although, as we have already pointed out, almost three-quarters have been captured by a small group of five countries (Nigeria, Congo, Chad, Sudan, and D.R.Congo).

Figure 1: FDI inflows to Sub-Saharan African Fragile States 2002-2011 (billion USD)



Source: World Bank Indicators, available on: http://databank.worldbank.org/ddp/home.do?Step=2&id=4&hActiveDimensionId=ADI_Time_DIM

As shown in figure 1, during the last decade, FDI inflows have risen in Sub-Saharan African Fragile States. The decline in flows recorded in 2008-2009, as a consequence of the global economic and financial crisis, did not affect the trend. However, as shown in table 2, five countries (Nigeria, Sudan, Congo, Chad and D.R. Congo) capture over three-quarters of the total FDI inflows to fragile states in the Sub-Saharan African region. As pointed out earlier, such a situation is likely to lead to the conclusion that FDI in Sub-Saharan African fragile states are driven by natural resources. At the same time, most countries in the Sub-Saharan African Region, particularly those in fragile situation, have been making efforts to improve their business regulation over years, by for instance, reducing taxes, establishing an investment promotion agency

(IPA) to better assist foreign investors and abolishing FDI-related restrictions (UNCTAD, 2011). Moreover, increased attention has been paid by many countries to policy aimed at making it easier to do business, mostly under the guidance of the World Bank Ease of Doing Business[3] (table 3), which, for many years, has proven a particularly powerful reform tool, by providing a comprehensive overview of business regulations and helping governments identify reform opportunities. Figure 3 and 4 illustrate respectively how some countries have for instance reduced the time (days) and number of procedures required to start a business, over the recent years. In 2012 for instance, some countries such as Rwanda, Ethiopia, and Kenya, have been among the best performers in regard with their overall business regulation. At the same time, countries such as D.R. Congo, Chad and Congo remain among the worst places for doing business (Doing Business Report, 2012). However, as already pointed out, the question this thesis seeks to answer is whether these improvements have had an impact on FDI inflows in those countries.

The "Doing Business" is based on some of the businesses' top constraints encountered by investors in more than 170 economies covered by the World

[3] To establish the Doing Business Report, the World Bank collaborates with academic professionals to design a business case survey. This method includes a business scenario and asks questions about how that firm would react to this scenario. Annually, the survey is distributed to nearly 8,000 local experts per economy, such as lawyers, consultants, accountants, supply chain professionals, government officials, and other businesspeople routinely administering or consulting foreign Investment. The methodology also includes direct contacts the professionals. The main groups of variables in the Doing Business Database are: "Starting a business" indicators; "Getting credit" indicators; "Protecting investors" indicators; "Closing a business" indicators

Bank, and includes factors such as the access and cost of financing an investment project, anticompetitive or informal practices, corruption, restrictive labor regulations, inefficient government, political instability bureaucracy, infrastructure (e.g. electricity, transportation), macroeconomic instability, tax rates, skills and education of workers, tax administration, economic and regulatory policy uncertainty.

The World Bank measures a country's ease of Doing Business in terms of the following indicators (see also Doing Business Indicators as summarized on table 3):

- Starting a business: which is measured in terms of number of procedures, time (days), cost (Percentage of income per capita), and minimum capital (percentage of income per capita) required for starting a business;
- Dealing with construction permits: measured in terms of number of procedures, time (days), and cost (percentage of income per capita) required to start a business;
- Employing workers: measured in terms of the level of difficulty for hiring, the rigidity of working hours, difficulty of firing, rigidity of employment, and firing cost;
- Registering property: measured in terms of procedures, time and cost (percentage of property value);
- Getting credit: measured in terms of the strength of the legal system, depth of credit information, public registry coverage, and private bureau coverage;

- Protecting investors: based on the extent of disclosure, and on the strength of investor protection;
- Paying taxes: measured in terms of the number of payments per annum, and tax rate;
- Trading across borders: measured in terms of the number of documents and time it takes, the cost to export and import;
- Enforcing contracts: based on the number of procedures, time (days) and cost;
- Closing business: measured in terms of time (years), cost (percentage of estate), and recovery rate.

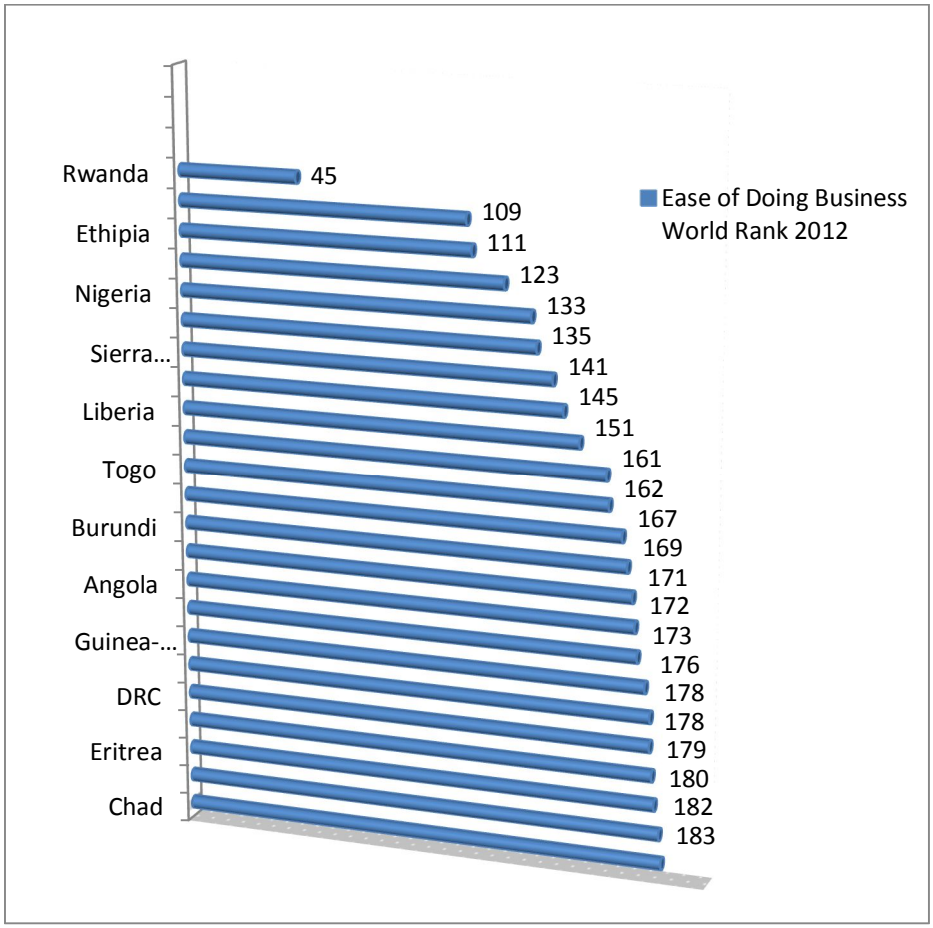
Table 3: Summary of the Ease of Doing Business Indicators

Starting a Business	Procedures, time, cost and paid-in minimum capital requirement
Dealing with Construction permits	Procedures, time, and cost
Getting Electricity	Procedures, time, and cost
Registering Property	Procedures, time, and cost
Paying Taxes	Payments, time and total tax rate
Trading across borders	Documents, time, and cost
Getting Credit	Movable collateral laws and Information systems
Protecting Investors	Disclosure and liability in related-party transactions
Enforcing Contracts	Procedures, time, and cost to resolve a commercial dispute
Insolvency	Time, cost, outcome, and recovery rate
Employing workers	Flexibility in the regulation of employment

Source: Doing Business Report 2012

So far, countries such as Rwanda, Ethiopia and Kenya, are considered the best performers in terms of Ease of Doing Business not only among fragile states, but also in the entire Sub-Saharan African Region, besides countries including Botswana and South Africa. Figure 2 illustrates each country's Doing Business World Ranking as of in 2012, and where Rwanda is in the 45th position worldwide, and at the top in the African Fragile States list.

Figure 2: Sub-Saharan African Fragile States---Doing Business Aggregate Ranking 2012



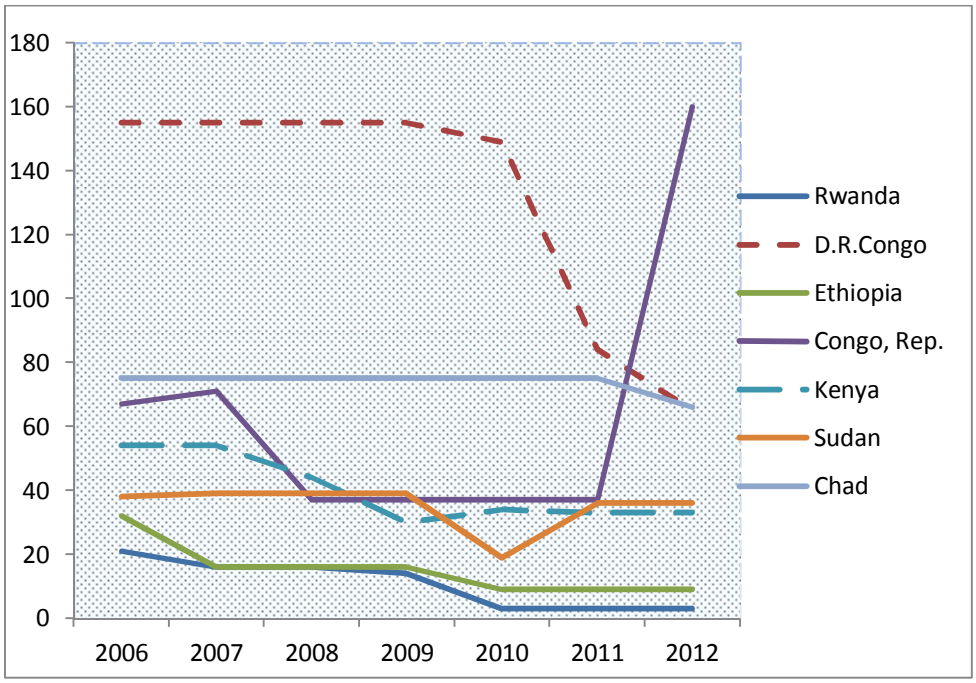
Source: Doing Business Report 2012

The Doing Business Report (2004) pointed out that heavier regulation in terms of procedures, longer delays (as time to start a business), and higher cost (as charge for services rendered to investors) were associated with more inefficiency in public institutions and corruption, which in turn may have adverse effects on the business environment. Consequently, there has been a

trend toward the reduction in time, procedures, and costs in many of the Sub-Saharan African countries in general. Figure 3 shows the trends concerning the reduction in terms of "the time to start a business" in some Sub-Saharan African Fragile States. "Starting Days" measures the time required to start a business, which is defined as the number of days that incorporation lawyers indicate is necessary to complete all required procedures with minimum follow-up with government agencies and no extra payments (Leora Klapper and Inessa Love, 2011).

To illustrate, from 2006 to 2012, Rwanda and Ethiopia have respectively reduced the time required to start a business from twenty-one to three days and thirty-two to nine days, while countries including Chad and Congo have not made progress in this area. In these countries, starting a business required over 50 days in 2012, and over 150 days in D.R. Congo between 2006 and 2010.

Figure 3: Time (days) required to start a business in some SSAFS (2006-2012)



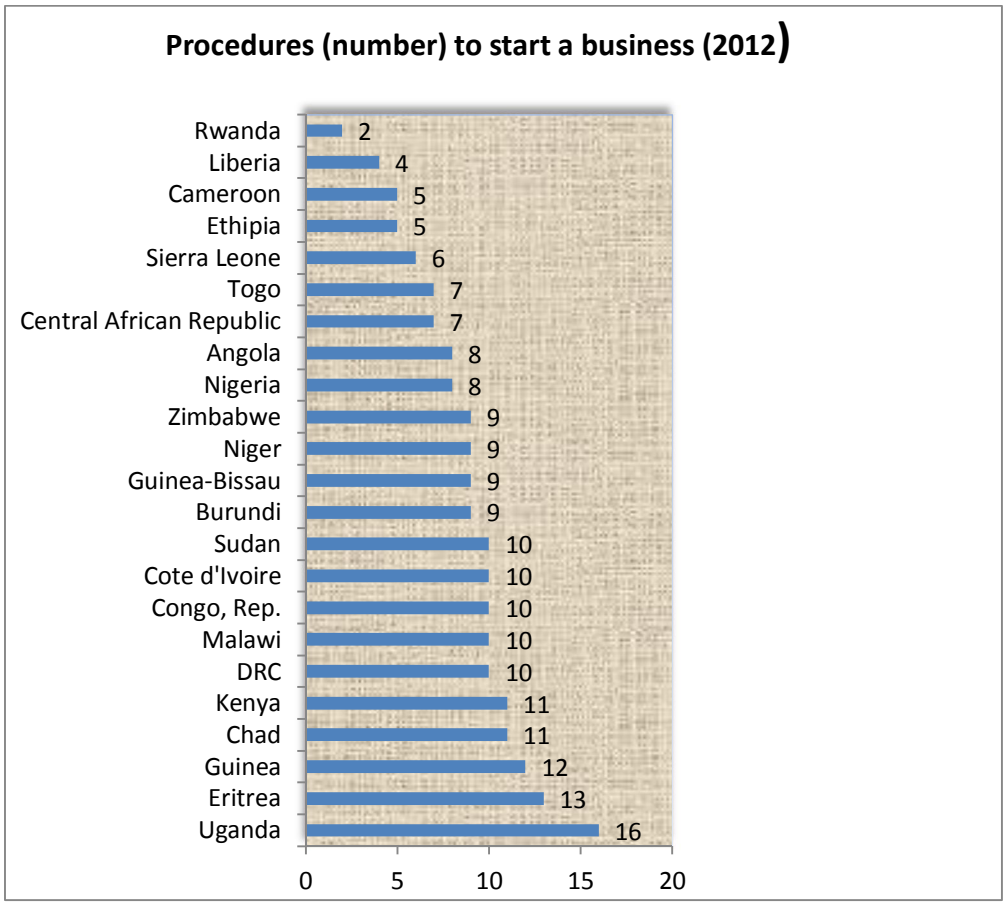
Source: World Bank, Doing Business reports (2006-2012)

At the same time, the number of procedures that are officially required for an entrepreneur to obtain all necessary permits, and to notify and file with all requisite authorities, in order to legally operate a Business[4] have been reduced in many countries, including Rwanda, Ethiopia, and Liberia (figure 4). In Rwanda and Cameroon for instance, the number of procedures to legally start

[4] There are a number of procedures necessary to legally operate industrial or commercial businesses in any given country. These include (1) obtaining the necessary permits and licenses, and (2) completing all of the required inscriptions, verifications, and notifications to enable the company to start operation. All procedures that are required for establishing a business are recorded, even if they may be avoided in exceptional cases or for exceptional types of business. In general, there are four types of procedures: (1) procedures that are always required; (2) procedures that are generally required but that can be avoided in exceptional cases or for exceptional types of businesses; (3) mandatory procedures that are not generally required (industry-specific and procedures specific to large businesses); and (4) voluntary procedures. For more about these procedures, visit: http://www.doingbusiness.org/~/media/GIAWB/Doing%20Business/Documents/Methodology/Supporting-Papers/DB-Methodology-Regulation-of-Entry.pdf

a business as of 2004, was respectively nine and twelve, and has been reduced to two and five in 2012. However, in countries such as Uganda, Guinea, Chad, Kenya, and the Democratic republic of Congo, no substantial progress has been made in this area.

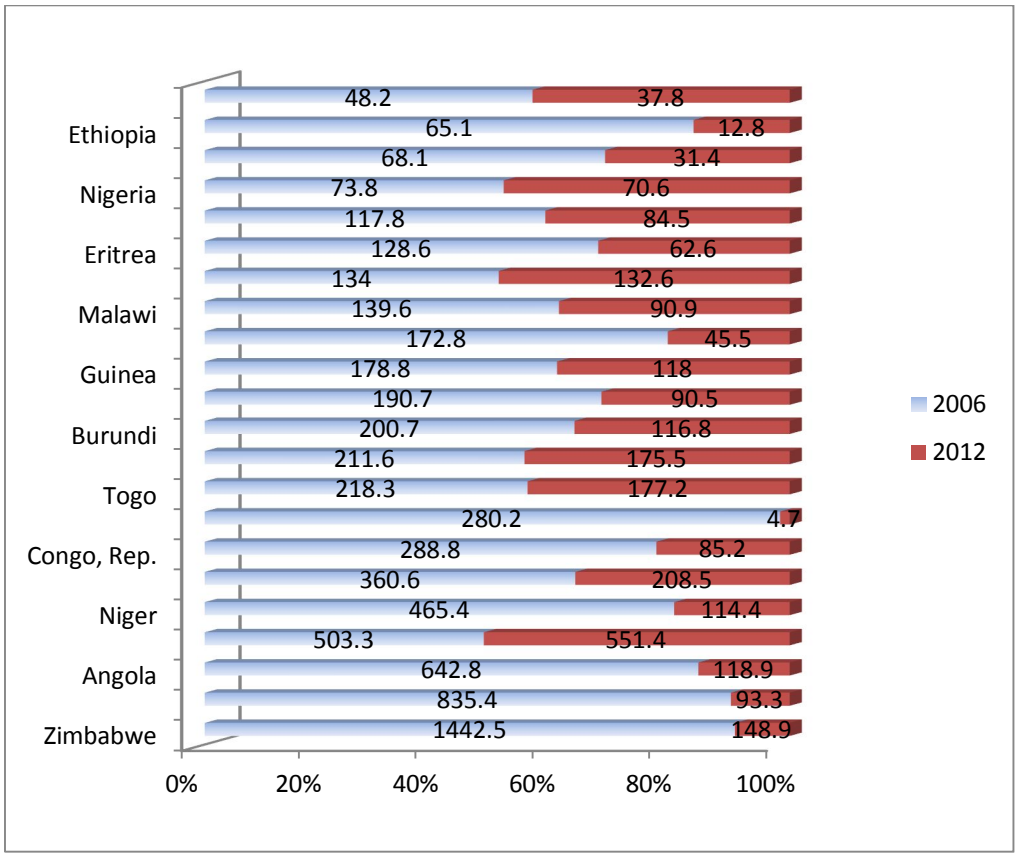
Figure 4: Procedures to start a business as of 2012



Source: World, Doing Business Report 2012

At the same time, starting a business requires procedures costs, known as starting costs, which captures all official and additional fees for legal and professional services involved in incorporating a business, and is measured as a percentage of the economy's income per capita. In this area also, many countries have been able to make some improvements from 2006 to 2012, especially Rwanda and Ethiopia. However, it is still extremely expensive to start a business in countries such as D.R. Congo, Nigeria, Central African Republic, and Cote d'Ivoire (figure 5).

Figure 5: Cost to start a business (% of income per capita) in SSAFS (2006-2012)



Source: World Bank

As highlighted earlier, some countries have been able to make considerable progress in terms of Business regulation. However, the question remains whether these improvements achieved have had an impact on Foreign Investment.

2.3.2. Case studies of doing business regulation in some selected Sub-Saharan African Fragile States (2006-2011)

1. Rwanda

The Republic of Rwanda is a country located in Eastern Sub-Saharan African Region. With a population estimated to approximately 10.9 million (2012), and a GDP per capita of $570, Rwanda is classified as a low-income Country.

Rwanda has emerged from years of civil conflict and political instability fueled by the Genocide in 1994, and has been able to implement tremendous business regulation reforms, which, as presented by the World Bank (2013), "has transformed the life of the private sector and made it notably easier to do business (see table 4). Consequently, the World Bank (2013) accredits the increase in GDP between 2006 and 2011 to sustained expansion of exports, domestic investment, and higher inflows of Foreign Direct Investment, in addition to a number of structural and institutional reforms implemented over the same period.

Table 4: Changes in some selected Doing Business indicators and FDI in Rwanda (2006-2011)

	2006	2007	2008	2009	2010	2011
FDI Inflow (million USD)	112.3	671.4	1033.5	118.7	42.3	106
FDI Inflow (% of GDP)	0.4	1.8	2.2	2.3	0.8	1.7
Ease of Doing Business Rank	139					48
Time required to start a business (days)	16	16	14	3	3	3
Procedures required to start a business	9	9	8	2	2	2
Cost to start a business (% of Income per capita)	1883	1515	1089	10.1	8.8	4.7
Time To Enforce Contract (days)	310	310	310	310	260	230
Procedures to Enforce contract (number)	27	27	24	24	24	24

Source: World Bank

As can be observed from this table, impressive business regulatory reforms, especially since 2008, have enhanced the business environment in Rwanda. For instance, launching a company takes only two procedures and three days, with a minimum capital of 4.5 percent required to start a business.

Consequently, in 2012, Rwanda is ranked at 45th out of 183 economies, which means an increase of 91 points compared to 2006, in other words, the highest Sub-Saharan African Rank. In addition, one of the most tremendous improvement concerns the cost of starting a business, which was 1883 % of income per capita in 2006, and decreased to 47% in 2011. That is, the cheapest place for starting a business in the entire Sub-Saharan Region. Further, the fact that there are not legal ownership restrictions on the majority

of sectors makes Rwanda one of the most open countries to foreign equity ownership.

In addition, the country has recorded some important improvement regarding the control of corruption. According to the "Heritage Foundation Index of Economic Freedom", Rwanda is ranked 48th in 2013, while it was at the 132nd position in 2006, and 85th in 2011. That is, one of the least corrupt countries in the entire Sub-Saharan Region.

Despite these improvements however, the government currently in place in Rwanda, seen as authoritarian, is not qualified to provide strong protection for property rights or insure respect for the rule of law, given the fact that the judiciary remains vulnerable to political interference.

2. Ethiopia

Ethiopia is a country located in East Sub-Saharan African Region. And until 2008, a United Nations peacekeeping mission was established on the border with Eritrea, following the war between the two countries in early 1990s. Besides, the current ruling party[5], in power since 1991, is described as authoritarian.

In addition, with a population estimated about 85 million (2012) and GDP per capita income of US $370, Ethiopia is the second-most populous country in Sub-Saharan Africa and one of the world's poorest countries. At the same time, the country has experienced strong economic growth since the middle of

[5] The Ethiopian People's Revolutionary Democratic Front (EPRDF)

the last decade, with Gross domestic product (GDP) growth averaging 8.5% per year. However, despite its relatively good ranking among the fragile states in terms of business regulation, Ethiopia's overall Doing Business 2011 ranking was 128 out of 183 economies, an overall score of 27 points lower compared to 2006, reflecting a remarkable increase in costs for starting a business (table 5).

Table 5: Changes in some selected Doing Business indicators and FDI in Ethiopia (2006-2011)

	2006	2007	2008	2009	2010	2011
FDI Inflow (million USD)	545.3	222	108.5	221.5	288.3	626.5
FDI Inflow (% of GDP)	3.6	1.2	0.4	0.8	1.1	2.1
Ease of Doing Business Rank	101					128
Time required to start a business (days)	18	18	18	15	15	15
Procedures required to start a business	9	9	9	9	9	9
Cost to start a business (% of Income per capita)	45.9	41.3	29.8	267.5	199.8	181.2
Time To Enforce Contract (days)	420	690	690	690	620	620
Procedures to Enforce contract (number)	30	30	39	39	37	37

Source: World Bank

Ethiopia is considered, with countries including Rwanda and Kenya, as one of the business-friendliest environments among Sub-Saharan African Fragile States. Yet, as can be observed from this table, although establishing a

business has become less time-consuming, the overall Ease of doing business ranking has declined between 2006 and 2011, reflecting other regulatory requirements that remain burdensome and opaque. For instance, the minimum capital required to start a business in 2011, is over three times the 2006 level.

In addition, law enforcement is described as weak, given the judicial system which is underdeveloped and still vulnerable to political interference on one hand. On the other hand, the Ethiopian Government has not made progress in terms of control of corruption, which further undermines the foundations of a reliable business environment.

3. Kenya

Located in the East Sub-Saharan Africa, with a population of approximately 41.6 million (2011), Kenya has had a long history of economic leadership in the Region. However, this economic leadership, has been undermined by poor economic policies, low domestic and foreign investment and slow growth recorded in the 1990s and early 2000s UNCTAD (2005), and which, combined with growing problems of corruption and governance, have discouraged the relative level of inflows of FDI. As can be observed from table 6, FDI inflows as a percentage of GDP represented less than 3% between 2006 and 2011.

In addition, Kenya has undergone widespread violence following the 2007 election, which caused the death of hundreds of people, and might have had a negative impact on the country's potential of attracting FDI. Furthermore, the World Bank's Business Environment Snapshots point out that Kenya restricts

foreign ownership in more sectors than most other Sub-Saharan African economies covered by the Investing Across Borders [6]. In the Telecommunications sector for instance, Foreign capital participation is limited to a maximum of 70%, whereas the regional average is about 84.1%. Also, in Insurance and Transport sectors, Foreign capital participation is limited to respectively 66.7% and 70%, while the Regional averages for both sectors is about 87%.

At the same time, if compared to others Fragile States in the region, Kenya has relatively good business regulation. As illustrated in figure 2, Kenya, ranked at 103rd out of 183 countries (2012), has the second business-friendliest regulations among the Sub-Saharan African Fragile States. And, as shown on table 6, it is relatively less costly and less time-consuming to start a business in Kenya, in comparison with the overall level in most countries in Sub-Saharan Africa.

[6] Investing Across Borders is a World Bank Group initiative comparing regulation of foreign direct investment around the world. It presents quantitative indicators on economies' laws, regulations, and practices affecting how foreign companies invest across sectors, start businesses, access industrial land, and arbitrate commercial disputes.

Table 6: Changes in some selected Doing Business indicators and FDI in Kenya (2006-2011)

	2006	2007	2008	2009	2010	2011
FDI Inflow (million USD)	50.7	72.9	95.6	116.3	178	335.2
FDI Inflow (% of GDP)	0.2	2.7	0.3	0.4	0.6	1
Ease of Doing Business Rank	68					117
Time required to start a business (days)	54	44	30	34	33	33
Procedures required to start a business	13	12	12	12	11	11
Cost to start a business (% of Income per capita)	45	45.9	39.6	44.4	46.6	45
Time To Enforce Contract (days)	360	360	465	465	465	465
Procedures to Enforce contract (number)	25	25	44	44	40	40

Source: World Bank

With thirty-three days and eleven procedures required, same for both domestic and foreign-owned limited liability companies, it is relatively faster to start a business in Kenya than in the regional average in the Sub-Saharan African Region, particularly if compared to the rest of Fragile States.

4. D.R. Congo

Located in the center of the African continent, with a land size of about 2,345,409 square kilometers, and a population of approximately 70 million inhabitants, the Democratic Republic of Congo is the largest country in sub-Saharan Africa.

With its immense extraordinary agricultural and mineral resources, the Democratic Republic of Congo has the potential to become one of Africa's richest countries and one of the continent's key engines for growth (World

Bank). However, after endless years of civil conflicts and political turbulence, successive governments have not been able to implement social and economic policies that could put the country on the path of socio-economic development. Today, according to the Human Development Index, the D.R. Congo is the poorest country in the World, with a GNI per capita of approximately $190 (2011).

This situation, combined with the deterioration of public institutions, has contributed to discourage foreign investment. For instance, in the 1990s, the inflow of FDI in D.R. Congo was either negative or represented less than $11 million (UNCTAD). But, although a large number of foreign investments have been registered since 2006, resulting from improvements in the Congo's business environment, much more remains to be done, as can be observed on table 7.

Table 7: Changes in some selected Doing Business indicators and FDI in DRC (2006-2011)

	2006	2007	2008	2009	2010	2011
FDI Inflow (million USD)	237.7	1793.7	1672.7	-278	2728	1596
FDI Inflow (% of GDP)	2.7	18	14.3	-2.481	20.8	10.2
Ease of Doing Business Rank	155					180
Time required to start a business (days)	133	133	133	127	84	65
Procedures required to start a business	14	14	14	14	10	10
Cost to start a business (% of Income per capita)	1076.9	1025.7	935.4	847.6	735.1	551.1
Time To Enforce Contract (days)	909	685	685	645	625	625
Procedures to Enforce contract (number)	51	51	43	43	43	43

Source: World Bank

As table 7 illustrates, on one hand, the Democratic Republic of Congo is one of the worst places for doing business in the world. Its overall Ease of Doing Business rank in 2011 is 180th out of 183 economies, which means, a 25 points decrease compared with 2006. This decrease reflects the country's poor regulation in terms of most Doing Business indicators, and compared to progress other countries have been able to make. For instance, as figure 5 also illustrates, the cost for starting a business in D.R. Congo is the highest not only among fragile states, but also in the entire Sub-Saharan African Region. In addition, as for many Sub-Saharan African Countries, the judiciary remains

vulnerable to political interference, which makes it difficult to provide strong protection for property rights or insure respect for the rule of law.

On the other hand, some improvements, although not significant have been recorded in terms of time and cost to start a business in D.R. Congo. For instance, in 2006, it required over four months (133 days) and fourteen procedures to start a business, whereas in 2011 and 2012, it takes only sixty-five days and ten procedures.

Finally, although the FDI inflow in D.R. Congo is relatively higher compared to countries such as Kenya, Rwanda or Ethiopia, and despite deficient business regulation, we consider it to be far below the country's potential to attract foreign investment. In other words, the overall poor investment regulation, combined with dysfunctioning institutions[7] and high level of corruption are disincentives to prospective foreign investors.

5. Congo, Rep.

In the Central African Region, with low population density estimated about 4.1 million (2011) distributed over a surface area of 342.000 km2, the Republic of Congo has experienced notable GDP growth and stable inflation in recent years (World Bank). This favorable macroeconomic situation combined with important oil reserves led to a significant flow of foreign investment over the last decade (see table 8).

[7] According to the World Bank's Governance Indicators (2010), the Democratic Republic of Congo is below the 10th percentile for all indicators.

This favorable economic context follows three deadly civil wars between 1993 and 1999, and through which, the current President, Denis Sassou-Nguesso Sassou-Nguesso seized power. Further, between 2000 and 2007, several rebel groups have been operating in some parts of the country, before many of them turned to banditry and criminality. Moreover, the civil wars left the judiciary and the country's institutions[8] subject to bribery, whereas, as pointed out in the 2013 Index of Economic Freedom, corruption and poor protection of property rights discourage entrepreneurial activity, undermining prospects for long-term economic expansion. In addition, the rule of law is weak, and the judicial system remains susceptible to substantial political interference.

Given this context, Congo has not made progress in terms of Doing Business Regulation over recent years, and remains one of the least Business-friendliest countries in the world. In Doing Business 2011, the Republic of Congo is ranked 184th out of 183 economies, recording a 36 points decline compared with 2006. This decrease, as shown on table 8, reflects some poor regulation compared with improvements other countries have been able to achieve.

[8] In the World Bank's Worldwide Governance Indicators report, Republic of Congo is at the 10th percentile or below for the Government Effectiveness and Regulatory Quality indicators

Table 8: Changes in some selected Doing Business indicators and FDI in Congo (2006-2011)

	2006	2007	2008	2009	2010	2011
FDI Inflow (million USD)	1487.7	2638.4	2525.7	1661.6	2208.9	2930.9
FDI Inflow (% of GDP)	19.2	31.4	21.4	19.4	18.4	20.3
Ease of Doing Business Rank	148					184
Time required to start a business (days)	37	37	161	161	161	161
Procedures required to start a business	11	11	11	11	11	11
Cost to start a business (% of Income per capita)	139.9	150.1	106.4	86.5	111.4	85.2
Time To Enforce Contract (days)	560	460	460	560	560	560
Procedures to Enforce contract (number)	47	29	34	44	44	44

Source: World Bank

As shown on table 8, it is more time consuming to start a business in 2011 than in 2006. In other words, the time required to start a business in 2011 has increased over three times the level of 5 years earlier.

Therefore, the increase in FDI inflow between 2006 and 2011, despite the country's poor business regulation over the same period brings again the question whether Foreign Investment is influenced by the World Bank's Doing Business Regulation.

6. Chad

Ranked 166th out of 167 countries on the Economist Intelligence Unit's Democracy Index[9], Chad is one of the world's least democratic countries, and still suffer from political instability and conflict arising mainly from tensions between various religious and ethnic factions (World Bank).

Moreover, although since the country has become an oil producing nation, GDP per capita has risen to about US$225 in 2003 to US$823 in 2011, Chad still faces poverty and lags far behind many other developing countries in terms of economic and human development. For instance, the country is ranked 163rd out of 169 countries on the 2010 United Nations Development Program (UNDP) Human Development Index, making it one of the world's poorest countries.

At the same, as already pointed out, evolutions in the oil sector have been the major driver for Chad's GDP growth rates since 2003, and also for foreign investment, which percent in GDP has doubled by more than fifteen times between 2007 and 2011 (see table 9).

The increase in FDI inflow has been possible despite the country's poor business regulation. As shown on table 9 and illustrated in figure 3, it takes longer to start a business in Chad than in most Sub-Saharan fragile states. Further, the minimum requirement or cost for starting a business exceeds

[9] The Economist Intelligence Unit is a private business based in the United Kingdom, and that measures the state of democracy in 167 countries, of which 166 are sovereign states and 165 are United Nations member states. The index is based on 60 indicators grouped in five different categories: electoral process and pluralism, civil liberties, functioning of government, political participation, and political culture.

more than two times the average level of annual income, which means, one of the highest in Sub-Saharan Africa.

In addition, as can be observed from table 9, since 2006, Chad has not made progress in terms of many indicators, including time and procedures required and cost to start a business, time and procedures to enforce contract, as well as many other indicators not mentioned on table 9. Consequently, in Doing Business 2011, the country is ranked 183rd out of 183 economies.

Table 9: Changes in some selected Doing Business indicators and FDI in Chad (2006-2011)

	2006	2007	2008	2009	2010	2011
FDI Inflow (million USD)	-279.2	-69.5	233.6	1105.5	1999.7	1855
FDI Inflow (% of GDP)	-4.6	-1	2.8	15.6	22.7	19.6
Ease of Doing Business Rank	152					185
Time required to start a business (days)	64	64	64	64	64	64
Procedures required to start a business	13	13	13	13	13	11
Cost to start a business (% of Income per capita)	241.6	273.3	253.3	246.4	226.9	208.5
Time To Enforce Contract (days)	526	743	743	743	743	743
Procedures to Enforce contract (number)	52	52	41	41	41	41

Source: world Bank

As we have observed, a higher Ease of Doing Business rank is not necessarily accompanied with greater FDI inflows, on one hand. On the other hand, poor performing countries in terms of Doing Business Regulation, but with significant reserves of natural resources, such as the Congo Republic, Chad and D.R. Congo, capture more important inflow of FDI. That is, the Doing Business Regulations do not impact foreign investment. The following section, therefore, will briefly examine the previous studies on determinants of FDI, including those that have looked upon the link between the Doing Business Indicators and Foreign Investments.

III. LITERATURE REVIEW

As already argued, a large body of the literature has looked at the question "what the determinants of FDI are?". On one hand, some studies explore the major determinants of FDI, such as GDP, GDP/capita, abundance of natural resources, cost of production, regional trade agreements (Peter Nunnenkamp, 2002; Bruce A. Blonigen and Jeremy Piger, 2011). And on the other hand, others emphasize the enabling framework based on variables such as favorable legislation, openness to foreigners, quality of institutions, as major determinant to FDI (Agnes Benassy-Quere at al., 2007; Ruhr and Ryan, 2005; Blanchet 2006; Frank L. Bartels, Stefen Kratzsch and Markus Eicher, 2008; Pravin Jadhav and Vijaya Katti, 2012).

For example, a study conducted by Bruce A. Blonigen and Jeremy Piger (2011) suggests that traditional variables such as GDP, GDP/capita, abundance of natural resources, cost of production, play an important role in determining FDI. In turn, they find factors such as multilateral trade openness, host country's business costs, host-country infrastructures and institutions less important in determining FDI.

Besides, other authors studied the effects on FDI of both "traditional" variables and quality of institutions. For instance, Elizabeth Asiedu (2006) found that FDI in South-Saharan African Countries is largely driven by natural resources and market size. She also highlighted the fact that three

largest recipients of FDI in the region were countries with huge reserves of natural resources (Angola, Nigeria and South Africa). At the same time, she emphasized the importance of institutions (efficient legal system, good investment framework) in attracting FDI. Another study, conducted by Kusi Hornberger (2011) also, although confirming the power of the size and growth of markets in attracting FDI, emphasizes the importance of investor-friendly regulations and strong institutions in boosting FDI. All in all, such conclusions confirm why some countries not traditionally known for large reserves of natural resources, for example Ghana, Ethiopia, Kenya, also attract more foreign investment, with Transnational companies investing billions of dollars in many projects.

Moreover, other studies, on the role of institutions, in terms of governance, control of corruption, rule of law, strength of the legal system, and macroeconomic policy, highlight some interesting findings, for instance:

- Agnes Benassy-Quere, Maylis Coupet and Thierry Mayer (2007), found good governance to be positively associated with foreign investments; and poor institutions and certain forms of uncertainty including policy reversals, weak enforcement property rights, and weak legal system to be negatively associated with FDI

- Pravin Jadhav and Vijaya Katti (2012), studied the impact of inflation rate, political stability, government effectiveness, control of corruption, regulatory quality and rule of law, on FDI in the economies of Brazil, Russia, India, China and South Africa, from

2000 to 2010, and concluded that government effectiveness and regulatory quality are positively related to FDI inflow in these countries, while the impact of political stability, accountability, and control of corruption is weak.

- Kratzch and Markus Eisher (2008), examined the determinants of FDI in relation to location factors in South-Saharan Africa, and concluded that foreign firms are primarily concerned with political economy, and also international trade agreements.

- P. Walsh and Jiangyan (2010), found that judicial independence and labor market flexibility are significantly associated with FDI inflows.

As can be seen, most studies that explored the determinants of foreign direct investments focused on traditional factors including GDP, GDP/capita, abundance of natural resources, cost of production, regional trade agreements, and quality of institutions, on one hand. On the other hand, for about a decade, as highlighted in the previous section, the regulatory framework based on the Doing Business Indicators of the World Bank has been shown to be an important element in the policy debate among most countries in the Sub-Saharan African Region. In other words, the interest of so many sub-Saharan governments to improve their countries Doing Business ranking raises the question: do Doing Business Indicators have an impact on FDI?

Some studies have attempted to answer the question by examining the relative impact of Doing Business Indicators on FDI. The Doing Business Report

(2013) for instance, points out a study based on a cross-country correlation, and which shows that FDI inflows are higher for economies performing better on Doing Business Indicators, even when differences across economies in other factors are taken into account.

Furthermore, a study conducted by Swarnim Wagle (2011), used a set of regulation specific to FDI, such as quality of institutions related to resolving investment disputes, time, procedures and rules required to set up a business, and found FDI to be highly responsive to the number of procedures requested to start a foreign-owned business.

In the same way, some studies have attempted to examine the impact of Doing Business Indicators and the quality of a country's institutions. For instance, Leora Klapper and Inessa Love (2011) used a panel data on the number of new firm registration in 92 countries in order to study the impact of reforms in the registration process (costs, days or procedures, etc.) on new firms' registration. They found that small reforms do not have the intended effect on private sector development, and that countries with relatively weaker business environment require relatively larger reforms in order to impact new firm growth. In contrast, Dinuk Jayasuriya (2011) found that "on average, countries that undertake large-scale reforms relative to other countries do not necessarily attract greater foreign direct investment inflows."

Nonetheless, the World Bank (2011) conducted a research on the relationship between Doing Business Indicators and FDI inflows, using the "distance to

frontier[10]" scores (rather than Doing Business Ranking) in a given year, to explain total FDI inflow in the following year for a sample of about 150 countries included in the Doing Business Report. The study took into account differences in macroeconomic and governance conditions, and found that a better distance to frontier score is significantly associated with larger inflows of FDI (Doing Business Report 2013).

Thereby, our observation about these previous researches on the impact of the Doing Business Indicators on FDI is that they fail to provide evidence of their finding for smaller subsets of economies such as Sub-Saharan African Fragile States.

This thesis attempts to move studies on investment policy and FDI forward in the following ways: it looks into the relationship between a set of Doing Business indicators and FDI inflows in a set of Sub-Saharan African fragile states. Further, it adds to the existing literature by empirically examining the response of FDI to selective Doing Business indicators, namely, Starting a Business (time required to start a business and cost to start a business), Registering Property (time required to register property and cost to register property), and Trading Across Borders (time to import and time to export) in a

[10] The distance to frontier measure is designed to address both shortcomings, complementing the ease of doing business ranking. This measure illustrates the distance of an economy to the "frontier,"and the change in the measure over time shows the extent to which the economy has closed this gap. The frontier is a score derived from the most efficient practice or highest score achieved on each of the component indicators in each Doing Business indicator sets (excluding the employing workers and getting electricity indicators) by any economy since 2005; Whereas The ease of doing business index ranks economies from 1 to 185. For each economy, the ranking is calculated as the simple average of the percentile rankings on each of the 10 topics included in the index in Doing Business 2013: starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts and resolving insolvency. (World Bank)

Set of Sub-Saharan African Countries. More specifically, the objective of this study is to find out the impact of these indicators during the period 2005 to 2011. And finally, from this study, we would be able to see which specific indicator policy is attracting or distracting FDI in those countries, and will therefore be of interest to policy makers in those countries where investment policy reforms are being implemented.

IV. RESEARCH APPROACH

4.1. Hypothesis, methodology and data

We already know that FDI inflows toward a given country are influenced by various factors, and for which several researches have been conducted. This study looks precisely on the widespread tendency toward the improvement of business regulation in most countries in the world, particularly in Sub-Saharan Africa, where foreign investment is argued an important instrument of development. Therefore, it examines the influence of the Doing Business regulations on the motivation of FDI to Sub-Saharan African Fragile states. Consequently, the research questions considered are: Do the Doing Business Indicators have an impact on FDI inflows in Sub-Saharan African Countries? What lesson can the D.R. Congo (and other countries) learn for investment policy reform?

This study is based upon the thesis that although macropolicies and other factors highlighted in the previous section (such as market size, natural resource endowment, factor costs, transportation links, country location, and most of the other fundamentals that determine investor flows) are unquestionably important, the quality of business regulation is a major determinant of FDI. Consequently, the indicators we have chosen to adopt for this study are broadly grounded on the category of policies aimed at eliminating barriers to entrepreneurship (Starting a business: time and cost to

start a business, time and cost to register property), and policies intended to facilitating trade[11] (Time to import and time to export).

Therefore, as we expect each country's change in the selected Doing Business Indicators to have an inverse relationship with FDI, this research will be based on the following assumption:

"Each country's improvement in the selected Doing Business Indicators will have a significant impact on FDI inflows". In other words:

- "A country's relative reduction in the number of days required for starting a business is positively associated with FDI inflows"
- "A country's relative reduction in the cost to start a business (reduction in the cost as a percentage of GNI per capita) is positively associated with FDI inflows"
- "A country's relative reduction in the number of days for registering property is positively associated with FDI inflows"
- "A country's relative reduction in the cost for registering property (reduction in the cost measured in terms of property value) is positively associated with FDI inflows"
- "A country's relative reduction in the number of days required to import is positively associated with FDI inflows"
- "A country's relative reduction in number of days required to export is positively associated with FDI inflows"

We investigate empirically the relationship between these doing business indicators and FDI for a set of 41 sub-Saharan African countries (among which, 15 are considered to be in fragile situation).

[11] It is argued that most of foreign investments in Sub-Saharan African countries are export-oriented. Especially those focused on the exploitation of natural resources.

Therefore, the following countries will be investigated (See table 10):

Table 10: Country Sample and Some Indicators (2011)

Country Name	Real GDP	FDI inflows	GDP per capita	Population	Ease of Doing Business Index
Angola*	82470.4	-5585.5	5318.04	19618432	174
Benin	6558.4	118.5	801.64	9099922	176
Botswana	14857.3	587.1	8532.62	2030738	58
Burkina Faso	8559.2	7.4	612.67	16967845	149
Burundi*	1480.5	1.7	271.24	8575172	172
Cameroon*	23648.6	360.0	1259.87	20030362	156
Cape Verde	1609.0	93.1	3797.83	500585	121
Central African Rep. *	1983.8	109.2	489.15	4486837	183
Chad*	8166.4	1855.0	918.09	11525496	185
Comoros*	541.2	6.8	809.57	753943	158
Congo, Dem. Rep. *	13230.4	1686.9	231.02	67757577	180
Congo, Rep. *	10774.8	2930.9	3484.66	4139748	184
Cote d'Ivoire*	22780.3	344.2	1194.56	20152894	177
Equatorial Guinea	11803.4	737.1	27477.71	720213	159
Ethiopia*	26928.2	206.1	356.97	84734262	125
Gabon	18771.3	728.0	11113.89	1534262	165
Gambia, The	1000.9	36.0	505.76	1776103	143
Ghana	32519.6	3222.3	1570.13	24965816	63
Guinea*	4266.7	1210.8	497.90	10221808	181
Kenya*	32482.7	335.2	808.00	41609728	117
Lesotho	2129.5	52.0	1105.91	2193843	153
Liberia*	873.0	508.0	374.33	4128572	154
Madagascar	8739.2	907.4	465.01	21315135	138
Malawi*	5325.2	56.3	365.45	15380888	151
Mali	9203.8	177.8	683.51	15839538	145
Mauritania	3913.2	45.2	1189.58	3541540	164

Mauritius	9728.6	273.4	8755.37	1286051	24
Mozambique	9532.8	2093.5	533.31	23929708	139
Namibia	11701.1	899.7	5383.26	2324004	81
Rwanda*	5655.4	106.0	582.56	10942950	48
Senegal	12840.6	286.1	1119.36	12767556	162
Sierra Leone*	2063.6	48.7	495.71	5997486	148
South Africa	363703.9	5807.4	8070.03	50586757	41
Sudan*	79479.7	1936.0	1435.13	34318385	140
Swaziland	3927.3	94.8	3830.57	1067773	123
Tanzania	23163.0	1095.4	532.32	46218486	133
Togo*	3162.2	53.8	588.19	6154813	161
Uganda*	17014.7	792.3	487.11	34509205	119
Zambia	16200.9	1981.7	1425.31	13474959	90
Zimbabwe*	7204.3	387.0	757.09	12754378	170

(*) Fragile states

Source: United Nations Conference on Trade and Development (UNCTAD)

This sample of forty-one Sub-Saharan African countries provides a mixture of case studies spanning geographic regions, income groups, and fragile statehood.

This study is based on secondary data, collected from the Doing Business, the United Nations conference on Trade and Development, and the World Bank databases, for a set of forty-one Sub-Saharan countries, and covering the years 2005 to 2011.

4.2. MODEL SPECIFICATION

When investigating the determinants of FDI, different studies propose various models and variables. Consequently, several combinations of factors, including institutional (good governance, control of corruption, etc.) and key macroeconomic variables (GDP growth, real GDP, GDP per capita, inflation rate, exchange rate, unemployment rate, etc.), and other factors (such as country's trade openness, natural resource endowments, etc.) are generally accepted as determining FDI inflows. Moreover, factors such as Real GDP, Real GDP growth, GDP per capita, which measure a country's economic conditions and potential, are usually used as a proxy for market size and growth, critical for FDI.

Thus, many researchers have mostly used those as independent variables (Blonigen 2011; Walsh and Yu, 2010) while FDI inflows, FDI percentage in GDP, and FDI stocks, are generally used as dependent variables.

However, as highlighted in the literature, there is no unanimously accepted theory of FDI. And, since different approaches are adopted and various explanatory variables are included in regressions seeking to measure the impact of the determinants of FDI, the model used in this present paper will specifically test the following variables (Table 11), after controlling for other possible variables which may affect the direction of FDI.

The following table summarizes the variables that will be used in this paper:

Table 11: Summary of selected variables

Dependent Variables	Descriptions	Sources	Expected sign
FDI	Inward Foreign Direct Investment in current US dollars	UNCTAD	-
Independent Variables			
Time to Start a Business	Number of days	Doing Business Database	-
Cost to Start a Business	% of GNI per capita	Doing Business Database	-
Time to Register Property	Number of days	Doing Business Database	-
Cost for Property Registration	% of Property Value	Doing Business Database	-
Time to Import	Number of days to import	Doing Business Database	
Time to Export	Number of days to export	Doing Business Database	-
Control Variables			
Real GDP	In current US Dollars	UNCTAD	+
GDP per capita	In current US Dollars	World Development Indicators	+
Inflation rate	GDP deflator	World Development	-

	(annual %)	Indicators	
Trade openness	Export+Import as % of GDP	World Development Indicators	+
Governance Effectiveness	Percentile rank	world Governance Indicators	+
Natural Resources	Total natural resources rents (GDP)	world Governance Indicators	+
Dummy Variables			
Fragile Statehood	Countries included in the harmonized Fragile States List	Harmonized list of Fragile States	-

The above Doing Business Indicators have been selected to the extent that excess costs and delays imposed on firms can reduce the number of foreign firms seeking to enter a market. In other words, bureaucratic barriers have a negative impact on Foreign Direct Investment. Therefore, we specifically focus on indicators that are more likely to influence investment toward a country at the entry level (time and cost required to start a business and to register new property). Further, we use time rather than the number of procedures, to the extent that both contain similar information in principle and produce similar results in practice. Finally, we use costs rather than any other indicators, to the extent that they exhibit how expensive it is to do business in a given country. We use also the time to import and export, because FDI in

Sub-Saharan countries is mostly export oriented, but also, a larger proportion of materials consumed by firms is imported.

That is, as our hypothesis suggests, we expect an inverse relationship between the inward FDI and the selected Doing Business Indicators. In addition, since there is no unanimously accepted theory on FDI, any empirical studies should adapt a pragmatic approach in selecting the explanatory variables to be included in the regression equation. Consequently, since the present study is based on Doing Business Indicators, the specification of the equation and the choice of variables for this paper are inspired by both empirical literatures on FDI and on recent researches on Doing Business Indicators[12]. Thus, the model we chose to estimate for the present paper has the following form:

$$\boldsymbol{lnFDI_{it} = \beta_1 + \beta_2 lnTSB + \beta_3 ln\mathrm{CSB} + \beta_4 ln\mathrm{TRP} + \beta_5 ln\mathrm{CRP} + \beta_6 ln\mathrm{TIM} + \beta_7 lnTEX + \beta_8\, lnRGDP + \beta_9 lnGDPP + \beta_{10}\, IR + \beta_{11} ln\, TRADE_{t-1} + \beta_{12}\, GE + \beta_{13} lnNR + FS + \varepsilon_{it}}$$

Where:

- FDI = Logarithm of inward FDI stock
- TSB = Logarithm of Time (days) to start a business
- CSB = Logarithm of Cost (% of income per capita) to start a business
- TRP = Logarithm of Time (days) to complete procedures to register property

[12] For instance, some interesting researches on the relationship between FDI and the Doing Business Indicators have been conducted by Jarasuriya (2011), Eiffert (2009), Djankov (2006), Leora Klapper and Inessa Love (2011), and Busse (2008).

- CRP = Logarithm of Cost (% of property value) to register property
- TIM = Logarithm of Time (days) to import
- TEX = Logarithm of Time (days) to export
- RGDP = Logarithm of Real GDP
- GDPP = Logarithm of GDP per capita
- IR = Inflation rate
- TRADE = Logarithm of Trade openness, captured as Export + Import of goods and services as % of GDP
- GE = Governance effectiveness
- NR = Logarithm of Natural Resources (logarithm of the sum of oil rents, natural gas rents, coal rents, mineral rents, and forest rents)
- IR = Inflation rate
- FS = Fragile State Dummy
- $\boldsymbol{\varepsilon_{it}}$ = Error term, is independent and identically distributed (*iid*) across countries and over time and $E(\varepsilon_{it}^2|\mathbf{x}_{it}) = \sigma^2$, for I = countries and T = 7 years.

The explanatory variables contain control variables, namely:

- Real GDP, used as a proxy for market size or host market attractiveness, with an expected positive relationship with FDI;

- GDP per capita, used as a proxy for host country wage level and consumption potential. The expected relationship with FDI is positive,

however ambiguous to the extent that many investments may be directed toward countries with relatively lower labor cost.

- Inflation rate, included as a proxy for macroeconomic policy inadequacies, is expected to have a negative relationship with FDI. In other words, countries with stable macroeconomic conditions are likely to receive higher FDI inflows than volatile economies.

- Governance Effectiveness, used as a proxy for the quality of the host country's institutions and management, represents, as highlighted in several researches, an important determinant for FDI. In other words, a country with higher Governance Effectiveness score is expected to attract more FDI.

- Trade, calculated as the ratio of exports and imports of goods in the gross domestic product (Export+Import/GDP), is used to capture the effect of the host economy's openness and linkage with the global market. It is expected to have a positive relationship with FDI.

- Natural Resources, measured as the total natural resources rents (% GDP), which is the sum of oil rents, natural gas rents, coal rents (hard and soft), forest rents, and mineral rents, is used to capture a country's natural resource export intensity. And a positive correlation is expected between natural resources rents and FDI.
- A dummy variable is also used to control for countries in fragile situation.

As already illustrated, the present analysis is limited to inward FDI to 40 Sub-Saharan African Countries over the period 2005 to 2011. And all variables, except Inflation Rate and Governance Effectiveness have been log-linearized. Further, in order to avoid endogeneity problems in the model to be tested, Trade Openness has been lagged one-year period.

In order to test the model, application of simple OLS estimation method might provide biased estimators, because of the existence of potential unobserved heterogeneity or individual effects in the sample of countries. Therefore, a Hausman test has been conducted in order to decide the appropriate estimation technique (either fixed or random effect estimator).

Results of Hausman test suggest that a random effects model must be conducted in order to estimate the model. That is, the null hypothesis is formulated as follows: "the unobserved effects are uncorrelated with the explanatory variables".

In addition, results in table 12 exclude fragile state dummy variables, to the extent that after running the random effect model, its p-value suggested that it was not significant in the model. In other words, fragile statehood dummy is insignificant when undertaking the Hausman test using the Fragile State dummy for the set of Sub-Saharan African countries used in this panel data analysis. Therefore, we decided that it was inappropriate to keep the fragile states dummy in the model.

The construction of the present thesis' model has encountered some problems stemming from the narrow scope of the control factors. In other words, it is impossible to include every factor that influences FDI in the model. Moreover, review of the past literature has shown that the macroeconomic terms chosen as control variables are quite significant to the level of FDI inflow. Results of the random effects estimation are presented in the following section.

V. EMPIRICAL RESULTS AND IMPLICATIONS

5.1. Results

As mentioned earlier in this paper, most of Sub-Saharan African countries have been engaged into reforms aimed at improving their business regulations in order to attract more private investments (foreign or local investments), and which, for over a decade, are measured by the World Bank's Ease of Doing Business Indicators. At the same time, as highlighted in the literature review, various factors are likely to influence the direction of foreign investments toward a country. Therefore, by estimating the impact of the Doing Business Indicators on FDI, and by controlling other variables, we have seen, as expected, that there is an inverse relationship between all the selected Doing Business Indicators and inward FDI in Sub-Saharan African countries.

Also, we have seen that the model is acceptable with R-Square equal to 0.823. This result suggests that the fraction of the variation in inward FDI in Sub-Saharan African Countries is predicted by our selected explanatory variables by 82.3%. Table 12 presents the estimation results using the random effects estimation technique.

Table 12: Parameter Estimates

Variable	DF	Estimate	Standard Error	t Value	Pr > |t|
Intercept***	1	7.581888	0.0335	226.14	<.0001
TSB*	1	−0.00014	0.000076	−1.84	0.067
CSB	1	−0.00003	0.000056	−0.51	0.6126
TRP	1	−0.00005	0.000096	−0.57	0.5723
CRP**	1	−0.0002	0.000094	−2.11	0.0358
TIM	1	−0.00018	0.000347	−0.51	0.6111
TEX	1	−0.00023	0.000434	−0.53	0.5963
RGDP***	1	0.003949	0.000455	8.68	<.0001
GDPP	1	−0.00036	0.000537	−0.67	0.5027
IR	1	−4.10E−06	3.48E−06	−1.18	0.2398
GE**	1	−0.00002	6.89E−06	−2.57	0.0108
Trade**	1	0.003893	0.00185	2.1	0.0367
NR*	1	−0.03685	0.0187	−1.97	0.05

*** Statistically significant at 10%**
**** Statistically significant at 5%**
***** Statistically significant at 1%**

5.1.1. FDI and Doing Business Indicators

Table 12 presents the relationship between the full sets of explanatory variables and inward FDI. As it was expected, the coefficients of correlation between inward FDI and the selected Doing Business Indicators are negative, which suggests that countries with unfavorable business rules and regulation are less successful in attracting FDI.

Importantly, the coefficients of the *days required to start a business* and the *cost for property registration* are both negative and significant at respectively 10% and 5% level. This suggests that, on average, a 1% decrease in the *number of days required for starting a business* and in the *cost for registering*

property will increase the inflow of FDI toward Sub-Saharan African Countries by respectively 0.00014 % and 0.0002%.

Furthermore, the coefficient of correlation between the *number of days required for starting a business* and *the cost for property registration* appears to be negative and statistically significant, compared to the remaining four indicators, for which coefficients turn out to be insignificant.

5.1.2. FDI and Control Variables

Table 12 also presents the coefficient of correlation between inward FDI and selected control variables:

- As expected, *Real GDP* positively and significantly affect the inflow of FDI in Sub-Saharan countries at 1% level. This suggests that, on average, a 1% increase in the GDP size of the host Sub-Saharan African Economy increases the inward of FDI by 0.003949%. Moreover, results suggest that *Real GDP* appears to be a good instrument for measuring the direction of FDI in Sub-Saharan Africa.
- In contrast, *GDP per capita,* surprisingly, with an unexpected negative sign, has an insignificant correlation with inward FDI. This may be explained by the fact that several foreign investments in Sub-Saharan Africa are likely to be directed toward countries with relatively lower labor cost.
- Another finding is that no evidence has been found for *inflation rate* to significantly impact inward FDI toward Sub-Saharan African countries, despite the negative sign of the correlation coefficient.

- *Governance Effectiveness*, unexpectedly, appears to be a negative and statistically significant factor for FDI in Sub-Saharan Africa, at 5% level.[13] A plausible explanation for this would be that foreign investors in Sub-Saharan Africa are less concerned about the quality of institutions.
- *Trade Openness* has a positive and significant effect on inward FDI, suggesting that, on average, a 1% improvement in terms of trade openness increases inward FDI by 0.003893%. This result suggests that trade liberalization will generate more FDI in Sub-Saharan Africa.
- Another surprising finding is that the existence of natural resources significantly and negatively impact inward FDI toward Sub-Saharan countries. This result is not in line with the finding in Moses Muse Sichei and Godbertha Kinyondo (2012), Elisabeth Asiedu (2001), who found that "Countries with natural resources tend to attract resource-seeking FDI than those without"[14]. In contrast, Elizabeth Asiedu and Donald Lien (2011) found a significant and negative association between natural resources and FDI, and provide the following explanations: first, among other reasons, a higher share of fuel and minerals in total merchandise exports implies less trade

[13] Although this finding goes far from our expectation, it appears to be consistent with the reality on the ground. For instance, foreign investors are less concerned about government legitimacy in Sub-Saharan African countries. To illustrate, the majority of Sub-Saharan African countries lack legitimate governments that are elected by their people in fair and free elections

[14] As already pointed out, many studies proved that FDI in Sub-Saharan Africa are directed toward countries rich in natural resources. For instance, countries rich in natural resources such as Angola, Nigeria, Congo, Sudan, Guinea, Chad, have received the most significant portion of all incoming FDI to Sub-Saharan Africa between 2005 and 2011.

diversification, which in turn makes a country more vulnerable to external shocks. All these factors generate macroeconomic instability and therefore reduce FDI. Second, and more importantly, they point out the fact that "*while natural resource exploration requires a large initial capital outlay, the continuing operations demand a small cash flow. Thus, after the initial phase, FDI may be staggered"*.

While we agree with these explanations, we further point out the fact that excessive business regulations, to some extent, reduce the potential to attract foreign firms, regardless of a country's endowment in natural resources. For instance, the Democratic Republic of Congo, despite its immense resources, attracts fewer FDI due, among other reasons, to its poor business regulations.

All in all, the most important problem encountered in our results result from the insignificant correlation between four out of the six selected Doing Business Indicators and inward FDI in Sub-Saharan African Countries. However, does this imply that we should draw the conclusion that Sub-Saharan African governments should solely focus on *Time to Start a Business* and *Cost to Register Property*, and ignore the remaining four Indicators in order to attract FDI?

We do not share such idea to the extent that the results of this paper have been drawn using a panel of 40 Sub-Saharan African countries, for a period of seven years. Thus, the results might have been affected by:

- Small sample (not enough observations)

- Problem of approximation: for instance, there might be problems exacerbated by the possibility of a disconnection between policy reported and policy actually enforced. In addition, there might be some error problems with the collection of data in each country.

Consequently, a longer time period with richer data will help fix this problem, and provide richer tools to improve the business regulations in Sub-Saharan African Countries. However, some lessons can be drawn from our findings.

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5.2. Policy Implications

According to the results of this study's panel data analysis, FDI to a given Sub-Saharan African Country will increase in proportion to the improvement in Doing Business Indicators, and decrease in response to poor Doing Business Regulations. Therefore, in order for a country to attract more FDI, it is desirable that it emphasizes on reducing the number of days to start a business and lowering the cost (in terms of value of the property) for registering property. In addition, the negative correlation coefficients of the remaining four Indicators suggest that the reduction in respectively, the Time to Export, the Time to Import, the Time for Property Registration, and Cost for Starting a Business, coupled with sound macroeconomic policies, will significantly boost a country's attraction for foreign investors. Moreover, although some studies point out natural resource to be a major determinant for FDI, findings from the present study suggest that without effective business regulations, adequate trade liberalization, and sound macroeconomic policies,

even Sub-Saharan African Countries well-endowed in natural resources will not be able to attract larger FDI.

5.3. Policy Implications for the Democratic Republic of Congo

The Democratic Republic of Congo, one of the Africa's poorest countries, turns out to be among the ten largest FDI recipients in Sub-Saharan Africa. This is because, as already pointed out, investments in the Region are directed toward the exploitation of natural resources (forest, minerals, oils, etc.), and for which the D.R. Congo is known to be one of the most endowed countries. It is unfortunate however that Congo, despite its huge natural resources, attract foreign investments under its potential. The reason resides in the country's poor business regulation, as highlighted in all the Ease of Doing Business reports released in the past recent years[15]. This means that no consistent efforts are made in order to change this state of things.

As, pointed out in the Doing Business Report (2013)[16], "*for policy makers trying to improve their economy's regulatory environment for business, a good place to start is to find out how it compares with the regulatory environment in other economies*". Policy makers in D.R. Congo should therefore look at how other countries have been able to implement sound

[15] For instance, since the World Bank publishes its Ease of Doing Business Report, the D.R. Congo is ranked at the buttom.
[16] See the Doing Business report 2013, Economy profile: Democratic Republic of congo. P.7

business regulations, not only in the Sub-Saharan African Region, but also in other regions in the world.

It is Unfortunate however that in the last Doing Business Report, released in 2013, D.R. Congo ranks far below the regional (Sub-Saharan Africa) average, in terms of the Ease of Doing Business aggregate ranking[17]. Therefore, improving the business regulations is crucial for attracting foreign investments to the extent that a high ranking means that the government has created a regulatory environment conducive to operating a business.

And, based on the findings of this paper, there is an opportunity to first, look at what the country has achieved so far, in terms of Doing Business Indicators that have been selected for this study, and second, make some policy recommendations for business policymakers in D.R. Congo:

First, in terms of C*ost for Property Registration and Time for Starting a Business*, which are found to be significant determinants for FDI according to this study, D.R. Congo, has not made substantial progress, if compared to other countries in the region. For instance, in 2013, it takes 38 days to start a business (133 days in 2005) and to register a property, it requires 6.7% of the property value (9.9% in 2005)[18], whereas, in countries such as Rwanda, it takes only 3 days for starting a business and only 5.6% is required for property registration in 2013. Consequently, we suggest that an emphasis must be put on further and substantial reduction of the number of days for

[17] D.R. Congo stands at the 149 position out of 185 economies, whereas the Sub-Saharan average ranking is 123.

[18] According to recent developments, from May 2013, it takes less than 5 days for starting a business in D.R. Congo.

starting a business. Also, reforms should stress on reducing the cost for property registration.

Second, as the results of this study establish an inverse relationship between all the Doing Business Indicators and inward FDI, reforms on Business Regulations in the Democratic Republic of Congo should also stress on reducing, in respect of priority, the number of days to export, the number of days to import, the time for property registration, and the cost for starting a business[19].

Finally, besides the business regulations, the government should also emphasize on the implementation of sound macroeconomic policies, including trade liberalization, in order to attract more FDI.

[19] In terms of time to import and export, D.R. Congo has not made any progress, compared to other countries, considered so far among best performers in terms of Business Regulations in the Region. For instance, in Botswana, in takes less than 28 days to export, and about 40 days to import (Doing Business Report 2012); in Rwanda, it takes respectively 29 and 31 days, whereas, in the Democratic Republic of Congo, it takes over 44 days to export, and 63 to import.

VI. CONCLUSION

The purpose of this paper was to study the impact of business regulations on foreign direct investment in Sub-Saharan African Countries, over the period 2005-2011. For that matter, we have selected six Doing Business Indicators, namely, the *number of days required for starting a business*, the *cost for starting a business*, the *number of days for registering property,* the *cost for registering property*, the *number of days to import*, and the *number of days to export*.

At the same time, doing such a study requires taking into account other factors that are likely to influence decisions of foreign investors to invest in one country or another. Consequently, this present paper has selected a subset of variables including the host country's market size and the potential demand for output (real GDP), the labor cost (GDP per capita), the macroeconomic stability (inflation rate), the quality of institutions or good governance (governance effectiveness), the trade openness (the sum of export and import as percentage of GDP), and natural resources (total natural resources rents). Further, for a better estimation, the study used only within country variation in the selected Doing Business Indicators, and in macroeconomic and governance variables.

Consequently, one of the key findings in light of the above analysis is that foreign direct investment responds positively to improvement in doing business indicators. In other words, an inverse relationship is established between FDI and the DBI, suggesting that, in a recipient country, the lesser

the time it takes for investors to start their business, and the fewer the cost to register properties, the larger the amount of foreign investments will be received.

In addition, the findings have also proved the hypothesis that improvement in Ease of Doing Business Indicators is associated with an increase in the amount of FDI received by the host country. This argument is supported by the negative relationship between all the Doing Business indicators selected for the present study, and inward FDI in Sub-Saharan African Countries.

Another finding is that foreign investments are concerned about the size of recipient country's economy. In other words, the larger the GDP, the larger the amount of FDI will be received by the recipient country. In contrast, the association between *GDP per capita* and inward FDI has been found to be negative and insignificant. The reason for this, as highlighted in the previous section, is the fact that foreign investments in developing countries in general, and in Sub-Saharan Africa in particular, are mostly directed toward countries with lower labor costs. Also, *Trade openness* has been found to be a significant determinant for FDI in Sub-Saharan Africa.

The findings have also supported the hypothesis that *governance effectiveness* is not a serious determinant for foreign investments in Sub-Saharan African Countries. At the same time, natural resources have been found to have a negative and significant association with FDI in Sub-Saharan Africa. One explanation, among others provided in this paper, is that excessive business regulations, to some extent, reduce the potential to attract foreign firms, regardless of a country's endowment in natural resources. In other words, a

country has to have effective business regulations, a considerable market size, and sound macroeconomic policies that can, combined with natural resources, attract more foreign direct investment. Moreover, these findings also suggest that, even countries that lack natural resources can attract FDI by improving their business regulations.

Accordingly, in light of our study, we argue that efficient business regulations, especially the *time for starting a business* and the *cost for property registration* are found to have critical roles in foreign investors' decisions. Thus, regulations focused on making it faster to start a business, and lowering the cost for property registration, added to sound macroeconomic policies, and trade liberalization, would increase FDI inflows in Sub-Saharan African Countries, including the D.R. Congo.

Finally, why is there an insignificant correlation between four of the six selected Doing Business Indicators and inward FDI in Sub-Saharan Countries? The most plausible explanation is that this study was based on a small sample, with no sufficient observations, and the fact that the analysis was based upon secondary data, which might have suffered from a problem of approximation, and errors in their collection.

Therefore, we suggest that a longer time period with richer data will help fix this problem, and provide richer tools to improve the business regulations in Sub-Saharan African Countries. Moreover, a more refined study, for instance, on the impact of Doing Business Regulations on foreign direct investment by sector, or by their sources, would have richer policy implications.

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국문초록

사하라 이남 아프리카에서 외국인 직접투자에 대한 연구: 규제가 중요한가?

DR 콩고에 주는 시사점

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그 동안 많은 선행 연구들은 외국인직접투자가 경제성장을 위해 긍정적인 영향을 미친다고 주장하여 왔다. 사하라이남 아프리카 국가의 정부들은 더 많은 민간 투자를 유치하기 위해 노력해왔고 기업 규제환경을 개선하기 위한 개혁을 수행해왔다.

본 연구는 사하라이남 아프리카 국가에서 이러한 정부의 정책이 외국인직접투자에 대해 미치는 영향에 대해 분석하고자 세계은행의 "Ease of Doing business" 지표를 사용하여 양자의 관계를 살펴보았다.

인과관계 분석을 위해 패널분석을 실시하였는데, 확률효과모형을 통해 양자간의 관계를 분석하였다. 종속변수는 외국인직접투자 유입액의 변화로 설정하였고, 독립변수로는 Doing Business Indicators 중에서 사업개시에 소요되는 시간, 사업개시에 소요되는 비용, 재산등록에 소요되는 시간, 재산등록에 소요되는 비용, 수입에 소요되는 시간, 수출에 소요되는 시간 등을 활용하였다. 분석은 사하라이남 아프리카 40 개국을 대상으로 하였다.

연구분석 결과에 따르면, 사업개시에 소요되는 시간과 재산등록에 소요되는 비용이 외국인직접투자액 유입과 통계적으로 유의미한 수준에서 음(−)의 관계에 있었다. 다시 말해, 사업을 시작하는데 필요한 기간을 줄이는 것과 재산등록에 소요되는 비용을 줄일 수 있다면 더 많은 외국인직접투자 유치가 가능할 것으로 판단된다. 그러나 다른 4 개의 독립변수들(사업개시에 소요되는 비용, 재산등록에 소요되는 시간, 수입에 소요되는 시간, 수출에 소요되는 시간)의 경우에도 통계적으로 유의하지는 않았지만 외국인직접투자와 음(−)의 상관관계가 있다는 것을 확인하였다.

이러한 연구결과는 단지 40 개 아프리카, 국가의 7 년치 데이터를 통해서 도출된 결과이기 때문에 해석과 일반화에는 주의가 필요하며, 보다 많은 기간을 포함하는 정교한 연구를 통해서 후속 연구를 수행할 필요가 있다.

주요어: 외국인직접투자, 세계은행 기업환경지수, 기업규제, 사하라이남 아프리카, 패널분석

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