

FDI, DOMESTIC INVESTMENT, AND INCLUSIVE GROWTH IN WAEMU: THE ROLE OF GOVERNANCE

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Abstract: Foreign direct investment (FDI) is an important source of external finance for developing countries. In the West African Economic and Monetary Union (WAEMU) region, FDI has experienced a relatively uneven development in recent years. However, it can have a significant impact on the host economies, including crowding in or displacing domestic investment. The effect of FDI on domestic investment is influenced by a wide range of factors, including competition regime, economic policy, level of technology, performance of domestic firms, and governance.

Keywords: Foreign direct investment (FDI), West African Economic and Monetary Union (WAEMU), Domestic investment, Governance, Crowding in, Crowding out.

1. Introduction

According to UNCTAD³ (2007), Foreign Direct investment is defined as an investment involving a long-term relationship and reflecting a lasting interest control by a resident entity in one economy (foreign direct investor or parent enterprise) in an enterprise resident in an economy other than that of the foreign direct investor (FDI enterprise or affiliate enterprise or foreign affiliate). Foreign direct investment represents an important source of external finance for several developing countries. As regarding the WAEMU area, this investment experienced a relatively uneven development during these last years and reached approximatively 2 billions of dollars in 2016. Even if this amount of foreign direct investments appears weak given the huge financing needs arose for these West African economies, we cannot underestimate their significant and complex impacts on the host economies. Indeed, FDI can crowd in or displace domestic investment and thus lead to a modification of the capital formation and the pace of economic growth. However the effect of FDI on domestic investment may be influenced by a wide range of factors such as competition regime, economic policy, level of technology, performance of domestic firms and especially the state of governance. This latter is defined as the manner in which power is exercised in the management of the country's economic and social resources for development (World Bank Report 1992). In short, the governance tends to affect the nature and the degree of the relationship between FDI and domestic investment. Moreover, one notices also that the mediating effects of governance on the relation between FDI and domestic investment yield ambiguous results in the economic literature.

With regard to this observation, It therefore appears essential to understand the interactions between the governance, FDI and domestic investment in the framework of WAEMU countries, and even more so because they run currently some aggressive policies in favour of the FDI in their development plans. The rest of the paper follows the bellow organization. We first deal with the literature review in section 2. The empirical framework is explored in section 3. The section 4 illustrates the empirical results and interpretations, and then the last section concludes.

2. Literature review

This section will focus on the literature about the impact of governance and its elements on the relationship between FDI and the domestic investment. But For a better understanding, it is useful to reply to these following questions: What is the effect of governance on investment (FDI or domestic investment)? Does FDI crowd in or crowd out domestic investment? How do the governance and FDI interact with domestic investment?

2.1. Governance and Investment

There is a large theoretical and empirical literature that investigates the issue of mechanisms by which governance affects investment. By browsing through the literature, the findings result in some controversy. Contrary to what one might think a priori, the governance does not necessarily contribute positively to the investments. It is customary for most countries in the world to improve their system of governance in order to incite domestic investors and to attract many international investors (Kurul and Yalta, 2017; Yerrabati and Hawkes, 2016; Farla and al., 2013; Adams, 2009; Borensztein and al., 1998). In that regard, Morrissey and Udomkerdmongkol (2012) argued that total or overall investment (FDI and private investment) is higher in countries with good governance. Political instability, corruption and legal uncertainty have a negative and statistically significant impact on domestic investment (Nunnenkamp, 2004; Li et Resnik, 2003; Rogoff and Reinhart 2003; Wei and Wu, 2001). So, it is widely accepted that poor governance leads to an increase in transaction and production costs, and risks that discourage foreign and domestic investors.

But paradoxically, some countries with poor governance (institutionally weak and more risky countries) tend to receive significant FDI flows (Giang, 2017; Wang, 2009; Hausman and fernandez-Arias, 2000). In the same line of thinking, Li and Resnick (2003) pointed out that democratic institutions have ambivalent effects on FDI. A body of arguments may be put forward to explain this situation. In fact, poor governance and high-levels of corruption in a country do however not mean that foreign investors can't secure their interest (Meon and Sekkat, 2005; Li, 2005; Wang, 2009). By offering gifts to local authorities in exchange for favors, foreign multinationals are able often to ensure protection of their property rights or financial benefits.

Several empirical studies attempt to examine the relationship between governance (or its elements) and investment (FDI or private domestic investment). Many authors argue that governance has positive effect on investment. Investigating this topic over 164 countries from 1996 to 2006, Buchanan and al. (2012) proved that institutional quality has a significant and positive impact on FDI. Globerman and Shapiro (2002) provided evidence that investments in governance attract more capital, and give domestic multinational corporations the ability to invest abroad. Implementing johansen estimation technique to data from 1970 to 2006 for Nigerian economy, Akanbi (2010) showed that well-structured and stable socio-economic environment stimulate investments over the long run. On contrary, there are some empirical works that pointed to a negative correlation between governance and investment. Bellos and Subasat (2012a; 2012b; 2013) found that poor governance is a source of attraction of foreign multinationals in transition countries and latin America.

2.2. FDI and Domestic Investment

FDI may affect domestic investments in different ways. In fact, FDI can generate complementary effects (crowding in) or substitution effects (crowding out) on domestic investment. These various impacts arise from several factors (or conditions), in particular the business environment, the specifics of FDI, the orientation of economic policy and the strength of local firms. Concerning for example the type of FDI, Ashraf and Herzer (2014) found out that Mergers and Acquisitions (M&A) do not have a significant influence on domestic investment, whereas greenfield flows appear to have a crowding-out effect. In the same vein, Agosin and Mayer

(2000) emphasized that the linkage between acquisitions of domestic firms by foreign multinationals and real investment seem to be very tenuous. It may also be noted that in the context of intensively competitive sector, an influx of foreign companies may take away investment opportunities previously open to domestic investors. Indeed, the presence and the actions of international firms lead to important changes in the domestic market that influence the activities and the stability of the local firms. So, the complementary effects are explained by a numerous channels, notably the positive externalities, the infrastructures, the linkage effects, the raise in domestic demand for goods and services, and more generally some wider business opportunities in the home country. (Moran, 2011; Görg et Greenaway, 2004; Cardoso and Dornbusch, 1989). As regards The substitution effects, they arise from several mechanisms, in particular the raise in domestic interest rates and in costs of inputs, the borrowing by multinational companies on domestic financial markets, the desincentives for domestic investment due to an extreme and unfair competition, and the proliferation of barriers to market access. (Harrisson and Mcmillan, 2003 ; Agosin and Mayer, 2000 ; Aitken and Harrisson, 1999; Markusen and Venables, 1999). Moreover, the net or total effect of FDI on domestic invetsment will depend on the relative strengths of the two effects (complementary or substitution effects). Some attempts have been made to test the validity of the correlation between FDI and domestic investment in some developing countries. By applying a panel model (Fixed-effects model) on the data running sub-saharan countries, Ndikumana and Verick (2008) found that FDI crowd in domestic investment. Using the GMM esimator to a panel of 36 countries (12 each of three regions: Africa, Asia and Latin America) over the period 1971-2000, Agosin and Machado (2005) showed that FDI displaced domestic investment in latin America. Furthermore, in Africa and Asia, FDI has increased overall investment one-to-one (neutral effect). In addition, Eregha (2011) used panel cointegration estimation technique to data from Ecowas for the period 1970-2008 and concluded that FDI has discouraged domestic investment.

2.3. Interaction between governance, FDI and domestic investment

The FDI effects on domestic investment depend on institutional and business environment. In other words, the substitutive or complementary effects of FDI on domestic investments are more or less enhanced by the level of governance. According to Morrissey and Udomkerdmongko (2012), among alternative elements of governance, political stability influences especially the linkage between FDI and domestic private investment in developing countries. More precisely, countries with better governance and higher political stability face a higher risk of crowding-out of private investors by foreign investors. But later, Farla and al. (2016) contest this conclusion by stating that FDI inflows crowd in domestic investment in a context of good governance. Rejecting this criticism of Farla and al. (2016), Morrissey and Udomkerdmongko (2016) confirm their previous result. It should be noted that the influx of foreign investments can also generate positive spillovers on the host economies with good governance. In other words, the level of FDI spillovers to domestic firms is influenced by the status of governance. So, in the countries with weak intellectual property rights protection (bad governance), foreign investors may limit their investments in new, effective and high technologies. Hence, the relative decrease in positive spillovers lessens the crowding in effects of FDI on domestic investment (Farla et al., 2013; Crespo and Fontoura, 2007).

In the context of countries with high levels of elite rent seeking behaviour (bad governance), FDI exerts crowding out on domestic investment. This is due mainly to the fact that foreign multinationals seize large parts of the market by excluding domestic investments (Diaz-Cayeros, 2013; Amsden, 2007; Farla and al., 2013). Moreover, political uncertainty incites domestic capitalists or entrepreneurs to seek out foreign partners or lenders for fighting against abuse of home governments. However, Farla and al. (2013) mention that the impact of rent

seeking on total investment is mitigated by the fact that these corrupt practises may result in an important influx of foreign investments. In short, the relative decline in domestic investments due to bribes or rents received by economic and political elites could be more than offset by acceleration in FDI. In some cases, the elite rent seeking behaviour can restrict or limit FDI. When domestic elite' interest groups collect large rent by managing or controlling some industrial sectors, they should prevent foreign investors from accessing the domestic market. As a result, these barriers to foreign investments contribute indirectly to the development of the private domestic investment.

3. Econometric framework

3.1. Empirical specification and data

In this section, we first specify our econometric model by elucidating relationship between private domestic investment, public investment, foreign direct investment, and economic growth augmented with governance indicators.

The model selected in this paper is evidently only a small subset of a wide range of models in the literature in order to highlight some basic components of our research theoretical issues and conceptualization. So our econometric model specification is based on those used by Morrissey and Udomkerdmongkol (2012) and Farla et al. (2013): $DI_{it} = \theta_0 + \theta_1 DI_{it-1} + \theta_2 PI_{it} + \theta_3 FDI_{it} + \theta_4 GR_{it} + \theta_5 FDI \cdot GI_{it} + \theta_6 GI_{it} + \gamma_{it}$ (1) Where DI indicates Domestic Private Investment, and the Domestic Public Investment is depicted by PI ; The Domestic Foreign Investment and real Growth are respectively FDI and GR . In our work, the private domestic investment, foreign direct investment and domestic public investment are selected as percentage of GDP respectively. The Governance Indicators are illustrated by GI and $FDI \cdot GI$ represents the mediating effect. Regarding the governance (GI) we use alternatively six indicators: Voice and Accountability (VA), Political Stability and Absence of Violence (PS), Government Effectiveness (GE), Regulatory Quality (RQ), Rule of Law (LR), and Control of Corruption (CO). Estimates of governance range from approximately -2.5 (weak) to 2.5 (strong) governance performance according World Governance Indicators (See Kaufmann et al, 2010; World Bank, 1992). The apriori expectations for the coefficients are: $\theta_1, \theta_2 > 0$; $\theta_3 < 0$; $\theta_4 > 0$; $\theta_5 < 0$; $\theta_6 > 0$. The variables utilized for N countries are indexed by i , observations in time T period indexed by t . The disturbances $\square_{it}$ are assumed to be independently distributed across countries with a zero mean. The dataset used for the study covers seven (7) West African countries spanning the period from 2002 to 2015. All annual data series were extracted from International Financial Statistics, World Development Indicators, Cote d'Ivoire National Statistics website (INS) and Worldwide Governance Indicators (www.govindicators.org).

3.2. Estimation Methodology

With more than twenty years literature to consider, many procedures have been experienced to analyse the crowding in and the crowding out effect between foreign direct investment and domestic private investment. Most of these studies use one-step (GMM) generalized method of moments Arellano and Bond (1991), Blundell and Bond, (1998) system generalized method of moments (GMM), ordinary least square (OLS) with fixed effects, Two stages least square regression (2SLS), seemingly unrelated regressions (SUR) with pool estimation, vector auto regression (VAR) system with error correction model among other. See also Ouattara (2004), Bakare (2011), and Mutenyo et al. (2010). Moreover, generalized method of moments is more advantageous procedure for dynamic model permitting to control dynamic panel bias. In fact, the conventional econometric techniques such as fixed effects method are unable to lead to unbiased or consistent estimators because of the presence of lagged levels of dependent variable as regressors.

The difference GMM estimator was first proposed by Holtz-Eakin, Newey and Rosen (1988). There are many advantages when we use GMM technique with dynamic panel data. Indeed, according to the defenders of this method, it makes it possible to provide solutions to the problems of simultaneity bias, inverse causality and any omitted variables. In addition, it should be added that the GMM on panel has another advantage, it generates the instruments from the explanatory variables; This is not the case for other traditional methods of instrumental variables such as two- or three-stages least square regression (2SLS or 3SLS) which require the choice of theoretical instrumental variables correlated with the explanatory variables and uncorrelated with the residuals, which are difficult to find. Moreover, the generalized method of moments (GMM) controls the individual and temporal specific effects.

There are two types of GMM estimators over dynamic panel: the first difference generalized moment method (GMMD) and the system generalized moment method (GMMS).

According to Arrelano and blond (1991), the estimator of the first-difference generalized method of moments (GMMD) eliminates individual unobserved specific effects by differentiation at order one. In other words, the firstdifferences of regression are taken to eliminate the specific effects. Then deeper lags of the dependent variables are used as instruments for differenced of the dependent variables (which are endogenous). These authors argue that GMMD estimators allow some satisfactory outcomes. Nevertheless, this estimation technique has been the subject of criticism, notably concerning the inability to measure the time-invariant effects and the strong persistence of series used. Indeed, this problem of highly persistent series leads to weak instruments for the GMMD estimator (Blundell and Bond, 2000). In fact, the lagged levels are poor instruments for first differences if the variables are close to a random walk.

In this case, Arellano and Bover (1995) and Blundell and Bond (1998, 2000) show that it is preferable to use an estimator of the System Generalized Moment Method (GMMS). It is a question of combining the estimator GMMD with additional moment restrictions. More clearly, the system GMM estimators use the levels equation to obtain a system of two equations: one differenced and one in levels. So the GMM technique uses lagged first differences as instruments in the levels equations. The additional moment equations should improve or increase the low efficiency of the GMMD estimator.

From such an estimator, Blundell and Bond (2000) thus obtain particularly satisfactory estimates. Moreover, unlike Blundell and Bond (2000) who use the robust variances from the first step as the robust variances of the second stage GMMD and GMMS estimators, we use a variance of second step proposed by Windmeijer (2000). Finally, in this paper, we adopt system generalized method of moments (GMMS), Blundell and Bond (1998), for the empirical investigation.

3.3. Validity tests of the panel dynamic model

The tests of Sargan or Hansen and of autocorrelation are useful to evaluate the validity of the panel dynamic model. Indeed, the validity of the moment conditions on the levels or differenced equations can be tested using Sargan's standard over identification test (Sargan, 1958), the Difference-in-Sargan test, the Hansen test, the Difference-in-Hansen test, or the Hausman test comparing the results of the GMMD and GMMS estimations (Arellano and Bond, 1991). We use in our study the Hansen test and the Difference-in-Hansen test. For the Hansen test, the null hypothesis admits that the instrumental variables are uncorrelated to idiosyncratic errors (instruments are valid or exogenous). Consequently, the higher the p-value of the Sargan or Hansen statistic the better. The Differencein-Sargan or Difference-in-Hansen test is used to test the validity of additional instruments or moment restrictions necessary for system GMM.

Furthermore, Arellano and Bond (1991) suggest using then m_1 and m_2 statistics to test the null hypothesis of non-correlation of residuals to order one (respectively, order two) for the GMM estimator (and the GMMS estimator).

4. Empirical results and interpretations

The empirical results are depicted in table 1 bellow which presents six different specifications for equation 1 by using alternatively the six dimensions of governance (CO, PS, GE, RQ, VA, or LR). From table 1, the GMMS produces some interesting outcomes.

Table 1: Governance, FDI and Private Domestic Investment: dynamic panel-data estimation (GMMS)

Dependant variable: **Private Domestic Investment** (DI_{it})

Independent variables	Governance Indicator (GI)					
	(1) CO	(2) PS	(3) GE	(4) RQ	(5) VA	(6) LR
DI_{t-1}	0.56*** (0.000)	0.51*** (0.000)	0.395*** (0.000)	0.508*** (0.000)	0.495*** (0.000)	0.526*** (0.000)
PI	0.520*** (0.000)	0.560*** (0.000)	0.410*** (0.000)	0.504*** (0.000)	0.482*** (0.000)	0.560*** (0.000)
FDI	-3.544*** (0.000)	-1.09*** (0.000)	-1.466*** (0.001)	-1.771*** (0.000)	-1.107*** (0.005)	-0.847 (0.129)
GR	-0.021 (0.248)	0.019 (0.170)	-0.015 (0.361)	-0.002 (0.226)	-0.003 (0.860)	-0.015 (0.393)
$FDIGI$	-2.315*** (0.000)	-0.490*** (0.000)	0.770** (0.020)	-0.551 (0.446)	-0.409 (0.329)	0.291 (0.709)
GI	-0.107** (0.028)	-0.068 (0.763)	-0.012** (0.012)	-0.079 (0.258)	0.002 (0.395)	-0.042 (0.544)
$AR(1)_{test}$	0.413	0.871	0.401	0.636	0.565	0.792
$AR(2)_{test}$	0.385	0.279	0.330	0.359	0.338	0.354
Hansen test	4.33	1.96	5.79	4.04	2.93	4.47
D-Hansen test	0.195	0.439	0.260	1.000	0.355	0.108
Observations	77	77	77	77	77	77

Source: authors' calculations. **Notes:** The asterisk***, ** and * represents 1 %, 5% and 10% significance levels respectively. The null hypothesis of the Hansen test is that the instruments are uncorrelated with the residuals. For the difference-in-Hansen test, the null hypothesis states that the additional instruments for system GMM estimator are valid. In our work the instruments are collectively exogenous in all cases. The null hypothesis of the AR tests is that the errors show no one (or second) order serial correlation; both $AR(1)$ and $AR(2)$ accept the null hypothesis of no serial correlation(0.05) p . The global tendency is that the parameter of FDI is statistically significant, robust and negative with exception of the model specify in column (6) which remains insignificant. This result shows that FDI crowds out domestic private investment in seven West African countries.

In fact, taking the specification reported in the first column (table 1) for example, one percent rise in FDI decreases domestic private investment by 3.54 percent. These results link with most of the empirical founding in developing countries see Mutenyo et al. (2010); Kokko et al. (1996); De Backer and Sleuwaegen (2003); Agosin and Machado (2005); Aslanliglu (2000); Grether (1999); Morrissey and Udomkerdmongko (2008; 2012; 2016) among other. The negative relationship between FDI and domestic private investment can be explained by the fact that a wide technological gap exists between domestic companies and foreign firms. Another meaning of crowding out effect would be that local government provides more facilities to foreign firms compared to domestic companies. For instance, free land, tax exemption on imported machinery, access to loan and many other advantages which could bias domestic companies' competition with their foreign counterparts.

Based on our empirical specification presented in table 1, current domestic private investment is indeed strongly path dependent, with a coherent structural component, as the lagged factor is robustly significant at all. In other words, if we take the specifications illustrated in table 1, column (1) for example, one percent rises in previous year' local domestic investment augments the current investment by 0.56 percent. The global view is that past value of domestic private investment links positively with current domestic private investment value and statistically significant at the conventional level for all specifications. This result pointed out the importance of the past value of domestic investment in the determination of its current value. Mavrotas and Luintel (2005) and Misati (2007) got the same results in their empirical investigation.

In addition, always based on the described data spread on table 1, column (1) to (6), the parameters of public investment displays positive link and statistically significant at all. This output shows that both public investment and domestic private investment have complementary effects rather than being substitutes. Referring to column (1) for instance, one percent augmentation of public investment leads to increase private domestic investment by 0.52 percent. As policy implication, this result demonstrates that the West African countries governments provide favourable environment for domestic private investment therefore infrastructures need to be reinforced. Similar results have been obtained by researchers such as Looney (1997), Blejer and Khan (1984), Aschauer (1989), Greene and Villanueva (1991) and Farla et al. (2013).

In the same order, domestic private investment negatively links with real growth but statistically insignificant for all specifications (see table 1) with the exception of column (2), which shows positive coefficients but insignificant. These results are contrary to those found by Greene and Villanueva (1991) and Sakr (1993) who obtained positive linkage. As interpretation, real growth seems not to be the key determinant of domestic private investment in West African countries. Furthermore, in our study we take into account six composite indicators of governance: voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption.

All these governance indicators are not statistically significant for all specifications signifying that they have no effect on local private investment (table 1) with the exception of government effectiveness term and of control of corruption which are robust and impact negatively domestic private investment. The interaction factors are robust and statistically significant and show that the crowding out impact is amplified with governance indicators such us corruption and political stability, and mitigated with government effectiveness. For instance, an increase of FDI in countries with High political stability by 1 percent displaces domestic private investment by 1.58 (1.09+0.49) percent (see table 1 column 2). On contrary, the interaction between foreign investment and other elements of governance (voice and accountability, regulatory quality and rule of law) has an insignificant mediating effect on investment (see table 1, columns 4 to 6).

Finally, focused on the database and the empirical specifications illustrated on table 1, we performed some diagnostic tests to verify the validity of our estimations. In so doing, Difference-in-Hansen and Hansen tests confirmed that the instruments are exogenous thus demonstrating that our models are well specified. In addition, The *AR (1)* and *AR (2)* tests in first differences accept the null hypothesis of non-correlation in the residuals. So the errors display no order serial correlation.

5. Conclusion and policy implications

In the recent past years, foreign direct investment has augmented significantly in sub-Saharan African countries. The West African countries exhibit the same tendency, and have attracted substantial level of FDI particularly in the past five years. The paper empirically investigates the determinants of domestic private investment focusing on foreign direct investment (FDI), and analyses the impact of alternative elements of governance on these two macroeconomic variables. More specifically, the study seeks to determine if foreign direct investment crowds out, in or has neutral effects on domestic private investment in seven West African countries namely Burkina Faso, Benin, Cote d'Ivoire, Niger, Mali, Senegal and Togo. For the econometric methodology, we utilize system generalized method of moment (GMMS) Arellano and Bover (1995) and Blundell and Bond (1998). We find that foreign direct investment crowds out domestic private investment in West African countries which is not good sign to sustain development.

In general, the academicians believe that FDI should complement domestic private investment. The reason is that multinational corporations with good technology level always boost domestic private investment. We are in fact not surprise by these results because the countries covered by the study are low income countries. We can explain this situation by the fact that the technology level in West African countries is very low compared to developed nations. In this context, the technology transfer is very difficult for domestic companies' thus low spillover impacts. Likewise, the crowding out effect of foreign direct investment on domestic private investment does not signify that FDI is not important for private investors. These results demonstrate that the better opportunities are reserved only to international investors because they have better access to financial market, high level of management skill, high technology and global market. Thus, the first priority is to rapidly minimize the technology gap by encouraging joint ventures between domestic investors and foreign investors. This could help domestic firms to better access to financial market, to global market and learn by doing with foreign partners. The second priority is to minimize the crowding out effect by implementing reforms which could bring favourable business environment. These reforms could help to attract FDI that promotes local firms but not displace domestic firms. For example, the favourable macroeconomic environment could provide to local firms many advantages such as strengthen skill, high technology transfer among others. (Kumar, 2003; Nunnenkamp, 2004)

Moreover, as we observed in our empirical investigation, the governance institutions generally display insignificant linkage with domestic private investment. This doesn't signify that the institutions are inexistent in these countries but their contributions are indirect. As proof the substitution effect (crowding out effect) is greater in francophone West African countries with good governance in terms of political stability and of control of corruption, but mitigated in the countries with high government effectiveness. Finally, governments must give more meaning to the role of governance in order to secure domestic investment and boost foreign direct investment.

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