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Public Investment, Foreign Direct Investment and Private Domestic Investment: Ripple or Eviction Effects in Togo

KEYWORDS: Foreign Direct Investment; Public investment; Private investment, VECM

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ABSTRACT In a macroeconomic context characterized by the revival of economic growth and in view of the avowed objective of making an emerging Togo in 2030, we have witnessed in recent years a major campaign to promote investment both domestic that foreign direct investment. Given the theoretical ambiguity of the relationship between these different types of investments, we propose in this paper an empirical validation of the interactions within the triptych FDI- public investment - domestic private investment. Estimates using a VECM showed that long-term private investment has a ripple effect on foreign direct investment and public, which conversely also have a positive influence on domestic private investment. In addition, there would be no significant relationship between public investment and FDI. Regarding the short term, there is a training of public investment in the previous period effect on FDI while domestic private investment tends to oust. Finally, an increase in FDI, stimulate in the short term, both public and domestic private investment.

Introduction

The achievement of a rigorous and sustained economic growth is one of the central questions of many economic policies. This conception is more crucial in developing countries, where the improvement of well-being is beyond a simple objective of economic policy, a vital necessity.

Indeed, economic literature on growth is abundant and offers a variety of strategies for the resolution of this problematic. However, despite the differences of theories, they are all almost unanimous in the central role of the investment presented as the main engine that nourishes and stimulates growth when a combination of a number of factors offers a favour environment for its expansion. Furthermore, the observation of stylized facts including those from Asian countries, comes in support of those various theories. This is because in the 90s, the Asian countries have experienced higher economic growth compare to other regions with a rate of investment to GDP which was around 27% during the same period whereas this rate was only 17 % in sub-Saharan Africa. Despite the unanimity around the role of investment, developing economies are characterized by low rates of investment, insufficient productivity gains, inappropriate incentives for innovation etc.

In the particular case of Togo, after independence and inspired by experiences from industrialized countries, an ambitious campaign of public investment was initiated to establish a structure of the national economy able to meet development challenges of the country. Unfortunately, the inefficient management of borrowed funds rapidly leaded the country into an abyss of debt and budgetary imbalances. The pessimistic economic situation aggravated by the international cooperation's suspension in the 90s significantly limit the financial resources of the country resulting in limited domestic investment for several decades.

Today, after development policies failure and economic difficulties of past decades, the recovery of international cooperation reinforced by reaching the completion point of the HIPC provides a new dynamism to the Togolese economy. Thus, one assists to the emergence of a series of reforms and development strategies in the medium and long term as SCAPE, with the targeted goal being to make Togo an emerging country by 2030. This optimistic vision was accompanied by a significant investment indicative of a revival of public investment policies mainly oriented towards improving national infrastructure.

Meanwhile, Togolese politicians aware of the essential role of the private sector in the fight against poverty and the importance of mobilizing both domestic and foreign private investment in creating a sustained growth, put particular emphasis on promoting the private sector and improving the business climate, conducive to the emergence of private investments. The recent adoption of the new investment code by which the country undertakes to waive for a determined period of time some of its prerogatives to allow national and foreign investors to settle and practice under favourable economic conditions their activities is a clear evidence.

Even though Foreign Direct Investments (FDI) have long been considered as a factor that could affect the sovereignty of the country, the current general trend is a consensus on its beneficial effects. Regionally, according to the World Investment Report (CNUCED, 2013), the FDI flows to developing countries continues. This justifies the absorption of 52% of the world FDI by developing countries in 2012.

In this context of promoting foreign-investment public, private domestic investment, private investment, it is reasonable to ask about the quality of interactions between the three types of investment.

Indeed, in the economic literature, existing theoretical links between these investments are somewhat ambiguous and vary not only from one country to another but also according to the type of investment.

Thus, through the political construction, rehabilitation and maintenance of infrastructure, education and health, public investments could enhance the effectiveness of private investment by creating a favorable environment for profitability and development. For example, investments in the

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field of transport and fast and safe communication reduce transport costs, save time and increase business profitability.

Public investment can theoretically be an obstacle for private investment in terms of its financing mechanism, through the bond or tax increase would reduce the funds available for the private sector by cornering d a portion of domestic savings. Also, even if the decision to make a public investment rarely reports to a calculation of immediate profitability, the state could, by operating in the sectors of high profitability, a substitute for the private sector, thus establishing a competition between the public and private. The increase in public investment (IPU) could therefore lead to the collapse or paralysis of private investment (IPR).

FDI, on the other hand can stimulate a domestic investment through the introduction of new technologies and know-how different the other, crowd out domestic investment both through the strong competition imposed by the use of scarce domestic resources. (Helpman et al, 2004).

Given the ambiguity of the relationship between these three types of investment and the prospect of the new dynamics of growth driven, it is essential to conduct a thorough study of the interactions between these three types of investment.

With this need, we propose in this article to make our contribution to the question: public investment, domestic and foreign private direct they are bound by training or crowding out?

The main objective of this article is to provide an empirical validation of the existing relationship between these three types of investments.

If there for Togo, studies on the effects of training and eviction, they focus primarily on the relationship between public investment and private domestic investment. Therefore, interactions with foreign direct investment remains in Togo, a little restrained appearance. This study could therefore bring its share of added value to a better knowledge of the Togolese economic environment.

To carry out this study, the rest of the article will be divided into four sections. The first will present the history of domestic and foreign direct investment in Togo. It will be followed by an overview of theoretical and empirical work base for this article. The third section is devoted to the methodology and the study data, the fourth will present the interpretations of the results of the estimates.

1. Evolution of domestic and foreign direct investment in Togo

This section presents the different phases of development of investment in Togo.

1.1 Domestic Investments

In the early 80s, Togo acquired a worldwide reputation for business hub thanks to its commercial dynamism and its export potential outstanding at that time. Unfortunately, the next decade was marked by numerous political and social tensions that led the major development partners to suspend their financial cooperation with the country, causing the deterioration of the economic and social situation.

Because of the international situation in the first half of the 1970s and the implementation of economic and social development program based mainly on the creation of infrastructure and public enterprises, the growth of investment expenditure was spectacular. The investment financed by massive foreign borrowing has reached very high levels. Thus, the share of capital expenditure to GDP increased from 12.6% in 1970 to 24.8% in 1975 and to almost 50% of GDP by the end of the 70s (46.66% in 1978, 47.17% in 1979).

Unfortunately, the increase in export earnings was only short-lived and the Togo country was forced to call on external borrowing to support the policy of great works. Also, during 1980, due to the inefficient management of initial public investment program, the low profitability of most of the public enterprises and the deterioration of terms of trade, the country faced significant fiscal imbalances requiring it to reduce its investment expenditures. Despite the implementation of structural adjustment policies to redress the unfavourable economic climate, the investment ratio to GDP was 28% in 1980, dropped to 20% in 1983 and 16% in 1989.

The suspension of support from donors since the early 90s, following the serious socio-political crisis has exacerbated the downward trend of public investments. Thus, the level of public investment increased from 13.8% of GDP in 1990 to 3.3% in 2003. Since 1991, the investment rate has fluctuated between 7% and 17% with relative deterioration from 1997.

With the more or less recent resumption of international cooperation and the attainment of the completion point of the Heavily Indebted Poor Countries (HIPC), there has been a resurgence of public investments. For instance, from 2011-2012, investment expenditures increased from 230.1 billion CFA to 281.7 billion[1], that is an increase of 22.4%. This increase is explained by the growth of investments financed by internal and external resources as well.

1.2 Foreign direct investment

In general, the evolution of FDI in Togo strongly fluctuated. Thus, from $ 23 million in 1997, the FDI rose to a peak of nearly $ 70 million in 1999. They then decreased to $ 57.2 million in 2000, to return to $ 67 million in 2001. In percentage of GDP, the FDI inflows increased by 11.3% in 1997 to nearly 35% in 1999, with an average of about 30% in 2000 and 2001. While the FDI inflows seem to have slightly improved in recent years, they remain, nevertheless, relatively small. The factors explaining the weakness of FDI are among others unstable electricity supply, high costs and poor quality of communications services, dilapidated infrastructure especially roads, the weight of bureaucracy etc.

Moreover, according to the Doing Business[2], the index of investor protection[3] in Togo is below the average for sub-Saharan African countries (3.7 against 4.4).

Nevertheless, it is estimated that with the improvement of the business climate, power plant construction projects, the conversion of road infrastructure, communications and the Port of Lomé, the attractiveness of FDI by the country will be greatly improved.

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2. **Literature review**

In the literature, theoretical and empirical works exist on investments in general. Considering the public, private domestic and foreign direct investment, a number of theoretical bases allow determining the interaction effects of these different types. Thus, the eviction theory by inflation developed by Milton Friedman in the 1950s and 1960s reprises by monetarists in the 1960s in the form eviction theory by interest rate shows that Public investment crowd out private investment because of the weight of public borrowing on financial markets. Generally, Public investment theoretically has an ambiguous effect on the Private investment due to three distinct effects: (i) the neutral effect in which while looking for a balanced budget of the State there may be insensitivity between Private and Public investments; (ii) The Public investment can promote Private investments as long as the both are complementary (iii) by contrast, the Public investment can crowd the Private investment in the sense that it deals with sectors where the private sector feels able to invest.

Also called international direct investment (IDI), FDI[4] is the subject of several studies from which one notices that their effects put particular emphasis on international trade, growth and employment, working conditions, the environment, balance of payments, human capital and domestic investment (DI).

The literature shows that FDI can have stimulation effects on DI by promoting increased productivity through several channels: competition (Desai et al., 2005), the creation of a new domestic demand and exports catalysis (Chen et al. 2004). The meeting between domestic investment and FDI is likely to create crowding out effects through two mechanisms: (i) competitive mechanisms both on the market of the products and on factors' market (Aitken and Harrison, 1999 Venable and Markusen, 1999 Brainard 1997, Helpman et al, 2004); and (ii) the mechanisms of the "Dutch disease" particularly through expenditures effect (Gregory, 1976 Cordon and Neary, 1982). Indeed, the increase in exports of these multinational corporations (MNCs) implies an increase in the real effective exchange rate and reduced the competitiveness of other sectors of tradable goods (Bourdet and Falck, 2006).

The effect of FDI on International Trade is of two kinds, one hand we have FDI as substitutes to trade and secondly the complementarity between FDI and trade. RA Mundell (1957)[5] in the framework of the theory of international trade in the logic of Ohlin and Heckscher exchanges related to differences in relative abundances of factors and conditions of horizontal FDI[6] shows that FDI appear as substitutes to trade in goods. For Dunning, in the case of horizontal FDI, these can be a considerable contribution in foreign exchange for developing countries.

In the case of vertical FDI[7], where FMN split their activities between countries according to the different comparative advantages, FDI and international trade can be complementary, including increased intra-firm trade.

Through the work of L. Fontagné and Tubal F. (2010)[8] we distinguish two effects of FDI for the investing country: a substitution effect which shows that if FDI is not invested in domestic activity (horizontal FDI), this causes a reduction in growth and employment in the investing country and an income effect resulting from the access to new market shares or to new factors and this will lead to increased sales of the MNF. Except these effects, it also has the effect related to offshoring which may cause negative effects as positive on the country of origin as well as on the recipient country.

The effect between public investment, private investment and FDI is theoretically ambiguous and indeterminate. This effect can also be non-significant (neutral effect), negative (substitution effect or crowding) as well as positive (complementary effect or training).

The analysis of the effect of public investment on private investment yield different results according to the authors and countries. Many authors obtained in their studies a positive effect. Thus, Antonio and Miguel (2010) from an estimate with VAR modelling show that public investment crowds out private investment in many countries in their sample. Blejer and Khan (1984) find similar results when useing public investment as a proxy of public investment.

Ghali (1998) for Tunisia and Ghura and Goodwin (2000) for Asia and Latin America show that public investment has a negative effect on private investment. A crowding was also highlighted by Kamgnia and Touma (2002) for Burkina Faso and Cameroon.

In an influential study, Aschauer (1989) shows that an expansion of public investment leads to a high rate of income of private investment, and thus a ripple effect is found. From a single investment equation on a panel of 15 African countries in the Sub-Sahara region, Faini (1994) finds that public investment is complementary to private investment rather than substituting it. The ripple effect is also shown by Ariyo and Raheem (1991) for Nigeria, by Martin and Wasow (1992) for Kenya and by Asante (2000) for Ghana. Ashipala and Haimbodi (2003) established on the basis of causality tests complementarity between public and private investment for Namibia, South Africa and Botswana. Ouattara (2004) found a positive relationship between public investment and private investment for Senegal. The results of the work of Keho Y. (2005) indicate that there is a complementary relationship between the accumulation of public and private investment. For estimates based on Keynesian models, public investment has a ripple effect on private investment (Dalagams, 1987; Eisner, 1983, 1986, 1989; Eisner and Pieper, 1987).

FDI can have two effects: positive as well as negative on private domestic investment. On one hand, it can stimulate domestic investment by providing new investment opportunities for local firms (Sun, 1998). For Noorzoy (1979) local firms can imitate the new technologies introduced by foreign firms, which could boost domestic investment. Furthermore, Jansen (1995) shows that increasing domestic investment is probably accompanied by an increase in FDI inflows when there are much more risky joint activities between local and foreign firms. James (2009) examining the long-term relationship between the domestic private investment, public investment and FDI find a fairly robust cointegration relationship between these variables during the period of 1960 to 2003. He also shows that foreign direct investment and public were found to be complementary rather than in competition with private domestic

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investment.

On the other hand, FDI for Jansen (1995) may crowd out domestic investment if the foreign firms compete with local firms in the use of scarce domestic resources such as skilled labour, financial resources etc. Also FDI can be a substitute for domestic investment if foreign firms have a technological advance or managerial expertise or profits on the tax provided by the host country (Noorzoy 1979).

Several studies of the effects of MNCs on local firms remains inconclusive. Indeed, Agosin and Mayer (2000) controlling the endogeneity and heterogeneity of their panel, find that FDI is good for stimulation the investments in Asia, crowd out investments in Latin America and do not have any effect in African countries for the period of 1970-1995.

Hejazi and Pauly (2003) and Barrios et al. (2005) show that the implementation of a FMN has two opposite effects. Stimulation exists only when positive externalities (off setting effects) can compensate and overcome the effects of substitution and the compensation effect exists only in the case of IDE manufacturers. However, results of Barrios et al. (2005) demonstrate that FMN affect local firms non-linearly, in a curved "U". These results are consistent with the assumptions of creative destruction.

More generally, empirical studies find that the effects of FDI on domestic investment positively depend on: the supervision of public authorities (Agosin and Mayer, 2000); the absorptive capacity of local firms (Borensztein et al, 1998, Barrios et al., 2005.); and bargaining power of FMN (Görg and Greenaway, 2003). Consequently the current paper aims to assess the relationships between private, public and foreign direct investments. Specifically, we are interesting in testing whether there exists a crowding out effect between private, public and foreign direct investments. The remaining of the paper is organized as follow: The section 3 presents the econometric methodology and the data while the section four presents and discusses the results. The paper ends with a conclusion

3. Data and Econometric Methodology

3.1 Data and choice of variables

All data used for the estimation of the model in this article are annual and cover the period of 1975- 2011. The World Development Indicators database of the World Bank (WDI, 2013) is the main source of data. For the reasons mentioned above, the variables used in the estimates are the following:

IDP: Domestic Private Investment measured by the difference between private investment and foreign direct investment.

IPB: Public Investment measured by public gross fixed capital formation.

FDI: Foreign Direct Investment represents by the net inflows of investment to acquire lasting interest in an enterprise that is operational in the Togolese economy. In order to normalize all these series we use their logarithm values.

3.2 Methodological Approach

The Vector Auto-Regressive process is used in this paper to achieve the targeted objective. This technique is inspired from the work of Antonio and Miguel (2010) and James (2009). The VAR process was introduced by Sims (1980) as an alternative to Keynesian macroeconomic models. The general specification of VAR is as follow :

$$X_t = \mu + \sum_{j=1}^{p} \Phi_j X_{t-j} + c_o + \varepsilon_t$$

Where :

$X_t = [IDP \quad IPB \quad IDE]'$; $\mu = [\mu_{IDP} \; \mu_{IPB} \; \mu_{IDE}]'$ represent the vector of constant terms

ϕ_j is parameters matrix of the specified VAR for a the lag j. $\varepsilon_t = [\varepsilon_{IDP} \; \varepsilon_{IPB} \; \varepsilon_{IDE}]' \sim IN(0, \Omega)$ are the vector of error terms. The choice of the control variables is based on the literature on the topic and the economic and political history of Togo.

The economic literature agrees on many variables as significantly explaining the level and structure of investments in a particular country or group of countries. This is among other investment in prior periods, income-related variables of the country and its financial situation, the report variables of the national economy to the outside. The quality of institutions and socio-political stability of a country are key determinant of the investments made.

Considering, on the one hand, the fixed exchange rate in the WAEMU[9] and secondly, the unavailability of data for some variables in the case of Togo, we retain as control variables: prior investment, real GDP per capita and the degree of openness.

Three dummy variables are incorporated in the model to account for the effect of the structural adjustment program in the 1980s, socio-political and economic crises that the country has experienced during the period of 1991 to 1992 and the surge in world food prices which affected Togo in 2007 to 2008. The dummy variables were specified as:

$$D_{80} = \begin{cases} 1 \text{ if } t = 1980 \\ 0 \text{ otherwise} \end{cases}$$

$$D_{91\text{-}92} = \begin{cases} 1 \text{ if } t = 1991\text{-}1992 \\ 0 \text{ otherwise} \end{cases}$$

$$D_{07\text{-}08} = \begin{cases} 1 \text{ if } t = 2007\text{-}2008 \\ 0 \text{ otherwise} \end{cases}$$

4. Results and discussion

4.1 Method of estimation

The estimation of the VAR model specified above with the help of STATA 12 software. The main steps followed during the estimation are:

- The unit root test: Augmented Dicky- fuller test (ADF) for the investigation of the stationarity properties of the series considered in the model by analyzing their order of integration;
- Johansen cointegration test to detect a possible cointegration relations existing between the variables

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of the model. In the absence of cointegration relationship, we go to estimate the VAR model, if one is obliged to determine an autoregressive error correction model (VECM);
- Determination of the optimal number of lags for the chosen model;
- Estimated VAR or VECM.

4.2 Interpretation of Results and policy implication

4.2.1 Unit root test

Two unit root tests are commonly used, namely the Augmented-Dickey-Fuller (ADF) test and the Phillips-Perron (PP) test. We use in this study Augmented-Dickey-Fuller test to test the stationarity of the different series. The results are presented in Table 1 bellow.

Table 1 : Results of the unit root test

Series	In level		First difference	
	ADF stat	P-value	ADF stat	p-value
LIDE	-2,532	0,1078	-7,150	0,0000
LIPB	-0,932	0,7772	-4,995	0,0000
LIDP	-1,180	0,6823	-5,958	0 ,0000
LGDP_Capital	-1,404	0,5802	-4,641	0 ,0001
Ltrade	-1,838	0,3617	-6,144	0 ,0000

Source: Author from estimate in STATA 12

It appears from the above table that all series (in level) of the model are nonstationary. This led us to the implementation of the ADF test on the series in first differences. The final conclusion is that all our series are stationary in first differences as the ADF statistic is well below the critical threshold values of 1, 5 and 10%. All series are integrated of order 1. Equality of integration levels required to make a co-integration test to determine whether to use a VAR or VECM modelling approach.

4.2.2 Cointegration tests

We are testing the number of cointegartion relationships with the tests proposed by Johansen and Juselius (1990). The results are reported in Table 2. This test analyses the possibility that one or more cointegration relationships between public, foreign direct and domestic private investments in Togo. The result indicate the existence of a cointegration relationship with at a threshold of 5%.

Table 2 : Cointegration test results

Rank of cointegration	LL	eigenvalue	Trace statistic	Critical value at a threshold of 5%
0	-1929,5491	.	29,9952	29,68
1	-1919,0219	0,49296	8,9409*	15,41
2	-1915,689	0,19348	2,2751	3,76
3	-1914,5515	0,07076		

Source: Author from estimate in STATA 12

This result leads us to the next step of estimating long and short term solutions of the equation in the context of a vector error correction model (VECM).

4.2.3 VECM estimation

The first step is to determine the order "p" of the VECM process to retain. To this end, we estimated various VECM processes for 'p' lags orders from 1 to 4. Based on Akaike information criterion we end up retaining VECM process (3) (table 3 and 4).

Tableau 3 : **Long term relationship**

	Foreign Direct Investment			Public investment			Domestic private investment		
Independent Variables	lipb (-1)	0,503	0,219	lide (-1)	0,106	0,219	lide (-1)	0,430	0,001
	lidp(-1)	0,802	0,001	lidp(-1)	0,237	0,040	lipb (-1)	0,602	0,040
	Constante	-12,76	0,038	Constante	11,603	0,000	Constante	6,014	0,192

Source : Author estimates in STATA 12

Table 4 : Short term relationship (Error Correction)

	D. LIDE		D.LIPB		D.LIDP	
Coef. of cointegration	-1,486	0,001	-0,920	0,001	-0,386	0,248
Lide						
LD.	0,878	0,027	0,855	0,001	0,552	0,059
L2D.	0,513	0,097	0,659	0,001	0,490	0,032
L3D.	0,675	0,001	0,340	0,006	0,350	0,015
Lipb						
LD.	2,444	0,046	0,799	0,302	0,066	0,941
L2D.	-0,516	0,581	0,371	0,530	-0,494	0,474
L3D.	0,496	0,581	-0,027	0,961	-0,440	0,507
Lidp						
LD.	-1,131	0,038	-0,430	0,213	-0,214	0,596
L2D.	-0,189	0,621	-0,308	0,203	0,074	0,793
L3D.	-0,744	0,091	-0,389	0,162	-0,357	0,272
GDP per capita						
LD.	-0,019	0,001	-0,004	0,175	-0,0032	0,444
L2D.	0,005	0,174	-0,0005	0,830	0,00431	0,145
L3D.	-0,005	0,164	-0,001	0,591	0,0002	0,931
Trade openness						
LD.	0,052	0,021	-0,019	0,164	-0,010	0,553
L2D.	-0,004	0,742	-0,005	0,555	0,001	0,894
L3D.	-0,001	0,899	-0,005	0,478	0,001	0,863
Constant	0,0923	0,314	-0,044	0,443	0,018	0,789

Source: Author from estimate in STATA 12

The estimation results of the long term relationship lead to the following implications. In the long term, foreign direct investment was impacted positively by private domestic

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investment. A 1% increase in private domestic investment leads to a positive variation of 80% of foreign direct investment. Public investment appears not to be significantly determined by the FDI in Togo. As for public investment, they are positively sensitive to the private domestic investment and statistically insensitive to foreign direct investment in Togo in the long term. Finally, the Togolese private domestic investments are positively impacted by foreign direct investment, on the one hand and the Togolese public investment, on the other.

The cointegration coefficient reflects the restoring forces towards long-term equilibrium. The long-term relationships suggest that whenever the variables foreign direct investment and public investment will deviate from their equilibrium level, they will reabsorb each period, 148% and 92% respectively of sustained imbalance. By contrast, if it were to deviate from its equilibrium level, the variable private domestic investment would move away indefinitely. Indeed, the cointegration coefficient attached to this variable is statistically insignificant.

The short-term dynamics shows that FDI is positively impacted by its own lagged values. As for the Public Investment, it appears not dependent, neither on its own lagged values, nor on the Domestic private investment. However, it is positively influenced by the level of foreign direct investment. Like public investment, private domestic investment in Togo is impacted by the level of foreign direct investment. Indeed, the private domestic investment is positively impacted by the FDI received and private domestic investments in previous years.

The three dummy variables used to capture the effect of the structural adjustment program in the 1980s, socio-political and economic crises that Togo experienced in the period 1991-1992 and surge world food prices, which hit Togo in 2007-2008 are statistically insignificant and therefore are excluded from the estimate.

The results of our estimates enabled us to establish long-term relationship on the one hand and on the other, short-term relationship between public investment, domestic private investment and foreign direct investment in Togo. But we must have some reserve on the extend of these results since other variables can influence this relationship including good governance, domestic bank credit level, external debt, interest rate, inflation rate , infrastructure etc.

5. Conclusion

The objective of this study is to shed light on the sense of the relationship between foreign direct investment, public investment and domestic private investment.

In light of the estimates, it appears that Togo domestic private investment have in the long term a ripple effect on foreign direct investment and public investment. Conversely, increased public investment and foreign direct investment also stimulate domestic private investment in the long term. In addition, in the long run, there would be no significant relationship between public investment and foreign direct investment.

As for the short term, while public investment in the previous period seems to boost foreign direct investment, private domestic investment tends to crowd them out. Moreover, foreign direct investment from previous periods seem to have a positive impact on its current value. Domestic investment, whether public or private, in the short term is influenced by foreign direct investments. Indeed, an increase in FDI in the short term would be beneficial for both the public and domestic private investment.

Finally, no dummy variables used in the model does seem to significantly affect the estimates.

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