

The Relationship Between Foreign Direct Investment and Economic Growth in Togo [1991-2009]

Assiobo Komlan Mawugnon, Fang Qiang

School of Management, Wuhan University of Technology, Wuhan, P.R.China, 430070

(E-mail: a.elvas@yahoo.fr, fangqianq@whut.edu.cn)

Abstract: This study investigated the causal relationship between Foreign Direct Investment (FDI) and Economic Growth in Togo within the period 1991-2009. To that end, we used the Granger-causality to test and determine the causal relationship between FDI and Economic Growth in Togo. Using time series data, the research found that there was a unidirectional relationship between FDI and GDP. The direction of causation ran from FDI to GDP enables to conclude that FDI cause GDP and not otherwise. The study recommended improvement in the investment climate for foreign capital to enhance competitiveness and strengthen the bargaining position of the country in the emerging globalized economy.

Key Words: Causal Relationship; Foreign Investment; Economic Growth; Togo

1 Introduction

In the face of inadequate resources to finance long-term development in Africa and with poverty reduction and other Millennium Development Goals (MDGs) looks increasingly difficult to be achieved by 2015, the issue of attracting FDI has assumed a prominent place in the strategies of economic renewal being advocated by policy makers at the national, regional and international levels (UNCTAD, 2005)^[1]. Even though the average annual FDI flows to Africa has increased nine-fold from \$2 million in 1980s to about \$18 million in 2003 and 2004, the current findings by UNCTAD have shown a positive but weak and unstable association between FDI and economic growth in Africa.

Foreign Direct Investment (FDI) refers to long term participation in management, joint-venture, transfer of technology and expertise by a country A into a country B. The economics literature drawing on endogenous growth theory, suggests that the level of financial sector development may influence foreign direct investment and its impact on the diffusion of technology in the host country, thereby increasing the rate of economic growth. There are two types of FDI: inward foreign direct investment and outward foreign direct investment, resulting in a net FDI inflow (positive or negative) and "stock of foreign direct investment", which is the cumulative number for a given period. Direct investment excludes investment through purchase of shares.

Many policy makers and academics contend that FDI can have important positive effects on a host country's development effort. In addition to the direct capital financing it supplies, FDI can be a source of valuable technology and know-how while fostering linkages with local firms, which can help jumpstart an economy. Based on these arguments, industrialized and developing countries have offered incentives to encourage foreign direct investments in their economies.

Foreign investment can play a major role in stimulating the economic growth of Togo. Foreign investors, through the establishment of multinational corporations, could help meet the country's local demands, create job opportunities and act as mobilizers of local capital and entrepreneurs. Through research and adaptation, they could also help to harness and refine local raw materials as inputs of production. With further expansion, they could create the necessary technological and industrial base for the country and the necessary base for the country's export trade.

Empirical studies of the impact of FDI on growth are concerned with either the overall effect on growth (or net welfare) or with specific aspects of the FDI impact on employment, technology, trade, entrepreneurship and other areas of the economy. Nevertheless, the nature of causation between FDI and economic growth remain unclear. It is, therefore, necessary to ascertain the link between FDI and economic growth in Togo. The main objective of this paper is, therefore, to test the direction of causality between FDI and economic growth (GDP) in the case of Togo.

2 Literature Review

The relationship between foreign direct investment (FDI) and economic growth has motivated a voluminous empirical literature focusing on both industrial and developing countries.

Despite there is many studies about the direction of the causal link between FDI and economic

growth, the empirical evidence is not clear for country groups. Following the criticisms in recent studies (Kholdy, 1995) of the traditional assumption of a one-way causal link from FDI to growth, new studies have also considered the possibility of a two-way (bidirectional) or non-existent causality among variables of interest. In other words, not only FDI can Granger cause GDP growth (with either positive or negative impacts), but GDP growth can also affect the inflow of FDI or there could be no causal link.

The results of Garba (1997)'s study on direct foreign investment and economic growth in Nigeria for the period 1970–1994 show that the coefficient of FDI was positive with high values indicating the sensitivity of FDI to GDP [2]. Existing empirical work by Karikari (1992) on the causality between FDI and economic growth in Ghana used the traditional Granger-type causality (Granger, 1969 and 1988) tests to identify the direction of causality in the above important relationship. Caves (1996) found bidirectional relationship. FDI and economic growth are positively interdependent. Large economic growth provides high profit opportunities attracting higher domestic and foreign direct investments. On the other hand, FDI through its spillover effect have direct positive economic growth of the host countries.

Hansen and Rand (2006) found that there is strong causal link between FDI and GDP for a group 31 developing countries during 1970-2000. De Mello (1997) point out that FDI had significantly positive effect on economic growth for the countries with high income [3]. In a study investigating 140 countries, Ghatak and Halicioglu found that FDI has a positive impact on real per-capita GDP (Ghatak and Halicioglu, 2006), furthermore, Roy and Berg also found evidence of positive and significant impact of the share of FDI in GDP on economic growth for the US by using SEM (Roy & Berg, 2006); on the other hand, Udo et al. found no evidence of the relation FDI-economic growth when analyzing the West African Monetary Zone (Udo and Obiora, 2006), proving the unilateral relation according to which FDI is attracted to countries with higher GDP per capita.

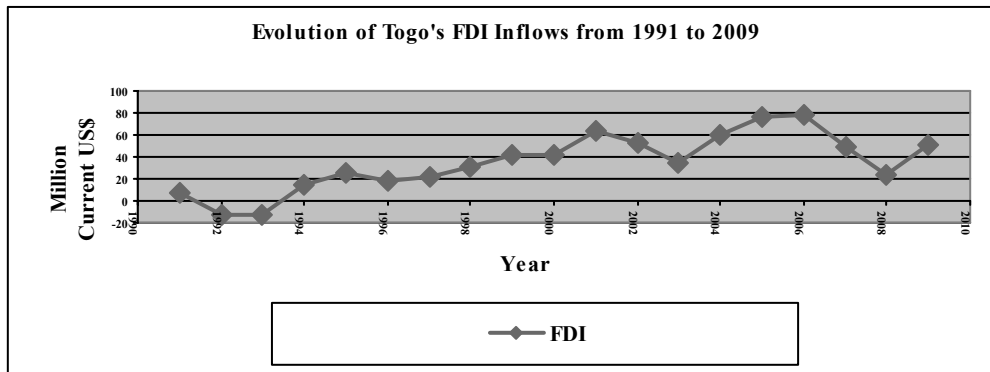
3 Foreign Direct Investment and Economic growth in Togo

Togo's economy relies heavily on agriculture, which employs 65% of the labor force. Cotton, cocoa and coffee are the most important cash crop. Togo is one of world's largest producers of phosphate. Commerce is also an important source of income for the nation. Lomé, Togo's capital is an important regional trading center.

Foreign Direct Investment plays a pivotal role in the development of Togo's economy. It is an integral part of the global economic system. Togo presents a vast potential for foreign investment and is actively encouraging the entrance of foreign players into the market.

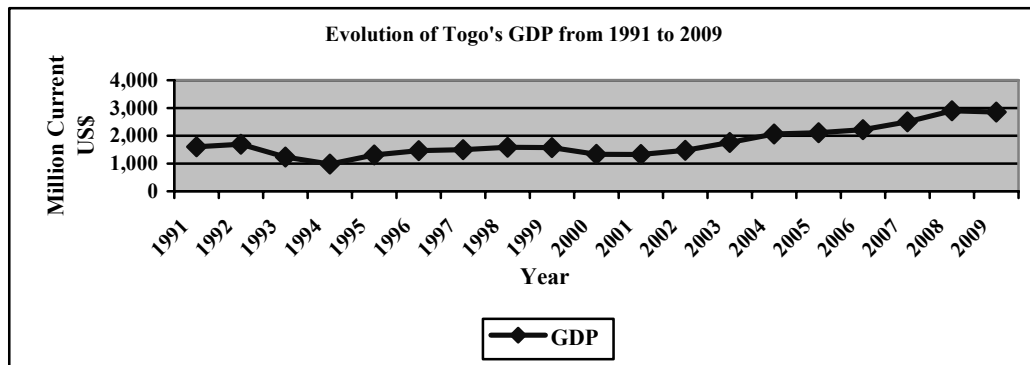
Historically, France has been Togo's principal trading partner, although other European Union countries are important to Togo's economy. China is another important trading partner.

Togo's economic growth was dramatically increasing since 2000 (Figure 1). From a low GDP in 2000 (\$1329.11 million), the annual growth of Togo has increased to \$2061.01 million in 2004 and increased to \$2898.55 million in 2008. The first decreased in the GDP was in 1992 and 1993 due to a very long general strike and the reduction of the international aid in 1993. The evolution of GDP over the period 1994-1999 was nearly stable with a push on over the three years 1995, 1996 and 1997 following the devaluation of 11/01/1994. In current francs, level (nominal) of GDP stood at \$1576.09 million in 1999 against \$982.63 million in 1994.



Source: World Development Indicators Website

Figure 1 Trends in FDI Inflows of Togo [1991 – 2009]



Source: World Development Indicators Website

Figure 2 Trends in GDP Growth of Togo [1991 – 2009]

The growth of FDI in Togo is one of the most consequences of Togo’s change in economic policy from a planned economy towards a market oriented economy. Even though the annual FDI flows to Togo has increased eight-fold from \$6.48 million in 1991 to about \$50.13 million in 2009. The amount of foreign investment rose from a tiny \$15.42 million in 1994 to \$77.34 million in 2006. However, it declined to \$49.16 million in 2007. In sum FDI has grown speedily with trends in Togo during the study period.

4 Data and Methodology

The data analyzed in this paper consists of Foreign Direct Investment (FDI) and Gross Domestic Product (GDP) time series of Togo in current USD. Data have been collected from Word Development Indicator Website. The data set of the study consists of 19 annual observations covering 1991 to 2009.

This study uses Granger-causality test proposed by Granger (1969)^[4] for testing statistical causality between FDI and GDP. The Granger causality test is a statistical hypothesis test for determining whether one time series is useful in forecasting another. This test is necessary because the direction of causation between GDP and FDI is not certain. While some economic theorists believe that economic growth (GDP) causes FDI, others opine that FDI causes economic growth. Granger causality may have more to do with precedence, or prediction, than with causation in the usual sense. It suggests that while the past can cause/predict the future, the future cannot cause/predict the past.

According to Granger, X causes Y if the past values of X can be used to predict Y more accurately than simply using the past values of Y. In other words, if past values of X statistically improve the prediction of Y, then we can conclude that X "Granger-causes" Y. Therefore, in a regression of Y on other variables (including its own past values), if we include past or lagged values of X and it significantly improves the prediction of Y, then we can say that X (Granger) causes Y. A similar definition applies if Y (Granger) causes X.

The test involves estimating the following regressions:

$$GDP_t = \alpha_0 + \sum_{i=1}^n \alpha_i GDP_{t-i} + \sum_{j=1}^n \beta_j FDI_{t-j} + \mu_{1t}$$

$$FDI_t = \delta_0 + \sum_{i=1}^n \lambda_i FDI_{t-i} + \sum_{j=1}^n \delta_j GDP_{t-j} + \mu_{2t}$$

where it is assumed that the disturbances are uncorrelated. To test the hypotheses, the restricted F-test is applied, which is given by:

$$F = [(RSSR - RSSUR) / m] / [RSSUR / (n - k)]$$

where, m is number of lagged terms, k is the number of parameters, RSSR and RSSUR are Residual Sum of Squares of Restricted and Unrestricted models respectively.

5 Results and Discussions

To test whether GDP causes FDI or FDI causes GDP in Togo, the data in Table 1 below is used to run a Granger causality test to determine the direction of causation between the variables.

Table 1 FDI Inflow and GDP for the Period 1991 – 2009 (million USD)

Year	FDI	GDP
1991	6.48	1,602.29
1992	-13.11	1,692.96
1993	-11.87	1,233.51
1994	15.42	982.63
1995	26.17	1,309.38
1996	17.31	1,465.31
1997	21.00	1,498.95
1998	30.16	1,587.35
1999	42.55	1,576.09
2000	41.92	1,329.11
2001	63.58	1,328.03
2002	53.36	1,476.12
2003	33.73	1,758.95
2004	59.36	2,061.01
2005	76.99	2,108.22
2006	77.34	2,217.98
2007	49.16	2,498.94
2008	23.88	2,898.55
2009	50.13	2,854.60

Source: World Development Indicators Website

Table 2 Pairwise Granger Causality Tests

Null Hypothesis	Lags: 1			Lags: 2			Lags: 3			Lags: 4		
	Obs.	F-Stat	Prob	Obs.	F-Stat	Prob	Obs.	F-Stat	Prob	Obs.	F-Stat	Prob
GDP does not Granger Cause FDI	18	0.0267	0.8723	17	0.7325	0.5010	16	0.6884	0.5815	15	0.7975	0.5681
FDI does not Granger Cause GDP	18	5.9853	0.0272	17	3.4169	0.0669	16	1.2804	0.3389	15	0.9645	0.4902

The table 2 shows the results of the Pairwise Granger Causality Tests in Lags: 1, Lags: 2, Lags: 3 and Lags: 4 respectively. The number of years the past behavior of the variables takes to impact significantly on the current period is indicated by the lags. This enables us to determine how past records of the variables for a short period of one year and a medium period of two to four years affect their current value.

The results in Lags: 1 (Table 2) reveal that there is a unidirectional relationship between FDI and GDP in Togo. Based on Table.2, the F-value of 5.98 is statistically significant at 1 percent level of probability. Consequently, the null hypothesis that FDI does not “Granger cause” GDP is rejected. However, the null hypothesis that GDP does not “Granger cause” FDI is accepted as judged by the low F-value of 0.03. Hence, the Granger causality test confirms a unidirectional causality from FDI to GDP.

The Granger causality test results confirm the consensus among economists that FDI have important positive impact on the country’s economic growth effort. Thus, FDI exerts positive effect on the growth of the economy, using GDP as a proxy in Togo.

6 Conclusions

This study empirically evaluates the relationship between FDI and Economic Growth in Togo. Evidence from the study showed a positive relationship between FDI and GDP during the period under review. Using the Granger Causality Test, the statistical result of our study shows a unidirectional causal effect running from FDI to GDP. The study, however, still failed to confirm Growth-driven FDI, i.e. GDP growth in Togo has not been attracted FDI inflows. Though FDI exhibited a positive relationship, its contribution to economic growth in Togo during the study period was significant. Understanding the direction of causality between the two variables is crucial for formulating policies that would encourage more private investors in Togo.

The study finds that FDI Granger cause GDP for the period 1991-2009. Thus, FDI stimulates GDP. Also, there was a unidirectional relationship between FDI and GDP. The results contradicted our a priori expectation that there was a bi-directional relationship between FDI and GDP. The results in table 2 further showed that the direction of causation ran from FDI to GDP. The implication here is that policy makers should pay increased attention to the overall role and the quality of FDI as a vital determinant of Economic Growth in Togo. This lends support to the validity of policy guidelines which emphasize the importance of FDI for Economic Growth and stability in developing countries under the assumption of FDI-led growth.

The paper recommends improvement in the investment climate for foreign capital in order to enhance competitiveness and strengthen the bargaining position of the country in the emerging globalized economy.

References

- [1] UNCTAD. Economic Development In Africa: Rethinking The Role Of Foreign Direct Investment[R]. UNCTAD/GDS/AFRICA/2005/1, United Nations, Geneva,2005
- [2] Garba, S. T. Direct Private Foreign Investment and Economic Growth in Nigeria (1980-1996): An Empirical Investigation[D]. (Unpublished Ph.D. Thesis) submitted to the Postgraduate School, ABU, Zaria. 1998
- [3] De Mello. L. Foreign Direct Investment Led Growth: Evidence from Time-Series and Panel Data[J]. Oxford Economic Papers, 1999,(51):133-151
- [4] Granger C. W. J. Investigating Casual Relationship by Econometric Models and Cross Spectral Methods[J]. Econometrica, 1969,(37):424-458
- [5] A. J. C. Onu, P. P. Njiforti. The Relationship between Foreign Direct Investment and Economic Growth in Nigeria (1986-2007)[J]. Journal of Research in National Development , 2010, 8(1)
- [6] Frimpong Joseph Magnus, Oteng-Abayie Eric Fosu. Bivariate Causality Analysis between FDI Inflows and Economic Growth in Ghana[C]. International Research Journal of Finance and Economics, 2008
- [7] UNCTAD. Foreign Portfolio Investment (FPI): Characteristics, Similarities, Complementaries and Differences[R]. Commission on Investment, Technology and Related Financial Issues; Expert Meeting, Geneva, 1999,(6): 28-30