# Economic Freedom and Foreign Direct Investment in Togo: Is There a Relationship?

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**Abstract**

The objective of this study was to contribute to a better understanding of the effect of economic freedom on FDI in Togo. We used data ranging from 1996 to 2021 and applied an autoregressive distributed lag (ARDL) model to analyze the short and long-term dynamics between FDI and the index of economic freedom, as well as other relevant explanatory variables. The tests carried out revealed the existence of a cointegrating relationship between FDI and the explanatory variables. In the short term, economic freedom has a positive impact on FDI, although this effect tends to diminish in the long term. In addition, other factors such as inflation, corruption, labor productivity and government spending have been identified as significant determinants of FDI.

**Keywords:** FDI, economic freedom, economic growth, ARDL, cointegration

**JEL**: O47, E22.

## 1. Introduction

Foreign direct investment (FDI) flows remain an important source of external finance for less developed countries and crucial for their sustainable development (UNCTAD, 2023). Numerous studies and reports by international institutions have shown that FDI is one of the key factors in economic growth. For example, the World Bank (World Bank, 2019) and the Organisation for Economic Co-operation and Development (OECD, 2016) showed the important role of FDI for economic growth. These reports concluded that FDI has a positive effect on productivity, knowledge transfer, innovation, and job creation.

These days, attracting FDI has become a priority for countries, especially developing ones. This is the example of the Pan-African Investment Code that was adopted at the end of 2016 by African Union specialists, the aim of which was to promote, facilitate and protect investments that foster the sustainable development of each member state, and the one in which the investment is made. Furthermore, it should be remembered that FDI is conditioned by certain variables, including economic freedom (Magnus & Kokko, 1997; Karl & Sachs, 2009; Gwartney & Lawson, 2020; etc.).

From an economic point of view, economic freedom is defined as the ability of companies and individuals to fully enjoy their economic activities without excessive or abusive intervention by the state or any other actor. It is generally captured by the Index of Economic Freedom published annually by the Heritage Foundation and other international institutions. The score produced by the Heritage Foundation takes into account twelve (12) factors grouped into four (4) main categories: i) the rule of law, which includes property rights, government integrity and judicial efficiency; ii) government leadership, which includes public spending, fiscal pressure and fiscal health; iii) regulatory efficiency: business freedom, labour freedom and monetary freedom; iv) open markets, which includes commercial freedom, investment freedom and financial freedom.

Studies by Faria and Montesinos (2009), and Gwartney et al. (2016) have shown that there is a positive link between economic freedom and economic growth. For them, countries that have improved their level of economic freedom have faster economic growth. This positive impact on growth is transmitted through several

channels, including foreign investment (Freytag & Thurik, 2007).

The current situation in Togo shows that the country's decision-makers still have some way to go in terms of economic freedom. According to the Heritage Foundation's (Note 1) 2022 report, Togo obtained an economic freedom score of 57.2 and is ranked 114th out of 177 of the freest countries in the world and 15th in sub-Saharan Africa. Generally speaking, its scores are often lower than the world average. What's more, the country is one of the poor performers according to the World Bank's Doing Business report. This report, published annually since 2003, examines the business climate in countries by tracking indicators such as obtaining building permits, setting up businesses, etc. Several other studies showed that Togo was lagging in terms of economic freedom, despite the measures taken to facilitate commercial activities and promote free enterprise through the introduction of regulatory and administrative reforms.

In addition, analysis of the link between the components of economic freedom and FDI in Togo revealed several aspects that needed to be highlighted. In the past, the country experienced periods of political instability and political transitions, which generated potential risks of disruption to economic activities, including those of foreign investors. Added to this was the absence of solid guarantees for private property, as well as concerns about the independence and fairness of the judicial system, which deterred foreign investors.

In other words, Togo's rule of law has fluctuated, which has had an impact on FDI. At the same time, the Togolese government, by setting up industrial free zones, is offering advantages such as tax incentives and infrastructure that attract FDI. In addition, measures have been taken to improve regulatory efficiency, such as the creation of a one-stop shop for business-related administrative procedures, enabling them to manage all formalities in one place.

Training and education programmes have been developed to improve the quality of the workforce and attract FDI. As far as open markets are concerned, Togo is a member of several international organisations and agreements aimed at promoting international trade.

"Despite its good economic performance, Togo had witnessed a decline foreign direct investment (FDI) since 2016. The growth rate since then has been halved compared with the average of 11% recorded between 2012 and 2015. The country's FDI stock of $1.9 billion in 2021 was lower than that of most neighbouring countries"(Note 2). It should be stressed that Togo, like all developing countries, still faces several major obstacles, such as corruption, unskilled labour, inadequate infrastructure and logistics, and the complexification of the administrative procedures due to the failure to implement appropriate laws.

UNCTAD's report on Togo's Investment Policy Review (IPR) (UNCTAD, 2019) made a similar point, stating that "many obstacles to the country's competitiveness, including infrastructure, human resources, access to markets and finance, needed to be overcome". Not to mention the rule of law in Togo, which has fluctuated in the past. Faced with all this, bringing in FDI needed to develop the country's various strategic sectors will be a difficult task if economic freedom is not improved. Hence the need to find whether economic freedom has an impact on the attractiveness of FDI in Togo.

This study is important for several reasons. On the one hand, it will help policymakers make decisions about Togo's attractiveness to foreign investors. On the other hand, it will inform economic policies that improve business climate and, ultimately, economic growth. In addition, it will reinforce the existing literature on the nexus between economic freedom and foreign direct investment.

The main objective of this study was to contribute to a better understanding of the relationship between economic freedom and FDI in Togo. Specifically, we seek to (i) determine the impact of economic freedom on FDI in Togo; (ii) determine the long-term dynamics, if any, between economic freedom and FDI in Togo.

The rest of the paper is structured into four (4) sections. First, we will present some stylised facts, followed by a selective literature review linking economic freedom and FDI. The third and last sections will be devoted respectively to the method of analysis and data, and the presentation and analysis of the empirical results.

## 2. Stylized Facts: FDI and Economic Freedom in Togo

Figure 1 below showed the trend of the index of economic freedom and FDI (as a percentage of GDP) flows entering Togo over the period 1996 to 2021. Overall, FDI fluctuated up and down, while the index of economic freedom remained relatively stable over this period. The Figure revealed a temporary correlation between economic freedom and FDI. Indeed, we noted that in 1999, when the index of economic freedom improved slightly compared to previous years, this was followed by an increase in the share of FDI over the period 1999 to 2001. This was followed by a decline up to 2003, mainly due to the fall in the economic freedom index between 2000 and 2002.

Between 2006 and 2009, FDI fell, then rose again until 2011 where it reached its highest level. In 2012, there was a sharp decrease, in contrast to the increase the previous year. From 2013 to 2021, the two economic aggregates showed significant fluctuations compared to previous years. Over this period, the Index of Economic Freedom reached its lowest level in 2018, as did FDI.
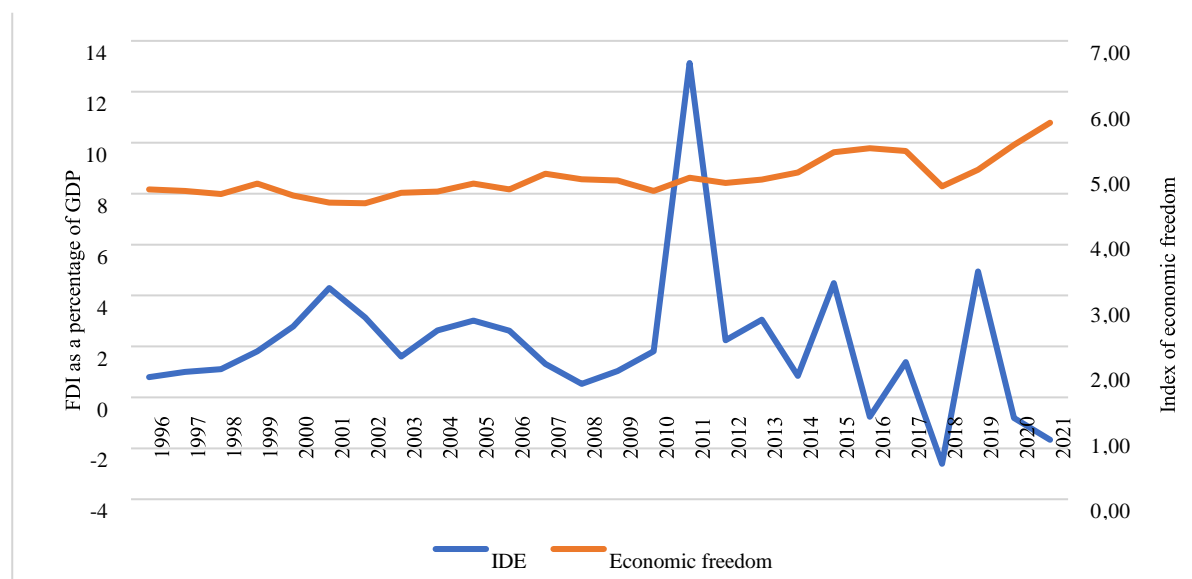


Figure 1. Index of economic freedom and FDI flows as a percentage of GDP in Togo

## 3. Review of Literature

### 3.1 Theoretical Review

Several studies and debates have been conducted to understand the link between FDI and economic freedom. The following is a brief review of these theories.

#### 3.1.1 Free Trade Theory

Several proponents of this theory have addressed the subject in question. Smith (1776) explained the importance of economic freedom for FDI. In his book "*The Wealth of Nations*", the father of modern economics discussed free trade, absolute advantage, and the importance of the division of labour. He supported the idea that economic freedom accompanied by the removal of trade barriers enables states to maximise their productivity and benefit from their comparative advantages. This creates a favourable business climate that attracts FDI.

Ricardo (1817) developed a theory of comparative advantage. According to his theory developed in "*Principles of Political Economy and Taxation*", countries should specialize in the production of goods and services, especially in industries where they can produce them at a lower opportunity cost than other countries. And to specialize in this comparative advantage, countries can rely on economic freedom, which will in turn attract FDI.

#### 3.1.2 Transaction Cost Theory

Williamson (1975), Coase (1937) and some other researchers and economists have contributed to the theory of transaction costs. According to Williamson and Coase in their respective publications "*Markets and Hierarchies*" and "*The Nature of the Firm*", countries must reduce their transaction costs associated with FDI if they hope to attract it. They supported the idea that factors such as bureaucracy, corruption and inefficient legal systems can discourage FDI. In fact, a country that takes measures against corruption, puts in place frameworks to reduce bureaucracy and minimizes regulatory barriers, attracts foreign investors by offering them more efficient and less costly transaction opportunities.

#### 3.1.3 Institutional Theory

This theory is defended by North (1990), Acemoglu and Robinson (2012). According to North (1990) in his book "*Institutions, Institutional Change and Economic Performance*", the protection of property rights, transparent regulations, an independent judicial system, etc. provide countries with a business climate that is favourable to

foreign investors. As for Acemoglu and Robinson (2012), they supported the same view as the previous authors in their book "*Why Nations Fail: The Origins of Power, Prosperity, and Poverty*". They added that inclusive institutions that guarantee economic freedom also encourage innovation, investment and economic growth.

3.1.4 Eclectic Theory

This theory was developed by the British economist Dunning (2006), the Eclectic Theory of FDI sheds light on the FDI behaviour of international companies. Also known as the "*Oxford Paradigm*", it is based on three concepts: "ownership advantages", "location advantages" and "internalisation advantages".

Ownership advantages" are specific advantages held by large multinational companies that are not readily available to local companies. Examples of these advantages include those in terms of technology, patents, management skills, etc. that make companies competitive on international markets. Location advantages" refer to the specific characteristics of the host country, such as proximity to markets, natural resources, favourable regulations, a skilled workforce, infrastructure, and so on. Countries with these factors attract FDI. As for "insourcing advantages", these are the advantages that companies obtain internally by carrying out their operations directly abroad rather than outsourcing them. These can include reduced transaction costs, protection of company-specific assets and preservation of technology confidentiality.

*3.2 Empirical Review*

In economic literature, several studies have examined the effect of economic freedom on FDI. Some authors have concluded that the link between these two factors was positive, while others have found that economic freedom had no link with the attractiveness of FDI.

Among the authors highlighting the positive effect of economic freedom on FDI, the work of Basu and Srinivasan (2002), Bengoa and Sanchez-Robles (2003) and others deserve to be mentioned. Basu and Srinivasan (2002) carried out a review analysis of FDI experiences in several African countries. They found that there are factors that positively influence the attractiveness of FDI. These include tax incentives, business climate and policies, trade openness, etc.

Bengoa and Sanchez-Robles (2003) deduced from a panel study of several Latin American countries over a period from 1970 to 1999 that economic freedom had a positive impact on FDI. In their view, economic freedom fulfilled several functions for a host country, including its vital importance in attracting FDI.

Using a dynamic panel GMM (Generalized Methods of Moments) estimator on 33 middle-income countries, Blanca and Marta (2003) also confirmed the positive link between FDI and economic freedom. These results are similar to those of Bevan, Estrin, and Meyer (2004). In fact, these authors studied the link between institutional development and FDI inflows, in a several transition economies. They showed that private ownership of companies, reform of the banking sector and the liberalisation of exchange rates and trade had a positive influence on FDI.

The study carried out by Cleeve (2008) revealed that "political and macroeconomic stability at national and regional levels, protection of property rights and other investment-friendly regulations, and improvements in infrastructure and services systems" are the variables on which the African authorities must base their efforts to attract FDI. These conclusions are in line with those of Zahia (2012), who looked at the effect of business freedom on the attractiveness of FDI in Algeria.

Garga and Tchakounte (2022) analysed the impact of economic freedom on FDI in six (6) countries in the Central African Economic and Monetary Community zone in a GMM in difference setting over the period 1995 to 2019. Their results showed that the freedom to do business had a positive and significant impact on the attractiveness of FDI. These results also showed that the freedom to do business had a positive impact on the attractiveness of FDI through the reduction of administrative formalities, hiring rigidities, investor protection, etc. operated by the country's authorities.

However, it should be noted that some studies suggested a negative link between economic freedom and FDI. For example, Globerman and Shapiro (2002) observed that foreign investors may be negatively influenced by government control and lack of regulation, which may be the result of greater economic freedom. Busse and Hefeker (2005) have also pointed out that high levels of economic freedom could discourage FDI in some contexts. Their study looked at the impact of economic policies and FDI. Similarly, Torben and Jakob (2008) concluded that developing countries with a high level of economic freedom were less attractive to FDI than those with a low level of economic freedom.

## 4. Method of Analysis and Data

### 4.1 The data

The data used in this study came mainly from the World Development Indicators (WDI) of the World Bank, the Heritage Foundation and the United Nations Conference on Trade and Development (UNCTAD). The data covered a period ranging from 1996 to 2021. Apart from FDI (as a percentage of GDP) flows, which is our dependent variable, the other variables are explanatory variables.

Table 1. Presentation of variables and their sources

| Variable | Information | Source |
|---|---|---|
| *fdi* | net FDI inflows as a percentage of GDP | UNCTAD |
| *ecofree* | composite index measuring economic freedom | Heritage Foundation |
| *infl* | Inflation rate | WDI |
| *corrup* | Corruption Perception Index | WDI |
| *lnlabf* | Labor force in logarithm | WDI |
| *lngdpempl* | Gross domestic product per employee (in logarithm) measuring labour productivity. | WDI |
| *lngov_cons* | Government consumption expenditures in logarithm | WDI |

Source: Author.

Based on the literature reviewed, we estimated the impact of economic freedom on the attractiveness of FDI (dependent variable), considering the main determinants of FDI presented in Table 1. The econometric specification is described as follows:

$$fdi_t = \alpha_0 + \alpha_1 ecofree_t + \alpha_2 infl_t + \alpha_3 corrup_t + \alpha_4 lnlabf_t + \alpha_5 lngdpempl_t + \alpha_6 lngov\_cons_t + \varepsilon_t \quad (1)$$

Where *t* is the time dimension, $\alpha_0; \ldots \alpha_6$ the parameters to be estimated and $\varepsilon_t$ is the error term.

### 4.2 Method of Analysis

Since the data available for this study are time series, it is important to analyze their time series characteristics. These are the temporal characteristics of the series. The appropriate analysis method will depend on the results of the stationarity tests. It will be decided whether to use an Autoregressive Distributed Lag (ARDL) model proposed by Pesaran et al. (2001). This model analyses the short and long-run dynamics between the FDI variable and the explanatory variables. In fact, it is applicable to integrated variables of order 0 or 1, i.e., stationary variables in level or after first differencing. Another advantage of this model is that it has better statistical properties on small samples (Cheung & Lai, 1993). It also takes into account the endogeneity between the explanatory variables (Harris & Sollis, 2003).

Our ARDL model is formulated as follows:

$$\Delta(fdi)_t = B_0 + \sum_{i=1}^{p} B_{1i}\Delta(fdi)_{t-i} + \sum_{i=0}^{q} B_{2i}\Delta(ecofree)_{t-i} + \sum_{i=0}^{q} B_{3i}\Delta(infl)_{t-i} + \sum_{i=0}^{q} B_{4i}\Delta(corrup)_{t-i}$$
$$+ \sum_{i=0}^{q} B_{5i}\Delta(\text{lnlabf})_{t-i} + \sum_{i=1}^{q} B_{6i}\Delta(lngdpempl)_{t-i} + \sum_{i=0}^{q} B_{7i}\Delta(lngov\_cons)_{t-i} + a_1(fdi)_{t-1} +$$
$$a_2(ecofree)_{t-1} + a_3(infl)_{t-1} + a_4(corrup) + a_5(\text{lnlabf})_{t-1} + a_6(lngdpempl)_{t-1} +$$
$$a_7(\text{lngov\_cons})_{t-1} + e_t \quad (2)$$

$\Delta$ represents the first difference; $B_0$ the constant; $B_1, \ldots, B_7$ are the short-term effects; $a_1, \ldots, a_7$ are the long-term dynamics of the model.

After identifying the optimal lags (*p, q*) in equation (2), based on the minimum values of the two criteria Akaike and Schwartz, we estimated the ARDL model with error correction formulated as follows:

$$\Delta(fdi)_t = B_0 + \sum_{i=1}^{p} B_{1i}\Delta(fdi)_{t-i} + \sum_{i=0}^{q} B_{2i}\Delta(ecofree)_{t-i} + \sum_{i=0}^{q} B_{3i}\Delta(infl)_{t-i} + \sum_{i=0}^{q} B_{4i}\Delta(corrup)_{t-i}$$
$$+ \sum_{i=0}^{q} B_{5i}\Delta(\text{lnlabf})_{t-i} + \sum_{i=1}^{q} B_{6i}\Delta(lngdpempl)_{t-i} + \sum_{i=0}^{q} B_{7i}\Delta(lngov\_cons)_{t-i} + \gamma(ECT)_{t-1} + e_t \quad (3)$$

With *ECT* being the error correction term. The parameter associated with the *ECT* term defined the speed of adjustment of the model towards its long-term equilibrium.

## 5. Presentation and Analysis of the Empirical Results

To assess the effect of economic freedom on foreign direct investment in Togo over the period ranging from 1996 to 2021, we opted for the ARDL approach because of its many advantages. The empirical results are presented below starting with the descriptive statistics presented in Table 2.

Table 2. Descriptive statistics

| Variable | Obs | Mean | Std. Dev | Min | Max |
|---|---|---|---|---|---|
| *fdi* | 26 | 2.065 | 2.883 | -2.609 | 13.131 |
| *ecofree* | 26 | 4.905 | 0.298 | 4.520 | 5.750 |
| *infl* | 26 | 2.501 | 2.517 | -0.980 | 8.695 |
| *corrup* | 26 | -0.860 | 0.117 | -1.040 | -0.677 |
| *lnlabf* | 26 | 4.066 | 0.006 | 4.049 | 4.077 |
| *lngdpempl* | 26 | 8.583 | 0.102 | 8.422 | 8.772 |
| *lngov_con* | 26 | 2.573 | 0.159 | 2.275 | 2.890 |

Source: Author's calculations.

We observed that FDI as a percentage of GDP stood on average at 2.065 with high variability (standard deviation of 2.883). However, the index of economic freedom stood on average at 4.905 with low variability (standard deviation of 0.298), indicating relative stability in the levels of economic freedom measured. The inflation rate and the corruption index stood on average at 2.501 and -0.860 respectively. In addition, variables such as the labour force, labour productivity and government consumption expenditures showed relatively stable averages with low variability.

*5.1 Unit Root Tests*

Assessing the presence of a unit root is an essential step in the analysis of time series. Even if it is not strictly required for the estimation of the ARDL model. The objective of the stationarity test in this study is to ensure that the variables are integrated of order 0 or 1 which is one of the fundamental criteria for applying the ARDL model. To do this, three tests were used: the Augmented Dickey-Fuller (ADF) test, the Phillips-Perron (PP) test, and the Kwiatkowski Phillips-Schmidt-Shin (KPSS) test. We decided to adopt a conclusion when more than two of these tests converge towards the same result. A first test was carried out on the level variables, then a second after applying the first difference to the non-stationary variables at the end of the first test.

The null and alternative hypotheses for these tests are as follows:

***For the ADF and PP***

$H_0$: the series is non-stationary.

$H_1$: The series is stationary.

***For the KPSS***

$H_0$: The series is stationary.

$H_1$: The series is non-stationary.

The decision rule is to reject $H_0$ if the p-value is below the 5% significance level. The test results are shown in Tables 3 and 4:

Table 3. Stationarity tests on level variables

| Variables | ADF | | PP | | KPSS (0.146) | | Final decision |
|---|---|---|---|---|---|---|---|
| | *P-value* | Nature | *P-value* | Nature | Test Statistic | Nature | |
| *fdi* | 0.178 | Non-stationary | **0.000** | Stationary | **0.114** | Stationary | Stationary |
| *ecofree* | 0.085 | Non-stationary | 0.309 | Non-stationary | 0.147 | Non-stationary | Non-stationary |
| *infl* | **0.000** | Stationary | **0.002** | Stationary | **0.058** | Stationary | Stationary |
| *corrup* | 0.845 | Non-stationary | 0.858 | Non-stationary | 0.500 | Non-stationary | Non-stationary |
| *lnlabf* | 0.989 | Non-stationary | 0.984 | Non-stationary | 0.318 | Non-stationary | Non-stationary |
| *lngdpempl* | 0.760 | Non-stationary | 0.972 | Non-stationary | 0.605 | Non-stationary | Non-stationary |
| *lngov_con* | 0.056 | Non-stationary | 0.072 | Non-stationary | 0.155 | Non-stationary | Non-stationary |

Source: Author's calculations.

Table 4. Stationarity tests on variables after first difference

| Variable | ADF | | PP | | KPSS (0.146) | | Final decision |
|---|---|---|---|---|---|---|---|
| | Pvalue | Nature | Pvalue | Nature | Test Statistic | Nature | |
| *d.ecofree* | **0.002** | Stationary | **0.002** | Stationary | **0.046** | Stationary | **Stationary** |
| *d.corrup* | **0.001** | Stationary | **0.001** | Stationary | **0.078** | Stationary | **Stationary** |
| *d.lnlabf* | **0.001** | Stationary | **0.001** | Stationary | 0.204 | Non-stationary | **Stationary** |
| *d.lngdpempl* | **0.000** | Stationary | **0.000** | Stationary | **0.104** | Stationary | **Stationary** |
| *d.lngov_con* | **0.000** | Stationary | **0.000** | Stationary | **0.040** | Stationary | **Stationary** |

Source: Author's calculations.

In the end, FDI and inflation are stationary in level and the other variables are stationary after the first difference. In summary, FDI and inflation are I(0) and the other variables are I(1).

*5.2 Cointegration Test*

Three specifications were used. Specification 1 includes five (5) variables: foreign direct investment, economic freedom, inflation, corruption, and the active population. We added labour productivity to obtain specification 2, while specification 3 is specification 2 plus the government consumption expenditures variable.

Table 4 presented the values of the Bounds Test, which used Fisher's statistics to examine the presence of cointegration between the variables of interest. The null hypothesis is the absence of cointegration, while the alternative hypothesis provides evidence for the existence of a cointegrating relationship. The test procedure is such that the values of the bounds must be compared with those of the Fisher's statistic. The null hypothesis is rejected when the value of the Fisher's statistic is greater than the upper bound, whereas in the opposite case, where the value of the Fisher's statistic is less than the lower bound, the null hypothesis is accepted. If the value of the Fisher statistic fell between the critical values of the lower and upper bounds, the result would be inconclusive.

The results are presented in the following tables:

Table 5. Bounds test for cointegration

| | Specification 1 | Specification 2 | Specification 3 |
|---|---|---|---|
| **Fisher statistics** | **5.162** | **6.113** | **8.686** |
| 5% critical bounds | I(0) | I(0) | I(0) |
| | I(1) | I(1) | I(1) |
| | 2.45 | 2.26 | 2.12 |
| | 3.52 | 3.35 | 3.23 |
| 10% critical bounds | I(0) | I(0) | I(0) |
| | I(1) | I(1) | I(1) |
| | 3.74 | 3.41 | 3.15 |
| | 5.06 | 4.68 | 4.43 |
| Decision | We reject H0 | We reject H0 | We reject H0 |

Source: Author's calculations.

From Table 5, we observed that the values of the Fisher's statistic for the three (3) specifications were greater than the upper limit of the critical values. Consequently, the null hypothesis of no cointegrating relationship was rejected, which meant that the variables examined were cointegrated. This conclusion, coupled with the results of the unit root tests, authorized the use of the ARDL model whose results are presented below.

*5.3 Results of the ARDL Model*

Table 6 presented the results for the short- and long-term relationships of the ARDL model. It also provided information on the optimal lag used for each specification. Based on the AIC criterion, specification 1 was an ARDL (1,2,1,2,0), an ARDL (1,2,1,2,2,2) for specification 2. and an ARDL (1,2,1,2,0,2,2) for specification 3.

The estimated results showed that the overall significance of all the specifications and the error correction coefficients were negative, less than 1, and significant for all the specifications (1, 2, and 3), namely **-0.832, -0.607**, and **-0.741**, with *p-values* of 0.001, 0.010 and 0.004 respectively. The results supported the existence of an error correction mechanism tantamount to a long-term dynamic between the variables.

Table 6. ARDL model estimation results for the first specification

| | specifications 1 | specifications 2 | specifications 3 |
|---|---|---|---|
| | Dependent variable: Foreign direct investment (*fdi*) | | |
| | ARDL (1,2,1,2,0) | ARDL (1,2,1,2,2,2) | ARDL (1,2,1,2,0,2,2) |
| ECT(t-1) | **-0.832 (0.001)** | **-0.607 (0.010)** | **-0.741 (0.004)** |
| | *Long-term* | | |
| *ecofree* | -1.456 (0.783) | -5.175 (0.471) | 4.296 (0.366) |
| *infl* | -0.525 (0.203) | -1.887 (0.093) | -0.330 (0.394) |
| *corrup* | -11.939 (0.095) | -2.372 (0.865) | 10.625 (0.274) |
| *lnlabf* | 128.075 (0.583) | -305.316 (0.494) | 313.997 (0.186) |
| *lngdpempl* | | -64.672 (0.107) | -27.209 (0.091) |
| | *Short-term* | | |
| *ecofree* | | | |
| D1. | **6.370 (0.053)** | **6.293 (0.070)** | **7.629 (0.012)** |
| LD. | **-8.944 (0.017)** | **-13.493 (0.005)** | **-8.774 (0.025)** |
| *infl* | | | |
| D1. | **0.511 (0.028)** | **0.873 (0.002)** | **0.535 (0.005)** |
| *corrup* | | | |
| D1. | -5.793 (0.528) | -13.030 (0.162) | **-25.140 (0.011)** |
| LD. | **23.284 (0.027)** | **39.152 (0.006)** | 11.575 (0.240) |
| *lnlabf* | | | |
| D1. | | -73.142 (0.842) | |
| LD. | | **-900.869 (0.061)** | |
| *lngdpempl* | | | |
| D1. | | -1.731 (0.927) | 26.262 (0.094) |
| LD. | | **46.279 (0.014)** | 5.303 (0.114) |
| *lngov_con* | | | |
| D1. | | | **12.347 (0.009)** |
| LD. | | | 5.303 (0.114) |
| R-squared | 0.864 | 0.948 | 0.978 |

Source: Author's calculations. Numbers in parenthesis are p-values.

In the long term, economic freedom has no significant effect on foreign direct investment for the three specifications. However, in the short term, it does have a positive effect on foreign direct investment. In the first specification, a 1% increase in economic freedom would lead to a 6.37 percentage point increase in the variation of foreign direct investment as a percentage of GDP. This rate is 6.29 percentage points and 7.63 percentage points for specifications 2 and 3 respectively. Overall, an increase in economic freedom seemed to stimulate FDI in Togo in the short run. These results suggested that investors were attracted by an open and business-friendly economic environment. Over the long term, however, this relationship appeared to be weakening, perhaps because of other structural factors or persistent institutional constraints.

With respect to the other variables, in the short-term inflation was positive and statistically significant at the 5% level. The value of this coefficient indicated that a 1% increase in inflation would lead to an increase in the variation of FDI by 0.51 percentage points. It would be 0.87 percentage points and 0.53 percentage points for the other two specifications respectively. However, this trend will be reversed at the 10% threshold in the long term, as shown by the results of specification 2. A rise in inflation can lead to an increase in FDI. which may be due to the prospect of increased profits for investors in the short term. However, at a higher inflation rate in the long-term the country might find it difficult to attract FDI. This may be because investors may become wary of the economic instability that high inflation could bring.

At the 5% level, we observed that the variation in FDI may drop in the short-term by 25 percentage points (specification 3) following a 1% increase in corruption. The same conclusion is observed in the short term at the 10% level with specification 1, with a fall of 11 percentage points. This negative impact of corruption on FDI suggests that foreign investors are sensitive to the risk associated with political and economic instability in Togo.

Labor productivity has a positive and significant effect in the short term and a negative effect in the long term on foreign direct investment. A 1% increase in labor productivity would increase the variation in FDI by 26 percentage points in the short term, but this effect would be negative in the long term. In fact, an increase in

labour productivity could increase the potential returns on foreign investment. For reasons of structural limitations, this effect may be reversed in the long term.

In addition, a 1% increase in government spending would have a positive and significant effect, leading to a 12 percentage points increase in the variation of FDI in the short term. This can be linked to targeted public investment that creates a favourable environment for private investment.

After estimating the ARDL model, we carried out diagnostic and stability tests, the results of which are presented below. The diagnostic tests covered the White's homoscedasticity test, the Durbin Watson's error autocorrelation and Breusch-Godfrey's error autocorrelation tests, while for the stability test, we used the CUSUM curve.

Table 7. Diagnostic tests

|  | specification 1 | specification 2 | specification 3 |
|---|---|---|---|
| Durbin-Watson statistic | 1.913 | 2.589 | 3.078 |
| Breusch-Godfrey autocorrelation P-value | 0.927 | 0.064 | 0.000 |
| White's homoscedasticity P-value | 0.404 | 0.404 | 0.404 |

Source: Author's calculations.

The results indicated that the Durbin-Watson statistic for specifications 1 and 2 were around two (2), suggesting that the errors are not autocorrelated. These conclusions are supported by the Breusch-Godfrey autocorrelation test, which showed a *p-value* greater than 5%, indicating that the null hypothesis of no autocorrelation between the errors could not be rejected. However, both tests confirmed the presence of autocorrelation between errors for specification 3. With regard to the homoscedasticity test, the results show that the probabilities associated with the coefficients are greater than 0.05. Consequently, the null hypothesis of error homoscedasticity could not be rejected.

Regarding stability of the models, Figure 2 shows that the CUSUM curves were within the confidence intervals, which led us to conclude that our models were stable.
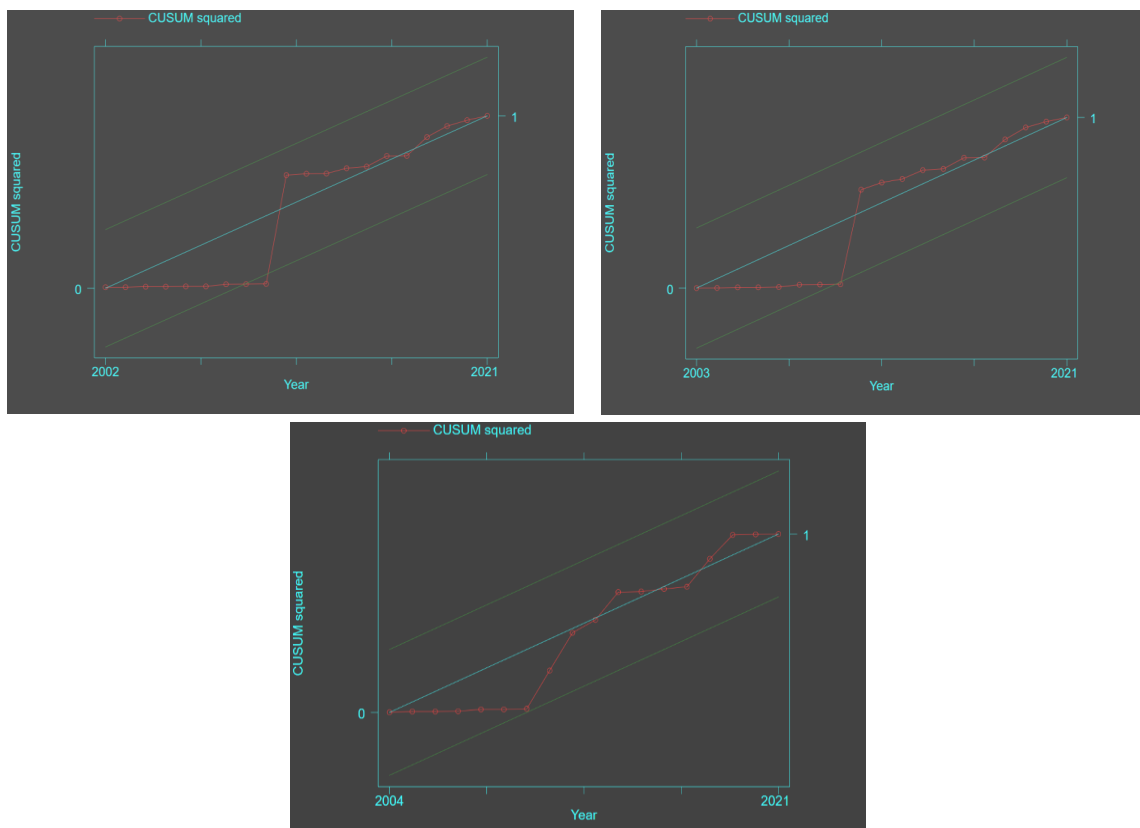






Figure 2. Cumulative sum of squares

## 6. Conclusion and Recommendations

The main objective of this paper was to contribute to a better understanding of the impact of economic freedom on FDI in Togo. Using annual data from various sources from 1996 to 2021 in an ARDL setting, we investigated the short and long-term dynamics between FDI and relevant explanatory variables. Before estimating the model, we initially established the existence of a cointegrating relationship between FDI and economic freedom as well as with the other variables of interest. The results of the ARDL model estimation showed that in the short term, economic freedom had a positive influence on FDI in Togo, although this effect vanished in the long term. In addition, other factors such as inflation, corruption, labour productivity and government spending significantly influenced FDI.

In order to harness the maximum benefit from FDI and encourage a steady flow of FDI on a sustainable basis, it is imperative that policymakers take appropriate and targeted measures, in particular, there is the need to

- Improving the business climate by simplifying the administrative procedures, strengthening the legal security of contracts, and promoting an open and competitive business environment to encourage FDI.

- Promoting structural reforms with the view to increasing the efficiency of the labor force, promoting innovation and increasing long-term productivity, while creating an environment more conducive to sustainable foreign direct investment.

- Strengthening anti-corruption policies by putting in place effective measures to reduce corruption and promote transparency within the government and public institutions in order to foster a more reliable and attractive business environment for foreign investors.

- Maintaining macroeconomic stability by adopting prudent monetary and fiscal policies to maintain macroeconomic stability and control inflation, which would help maintain long-term investor confidence and mitigate any negative effects on FDI.

### Authors Contributions

All authors read and approved the final manuscript. The authors contributed equally to the study.

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### Declaration of Conflicting Interests

The Author(s) declare(s) that there is no conflict of interest'.

### Data Availability

The data used for this work is available upon request.

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**Notes**

Note 1. https://www.heritage.org/index/pdf/2022/book/2022_IndexOfEconomicFreedom_FINAL.pdf .

Note 2. https://unctad.org/fr/news/au-togo-les-futures-reformes-de-linvestissement-rimeront-avec-croissance-durable.

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