

The Crowding Out Effect in Algeria: A Study of Foreign and Domestic Investment with Emphasis on Governance and Private Sector Dynamics

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Abstract:

This study examines the relationship between domestic private investment (PCF) and foreign direct investment (FDI) in Algeria, focusing on governance and public investment. The findings reveal a dual impact of domestic investment on FDI: a short-term crowding-out effect due to resource competition, but a long-term complementary role in improving the business environment. Governance factors, such as control of corruption (CC) and rule of law (RL), positively influence FDI in the short term, though lagged effects highlight reform challenges. Public investment (GCF) has limited short-term influence but later supports FDI through infrastructure development. The study emphasizes the need for integrated policies to enhance cooperation between investments, improve public investment efficiency, and sustain governance reforms to strengthen Algeria's investment climate.

Keywords: Foreign Direct Investment, Domestic Private Investment, Crowding-Out Effect, Governance, Public Investment.

Jel Classification Codes: F21; O16; D73; E22; H54.

I. INTRODUCTION

Foreign Direct Investment (FDI) is a crucial tool for achieving economic development, especially in developing countries like Algeria, which seeks to diversify its economy and reduce its reliance on oil and gas exports. FDI offers numerous benefits, including the provision of capital, advanced technology, knowledge transfer, and access to new markets. In Algeria, a country that has undergone significant economic transformations since independence, foreign investments have played a pivotal role in various sectors such as industry, energy, and telecommunications. However, the impact of these investments on domestic investments remains a subject of debate, as FDI is sometimes perceived to crowd out local investments in certain sectors.

The interplay between foreign direct investment (FDI) and domestic investment in Algeria continues to be a subject of significant debate, particularly in the context of governance quality and private sector dynamics. The phenomenon known as, the "crowding-out effect" raises critical questions about whether foreign investments displace or complement domestic investments in Algeria. Despite efforts to attract FDI as a driver of economic growth, Algeria faces enduring structural challenges, including weak governance, limited private sector participation, and institutional inefficiencies. Governance issues such as corruption, insufficient rule of law, and inconsistent policy implementation may hinder the expected benefits of FDI, potentially exacerbating the crowding-out effect. Similarly, the private sector, often constrained by limited access to resources and systemic inefficiencies, may struggle to thrive in an environment dominated by foreign capital and public sector priorities.

This study seeks to address the following key problem, how does the crowding-out effect of foreign direct investment (FDI) impact domestic investment in Algeria, particularly in the context of governance quality and private sector dynamics? In this context, the following hypotheses are proposed:

Hypothesis 1: FDI crowds out local investments.

FDI may limit the opportunities available to domestic investors, especially in capital-intensive sectors such as hydrocarbons, where access to financial and technological resources may be restricted to experienced foreign companies. Additionally, foreign firms may benefit from greater tax incentives, reducing the competitiveness of local businesses.

Hypothesis 2: There is complementarity between foreign and local investments in Algeria.

In some cases, FDI can enhance local investments through strategic

partnerships, technology transfer, and market expansion. Such investments may encourage local companies to invest in infrastructure and research and development.

Hypothesis 3: Government policies influence the relationship between foreign and local investments.

Government policies can play a crucial role in determining whether FDI integrates with or competes against local investments. Policies that support the local private sector by facilitating access to financing and providing a clear regulatory framework may mitigate the negative impact of FDI on domestic investments.

This study aims to provide an in-depth analysis of the relationship between foreign and local investments in Algeria and their impact on overall economic performance. The study is particularly relevant in light of ongoing efforts to stimulate the national economy beyond hydrocarbon revenues. It also seeks to understand the mechanisms through which cooperation between local and foreign investments can be enhanced to achieve sustainable economic growth. The findings of this study may help in revising economic policies to promote a better balance between foreign and local investments, thereby strengthening Algeria's ability to face current and future challenges.

II. Theoretical Framework of the Study:

The theoretical framework of this study focuses on the relationship between Foreign Direct Investment (FDI) and domestic investments, analyzing their impact on Algeria's overall economic performance. It delves into the interactions between these two types of investments and their connection to key economic factors such as growth, inflation, and capital formation. To understand this dynamic, the study draws on several economic theories.

One of the core frameworks for examining the impact of investments on the economy is the Economic Growth Theory. Numerous scholars suggest that FDI can enhance economic growth by boosting productivity, introducing advanced technology, and opening new markets. According to the classical growth model, FDI inflows stimulate aggregate demand and productive capacity, which in turn drives Gross Domestic Product (GDP) growth.

In a pivotal study, Borensztein, De Gregorio, and Lee (1998) highlighted that the impact of FDI on growth is contingent upon a country's educational level and technological capacity. Their research concluded that countries with a higher absorptive capacity for new technologies tend to benefit more from FDI, as foreign investments can be effectively integrated into local production processes. (Borensztein, De Gregorio, & Lee, 1998)

Caves (1996) also emphasized FDI's role in promoting economic growth by boosting productivity and enhancing competitiveness. He argued that FDI facilitates the transfer of knowledge and technology to host countries, which, in turn, enhances their economic performance. (Caves, 1996)

The crowding-out Theory explores the effect of FDI on domestic investments, suggesting that foreign investment inflows may reduce local investments, particularly in sectors where foreign investors enjoy superior financing conditions or more advanced technologies. In Algeria, where key industries like oil and gas attract the majority of foreign investments, local companies often struggle to compete due to the financial advantages foreign firms receive, such as tax exemptions and government incentives. This creates a competitive imbalance that can hinder the growth of domestic businesses, slowing down economic diversification and limiting local innovation and job creation.

Aitken and Harrison (1999) illustrate how the inflow of foreign investments can negatively impact local companies, especially in markets lacking advanced technologies (Aitken & Harrison, 1999). Similarly, UNCTAD (2023) reports highlight how foreign investments affect developing economies, emphasizing the importance of institutional frameworks in shaping the impact on local investment. (UNCTAD, 2023)

The Institutional and Regulatory Enhancement Theory stresses the critical role that legal and regulatory frameworks play in shaping the relationship between foreign and local investments. A transparent investment environment can encourage cooperation between foreign and domestic investors. North (1990) discussed the profound influence of institutions on economic performance and proposed strategies for improving institutional frameworks to foster sustainable economic growth. (North, 1990). Williamson (2000) examined how institutional and organizational economics can improve institutional performance and economic efficiency. (Williamson, 2000). Rodrik (2009) provided strategies for enhancing economic institutions across different contexts to drive growth and development. (Rodrik, 2009). Acemoglu and Robinson (2012) analyzed the impact of political and regulatory institutions on economic development, highlighting that inclusive institutions foster growth, while extractive ones result in stagnation. (Acemoglu & Robinson, 2012).

Blomstrom and Kokko (2003) discussed how FDI can complement domestic investment by transferring knowledge and enhancing local capabilities, provided the host country has sufficient absorptive capacity, such as skilled labor and infrastructure (Blomstrom & Kokko, 2003). Jude and Leveuge (2013) found that the effect of FDI—whether complementary or substitutive—depends

significantly on the host country's institutional quality and financial development. (Jude & Leveuge, 2013).

Agosin and Mayer (2000) observed that the effect of FDI on domestic investment varies across regions, with positive crowding-in effects seen in East Asia, while substitution effects are more common in Latin America and Africa. (Agosin & Mayer, 2000).

Friedman (2002) argued that economic freedom, facilitated by open markets, is essential for both individual liberty and economic prosperity. He noted that countries with liberalized economies tend to achieve higher growth rates and better standards of living. (Friedman, 2002). Dollar and Kraay (2002) examined the relationship between trade openness and economic growth in developing countries, finding that countries embracing free trade and FDI experienced faster growth and significant poverty reduction. (Dollar & Kraay, 2002). Berthélemy (2006) emphasized the importance of institutional quality in maximizing the benefits of economic openness, asserting that countries with strong institutions and stable governance are better positioned to leverage FDI for sustainable growth. (Berthélemy, Aid allocation: Comparing donors' behaviours, 2006).

III. Applied Aspect of the Study:

1.1. ARDL Models (Auto Regressive Distributed Lag):

Dynamic models, such as ARDL models, are analytical tools that account for temporal dynamics, including adjustment periods and expectations, when explaining time-series variables. This approach enhances the accuracy of forecasts and the effectiveness of policies and decisions compared to non-dynamic models. Unlike dynamic models, non-dynamic models provide only an instantaneous explanation (immediate or non-distributed effect over time), capturing a limited portion of the variation in the variable being analyzed.

Dynamic models can be categorized into three main types. In such models, a dependent variable (Y_t) can be explained by:

- Its own lagged values. This type of dynamic model is referred to as an "autoregressive model" (AR) and can be expressed as:

$$Y_t = a_0 + a_1 Y_{t-1} + \dots + a_p Y_{t-p} + \varepsilon_t$$

$$Y_t = a_0 + \sum_{i=1}^p a_i Y_{t-i} + \varepsilon_t \dots \dots \dots 1$$

The current values of the independent variables (X_t) as well as their lagged values (X_{t-i}). These are referred to as "distributed lag models" (DL) and take the following form:

$$Y_t = \beta + b_0 X_t + \dots + b_q X_{t-q} + z_t$$

$$Y_t = \beta + \sum_{j=0}^q b_j X_{t-j} + z_t \dots \dots \dots 2$$

- Its own lagged values, along with the current values of the independent variables (X_t) and their lagged values (X_{t-i}). These models combine the features of the previous two types and are known as “autoregressive distributed lag models,” abbreviated as “ARDL models.” Their forms are presented below:

$$Y_t = \varphi + a_1 Y_{t-1} + \dots + a_p Y_{t-p} + b_0 X_t + \dots + b_q X_{t-q} + e_t$$

$$Y_t = \varphi + \sum_{i=1}^p a_i Y_{t-i} + \sum_{j=0}^q b_j X_{t-j} + e_t \dots \dots \dots 3$$

Note that “ b_0 ” reflects the short term effect of X_t on Y_t . To calculate the long-term effect of X_t on Y_t (ie “ λ ”), starting from the following long-term or equilibrium relationship: $Y_t = k + \lambda X_t + u$, we will do:

$$\lambda = \frac{\sum b_j}{1 - \sum a_i}$$

ARDL models, which combine the features of AR and DL models, face certain econometric challenges that complicate their estimation using Ordinary Least Squares (OLS). These challenges include collinearity among explanatory variables (inherent in DL models) and autocorrelation of errors (common in AR models). As a result, robust estimation techniques are typically employed to address these issues. (Pesaran, Shin, & Smith, 2001)

1.2.Application model:

We selected the model variables based on four key considerations, as highlighted in various studies within the economic literature. These variables represent the primary determinants of foreign direct investment (FDI) attractiveness: market size, institutional quality, the role of the state in the economy, and tax burden .

The data used in our study are annual and sourced from World Bank databases (WDI) and Transparency International reports. The dataset spans the period from 1996 to 2022. The variables included in the analysis are as follows:

Variables	Descriptions and data	
FDI	Foreign direct investments	World Bank
PCF	Domestic Private Investment	World Bank

GCF	Public Investment	World Bank
CC	Control of Corrupt	World Bank
RL	Rule of Law	World Bank

$$FDI = f(PCF, GCF, CC, RL)$$

If we intend to capture the short-term and long-term effects of the above explanatory variables on FDI, the ARDL representation of the function:

$$\begin{aligned} \Delta FDI_t = & a_0 + \sum_{i=1}^p a_{1i} \Delta FDI_{t-i} + \sum_{i=0}^q a_{2i} \Delta PCF_{t-i} + \sum_{i=0}^q a_{3i} \Delta GCF_{t-i} \\ & + \sum_{i=0}^q a_{4i} \Delta CC_{t-i} + \sum_{i=0}^q a_{5i} \Delta RL_{t-i} + b_1 FDI_{t-1} + b_2 PCF_{t-1} \\ & + b_3 GCF_{t-1} + b_4 CC_{t-1} + b_5 RL_{t-1} + e_t \end{aligned}$$

1.2.1. Stationarity of series:

In this study, we used ADF test, the results are given as follows.

Table (1) :: Unit root test ADF (Test of Stationary)

Vs	Level			1st difference			decision
	Intercept	Trend and intercept	None	Intercept	Trend and intercept	None	
FDI	-1.40111 (0.5667)	-0.75502 (0.9578)	-0.58527 (0.4544)	-3.98147* (0.0053)	-4.19681 * (0.0142)	-4.03917* (0.0003)	I(1)
PCF	-1.31012 (0.6093)	-1.48460 (0.8089)	2.68346 (0.9972)	-4.25272* (0.0029)	-4.35479** (0.0104)	-3.30140* (0.0020)	I(1)
GCF	-4.358 * (0.0012)	-4.324 * (0.0071)	-1.627 (0.0970)	-6.534* (0.0000)	-6.351* (0.0000)	-6.606* (0.0000)	I(0)
CC	-1.6421 (0.4476)	-2.5855 (0.2890)	-0.2314 (0.5931)	-4.7501* (0.0009)	-4.6981* (0.0049)	-4.8504 * (0.0000)	I(1)
RL	-0.5001 (0.8719)	-2.8099 (0.2099)	1.2803 (0.9433)	-14.500* (0.0000)	-9.9180* (0.0000)	-15.523* (0.0001)	I(1)

(.): Probabilities; *: stationary at 1%; **: stationary at 5%

The source: Eviews program outputs

The stability results indicate that the time series of the model variables are not integrated to the same degree. As a result, the Engle and Granger co-integration

test (for the multivariate case) and the Johansen test are unsuitable. Instead, the ARDL (Autoregressive Distributed Lag) approach is deemed more appropriate. (Pesaran et al, 2001).

1.2.2. Co-integration Test by Pesaran et al. 2001:

The co-integration test developed by Pesaran et al. (2001) was deemed suitable for our data series. The application of this test requires following two key steps :

- Determine the optimal lag: Select the appropriate lag structure using criteria such as AIC and SIC .
- Test for co-integration: Apply the Fisher test to examine the presence of co-integration among the series .

Optimal Lag and ARDL Model Estimation :

The Schwarz Information Criterion (SIC) was utilized to select the optimal ARDL model. This criterion ensures the choice of a model that provides statistically significant results while minimizing the number of parameters. The estimation results of the selected optimal ARDL model are presented below (refer to Table N°2 and Figure N°2).

Table (2) : ARDL model (1.2.2.3.3)

Dependent variable : FDI				
Variables	Coefficient	Std. Error	t-Statistic	Prob.*
FDI(-1)	0.600003	0.136256	4.403496	0.0017
PCF	-0.359855	0.239047	-1.505373	0.1665
PCF(-1)	-1.487292	0.342482	-4.342681	0.0019
PCF(-2)	1.543619	0.286400	5.389724	0.0004
GCF	0.000849	0.031040	0.027350	0.9788
GCF(-1)	-0.034296	0.043239	-0.793190	0.4481
GCF(-2)	0.116311	0.039948	2.911558	0.0173
CC	6.610315	1.983734	3.332258	0.0088
CC(-1)	-5.997388	1.989036	-3.015224	0.0146
CC(-2)	-0.292073	1.293337	-0.225829	0.8264
CC(-3)	-3.311109	1.175515	-2.816731	0.0202
RL	2.830436	1.106893	2.557100	0.0308
RL(-1)	-2.999878	1.137292	-2.637737	0.0270
RL(-2)	-1.961993	1.172601	-1.673198	0.1286
RL(-3)	3.051124	0.990945	3.079004	0.0132

R-squared	0.907305
Durbin-Watson stat	2.554071
F-statistic	6.292355
Prob (F-statistic)	0.004437

The source: Eviews program outputs

Figure (1):: SIC graph values

Erreur ! Des objets ne peuvent pas être créés à partir des codes de champs de mise en forme.

The source: Eviews program outputs

As observed, the ARDL model (1,2,2,3,3) is the most optimal among the 19 models tested, as it yields the smallest SIC value. Additionally, the diagnostic tests for the estimated ARDL model show favorable results: there is no autocorrelation in the errors, no evidence of heteroskedasticity, the errors are normally distributed, and the model is well-specified (see Table N°3 for details).

Table (3) : Results of diagnostic tests of the estimated ARDL model

Test hypothesis	tests	Values	(probability)
Autocorrelation	Breusch-Godfrey	0.8325	prob(0.4738)
Heteroskedasticity	Breusch-Pagan- Godfrey	0.1598	prob(0.9988)
Normality	Jarque-Bera	3.7151	prob(0.1560)
Specification	Ramsey (Fisher)	1.7471	prob(0.1862)

The source: Eviews program outputs

The null hypothesis is accepted for all diagnostic tests, confirming the statistical validity of the model. The estimated ARDL model (1,2,2,3,3) performs well overall, explaining 90% of the variation in the data

1.2.3. Stability Tests of the Model :

To detect potential structural changes in the model, two tests were employed: the Cumulative Sum of Residuals (CUSUM) and the Cumulative Sum of Squares of Residuals (CUSUM of Squares). These tests assess the stability of the ARDL model. The structural stability of the estimated coefficients of the error correction

term in the autoregressive distributed lag model is confirmed if the graphs of the CUSUM and CUSUM of Squares tests remain within the critical bounds at the 5% significance level. The results of these tests are presented in the following figures:

Figure (2):: CUSUM test

Erreur ! Des objets ne peuvent pas être créés à partir des codes de champs de mise en forme.

The source: Eviews program outputs

Figure (3):: CUSUM of Squares test

Erreur ! Des objets ne peuvent pas être créés à partir des codes de champs de mise en forme.

The source: Eviews program outputs

1.2.4. Co-integration test at Bounds:

Table (4) : Results of the co-integration test of Pesaran et al. (2001)

variables	FDI GDP EG CORRUP OFISC	
F-stat calculated	5.658250	
Critical threshold	Bound <	Bound >
10%	1.900	3.010
5%	2.260	3.380
1%	3.070	4.440

The source: Eviews program outputs

The results of the terminal co-integration test confirm the existence of a co-integration relationship between the series under study. As shown in Table N° 4,

the value of the F-statistic exceeds the upper bound, suggesting the possibility of estimating the long-term effects of the variables PCF, GCF, CC, RL, and FDI.

IV. Results and discussion :

1.1.1. Analysis of the Estimation Results Using the Error Correction Model ECM (Short-term):

Based on the results we obtained, as shown in Table N° 5, it can be concluded that:

(General Characteristics of the Model):

-R-squared (0.891252): Indicates that 89.13% of the variations in Foreign Direct Investment (FDI) are explained by the independent variables and their lags. This means the model performs well in explaining the data.

-F-statistic (10.65428) and Prob(F-statistic = 0.000097): Reflects the overall significance of the model, indicating a meaningful relationship between the independent and dependent variables.

-Durbin-Watson stat (2.554071): Suggests the absence of autocorrelation in the residuals, which is a positive indicator.

Interpretation of Independent Variables and Their Lags (Short-Term Dynamics):

D(PCF): Coefficient = -0.359855, Prob = 0.0750: The negative effect of current domestic private investment on foreign direct investment. Statistically insignificant (p-value > 0.05)

D(PCF(-1)): Coefficient = -1.543619, Prob = 0.0000 :The negative effect of lagged domestic private investment (by one period) on foreign direct investment is strong and highly significant. This reflects the phenomenon of investment crowding-out in the short term.

D(GCF): Coefficient = 0.000849, Prob = 0.9711 :The effect of current public investment is very weak and statistically insignificant.

D(GCF(-1)): Coefficient = -0.116311, Prob = 0.0002 :The negative effect of lagged public investment (by one period) on foreign direct investment is strong and significant. This might indicate inefficiency in managing public investments or crowding-out effects in the short term.

D(CC) (Control of Corruption): Coefficient = 6.610315, Prob = 0.0003: Control of corruption currently has a strong and significant positive impact on attracting foreign direct investment.

D(CC(-1)) and D(CC(-2)): Coefficients = 3.603182 and 3.311109, Prob = 0.0011 and 0.0013: A delayed and significant positive effect of controlling corruption, reflecting the sustained impact of such reforms.

D(RL) (Rule of Law): Coefficient = 2.830436, Prob = 0.0023 :A strong positive effect in the short term, supporting the attraction of foreign direct investment.

D(RL(-1)) and D(RL(-2)): Coefficients = -1.089131 and -3.051124, Prob = 0.0925 and 0.0010 .The short-term negative effect RL(-2) reflects the potential impact of temporary legal challenges on investment.

Error Correction Term CointEq(-1): Coefficient = -0.399997, Prob = 0.0000:

- The negative and significant value of the error correction term indicates that the system corrects deviations from the long-term equilibrium at a rate of approximately 40% per period.

- This confirms the existence of a long-term equilibrium relationship between foreign direct investment and the independent variables.

Table (5) : Estimation results of ST coefficients (Error Correction)

Dependent variable : FDI				
Variables	Coefficient	Std. Error	t-Statistic	Prob.*
D(PCF)	-0.359855	0.185947	-1.935259	0.0750
D(PCF(-1))	-1.543619	0.209996	-7.350691	0.0000
D(GCF)	0.000849	0.023022	0.036876	0.9711
D(GCF(-1))	-0.116311	0.022859	-5.088123	0.0002
D(CC)	6.610315	1.332239	4.961808	0.0003
D(CC(-1))	3.603182	0.862594	4.177145	0.0011
D(CC(-2))	3.311109	0.814444	4.065482	0.0013
D(RL)	2.830436	0.747033	3.788903	0.0023
D(RL(-1))	-1.089131	0.599827	-1.815740	0.0925
D(RL(-2))	-3.051124	0.718241	-4.248050	0.0010
CointEq(-1)*	-0.399997	0.062572	-6.392585	0.0000
R-squared 0.891252				
Durbin-Watson stat 2.554071				
F-statistic 10.65428				
Prob(F-statistic) 0.000097				

The source: EvIEWS program outputs

Factors Affecting the Short-Term:

Domestic Private Investment (PCF):

- A strong negative effect with a one-period lag, supporting the crowding-out investment theory in the short term. This indicates that private domestic investment can inhibit foreign direct investment in the short run.

Public Investment (GCF):

- A negative effect with a one-period lag, which may reflect inefficiency in managing public resources or the concentration of investments in sectors that do not directly contribute to attracting foreign investment.

Control of Corruption (CC):

- A strong positive effect in the short and medium term, showing the importance of institutional reforms in attracting foreign direct investment. Effective control of corruption can improve the investment climate significantly.

Rule of Law (RL):

- A positive effect in the present, but with a negative effect in the short term, which may indicate the temporary impact of legal changes or legal instability. This suggests that while rule of law is important for long-term investment attraction, short-term changes in legal frameworks may create uncertainty for investors.

1.1.2. Long-Term Relationship:

Based on the results we obtained, as shown in Table N° 6, it can be concluded that:

Interpretation of Independent Variables:

PCF (-1) : Coefficient = -0.758828, Prob = 0.1136 :

- The negative impact of private domestic investment (PCF) on FDI is statistically insignificant (P-value > 0.05) .

- This suggests that, in the long run, private domestic investment may not have a significant impact on FDI, or the relationship is not clear enough.

GCF(-1) : Coefficient = 0.207159, Prob = 0.0730 :

- The impact is positive but relatively weak, and significant at the 10% level (P-value < 0.10).

- This indicates that public investment may play a positive role in enhancing the investment environment and attracting FDI in the long term, though its influence is not particularly strong.

CC(-1) : Coefficient = -7.475698, Prob = 0.0862 :

- The impact is negative and significant at the 10% level (P-value < 0.10) .

- This implies that improving control of corruption may require more time to yield positive effects. Institutional challenges or the slow response to reforms could explain this negative impact.

RL(-1): Coefficient = 2.299241, Prob = 0.4387:

- The impact is positive but statistically insignificant (P-value > 0.05).
- This suggests that the rule of law does not have a clear or direct impact on attracting FDI in the long run within this sample.

Factors Influencing the Long Term:

Private Domestic Investment (PCF):

- The relationship is negative and insignificant, which may indicate that the crowding-out effect in the long term is either weak or unsustainable.

Public Investment (GCF):

- The impact is positive but weak, significant at the 10% level .
- This suggests that enhancing public investment may contribute to attracting FDI, though it is not a particularly strong driver.

Control of Corruption (CC):

- The impact is negative and significant at the 10% level .
- This reflects that initial efforts to control corruption might lead to structural disruptions that negatively affect FDI before reforms start producing positive outcomes.

Rule of Law (RL):

- The impact is positive but insignificant, indicating that improving the rule of law alone may not be sufficient to attract FDI in the long term.

Table (6) : Estimation results of LT coefficients (ARDL cointegration)

Dependent variable : FDI				
Variables	Coefficient	Std. Error	t-Statistic	Prob.*
PCF(-1)	-0.758828	0.458555	-1.654826	0.1136
GCF(-1)	0.207159	0.109486	1.892115	0.0730
CC(-1)	-7.475698	4.141813	-1.804934	0.0862
RL(-1)	2.299241	2.909543	0.790242	0.4387

The source: EvIEWS program outputs

The presence of error correction suggests a restoration of equilibrium between Foreign Direct Investment (FDI) and the independent variables.

Enhancing Integration Between Domestic and Foreign Investments:

- Reduce the crowding-out effect through policies that support partnerships between local private sectors and foreign companies. This can foster mutual benefits and enhance investment flows.

Improving Public Investment Efficiency:

- Direct public investments toward improving infrastructure and sectors that enhance the overall investment environment. This would create a more attractive climate for foreign investments.

Continuing Governance Reforms:

- Strengthen transparency and the rule of law to improve the business and investment environment. Institutional reforms are essential to sustain long-term FDI attraction.

Ensuring Legal Framework Stability:

- Minimize the negative impact of sudden changes in laws or regulations. Consistency and predictability in the legal environment are crucial for foreign investors' confidence.

V. Conclusion:

Economic theory offers several hypotheses regarding the relationship between domestic private investment (PCF) and foreign direct investment (FDI), as well as the impact of governance factors and public investment. Analyzing empirical results reveals alignment with theoretical expectations in several aspects, while deviations can be attributed to the local context in Algeria.

Regarding domestic private investment, the theory suggests that it can have a dual impact on foreign investment. On the one hand, it may enhance the investment environment in the long term. On the other hand, it may consume available resources such as capital, skilled labor, and infrastructure, thereby reducing the attractiveness of foreign investment. Empirical results confirm a short-term negative effect of domestic private investment on FDI, consistent with the theory's prediction that resource consumption by the local private sector weakens the market's competitiveness for foreign investors. However, the results also show a positive long-term effect, reflecting the role of domestic investment in improving the economic environment through infrastructure development and increased economic stability, which boosts the confidence of foreign investors and attracts them to the Algerian market.

In terms of governance factors, such as control of corruption (CC) and rule of law (RL), economic theory emphasizes their crucial role in attracting foreign investment. Improved control of corruption enhances transparency and reduces

hidden costs, such as bribes, thereby increasing foreign investors' confidence. Empirical results support this view, showing an immediate positive impact of corruption control. However, negative effects in later periods suggest that reforms in this area may face institutional challenges or take longer to yield substantial results. Regarding the rule of law, empirical findings align with theory through an immediate positive effect, as a strong legal system protects property rights and facilitates dispute resolution, making the investment environment more appealing. Nevertheless, short-term negative effects may reflect regulatory disruptions or legal changes that temporarily create market uncertainty.

Public investment (GCF) is another factor influencing foreign investment. When directed effectively, public investment can enhance infrastructure and essential services, making the investment climate more attractive. However, empirical results show an insignificant short-term impact of public investment on FDI, indicating inefficiencies in Algeria's public resource allocation. In the long term, a delayed positive effect is observed, consistent with the theory that improvements in infrastructure and services require time to produce tangible outcomes.

While there is a general alignment between empirical results and economic theory, some deviations emerge due to Algeria's specific context. The negative effects of lagged governance variables (e.g., CC(-1) and RL(-1)) highlight political and economic challenges, where institutional reforms may face resistance from bureaucracy or slow implementation.

To address these challenges and maximize the benefits of foreign investment, it is crucial to adopt policies that reduce the crowding-out effect between domestic and foreign investments, focusing on promoting integration rather than competition. Improving the efficiency of public investment management is also essential by directing resources towards infrastructure and services that support investment. Finally, governance reforms should be sustained with transparency and consistency to ensure a stable investment environment and enhance the confidence of both domestic and foreign investors.

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