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Macroeconomic Instabilities and Foreign Direct Investment in Developing countries :Theoretical and Empirical Validation

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Macroeconomic Instability and Foreign Direct Investment in Developing Countries: Theoretical and Empirical Validation

Abstract

This article examines the impact of macroeconomic instabilities on foreign direct investment (FDI) in developing countries. Drawing on a theoretical framework that integrates the OLI paradigm, the theory of irreversible investment under uncertainty, and institutionalist approaches, the study highlights the mechanisms through which inflation, exchange rate volatility, fiscal instability, growth volatility, and political instability influence multinational firms' location decisions. The empirical analysis is based on panel data from the World Bank and estimations conducted using heteroskedasticity-robust standard errors. The results indicate that macroeconomic instabilities exert a negative and statistically significant effect on FDI inflows, thereby confirming the central role of macroeconomic and institutional credibility in enhancing the attractiveness of developing countries. These findings underscore the need for sustainable macroeconomic stabilization strategies to foster productive capital inflows and support structural transformation.

Keywords: *Macroeconomic instability; Foreign direct investment; Developing countries; Panel data*

JEL Classification : *F21 ; O11 ; E60 ; C23*

1. Context

Foreign direct investment (FDI) occupies a central position in the development trajectories of developing countries. Since the seminal contribution of Borensztein, De Gregorio, and Lee (1998), it has been widely acknowledged that FDI can stimulate economic growth by facilitating technology transfer, human capital accumulation, and integration into international markets. Subsequent analyses have demonstrated that the impact of FDI extends beyond its quantitative contribution to gross fixed capital formation: it also fosters knowledge spillovers, improves managerial practices, and promotes productive diversification (Alfaro et al., 2004; Javorcik, 2004; Harrison and Rodríguez-Clare, 2010). More recently, the literature on global value chains emphasizes that FDI constitutes a key channel for productive integration and upgrading in emerging economies (Taglioni and Winkler, 2016; World Bank, 2020; UNCTAD, 2022).

In this context, attracting FDI has become a major strategic objective for developing countries, particularly in an environment characterized by volatile official development assistance flows and increasing external debt constraints. However, a country's ability to attract FDI largely depends on the quality of its macroeconomic and institutional environment. Macroeconomic stability is often regarded as a prerequisite for international investor confidence (Fischer, 1993; Blanchard and Johnson, 2013).

Yet developing countries are frequently confronted with persistent macroeconomic instabilities. These typically manifest in high and volatile inflation, chronic fiscal deficits, rising public debt, and substantial exchange rate volatility. Such macroeconomic imbalances are often exacerbated by external shocks, including commodity price volatility, sudden capital outflows, or international financial crises (Reinhart and Rogoff, 2009; Kose et al., 2019). Recent crises, particularly the COVID-19 pandemic and rising global geopolitical tensions, have further intensified these vulnerabilities across many developing economies (IMF, 2023; World Bank, 2023).

The theoretical literature identifies several channels through which macroeconomic instability may affect multinational firms' investment decisions. According to the theory of irreversible investment under uncertainty, when investment decisions involve sunk costs, an increase in uncertainty raises the value of the option to wait, thereby inducing firms to postpone investment projects (Bernanke, 1983; Dixit and Pindyck, 1994). Within this framework, macroeconomic instability—by increasing the variability of expected returns—can reduce FDI inflows (Servén, 2003).

High inflation distorts relative price signals, complicating the assessment of future costs and expected profits. Similarly, exchange rate volatility increases the risk of losses associated with currency fluctuations, particularly for firms engaged in international transactions (Goldberg, 1993; Campa, 1993). Persistent fiscal imbalances may fuel expectations of future fiscal adjustments or debt monetization, thereby reinforcing macroeconomic uncertainty (Bleaney and Greenaway, 2001).

Beyond strictly economic mechanisms, macroeconomic instability also carries an institutional dimension. Neo-institutionalist approaches argue that policy stability constitutes a crucial signal of credibility and reliability (North, 1990; Acemoglu and Robinson, 2012). Persistent instability may be interpreted by investors as reflecting weak institutions or deficient economic governance. Recent empirical evidence confirms that institutional quality, political stability, and macroeconomic policy credibility are major determinants of FDI flows in developing countries (Busse and Hefeker, 2007; Buchanan et al., 2012; Kurul, 2017; Gohou and Soumaré, 2019).

Nevertheless, the empirical evidence remains mixed. While several studies find a significant negative effect of macroeconomic instability on FDI (Aisen and Veiga, 2013; Kaur and Sharma, 2013; Boateng et al., 2015), others show that certain forms of instability may coexist with substantial FDI inflows, particularly in resource-rich countries or those with large domestic markets (Asiedu, 2002; Dupasquier and Osakwe, 2006; UNCTAD, 2021). Moreover, recent research suggests that the impact of macroeconomic instability may be nonlinear or conditional on the level of financial and institutional development (Combes et al., 2019; Canh et al., 2020; Bouri et al., 2021).

2. Literature Review

The relationship between macroeconomic instability and foreign direct investment (FDI) has been extensively examined in international economics and development economics. This body of literature can be structured around three main strands: (i) the macroeconomic determinants of FDI, (ii) the role of uncertainty and macroeconomic instability in investment decisions, and (iii) the importance of institutions and the credibility of economic policies in developing countries.

2.1 Macroeconomic Determinants of Foreign Direct Investment

Early analyses of FDI determinants emphasize the role of fundamental macroeconomic factors such as market size, economic growth, trade openness, and macroeconomic stability. The seminal contributions of Dunning (1988, 1993), through the OLI (Ownership, Location, Internalization) paradigm, highlight that location-specific advantages are central to multinational firms' investment decisions. Among these advantages, macroeconomic stability emerges as a key determinant, as it ensures the predictability of expected returns.

Empirically, several studies confirm that GDP growth, market size, and trade openness positively influence FDI inflows (Chakrabarti, 2001; Asiedu, 2002; Onyeiwu and Shrestha, 2004). However, these factors are closely intertwined with macroeconomic stability, since sustainable growth and effective openness require a coherent macroeconomic framework.

In developing countries, macroeconomic instability tends to weaken these traditional determinants. Schneider and Frey (1985) show that inflation and macroeconomic imbalances significantly reduce FDI inflows, while Gastanaga, Nugent, and Pashamova (1998) emphasize the importance of fiscal and monetary discipline in enhancing the attractiveness of emerging economies.

2.2 Macroeconomic Instability, Uncertainty, and Investment Decisions

A substantial strand of the literature draws on the theory of irreversible investment to analyze the impact of macroeconomic instability on investment decisions. Bernanke (1983) and Dixit (1989) demonstrate that uncertainty increases the value of the option to wait, leading firms to postpone investment when the economic environment becomes unstable. Dixit and Pindyck (1994) formalize this theoretical framework and show that the irreversibility of investment strengthens the sensitivity of investment decisions to macroeconomic uncertainty.

From this perspective, macroeconomic instability affects FDI through several transmission channels. High and volatile inflation distorts price signals and complicates the assessment of future costs and profits (Fischer, 1993). Servén (2003) finds that macroeconomic volatility exerts a significant negative effect on private investment, including foreign investment, in developing countries.

Exchange rate volatility constitutes another key channel. Goldberg (1993) and Campa (1993) argue that uncertainty stemming from exchange rate fluctuations increases financial risk for multinational firms, particularly in contexts where hedging markets are underdeveloped. Empirical evidence confirms that exchange rate volatility reduces FDI inflows, especially in low-income economies (Kiyota and Urata, 2004; Cushman, 1985).

Fiscal imbalances and instability in fiscal policy further reinforce macroeconomic uncertainty. Bleaney and Greenaway (2001) show that unstable fiscal policies increase perceived investor risk by fueling expectations of tax increases or debt monetization. In developing countries, these effects are often magnified by shallow financial markets and reliance on external financing.

2.3 Recent Empirical Evidence on Macroeconomic Instability and FDI

Recent empirical studies largely confirm the negative impact of macroeconomic instability on FDI, while highlighting heterogeneous effects across countries. Aisen and Veiga (2013), using a large panel of countries, find that macroeconomic and political instability significantly reduce FDI inflows, particularly in developing economies. Kaur and Sharma (2013) and Boateng et al. (2015) similarly show that inflation and macroeconomic volatility exert a deterrent effect on FDI in emerging markets. More recently, Kose et al. (2019) emphasize that episodes of heightened macroeconomic volatility associated with financial crises lead to persistent contractions in FDI flows to low- and middle-income countries.

However, some studies qualify these findings. Asiedu (2002) shows that resource-rich countries may attract FDI despite high levels of macroeconomic instability. Dupasquier and Osakwe (2006) argue that market size and sectoral profitability can, in certain cases, offset the adverse effects of macroeconomic instability, particularly in extractive industries.

Recent research also highlights non-linear effects. Combes, Kinda, and Plane (2019) demonstrate that the negative impact of macroeconomic instability on FDI is more pronounced in countries with weak institutional quality. Canh et al. (2020) and Bouri et al. (2021) suggest that financial development and institutional credibility can mitigate the adverse effects of macroeconomic instability.

2.4 Role of Institutions and Credibility of Macroeconomic Policies

The institutional literature underscores the close link between macroeconomic instability and institutional quality. North (1990) argues that stable and credible institutions reduce uncertainty and foster long-term investment. Acemoglu and Robinson (2012) contend that inclusive institutions are essential for ensuring macroeconomic stability and attracting productive investment.

Empirically, Busse and Hefeker (2007) highlight the importance of political and institutional stability in attracting FDI. Buchanan, Le, and Rishi (2012) show that governance quality and the credibility of economic policies play a decisive role in developing countries. More recently, Kurul (2017) and Gohou and Soumaré (2019) confirm that improvements in institutional quality can partially offset the negative effects of macroeconomic instability.

These studies suggest that macroeconomic instability operates both as an economic risk factor and as a negative institutional signal, reinforcing international investors' risk aversion in fragile institutional environments.

2.5 Limitations of the Literature and Contribution of the Study

Despite the abundance of existing research, several limitations remain. First, many studies examine the effects of different forms of macroeconomic instability separately, without offering an integrated perspective on the underlying theoretical mechanisms. Second, empirical findings remain heterogeneous,

suggesting that the impact of macroeconomic instability strongly depends on institutional context and the level of economic development.

3. Problem Statement

In developing countries, foreign direct investment (FDI) is widely recognized as a key driver of economic growth and structural transformation. By facilitating technology transfer, skills diffusion, productivity enhancement, and integration into global value chains, FDI is often viewed as either a substitute for or an essential complement to insufficient domestic savings (Borensztein et al., 1998; Alfaro et al., 2004). In this context, attracting FDI has become a strategic priority for many developing economies facing persistent financial, fiscal, and structural constraints.

Despite the implementation of various incentive policies aimed at attracting foreign capital, FDI flows to developing countries remain volatile and unevenly distributed. A structural characteristic of these economies is the persistence of macroeconomic instability, manifested in high and fluctuating inflation, significant exchange rate volatility, and recurrent fiscal imbalances. These macroeconomic vulnerabilities are frequently amplified by exposure to external shocks, such as commodity price volatility, reversals in international financial flows, or global economic crises.

From a theoretical standpoint, the relationship between macroeconomic instability and FDI remains ambiguous. The theory of irreversible investment under uncertainty suggests that increased macroeconomic uncertainty raises the value of the option to wait, thereby encouraging multinational firms to postpone or even abandon investment projects when the economic environment becomes unstable (Dixit and Pindyck, 1994). Within this framework, macroeconomic instability acts as a major deterrent to FDI by reducing the predictability of future returns and increasing the perceived risk faced by international investors.

Similarly, the OLI paradigm emphasizes that multinational firms' location decisions depend critically on the location-specific advantages offered by host countries, among which macroeconomic stability occupies a central position (Dunning, 1988). Uncontrolled inflation, pronounced exchange rate volatility, or instability in public finances may therefore undermine a country's attractiveness, even when other economic fundamentals appear favorable.

However, existing empirical evidence does not yield a clear consensus. While numerous studies report a negative and statistically significant effect of macroeconomic instability on FDI flows—particularly in developing countries—others highlight that some economies succeed in attracting substantial FDI despite unstable macroeconomic environments, especially when they possess specific advantages such as abundant natural resources, large domestic markets, or high expected returns (Asiedu, 2002). These divergent findings suggest that the impact of macroeconomic instability on FDI may depend on institutional context, the level of financial development, and the credibility of economic policies.

Moreover, a growing body of recent literature underscores the decisive role of institutions and governance in shaping the relationship between macroeconomic instability and FDI. Persistent instability is often interpreted as a symptom of weak institutions and a lack of policy credibility, thereby reinforcing international investors' risk aversion (Acemoglu and Robinson, 2012). In developing countries, this institutional dimension is particularly crucial, as it conditions the ability of governments to implement coherent and predictable macroeconomic policies.

Against this backdrop, the central issue addressed in this article lies in identifying the precise mechanisms through which macroeconomic instabilities influence multinational firms' investment decisions in developing countries. More specifically, the study seeks to determine the extent to which

different forms of macroeconomic instability affect FDI inflows, and whether these effects are systematically deterrent or conditional upon structural and institutional factors.

Accordingly, the main research question guiding this study can be formulated as follows: To what extent do macroeconomic instabilities hinder the attractiveness of foreign direct investment in developing countries, and through which economic and institutional mechanisms does this influence operate?

4. Macroeconomic Instabilities and FDI: Descriptive Analysis

In the context of developing countries, understanding the behavior of macroeconomic variables and foreign direct investment (FDI) flows is of paramount importance. FDI is widely recognized as a key driver of economic development, as it promotes technology transfer, job creation, and integration into global value chains (Dunning, 1993; Blonigen, 2005; Alfaro et al., 2004). However, its dynamics depend heavily on macroeconomic stability, institutional quality, and the predictability of public policies (Rodrik, 2000; Asiedu, 2002; Noorbakhsh et al., 2001).

Borensztein et al. (1998) and Carkovic and Levine (2005) show that FDI yields stronger growth effects in economies characterized by stable macroeconomic frameworks and credible monetary and fiscal policies. Conversely, recent empirical literature confirms that periods of macroeconomic instability—characterized by high inflation, exchange rate fluctuations, and persistent fiscal deficits—lead to a significant decline in FDI inflows (Bénassy-Quéré et al., 2007; Aizenman, 2008; IMF, 2023). According to Campos and Kinoshita (2010) and Ndikumana (2020), such macroeconomic imbalances increase perceived uncertainty among investors, thereby raising the risk of divestment or postponement of productive investments.

Furthermore, the literature highlights that external shocks and commodity price volatility exacerbate macroeconomic vulnerability in developing countries, reducing their attractiveness to foreign capital (Hausmann and Rigobon, 2003; Reinhart and Rogoff, 2011; Asonuma et al., 2020). In the context of financial globalization, exchange rate stability and public debt sustainability therefore emerge as preconditions for international investor confidence (Kose et al., 2017; Polzin et al., 2019; UNCTAD, 2023). More generally, in developing countries, FDI flows are strongly conditioned by macroeconomic stability. Inflation volatility, exchange rate fluctuations, and fiscal imbalances reduce the predictability of returns and hinder the attraction of foreign capital (Borensztein et al., 1998; Alfaro et al., 2004).

This section aims to propose an empirical approach to assess the impact of macroeconomic instabilities on FDI in developing countries. The first subsection presents a descriptive analysis of the main variables of the study and the data sources used. The second subsection will be devoted to the presentation and interpretation of the empirical results, highlighting dynamics specific to the contexts under investigation.

4.1 Macroeconomic Instabilities and FDI: Descriptive Analysis and Data Sources

In this subsection, we successively present the stylized facts, the data sources, and the definition and justification of the variables included in the study.

4.1.1 Data Sources and Description of Variables

This subsection presents the different variables used in the analysis and their respective data sources.

4.1.1.1 Data Sources

The data used in this chapter are primarily drawn from three major international databases: the World Bank (World Development Indicators, 2023), the United Nations Conference on Trade and

Development (UNCTAD, 2023), and the International Monetary Fund (IMF, 2023). These institutions are widely recognized for the reliability, consistency, and cross-country comparability of their macroeconomic indicators. Their databases constitute an essential resource for analyzing the relationship between macroeconomic instabilities and foreign direct investment (FDI), as they provide harmonized and up-to-date statistical series covering both internal and external imbalances in developing economies.

The sample includes 150 developing countries observed over a 24-year period from 2000 to 2023, allowing for the capture of both long-term trends and short-term cyclical fluctuations that may influence FDI dynamics. The World Bank provides key indicators such as GDP growth, inflation, public debt, fiscal deficits, investment rates, and net FDI inflows, which are essential for assessing the effects of macroeconomic imbalances on economic performance. UNCTAD supplies detailed data on the structure, composition, and sectoral distribution of international investment flows, while IMF statistics complement the analysis with variables related to monetary and fiscal stability, including the real effective exchange rate, balance of payments indicators, and international reserves.

The combination of these three sources ensures an integrated perspective on the phenomenon under study, taking into account both domestic and external dimensions of macroeconomic instability. Moreover, the temporal and geographical breadth of the dataset strengthens the robustness of the econometric analysis and allows for a precise examination of how macroeconomic shocks affect the capacity of developing countries to attract foreign direct investment sustainably.

Finally, the estimation strategy relies on Ordinary Least Squares (OLS) regression. This method is considered appropriate given that the dependent variable—FDI inflows—is quantitative and continuous, thereby allowing for a rigorous quantification of the impact of macroeconomic instabilities on investment flows across the countries included in the sample.

4.1.1.2 Presentation and Justification of Variables

The variables used in this study are grouped into two main categories: the dependent variable, representing FDI inflows, and the explanatory variables, which include macroeconomic instability indicators and a set of control variables.

A) The Dependent Variable: Foreign Direct Investment (FDI)

Foreign Direct Investment (FDI) constitutes the dependent variable of this study. It is defined as cross-border capital flows directed toward a host country with the objective of acquiring a lasting interest and significant control in a local enterprise. FDI is widely regarded as a key driver of economic growth and structural transformation, particularly in developing countries where domestic resources remain limited.

According to Borensztein, De Gregorio, and Lee (1998), FDI facilitates technology transfer, the diffusion of managerial skills, and job creation, thereby contributing to productivity growth and the modernization of the economic structure. Furthermore, UNCTAD (2023) emphasizes that FDI represents a major instrument for financing sustainable development, particularly by supporting the energy, manufacturing, and digital sectors in emerging economies.

In addition, several recent empirical studies confirm the sensitivity of FDI to economic and institutional stability. Adeleye et al. (2021) demonstrate that macroeconomic stability significantly enhances foreign investors' confidence in African economies. Similarly, Owusu and Asiedu (2022) show that countries characterized by low inflation volatility and sound fiscal management attract higher FDI inflows. More recently, Agyapong et al. (2024) find that the quality of public policies and the predictability of regulatory frameworks foster long-term FDI. These findings are consistent with those of the OECD (2023)

and the IMF (2024), which emphasize the necessity of a stable macroeconomic environment to stimulate cross-border investment and strengthen structural transformation.

B) Explanatory Variables

The explanatory variables include the main variable of interest—macroeconomic instability—and a set of control variables designed to isolate its specific effect on FDI inflows.

a) Macroeconomic Instability (Main Explanatory Variable)

Macroeconomic instability is the key explanatory variable in this study. It is defined as the volatility or unpredictability of major macroeconomic aggregates such as inflation, exchange rates, economic growth, fiscal deficits, or public debt. According to Alesina and Perotti (1996), macroeconomic instability often results from inconsistent economic policies, weak fiscal governance, and limited monetary discipline. Consequently, it generates an environment of uncertainty that undermines investor confidence and hampers economic performance.

Conceptually, macroeconomic instability reflects structural disorder in overall economic management. Fischer (1993) and Ramey and Ramey (1995) argue that excessive macroeconomic fluctuations reduce return predictability and distort investment decisions. Fielding (2004) further shows that growth volatility increases uncertainty regarding future demand, leading multinational firms to postpone investment projects. Macroeconomic stability thus constitutes a sine qua non condition for maintaining competitiveness and economic attractiveness.

Moreover, macroeconomic instability acts as a structural barrier to economic transformation. Rodrik (2018) argues that instability undermines economic actors' confidence and compromises prospects for productive diversification. Price volatility, exchange rate depreciation, and fiscal imbalances reduce competitiveness and hinder the implementation of coherent industrial strategies. Aisen and Veiga (2023) show that countries with stable monetary and fiscal policies perform better in attracting FDI, enhancing productivity, and creating employment.

b) Control Variables

In addition to macroeconomic instability, the analysis incorporates several control variables to isolate its specific effect on FDI inflows and to ensure robust econometric estimations (Wooldridge, 2013).

Trade Openness. Measured as the ratio of exports plus imports to GDP, trade openness enhances a country's attractiveness by facilitating access to international markets and integrating the domestic economy into global value chains. Asiedu (2006) and Blonigen (2005) show that more open economies attract greater FDI inflows due to stronger growth prospects and higher expected profitability.

GDP per Capita and Market Size. GDP per capita reflects the level of economic development and serves as a crucial indicator for investors. Borensztein et al. (1998) and Dunning (1988) demonstrate that investors favor countries with higher average income levels, as they signal stronger domestic demand and larger market potential.

Labor Force. The size and quality of the labor force directly influence FDI location decisions. Aitken and Harrison (1999) and Javorcik (2004) show that multinational firms tend to invest in countries with abundant and skilled labor, particularly in labor-intensive industrial sectors.

Access to Electricity and Industrial Infrastructure. Reliable energy supply and adequate infrastructure are fundamental determinants of foreign investment, as they enhance productivity and

competitiveness. According to the World Bank (2023) and UNIDO (2023), infrastructure quality constitutes a prerequisite for the establishment and expansion of foreign enterprises.

Finally, **Wage Level**. Wage levels directly affect production costs and expected profitability. Kugler and Verhoogen (2012) show that competitive wages aligned with labor productivity enhance FDI attractiveness, whereas extremely low wages may reflect structural or social constraints that reduce investor confidence.

c) Instruments

For this chapter, the most relevant instruments were employed to measure macroeconomic instability and its effect on FDI. GDP growth volatility was selected due to its ability to capture economic uncertainty and production shocks that influence investment decisions, as demonstrated by Ramey and Ramey (1995) and Kose et al. (2003).

Inflation and its volatility constitute a second instrument, capturing price fluctuations and the degree of monetary stability necessary for investor planning (Barro, 1996; Catao and Terrones, 2005). Fluctuations in the real exchange rate were adopted to represent the exposure of FDI to variations in international returns (Chakrabarti, 2001).

Finally, the fiscal deficit or the public debt-to-GDP ratio serves as an instrument to assess the overall macroeconomic environment and fiscal constraints that may discourage foreign investment (Rodrik, 1991; Alesina et al., 1996). These instruments thus make it possible to isolate the effect of macroeconomic instability on FDI inflows.

4.1.2 Descriptive Analysis

The descriptive analysis of this study is based on the examination of the basic statistical characteristics of the principal variables retained in the empirical model, namely their means, standard deviations, and minimum and maximum values. These indicators make it possible to assess the dispersion and distribution of the data while highlighting structural contrasts among the developing countries included in the sample.

The results reveal substantial heterogeneity across countries, both in terms of institutional and macroeconomic variables. In particular, the observed gaps in macroeconomic instability indicators and foreign direct investment (FDI) inflows reflect deep structural differences between economies, notably regarding macroeconomic management, institutional quality, and exposure to domestic and external shocks.

The dispersion of FDI inflows suggests that developing countries do not benefit uniformly from international capital flows. Some economies experience sustained inflows, while others face episodes of stagnation or even net outflows. Such variability underscores the importance of domestic macroeconomic conditions and structural factors in shaping investor confidence.

Similarly, macroeconomic instability variables display pronounced variation across the sample. Differences in inflation dynamics, growth volatility, fiscal balances, public debt levels, and exchange rate movements illustrate the unequal capacity of countries to maintain macroeconomic stability. High standard deviations and extreme values in certain variables indicate the presence of significant shocks in some economies, potentially linked to commodity price fluctuations, financial crises, political instability, or weak institutional frameworks.

Institutional and structural control variables also exhibit disparities, though generally less extreme than macroeconomic instability indicators. Variations in trade openness, income levels, labor force

participation, infrastructure access, and wage structures point to differences in economic development stages and production structures among countries.

Overall, the descriptive statistics confirm strong cross-country heterogeneity in both macroeconomic stability and structural fundamentals. The significant dispersion observed in FDI flows and instability measures provides preliminary empirical support for the hypothesis that macroeconomic instability may play a decisive role in influencing foreign investment decisions. These findings justify the subsequent econometric analysis aimed at quantifying the magnitude and direction of this relationship

Table 1: Descriptive Statistics of the Study Variables (FDI)

Variables	*Observations*	*Mean*	*Standard/deviation*	*Minimum*	*Maximum*
FDI (% of GDP)	3,266	.95946	1.235554	-6.684428	4.637999
Unemployment	3,309	1.78384	.8974043	-2.302585	3.619529
Inflation	3,170	1.712615	1.13798	-4.897726	7.874786
Economic growth volatility	3,403	-52.62046	2738.487	-104513.1	85308.89
Government expenditure	2,776	2.338334	2.79557	0	52.61411
External debt	2,769	55.21185	48.88345	1.154216	610.4519
Interest rate	2,535	6.241692	10.72847	-81.13211	93.91508
Exchange rate	3,503	1920056	1.14e+08	.0444684	6.72e+09
Balance of payments deficit	3,186	-3.41e+08	2.64e+10	-1.76e+11	4.24e+11
Governance	3,624	-.3665605	.671503	-2.409534	1.327888
Trade openness	3,186	2.835918	.7474212	.6954001	4.969678
GDP per capita	3,507	9.019967	1.012954	6.554785	11.88856
Economic participation	3,309	4.140048	.2099941	3.138446	4.493434
Industrial employment	3,549	4.41281	.3737915	1.252763	4.60517
Wages	3,309	2.808227	.5212957	.8130062	4.087303

Source: *Author's calculations based on data processed in Stata*.

The table above presents the descriptive statistics of the variables used in the analysis of the relationship between macroeconomic instabilities and foreign direct investment (FDI) in developing countries. It reports the number of observations, means, standard deviations, as well as minimum and

maximum values for the principal variables of the study. The data, derived from computations performed using Stata, provide an overview of general trends and structural disparities across the countries considered.

An examination of the table shows that the dependent variable, FDI inflows (as a percentage of GDP), based on 3,266 observations, has a mean of 0.959 and a standard deviation of 1.236, ranging from −6.684 to 4.638. These values indicate substantial heterogeneity in foreign investment inflows across developing countries: while some economies attract significant FDI, others experience net capital outflows. Unemployment, calculated from 3,309 observations, has a mean of 1.784 and a standard deviation of 0.897, with values ranging from −2.303 to 3.620, revealing considerable variation in labor market conditions across national contexts. Inflation records a mean of 1.713 and a standard deviation of 1.138 (3,170 observations), with values between −4.898 and 7.875, reflecting pronounced price volatility in several economies. Likewise, the volatility of economic growth, with a mean of −52.620 and an exceptionally high standard deviation of 2738.487, indicates significant macroeconomic instability and highlights the vulnerability of these countries to internal and external shocks.

From a fiscal perspective, public expenditure (2,776 observations) shows a mean of 2.338 and a standard deviation of 2.796, ranging from 0 to 52.614, indicating highly disparate spending levels across countries. External debt, with a mean of 55.212 and a standard deviation of 48.883, varies between 1.154 and 610.452, revealing substantial heterogeneity in external indebtedness. Interest rates display a mean of 6.242 and a high standard deviation of 10.728, with values ranging from −81.132 to 93.915, illustrating often unstable financial conditions. The exchange rate variable (3,503 observations) presents an average of 1,920,056 with extremely high dispersion (standard deviation of 1.14e+08), ranging from 0.044 to 6.72e+09, underscoring major structural differences across monetary systems. Finally, the balance of payments deficit shows a negative mean (−3.41e+08) and a very high standard deviation (2.64e+10), indicating frequent external imbalances in several countries.

Governance and trade openness variables complement this diagnosis. Governance, with a negative mean (−0.367), reflects generalized institutional weaknesses across much of the sample. By contrast, trade openness records a relatively high mean (2.836) and a standard deviation of 0.747, indicating progressive integration into global trade. GDP per capita (3,507 observations) has a mean of 9.020 and a standard deviation of 1.013, ranging from 6.555 to 11.889, reflecting notable income disparities across countries.

From a social and productive standpoint, economic participation (mean 4.140), access to electricity (mean 4.413), and industrial employment (mean 2.808) suggest gradual improvements in productive capacity and infrastructure, although substantial disparities persist. Finally, the wage variable, with a mean of 3.726 and a standard deviation of 0.668, indicates heterogeneous remuneration levels, reflecting differences in productivity and economic structures.

Overall, the table highlights pronounced macroeconomic instability, combined with institutional weaknesses and marked economic and social disparities—factors that directly influence the ability of developing countries to sustainably attract foreign direct investment.

4.2 Macroeconomic Instabilities and FDI: Empirical Analysis

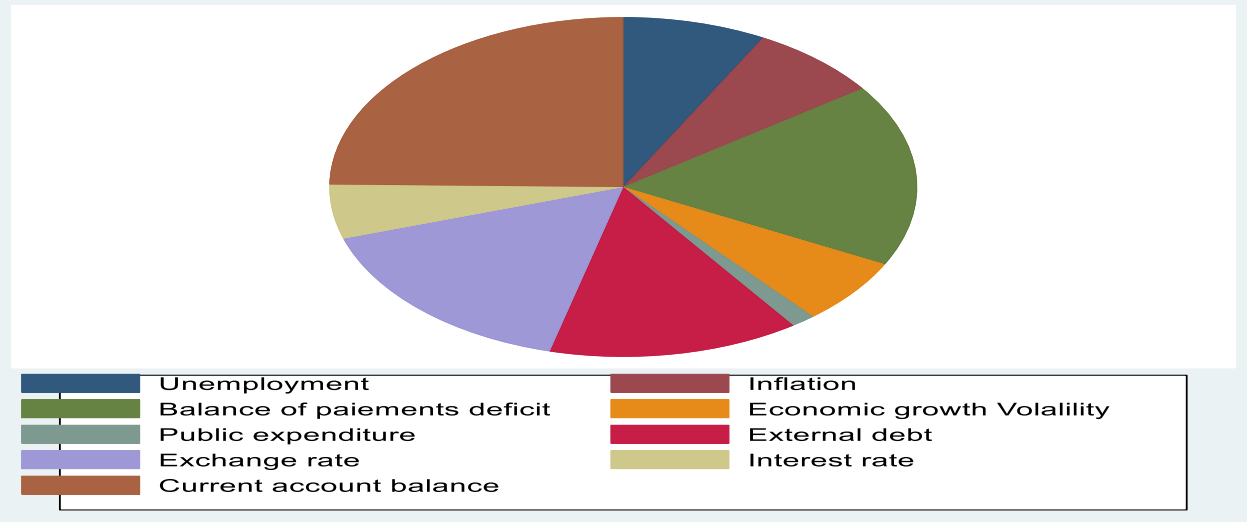
The question of foreign direct investment (FDI) attractiveness in developing countries remains central to debates on structural transformation, productive diversification, and sustainable economic growth. FDI is widely recognized as a key mechanism for technology transfer, productivity upgrading, and integration into global value chains (Dunning & Lundan, 2008; Alfaro, 2017). However, the ability of developing countries to attract and retain such capital flows depends heavily on macroeconomic stability, which conditions the predictability of returns and the security

of investments. In this context, macroeconomic instability—manifested through inflation, exchange rate volatility, fiscal deficits, or political uncertainty—appears as a determining factor likely to negatively influence multinational firms' location decisions (Aizenman & Jinjarak, 2019; Kose & Ohnsorge, 2023).

Nevertheless, recent empirical literature suggests that the relationship between macroeconomic instability and FDI is neither linear nor uniform. In certain economies undergoing institutional transition, a moderate degree of instability may coexist with rising FDI inflows, particularly when investors anticipate higher profit margins or ongoing structural reforms (Mendoza & Terrones, 2022; Amador & Caballero, 2020). Conversely, once instability surpasses a critical threshold, it becomes a systemic risk that undermines policy credibility, increases financing costs, and weakens legal certainty, ultimately leading to a gradual or even massive withdrawal of foreign investors (Rodrik, 2020; Bussmann, 2022).

On this basis, the empirical analysis first presents the adopted methodology, including model specification, data sources, and variable definitions. It then reports the estimation results, followed by their interpretation in light of existing theoretical and empirical findings, in order to better understand how macroeconomic instabilities, influence FDI dynamics and to derive relevant public policy implications.

Figure: Levels of impact of macroeconomic instability indicators on FDI flows.



***Source**: Author's calculations based on Stata data.*

This figure illustrates the impact levels of macroeconomic instability indicators on FDI flows in developing countries. The results indicate that the current account balance and the balance of payments deficit are the main negative determinants of FDI inflows. This can be explained by the fact that external imbalances reflect a country's fragile external position and increase the risk of an international liquidity crisis. Foreign investors interpret such imbalances as a signal of heightened uncertainty regarding future exchange rate stability and the country's capacity to maintain a profit-friendly environment. Recent studies, such as Kinda et al. (2020), show that widening current account deficits significantly reduce FDI in African economies due to the risk of abrupt currency depreciation. Similarly, Babatunde et al. (2022) argue that external balance fragility leads to an increase in the country risk premium, prompting investors to withdraw or postpone their commitments. These findings are consistent with classical analyses by Eichengreen and

Hausmann (2005) and more recent work by Bayraktar and Fofack (2021), which emphasize that countries with external imbalances are more vulnerable to global financial shocks.

4.2.1 Analysis Method

This subsection addresses two points: the estimation principle and the choice of econometric model.

4.2.1.1 Estimation Principle

The empirical analysis in this chapter is based on the use of a fixed-effects model combined with instrumental variables (FE-IV) to rigorously evaluate the impact of macroeconomic instabilities on foreign direct investment (FDI) flows in developing countries. This methodological choice is justified by the need to account both for unobserved heterogeneity across countries and the potential endogeneity of explanatory variables, issues widely emphasized in recent literature on FDI flows and macroeconomic dynamics in developing economies.

Indeed, countries exhibit structural characteristics that are stable over time—such as institutional quality, governance efficiency, average human capital, or infrastructure level—that simultaneously influence FDI attractiveness and vulnerability to macroeconomic instabilities. Ignoring these factors would result in omitted variable bias, compromising the consistency of estimators (Baltagi, 2021; Wooldridge, 2010). The fixed-effects approach neutralizes these time-invariant characteristics by focusing only on within-country temporal variations of the regressors, thereby effectively controlling for structural differences across countries (Hsiao, 2014; Plümper & Troeger, 2007).

However, certain explanatory variables—such as inflation, exchange rate volatility, budget deficits, or public debt—may be endogenous. Endogeneity can arise from reverse causality, where FDI itself influences macroeconomic conditions (Blonigen, 2005; Carkovic & Levine, 2005), or from omitted dynamic variables, such as unobserved political or financial shocks that simultaneously affect both FDI and macroeconomic indicators (Baharumshah et al., 2019; Nistor et al., 2021). Moreover, measurement errors in data from developing countries can bias conventional estimators (Aizenman & Jinjarak, 2009; Busse et al., 2010).

To correct for these biases, carefully selected instrumental variables are used. These instruments must satisfy two essential conditions: they must be correlated with the endogenous regressors (relevance condition) and uncorrelated with the error term (exogeneity condition) (Angrist & Pischke, 2009; Wooldridge, 2015). The FE-IV approach thus provides consistent and robust estimators even in the presence of simultaneity or omitted variables, which is crucial for identifying the causal effect of macroeconomic instabilities on FDI (Baharumshah et al., 2019; Li & Liu, 2020).

The advantage of this combined methodology lies in its ability to neutralize the effects of time-invariant structural characteristics specific to each country while correcting for endogeneity of critical regressors. It therefore allows for the measurement of the direct and isolated impact of variations in macroeconomic instability indicators on FDI flows. This approach is supported by numerous recent studies: Alfaro et al. (2004) show that simultaneously controlling for structural and macroeconomic factors is essential for assessing the effect of financial markets on FDI, while Baharumshah et al. (2019) and Li & Liu (2020) confirm the effectiveness of FE-IV in analyzing the influence of macroeconomic instabilities on FDI flows in panels of emerging and developing countries. Other recent works, such as Nistor et al. (2021) and Carkovic & Levine (2005), emphasize the importance of the FE-IV approach to avoid biases related to endogeneity and omitted variables.

In sum, the use of a fixed-effects model with instrumental variables constitutes a rigorous and appropriate methodological framework for isolating the net effect of macroeconomic instabilities on FDI,

ensuring both the statistical validity and robustness of the results presented in the following empirical sections.

4.2.1.2 Choice of Econometric Model

The empirical (econometric) analysis of the relationship between macroeconomic instabilities and foreign direct investment (FDI) in developing countries requires an econometric model capable of accounting not only for structural heterogeneity across countries but also for potential endogeneity issues that may bias estimates. Indeed, the literature shows that macroeconomic factors such as inflation, exchange rate volatility, budgetary imbalances, and fluctuations in external balances significantly affect international investment decisions. However, FDI flows may, in turn, influence these variables, creating potential circularity in the analysis (Aizenman et al., 2013; Bekaert et al., 2016).

In this context, we adopt a panel data model estimated via the fixed-effects (FE) method to control for unobservable structural characteristics specific to each country, such as productive structure, economic geography, historical levels of financial development, or sectoral specializations. This choice allows us to neutralize biases arising from time-invariant factors (Wooldridge, 2010). The reference equation is inspired by the works of Busse and Hefeker (2007) and Asiedu (2002):

$$FDI_{\text{it}} = \beta_0 + \beta_1 Instab_{it} + \beta_2 X_{it} + \mu_i + \lambda_t + \varepsilon_{it} \qquad [1]$$

Where FDI_{it} represents the FDI inflows for developing country i at time t, $Instab_{it}$ is the main variable of interest (macroeconomic instability) i at time t, X_{it} is a set of control variables, μ_i captures country-specific effects, λ_t captures time-specific effects, and ε_{it} is the error term, β_0 accounting for other unobserved factors.

However, this simple equation may suffer from endogeneity, hence the use of instrumental variables to instrument $Instab_{it}$. These instruments can include institutional, historical, political, or structural variables such as governance, dependence on primary exports, or past political instability (Acemoglu et al., 2001; Rodrik et al., 2004). The first stage of IV estimation models macroeconomic instability using instruments Z_{it}, giving:

$$Instab_{it} = \pi_0 + \pi_1 Z_{it} + \pi_2 X_{it} + \mu_i + \lambda_t + v_{it} \qquad [2]$$

The second stage replaces $Instab_{it}$ with its instrumented value $Instab_{it}^{*}$ in the original FDI equation to obtain:

$$FDI_{\text{it}} = \beta_0 + \beta_1 Instab_{it}^{*} + \beta_2 Z_{it} + \mu_i + \lambda_t + \varepsilon_{it} \qquad [3]$$

This procedure corrects for endogeneity bias. Additionally, to capture the dynamics of FDI flows, lagged terms of investor confidence can be included, as suggested by Blundell and Bond (1998), yielding a dynamic panel equation:

$$FDI_{\text{it}} = \beta_0 + \beta_1 Instab_{i,t-1} + \beta_2 Z_{it} + \mu_i + \lambda_t + \varepsilon_{it} \qquad [4]$$

To ensure the validity of the instruments, we verify the moment conditions according to Hansen (1982):

$$E(Z_{it}.\varepsilon_{it}) = 0 \qquad [5]$$

The validity and robustness of the instruments are further evaluated using Hansen's over-identification test (1982) and Stock and Yogo's weak instrument test (2005), ensuring reliable estimates. Thus, the IV-FE approach, combined with a dynamic panel framework, allows for rigorous identification of the causal impact of macroeconomic instabilities on FDI inflows, while neutralizing potential biases due to omitted variables, country-specific structural characteristics, and endogeneity of the variable of interest (Campos & Kinoshita, 2010; Daude, 2018; IMF, 2022).

4.2.1.3 Main Robustness Tests

To assess the robustness of our model, two main tests are performed. The first is the Sargan/Hansen over-identification test, which evaluates the validity of the lagged variables as instruments. The test is considered valid if the null hypothesis cannot be rejected at the 10% significance level. We prefer Hansen's test over Sargan's test because it is robust to heteroskedasticity in the residuals.

The second is the second-order autocorrelation test by Arellano and Bond. The test is considered valid if the null hypothesis (absence of second-order autocorrelation in first-differenced errors) cannot be rejected at the 10% level.

4.2.2 Results and Interpretation

This subsection is structured around two main points. First, we present the principal results obtained from our estimations. Second, we provide an economic interpretation of these results, discussing the implications for FDI inflows in developing countries and linking them to both theoretical and empirical evidence on macroeconomic instability and investment behavior.

4.2.2.1 Results of Estimations

	Mode l(1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)	Model (7)
Variables	FDI (% of GDP)	FDI (% of GDP)	FDI (% of GDP)	FDI (% of GDP)	FDI (% of GDP)	FDI (% of GDP)	FDI (% of GDP)
Inflation	0.0313***						
	(0.00890)						
Cuurent account deficit		0.00542***					
		-0,00207					

External debt			-0.802***				
			(0.229)				
Exchange rate				-1.030***			
				(0.223)			
Interest rate					-0.0327***		
					(0.0113)		
Corruption						-3.912***	
						(1.145)	
Political instability							-3.773**
							(1.468)
Trade openness	0.0514	-0.0957	0.0871	0.148	0.0333	-0.128	-0.268
	(0.231)	(0.232)	(0.241)	(0.242)	(0.258)	(0.227)	(0.240)
GDP per capita	-0.629*	-1.087**	0.318	-0.162	-0.638*	-0.379	-0.525
	(0.366)	(0.425)	(0.453)	(0.361)	(0.363)	(0.376)	(0.376)
Labor force participation	5.190***	5.338***	5.493***	8.854***	6.978***	7.666***	5.894***
	(1.443)	(1.488)	(1.495)	(1.552)	(1.392)	(1.952)	(1.891)
Access to electricity	2.961	2.032	-1.351	1.852	-0.805	0.393	1.347
	(1.861)	(1.874)	(2.003)	(1.733)	(2.508)	(1.778)	(1.780)
Industriel labor	-2.962***	-3.456***	-3.249***	-3.322***	-2.541***	-2.150**	-2.727***
	(0.909)	(0.958)	(0.945)	(0.862)	(0.958)	(0.942)	(0.922)
Wages	2.652**	2.291*	-0.715	1.533	2.559**	2.478**	2.179*
	(1.162)	(1.185)	(1.327)	(1.067)	(1.227)	(1.169)	(1.175)
Dummy variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Constant	-30.12***	-19.07*	-4.496	-35.60***	-21.11*	-30.54***	-22.66**
	(10.55)	(10.29)	(11.03)	(10.25)	(12.62)	(11.63)	(11.45)
Observations	176	176	176	167	124	172	172
ID Number	51	51	51	50	54	51	51
R-Carré Whithin	0.5692	0.4145	0.3184	0.3700	0.3918	0.5916	0.4752
Fisher (p-value)	0	0	0	0	0	00	

Source: *Author, estimates based on World Bank data.*

Notes: Values in parentheses correspond to the heteroskedasticity-robust standard errors. *** p < 0.01: significant at 1% **; p < 0.05: significant at 5%; p < 0.1: significant at 10%

4.2.2.2 Interpretation of Results

The analysis of the seven presented models aims to examine the impact of macroeconomic, financial, and institutional instabilities on foreign direct investment (FDI) in developing countries. The estimates are based on the fixed-effects model with instrumental variables (FE-IV), which allows, on the one hand, to control for unobservable heterogeneity specific to each country and, on the other hand, to correct for potential endogeneity biases between FDI and certain macroeconomic variables. This approach is particularly suitable in the context of developing countries, as emphasized by Wooldridge (2010) and Baum et al. (2007).

Indeed, the estimates obtained using the FE-IV method clearly highlight the central role of macroeconomic and institutional instabilities in shaping FDI dynamics in developing countries. First, inflation appears as a factor exerting a positive and statistically significant effect on FDI, with an estimated coefficient of 0.0313 at the 1% significance level. This result suggests that, in developing economies, moderate and anticipated inflation can be interpreted by foreign investors as a signal of dynamic domestic demand and short- to medium-term profitability prospects. This interpretation is consistent with recent analyses by Aisen and Veiga (2013), extended by Nguyen et al. (2020) and Mensah et al. (2022), which show that it is not the level of inflation per se that discourages FDI, but rather its unpredictable and volatile nature.

In contrast, external macroeconomic imbalances constitute a major constraint on the attractiveness of the economies studied. In this regard, the balance of payments deficit has a negative effect, with a coefficient of –0.0207, indicating that a deterioration of the external position increases macroeconomic vulnerability and reinforces expectations of currency crises. Similarly, external debt exhibits a strongly

negative and significant effect, with a coefficient of –0.802, confirming that excessive indebtedness constitutes an unfavorable signal for foreign investors. These findings corroborate recent studies by Presbitero et al. (2016), Kose et al. (2017), and Checherita-Westphal and Rother (2020), which highlight that debt accumulation reduces fiscal space, increases macroeconomic uncertainty, and hinders long-term productive investments.

Furthermore, the exchange rate emerges as a crucial determinant of FDI, with a negative and highly significant coefficient of –1.030, indicating that volatility or excessive depreciation of the national currency discourages foreign investment. Exchange rate instability increases uncertainty about future cash flows and raises hedging costs, prompting multinational firms to adopt wait-and-see strategies. This result is fully consistent with recent empirical analyses by Bénassy-Quéré and Mayer (2019), Kiyota and Urata (2020), and IMF (2022), which demonstrate the dissuasive effect of exchange rate volatility on FDI flows to emerging and developing countries.

Similarly, the interest rate has a negative and significant effect, with an estimated coefficient of –0.0327, suggesting that restrictive domestic financial conditions reduce the attractiveness of host economies for foreign investors. By raising the cost of capital and limiting access to local financing, high interest rates hinder the implementation of productive investment projects. This relationship is confirmed by recent studies such as Alfaro, Kalemli-Özcan, and Volosovych (2018), Aghion et al. (2019), and UNCTAD (2023), which emphasize the importance of a stable and accommodating financial environment for attracting FDI.

Beyond macroeconomic factors, the results show that institutional variables play a decisive role. Corruption has a strongly negative effect on FDI, with a coefficient of –3.912, highlighting the substantial economic cost of poor governance. Corruption increases transaction costs, reduces policy predictability, and weakens property rights protection, thereby discouraging foreign investors. This finding aligns closely with recent studies by Qureshi et al. (2019), Baum et al. (2020), and Baho and Paltrinieri (2020). Complementarily, political instability also exhibits a negative and significant effect, with a coefficient of –3.773, confirming that political uncertainty is one of the main determinants of capital flight or reallocation. This relationship is well established in recent literature, notably by Jensen and Malesky (2018), Bove et al. (2021), and Krammer (2022).

Regarding control variables, trade openness does not show a statistically significant effect in most specifications, suggesting that its impact on FDI strongly depends on institutional quality and the level of productive diversification, as noted by Rodrik (2018) and Furceri et al. (2020). In contrast, GDP per capita exhibits a negative and significant effect, reaching –1.087, indicating that FDI preferentially flows to economies with high growth potential rather than to those that have already achieved relatively high income

levels, a result confirmed by Asiedu and Lien (2019) and Blaise (2021). Furthermore, labor force participation has a positive and highly significant effect, with coefficients ranging from 5.190 to 8.854, reflecting the importance of labor availability and mobilization in investment decisions, as shown by ILO (2021) and OECD (2022).

Finally, access to electricity and industrial employment present negative and significant coefficients, suggesting the presence of persistent structural constraints, such as high production costs and low industrial productivity gains in developing countries. This interpretation aligns with recent analyses by Calderón and Servén (2019), Hallward-Driemeier and Nayyar (2018), and the World Bank (2023). Conversely, wages show a positive and significant effect, with coefficients reaching 2.652, indicating that foreign investors value productivity, skills, and human capital quality more than simply low labor costs, in line with the findings of Alfaro and Chauvin (2023) and UNIDO (2022).

Overall, the robustness of the results is confirmed by econometric indicators. The within R^2 values, ranging from 0.318 to 0.592, indicate a satisfactory explanatory power in a fixed-effects framework. Fisher tests confirm the overall significance of the models (p-value = 0). The combined use of fixed effects and instrumental variables ensures that the estimated coefficients capture more credible causal relationships by reducing biases related to endogeneity and unobservable heterogeneity, in accordance with the methodological recommendations of Wooldridge (2010).

4.2.3 Robustness Analysis

The robustness analysis of the article results aims to verify the strength of the empirical conclusions regarding the impact of macroeconomic instabilities on foreign direct investment (FDI) in developing countries. Since the main model is estimated using a fixed-effects model with instrumental variables, the robustness of the results is assessed by employing an alternative method, namely two-stage least squares (2SLS) with instrumental variables. The fixed-effects approach controls for unobservable, time-invariant heterogeneity specific to each country, while the use of instrumental variables aims to correct potential endogeneity between macroeconomic instability indicators and FDI flows. To ensure that the obtained results do not depend solely on this estimation framework, the model is re-estimated using the 2SLS method as a robustness test.

The 2SLS estimation results largely confirm those obtained with the instrumentalized fixed-effects model. In particular, the main macroeconomic instability indicators retain the same sign and remain statistically significant, indicating a persistent negative effect on FDI flows. Although the magnitude of the coefficients may vary slightly between the two methods, these differences do not affect the economic interpretation of the results, which demonstrates the stability of the identified relationship.

Moreover, the validity of the instruments used in the 2SLS estimations is verified using the Sargan/Hansen over-identification test, with associated probabilities exceeding the usual critical thresholds. This outcome leads to a failure to reject the null hypothesis of instrument exogeneity, thereby confirming the reliability of the econometric identification. Additionally, the overall significance of the models is confirmed by Fisher tests, indicating that the explanatory variables jointly contribute to explaining FDI. The control variables also retain signs consistent with theoretical and empirical predictions in the literature, both in the main model and in the robustness estimations. This stability suggests that the effect of macroeconomic instabilities on FDI is neither sensitive to the choice of estimation method nor to the model specification.

Ultimately, the fact that the results obtained with the instrumentalized fixed-effects model are confirmed by the 2SLS estimations with instrumental variables indicates that the conclusions of Chapter 1 are robust. The 2SLS estimations were carried out, and the results are presented in the **appendix**

Conclusion

This paper analyzed the impact of macroeconomic instabilities on foreign direct investment (FDI) flows in developing countries, drawing on both the theoretical foundations of investment under uncertainty and empirical validation using panel data. The aim was to go beyond a purely descriptive reading of FDI to highlight the structuring role of macroeconomic stability in the long-term investment decisions of multinational firms.

From a theoretical perspective, the results are fully consistent with the literature on irreversible investment, which suggests that macroeconomic uncertainty increases the value of the option to wait and encourages investors to delay their projects (Dixit and Pindyck, 1994; Bernanke, 1983). Within this framework, instability in inflation, exchange rate volatility, and persistent fiscal imbalances reduce the predictability of future returns and increase the perceived risk for foreign investors (Fischer, 1993; Serven, 2003).

The econometric results obtained confirm these theoretical predictions. Panel estimations show that macroeconomic instability indicators exert a negative and statistically significant effect on FDI inflows, consistent with previous empirical studies conducted in developing countries (Asiedu, 2002; Busse and Hefeker, 2007; Blonigen, 2005). These findings suggest that even in the presence of natural comparative advantages or an attractive domestic market, macroeconomic instability constitutes a major barrier to the attraction of productive capital.

Furthermore, the study highlights the complementary role of institutions and the credibility of economic policies. Persistent macroeconomic instability is often interpreted by investors as a signal of institutional weakness, reflecting low economic governance credibility and unpredictable public policies

(North, 1990; Acemoglu and Robinson, 2012). Thus, macroeconomic stability emerges not only as a direct determinant of FDI but also as an indirect channel enhancing investor confidence in the institutional environment of host countries.

In light of these findings, several policy recommendations can be formulated for policymakers in developing countries:

- Prioritize the stabilization of the macroeconomic framework. Controlling inflation, reducing its volatility, and prudent management of public finances are essential to reduce the uncertainty perceived by foreign investors. Credible and sustainable fiscal policies, supported by clear rule-based frameworks, help improve long-term visibility of investment returns.
- Reduce exchange rate volatility. Limiting excessive currency fluctuations is an important lever to strengthen FDI attractiveness. Without necessarily adopting rigid exchange rate regimes, monetary authorities should implement policies to moderate volatility, including adequate accumulation of foreign reserves, enhancing the credibility of monetary policy, and developing domestic financial markets.
- Strengthen economic institutions. Improving governance quality, increasing public policy transparency, and enhancing regulatory predictability help reduce institutional uncertainty that often accompanies macroeconomic instability. In this context, stable fiscal rules and protection of property rights are particularly critical for foreign investors.
- Integrate FDI policies into a broader development strategy. Tax incentives or special economic zones can only produce sustainable effects if implemented within a stable macroeconomic environment. Targeted FDI policies should thus be conceived as complements to macroeconomic stability, not substitutes.

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Appendix

	Modèle (1)	Modèle (2)	Modèle (3)	Modèle (4)	Modèle (5)	Modèle (6)	Modèle (7)
VARIABLES	IDE (pib)	IDE (pib)	IDE (pib)	IDE (pib)	IDE (pib)	IDE (pib)	IDE (pib)
Inflation	0.0313***						
	(0.00890)						
Deficit Balence de paiement		0.00542***					
		-0,00207					
Dettes exterieures			-0.802***				
			(0.229)				
Taux de change				-1.030***			
				(0.223)			
Taux d'interet					-0.0327***		
					(0.0113)		
Corruption						-3.912***	
						(1.145)	
Iinstabilité Politique							-3.773**
							(1.468)
Ouverture comerciale	0.0514	-0.0957	0.0871	0.148	0.0333	-0.128	-0.268
	(0.231)	(0.232)	(0.241)	(0.242)	(0.258)	(0.227)	(0.240)
PIB (tete)	-0.629*	-1.087**	0.318	-0.162	-0.638*	-0.379	-0.525
	(0.366)	(0.425)	(0.453)	(0.361)	(0.363)	(0.376)	(0.376)
Participation économique	5.190***	5.338***	5.493***	8.854***	6.978***	7.666***	5.894***

	(1.443)	(1.488)	(1.495)	(1.552)	(1.392)	(1.952)	(1.891)
Accès à l'electricité	2.961	2.032	-1.351	1.852	-0.805	0.393	1.347
	(1.861)	(1.874)	(2.003)	(1.733)	(2.508)	(1.778)	(1.780)
Travail industriel	-2.962***	-3.456***	-3.249***	-3.322***	-2.541***	-2.150**	-2.727***
	(0.909)	(0.958)	(0.945)	(0.862)	(0.958)	(0.942)	(0.922)
Salaire	2.652**	2.291*	-0.715	1.533	2.559**	2.478**	2.179*
	(1.162)	(1.185)	(1.327)	(1.067)	(1.227)	(1.169)	(1.175)
Variables temmporelles muettes	Oui	Oui	Oui	Oui	Oui	Oui	Oui
Constante	-30.12***	-19.07*	-4.496	-35.60***	-21.11*	-30.54***	-22.66**
	(10.55)	(10.29)	(11.03)	(10.25)	(12.62)	(11.63)	(11.45)
Observations	176	176	176	167	124	172	172
Numero de ID	51	51	51	50	54	51	51
R-Carré Whithin	0.5692	0.4145	0.3184	0.3700	0.3918	0.5916	0.4752