

Net capital inflows and party ideology: Evidence from Latin America

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Abstract

Leftist governments tend to pursue policies that favor labor over capital, which has led to the claim that such policies negatively impact net capital inflows. However, empirical evidence supporting this claim is limited. In a sample of Latin American countries for the period 1996-2020, I find that net capital inflows as a percentage of GDP are on average one percentage point lower during leftist governments than during centrist ones when both types of governments are unified (i.e., the party in control of the executive also holds a majority of seats in the legislature). However, capital inflows do not seem to respond to executive's ideology when governments are divided. This suggests that investors may perceive divided governments as a guarantee of policy stability, regardless of the executive's ideology. Consequently, there is no incentive for investors to alter their investment decisions. My findings remain statistically significant across a range of sensitivity checks and extensions. These include incorporating populist governments, identified using GPT classifiers based on established definitions of populism; alternative estimation methods; and an unsupervised machine learning technique for regrouping Latin American countries into different samples. I also highlight the advantages of using the political variables constructed in this paper over institutional quality indices to study capital inflows dynamics.

JEL Classification: F30; P00

Keywords: Capital inflows; Divided governments; Party ideology; Institutional quality

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1 Introduction

Net capital inflows have been shown to be significantly affected by institutional quality. Studies have identified the impact of various institutional factors, including political risk and uncertainty (e.g., Busse and Hefeker, 2007; Choi et al., 2021; Jensen, 2008), corruption and rule of law (e.g., Staats and Biglaiser, 2012; Barrasi and Zhou, 2021), and composite institutional quality indices (e.g., Alfaro et al., 2008; Papaioannou, 2009).

Although these studies have significantly advanced our understanding of the factors influencing investment decisions, including the role of institutional quality in assessing political risk and attracting capital, a key limitation remains. Institutional quality is often measured through indices based on survey data on government effectiveness, rule of law, and corruption. The subjective nature of these surveys can lead to biased and potentially inaccurate indices. For example, Donchev and Ujhelyi (2014) have shown that corruption perception is affected by factors such as protestant traditions and economic development, even when holding corruption experience constant. Those factors produce a subjective perception that could bias the measurement of corruption experience. Additionally, Michener (2015) and Bellinger and Son (2018) have argued that investors may assess political risks through observable political environments, which are typically not well represented by composite institutional quality indices.

Alternatively, scholars have identified more objective and observable political factors as determinants of capital inflows. For example, Bellinger and Son (2018) examined the impact of the effective number of political parties on foreign direct investment. The mechanism is that a larger number of veto players in Congress can help prevent sudden policy changes, thereby fostering policy stability and attracting capital inflows. Moreover, the observable number of political parties in Congress provides potential investors with a clear indicator of policy stability before making investment decisions. Bütthe and Milner (2008) examined the impact of international trade agreements on foreign direct investment. Policies promoting

trade and financial openness signal a favorable investment climate to investors. However, politicians may lack credibility in implementing these policies, as they could be reversed due to pressures from various interest groups, particularly in developing countries. In contrast, international trade agreements may be perceived as a more credible commitment by investors, as they are generally more difficult to repeal.

This paper proposes alternative political factors as determinants of capital inflows that are also more objective and observable than institutional quality indices. Left-wing governments often implement policies that disproportionately tax capital goods (Angelopoulos et al., 2012), which may deter capital inflows during periods of left-wing leadership. Additionally, a unified left-wing government may exacerbate this effect, as it could more easily and rapidly implement tax reforms targeting capital goods, or even engage in constitutional expropriations. These are the hypotheses to be tested in this paper for Latin American countries over the period 1996-2020. Executives are classified as leftist or centrist/rightist (moderate, hereafter) based on their self-identified party ideology and/or stated policy proposals, which are generally more objective and observable than institutional quality indices.¹ Additionally, a variable measuring the degree of unified government provides an objective and observable measure of the executive party's control over Congress. It is calculated by dividing the number of seats held by the executive's party or coalition by the total number of seats in Congress. Another advantage of using an indicator of left-wing governments and their congressional majorities, rather than institutional quality indices, is the significant within-country variability over time. This allows me to exploit both cross-country and time-series variation to study the dynamics of capital inflows and mitigate potential endogeneity issues in a panel data setting. Alfaro et al. (2008) acknowledged the poor time-series variability of institutional quality indices, which forced them to rely on a cross-country study, thereby

¹The left-wing executive dummy variable takes the value 1 for left-wing executives and 0 otherwise. The ideological affiliation of governments (left, center, or right) is classified according to the Database on Political Institutions (DPI), compiled by the Inter-American Development Bank. Further details on the classification process will be provided in the next section.

limiting the opportunity to explore capital inflow dynamics. The Latin American region provides a relatively homogeneous environment for studying the impact of left-wing governments on capital inflows, as leftist policymakers across the region have adopted similar policy practices (e.g., high government spending that raises the opportunity cost of capital, constitutional expropriations, and heavy taxation on capital goods).²

In the baseline regression model, net capital inflows as a percentage of GDP do not exhibit a significant decrease when a left-wing incumbent is in office under a balanced legislature (i.e., the executive party or coalition holds 50% of seats). However, if this proportion increases to 62.5%—the mean value for the Latin American sample—net capital inflows as a percentage of GDP decline significantly, ranging from 0.75 to 1 percentage points, depending on the specification, relative to the analogous scenario of a moderate executive with the same seat share. This suggests that investors may perceive divided governments as a guarantee of policy stability, regardless of the executive’s ideology. Consequently, there is no incentive for investors to alter their investment decisions.

My results are robust to alternative regression models, such as incorporating nonlinearities in the congressional majority variable and using a K-means clustering algorithm to re-group the Latin American countries in this study. I further extend the study to include populist governments, as defined by Mudde (2004). While populist governments exacerbate the effect, the results are not statistically significant, indicating that the primary driver remains left-wing governments.³

While many scholars believe that capital flees countries under left-wing governments (e.g., Staats and Biglaiser, 2012), there is a lack of substantial and significant empirical evidence to support this claim. This paper employs dynamic panel data frameworks to provide

²In the conclusion section, I provide case studies, with their primary sources.

³I employ GPT prompts based on the definition of a populist leader to classify all Latin American leaders as either populist or non-populist. While there is no direct method to validate the accuracy of the GPT classifier, I cross-referenced the results with Funke et al. (2023), who also applied Mudde (2004)’s definition. For the Latin American leaders included in both studies, the classifications largely aligned. Further details are provided in Section 5.2.

significant quantitative empirical evidence supporting such claim.⁴

The next section describes the data and provides descriptive statistics. Section 3 describes the econometric methods to be used. Section 4 presents the empirical results of the baseline models. Section 5 presents extensions and robustness checks. Section 6 concludes.

2 Data and descriptive statistics

Data on net capital inflows comes from the International Monetary Fund's International Financial Statistics (IFS), Balance of Payment Sections (BOP). I use aggregate annual data on net portfolio and net direct investments. The former mainly comprises equity (when a foreign investor acquires less than 10% of the value of a company in the host country), corporate debt, and sovereign debt. Direct investment mainly comprises equity, when a foreign investor acquires more than 10% of a company in the host country, which may be considered more strategic and long-term. The political variables used to test the main hypotheses of this paper are from the Inter-American Development Bank's Database on Political Institutions (DPI). I use mainly two variables: a binary indicator for a left-wing executive (*LEFTIST*), and a variable measuring the difference in seat shares between the governing and opposition coalitions in the legislature (*MAJ*). If *MAJ* is equal to 0, the government party or coalition has 50% of the seats in the legislature. A positive value indicates a simple majority, and a super-majority when *MAJ* is greater than or equal to 1/3. For example,

⁴Pinto and Pinto (2008) studied the effect of leftist governments on the composition of foreign direct investment (FDI). They argued that left-wing governments prioritize labor interests and found that foreign direct investment (FDI) flows into sectors that positively impact labor returns. Their study differs from mine in three key ways. First, they only study foreign direct investment (FDI), while I also study portfolio investment. Second, they study the effect of leftist governments on the shares of FDI per industry, so they only capture FDI composition cycles (as a share of the total). In contrast, I study the effect of leftist executives on the total (net) capital inflows to capture total inflow cycles. Finally, and more importantly, their study focuses on OECD countries, while mine focuses on Latin American countries. This is crucial because the conception of left-wing governments differs between OECD countries (primarily EU nations) and Latin America. In OECD countries, these governments are often associated with labor-oriented policies, while in Latin America, they are frequently associated with policies that may be perceived as hostile to capital, such as heavy capital taxation and constitutional expropriations.

a unified left-wing government with simple majority is indicated by $LEFTIST = 1$ and $0 < MAJ < 1/3$, while a leftist with super-majority is indicated by $LEFTIST = 1$ and $MAJ \geq 1/3$. A left-wing divided government is indicated by $LEFTIST = 1$ and $MAJ < 0$. As explained in the Introduction, these two political variables are more objective than traditional institutional quality indices. However, for comparison with previous literature and to avoid possible omitted variable bias, I also use data on institutional quality from the World Bank’s Worldwide Government Indicators (WGI), as used in Economou et al. (2017) and others. I use two indices from this database:⁵ Rule of Law index (*RULE.LAW*) and Control of Corruption index (*CTRL.CORR*). The former “*captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence*”.⁶ Variables used to construct the index include, among others, violent and organized crime, speediness of judicial process, intellectual property rights protection, private property protection, and confidence in the police force. The latter “*captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as capture of the state by elites and private interest*.”⁷ Variables used to construct the index include, among others, corruption among public officials, and irregular payments in public contracts. Both indices, which range from -2.5 to $+2.5$, are good proxies of institutional quality, with higher values indicating higher institutional quality. Throughout the paper, I use Rule of Law index only, given that it is highly correlated with the Control of Corruption index.⁸

While institutional quality indices exhibit low within-country variability, the politi-

⁵I employ additional indices from the same database, all of which are reliable proxies for institutional quality, to demonstrate the robustness of the findings to alternative measures. Results are available upon request.

⁶Text extracted from www.info.worldbank.org/governance/wgi/Home/Documents.

⁷Text extracted from www.info.worldbank.org/governance/wgi/Home/Documents.

⁸In the robustness check section (Section 5) I use different transformations of Rule of Law and Control of Corruption, and results are virtually the same.

cal variables of left-wing executive (*LEFTIST*) and Majority (*MAJ*) demonstrate high within-country variability. Table 1 shows the decomposition of the overall variance of each variable into within-country and between-country components for the Latin American nations in the sample (Argentina, Bahamas, Barbados, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, and Uruguay).

Table 1. Definition of variables and descriptive statistics

Variable	Description	Within Group Variance	Between Group Variance	Overall Variance	Mean	CV	Source
<i>LEFTIST</i>	Dummy variable. Left-wing executive = 1	0.124	0.095	0.219	0.319	1.470	DPI
<i>MAJ</i>	Share of seats of same party as executive minus share of seats of opposition party	0.078	0.034	0.112	0.137	2.439	DPI
<i>RULE.LAW</i>	Rule of Law Index	0.044	0.466	0.509	-0.222	3.216	WGI
<i>CTRL.CORR</i>	Control of Corruption Index	0.030	0.607	0.638	-0.096	8.284	WGI

Notes: Countries in the sample from Latin America: Argentina, Bahamas, Barbados, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, and Uruguay. Sample period 1996-2020. DPI stands for Database on Political Institutions. WGI stands for World Governance Indicators.

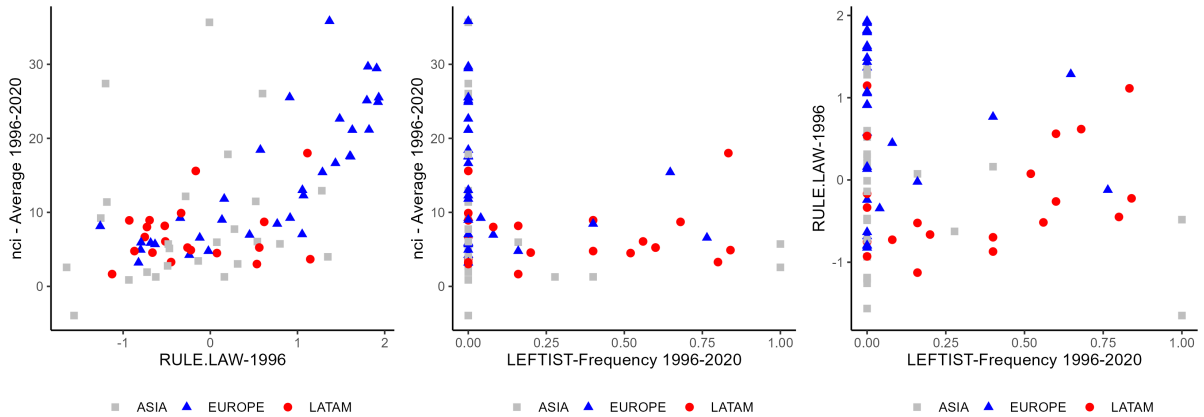
We observe that *LEFTIST* (a binary indicator for left-wing governments) and *MAJ* (a variable measuring the difference in seat shares between the governing and opposition coalitions in the legislature) possess a high within-country variance component relative to the between-country variance (about three times higher). The coefficient of variation of these variables are 1.47 and 2.44, respectively, which are considered high. By contrast, the institutional quality indices, rule of law (*RULE.LAW*) and control of corruption (*CTRL.CORR*), have both low within-country variation in relation to the between-country component, as I have highlighted in the Introduction. For example, the between-

group variance component of *RULE.LAW* is about 0.47, while the within-group variance component is 0.044 (the former is about 10 times greater). This indicates that institutional quality indices are well-suited for cross-country studies with time-averaged data, as in Alfaro et al. (2008), Azémar and Desbordes (2013), Akhtaruzzaman et al. (2018), and no advantage could be gained in a time-series setting.⁹

I will now rely on visual inspection to illustrate the relationships between the institutional quality index for rule of law (which exhibits low time-series variation per country), the binary indicator for left-wing governments (which exhibits high time-series variation per country), and net capital inflows as a percentage of GDP. To facilitate cross-country comparisons, I will utilize time-averaged data to generate country-level graphs.

⁹In one of the econometric specifications, I employ a fixed-effects model. For these estimations, I exclude the institutional quality index due to its low time-series variation. Including this variable would complicate the interpretation of the results, as it is highly correlated with country-specific fixed effects.

Figure 1. Relationship between Capital Inflows, Institutional Quality, and Left-Wing Governments



Notes: The left graph shows the relationship between the average net capital inflow as percentage of GDP (*nci*) from 1996 to 2020 and the 1996 value of rule of law index (*RULE.LAW*) per country; the center graph shows the relationship between the average net capital inflow as percentage of GDP (*nci*) from 1996 to 2020 and the frequency of left-wing governments from 1996 to 2020 (*LEFTIST*) per country; the right graph shows the relationship between the 1996 rule of law index (*RULE.LAW*) and the frequency of left-wing governments from 1996 to 2020 (*LEFTIST*) per country. Countries in the Latin American sample, depicted in red circles, are: Argentina, Bahamas, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, and Uruguay. Countries in the European cluster, depicted in blue triangles, are: Albania, Austria, Belarus, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Latvia, Lithuania, Norway, Poland, Portugal, Romania, Russia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, UK, and Ukraine. Asian countries, depicted in gray squares, are: Armenia, Azerbaijan, Bahrain, Bangladesh, Georgia, India, Israel, Japan, Jordan, Kazakhstan, Kuwait, Kyrgyz, Malaysia, Philippines, Singapore, Sri Lanka, Tajikistan, Thailand, and Vietnam.

The left panel of Figure 1 illustrates the relationship between the initial 1996 value of the rule of law index and time-averaged net capital inflows. In addition to the Latin American countries (represented by red circles), the figure also includes Asian countries (gray squares) and European countries (blue triangles) for comparison. Given their generally higher levels of development, European countries (particularly in Western Europe) tend to exhibit both higher institutional quality and higher net capital inflows, positioning them in the upper-right quadrant of the plot. However, both European and Latin American countries exhibit a clear positive relationship between the rule of law index and the time-averaged net cap-

ital inflows. Similarly, Asian countries show a positive relationship, although it is more dispersed. This cross-country relationship is the keystone of the studies on the effect of institutional quality on net capital inflows, providing an explanation for the Lucas Paradox (e.g.: Alfaro et al., 2008; Azémar and Desbordes, 2013; Akhtaruzzaman et al., 2018).¹⁰ This approach is appropriate for studying this phenomenon, as little information is lost by time-averaging country-level variables, particularly given the low time-series variation in institutional quality, as demonstrated in Table 1. However, when using an indicator with high time-series variation, such as the frequency of left-wing governments in Latin American countries, time-averaging data can lead to inaccurate and potentially counter-intuitive correlations, as the time-varying nature of the data is lost. As shown in the center panel of Figure 1, the relationship between average net capital inflows and the frequency of left-wing governments in Latin America is unclear, which contradicts the hypotheses outlined in the Introduction. This inconsistency in the between-country comparison requires the analysis of within-country variation to uncover accurate relationships aligned with the hypotheses to be tested. In the European and Asian country groups, only a small number of countries (six and five, respectively) exhibit a frequency of left-wing governments between zero and one, compared to the total number of countries in these groups. This creates a weak overall variation of left-wing governments that could lead to unreliable estimates on the effect of left-wing governments on net capital inflows if European and Asian countries are used in the econometric analysis. For this reason, those two regions are not considered in the regression analyses below.¹¹ Finally, the right panel of Figure 1 does not reveal

¹⁰Under classical assumptions, poor countries have less capital per worker than developed countries, which causes the marginal productivity of capital per worker to be higher in poor countries than in developed countries. This should cause capital to flow from developed to poor countries. However, this prediction is not supported by substantive empirical evidence. Lucas (1990) observed this, and it has since come to be known as the Lucas Paradox.

¹¹Moreover, the DPI coded parties as left-wing based on a broad range of characteristics, including communist, socialist, social democratic, or simply self-identified as left-wing. The distinction lies in the differing policy preferences of socialist and social democratic incumbents. Historically, Latin American left-wing leaders have tended to favor socialist policies, such as heavy capital taxation and constitutional expropriations (for examples, see the conclusion section). In contrast, European left-wing governments have tended toward

a strong correlation between the frequency of left-wing governments and the rule of law index. However, for Latin American countries, there is a weak positive correlation, which is somewhat counter-intuitive.

Table 2. Correlation coefficients

	<i>LEFTIST</i>	<i>RULE.LAW</i>	<i>CTRL.CORR</i>	<i>MAJ</i>
<i>LEFTIST</i>	1			
<i>RULE.LAW</i>	0.16	1		
<i>CTRL.CORR</i>	0.15	0.74	1	
<i>MAJ</i>	0.18	0.08	0.016	1

Notes. Countries in the sample from Latin America: Argentina, Bahamas, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, and Uruguay. Time period is 1996-2020.

To finalize the analysis of the relationship between political variables and institutional quality indices, Table 2 shows correlation coefficients for the Latin American countries. We observe that the correlation coefficients between *LEFTIST* and *RULE.LAW*, and between *LEFTIST* and *CTRL.CORR* are positive and relatively low (about 0.16 and 0.15, respectively), suggesting that including both variables in a linear regression model is unlikely to cause multicollinearity issues, or unlikely to cause omitted variable bias when one or the other is not included. Moreover, the correlation between *MAJ* and *LEFTIST* is relatively low and positive (about 0.18), suggesting a slight bias towards a higher majority under left-wing governments than under right ones. The correlation between *MAJ* and *RULE.LAW*, and between *MAJ* and *CTRL.CORR* are very low (0.08 and 0.016, respectively), which is good for identification purposes.

social democratic policies, which typically involve less hostile measures toward capital but greater support for labor, as demonstrated by Pinto and Pinto (2008) for OECD countries. Consequently, capital inflows may react differently to left-wing governments across these continents. Then, pooling European, Asian, and Latin American countries may provide mixed results.

3 Econometric Methods

This section describes the econometric model used to study the impact of the executive party’s ideology on net capital inflows for the Latin American countries. It also provides details and sources for the time-varying covariates employed in the analysis. The primary regression equation is as follows:

$$y_{it} = \alpha + \lambda \times y_{i,t-1} + \beta \times RULE.LAW.D_{it} + \gamma \times LEFTIST_{it} + \theta \times MAJ_{it} + \delta \times LEFTIST_{it} \times MAJ_{it} + \mathbf{X}'_{it}\boldsymbol{\tau} + u_{it}, \quad (3.1)$$

where y represents the dependent variable, which can take one of three forms: total net capital inflows (nci), net portfolio investment inflows (npi), or net direct investment inflows (ndi), all expressed as a percentage of potential GDP.¹² One lag of y is used as an independent variable to capture persistence.¹³ $RULE.LAW$ (rule of law) is used as a proxy of institutional quality, as it was shown in Table 1.¹⁴ I use a dummy variable transformation of $RULE.LAW$, which takes the value 1 when the standardized value of $RULE.LAW$ is positive and 0 otherwise ($RULE.LAW.D$). As found in the literature of net capital inflows and institutions, we expect $\hat{\beta}$ to be significantly positive. $LEFTIST$ takes value 1 when a leftist executive is in office and 0 otherwise. We expect $\hat{\gamma}$ to be significantly negative as left-wing governments in Latin America often implement policies that deter capital inflows, such as heavy taxation of capital and financial assets, multiple exchange rate regimes, capital controls, and even constitutional expropriations. MAJ is a variable measuring the

¹²Potential GDP was estimated using the Hodrick-Prescott filter. By using potential GDP instead of GDP, I mitigate the impact of short-term fluctuations in economic activity on the dependent variable

¹³The Akaike information criterion reveals a clear preference for one lag over two lags. Results are available upon request.

¹⁴Control of Corruption is another variable that can be used as a proxy of institutional quality, which is highly correlated with Rule of Law, as shown in Table 1. In the robustness check section I show results employing Control of Corruption instead of Rule of Law, and results are virtually the same.

difference in seat shares between the governing and opposition coalitions in the legislature. Then, when MAJ is greater than 0, the legislature is controlled by the same party or coalition of the executive. Analogously, when it is less than 0, we have the typical situation of a divided government. We expect $\hat{\theta}$ to be positive because MAJ itself represents the omitted category of the executive’s ideology, which is moderate (note that in this case $LEFTIST = 0$). The intuition is that moderate executives with a majority in congress are less likely to implement policies hostile to capital, as demonstrated by Angelopoulos et al. (2012), leading to higher capital inflows. Finally, we expect δ , the coefficient of the interaction term $LEFTIST \times MAJ$, to be negative, as a larger share of legislative seats held by the left-wing party should exacerbate capital outflows. Table 3 below summarizes the expected signs from the hypotheses to be tested.

Table 3. Expected Signs of Coefficients

Variable	Definition	Expected Sign
$LEFTIST$	Dummy = 1 for left-wing executive, 0 otherwise.	Negative
$RULE.LAW.D$	Rule of Law Index (or control of corruption index). Dummy = 1 if standardized version > 0, 0 otherwise.	Positive
MAJ	Difference in seat shares between the governing and opposition coalition in the legislature.	Positive
$LEFTIST \times MAJ$	Interaction term	Negative

\mathbf{X}_{it} is a matrix of time-varying controls used in the literature. Unless otherwise indicated, those control variables come from International Monetary Fund’s International Financial Statistics. These are: (I) the first lag of $real.GDP.growth$, from the World Bank’s World Development Indicators. Alfaro et al. (2008) uses GDP adjusted for purchasing power parity. In contrast to their cross-country work, my analysis exploits time series and cross-country data. Since y is a stationary, $I(0)$, process, to produce co-integrated series I have to use a stationary version of Real GDP. Real GDP growth fits into this definition.¹⁵ A higher GDP

¹⁵Dickey-Fuller tests are available upon request.

growth rate may positively impact capital inflows in two ways: First, developing countries, with lower capital-labor ratios and consequently higher marginal returns to capital, may attract greater capital inflows as they catch up with developed economies. Second, higher GDP growth rates may signal more profitable investment opportunities and reduced economic uncertainty, thereby incentivizing capital inflows.¹⁶ (II) The first lag of *CPI.index*, a transformed variable of CPI changes, also an $I(0)$ process. Following Acemoglu et al. (2008), *CPI.index* equals to $\frac{\Delta cpi_{it}}{\Delta cpi_{it+1}}$, where $cpi_{it} = \ln CPI_{it}$. This is a way to smooth inflation, which is particularly important for Latin American countries given their history of hyperinflation in the 1980s and 1990s. During hyperinflation episodes, the *CPI.index* approaches 1, while during normal inflation periods, it approaches to 0. Higher inflation leads to increased uncertainty, which can deter capital inflows. (III) The first lag of *openness*, imports plus exports as a share of GDP ratio, also used by Barassi and Zhou (2012), and Kaya and de Haan (2022), among others. We expect increased capital inflows, particularly foreign direct investment, as the current account becomes more open. This is because a more open current account facilitates the import of production inputs. (IV) The first lag of *Fiscal.Balance./GDP*, also an $I(0)$ process. Higher fiscal deficits can lead to appreciations of the local currency –specially when domestic prices are fixed in the short-term– if government consumption is biased towards non-tradable goods (Goldfajn and Valdes, 1999). However, if GDP growth does not exceed such deficit, the increased fiscal deficit is not sustainable in the long run. In this case, investors may anticipate currency depreciation, as suggested by Garofalo and Streb (2021), which could slow capital inflows until the expected depreciation takes place. Also, this could be seen as an case of the traditional crowding-out effect through the interest rate channel. (V) The first lag of *real.interest.rate*; foreign direct investment inflows are expected to decrease when interest rates in the host country rise,

¹⁶Kaya and de Haan (2022) included GDP growth in their study of capital inflows to EU countries. They found a positive coefficient for foreign direct investment as a share of GDP and an insignificant negative coefficient for portfolio investment as a share of GDP. While my study focuses on Latin American countries, I observe similar patterns in my estimation results below.

as this increases the opportunity cost of capital. Regarding portfolio investment inflows, higher interest rates may incentivize investors to engage in carry trade strategies, investing in high-interest-rate currencies against low-interest-rate ones. In this scenario, portfolio investment may be positively correlated with interest rates. However, higher interest rates may signal higher economic uncertainty, which can deter portfolio investment, particularly in environments with high exchange rate volatility (Menkhoff et al., 2012). (VI) The first lag of *Dual.Market*, from Ilzetzki et al. (2019), a dummy variable that takes value 1 if a country adopts dual exchange rate regimes (i.e., official and parallel market/s) and 0 otherwise. A dual exchange rate regime is particularly complicated for foreign direct investment because it can block the repatriation of companies' profits, so a negative impact on foreign direct investment is expected. (VII) The first lag of terms of trade, *ToT*, from the World Bank's World Development Indicators, which it may be of particular importance in foreign direct investment. An improvement in terms of trade can lead to an appreciation of the domestic currency, all else equal. In this scenario, direct investment inflows may increase, particularly into non-tradable sectors, as profits in domestic currency can be converted into more profits in foreign currency due to the domestic currency appreciation. (VIII) The first lag of *real.interest.rate.US*, a higher US interest rate increases the opportunity cost of capital in the US, so direct investment may flow to developing countries, such as those in Latin America. Conversely, as US interest rates rise, US bonds fall, which may divert portfolio investment away from developing countries, particularly if investors perceive the increase in US interest rates as temporary. Finally, (IX) the first lag of *Finc.Index*, financial development index, also used in Lee and Chang (2009), Kaya and de Haan (2022), among others. As the financial development index increases, net capital inflows are expected to rise, in part because a more developed financial sector reduces transaction costs and logistical barriers to investment.

To estimate equation (3.1), I employ a generalized least squares (GLS) estimation, which

allows for a general variance-covariance matrix. I estimate such matrix allowing for country-specific autocorrelation processes and country-specific (group-wise) heteroskedasticity. As robustness check, I also estimate equation (3.1) under OLS with fixed effects per country, using robust standard errors. In this case, the rule of law index (*RULE.LAW.D*) is excluded from this model due to its low time-series variation, which leads to high collinearity with the country fixed effects.

4 Regression Results

In this section, I estimate equation (3.1), where net capital inflows are regressed on the set of time-varying covariates described in the previous section, the dummy variable for a left-wing executive (*LEFTIST*) and the difference in seat shares between the governing and opposition parties in the legislature (*MAJ*). To confirm that the estimated coefficients align with the economic rationale presented in the previous section, I first estimate equation (3.1) using only the time-varying covariates described earlier, along with the proxy for institutional quality (*RULE.LAW.D*). Next, I estimate equation 3.1 including *LEFTIST*, *MAJ*, and the interaction term $LEFTIST \times MAJ$ to test the main hypotheses of the paper, i.e., capital inflows decrease under left-wing governments, and this effect is exacerbated if the government also controls the legislature. Table 4 below shows the effect of time-varying covariates and institutional quality index (*RULE.LAW.D*) on, as percentage of potential GDP, net capital inflows (*nci*), net portfolio investment inflows (*npi*), and net direct investment inflows (*ndi*) in columns (1), (2), and (3), respectively. In column (1), high institutional quality ($RULE.LAW.D = 1$) is associated with an increase in net capital inflows as a percentage of potential GDP of 0.99 percentage points. When dis-aggregating net capital inflows into its components, net portfolio investment and net direct investment inflows as percentage of potential GDP (*npi* and *ndi*), the changes are 0.55 and 0.52 percentage points,

respectively, shown in columns (2) and (3). The results are consistent with findings in the literature (see for example, Alfaro et al., 2008; Acemar and Desbordes, 2013; Akhtaruzzaman et al., 2018; Kaya and de Haan, 2022), where higher institutional quality boosts net capital inflows.

Table 4. Estimation results without political variables

		(1)	(2)	(3)
	Dep. Var.	<i>nci</i>	<i>npi</i>	<i>ndi</i>
Estimators				
	$y_{(-1)}$	0.558*** [0.047]	0.444*** [0.051]	0.495*** [0.050]
	<i>CPI.index</i>	-18.123 [18.600]	-23.570* [12.674]	8.193 [11.259]
	<i>openness</i>	1.481* [0.779]	0.413 [0.423]	1.497*** [0.540]
	<i>Fiscal.Balance./GDP</i>	0.066 [0.069]	0.067* [0.041]	-0.042 [0.040]
	<i>real.GDP.growth</i>	10.070** [5.131]	-0.309 [3.462]	9.211*** [3.183]
	<i>real.interest.rate.US</i>	0.196 [0.167]	-0.033 [0.102]	0.220** [0.106]
	<i>real.interest.rate</i>	-0.099 [0.133]	-0.145 [0.093]	0.086 [0.077]
	<i>Dual.Market</i>	-0.764 [0.725]	-0.289 [0.498]	-0.277 [0.287]
	<i>ToT</i>	0.005 [0.004]	-0.001 [0.002]	0.007** [0.003]
	<i>Finc.Index</i>	2.881** [1.451]	4.217*** [0.985]	0.830 [0.963]
	<i>RULE.LAW.D</i>	0.988** [0.428]	0.551** [0.259]	0.515* [0.284]

Notes: Results are from the estimation of equation (3.1). Dependent variables: $nci = npi + ndi$, net capital inflows as percentage of potential GDP, npi , net portfolio investment inflows as percentage of potential GDP, ndi , net foreign direct investment inflows as percentage of potential GDP. GLS methodology was used allowing for country-specific autocorrelation process, and country-wise heteroskedasticity. Independent variables are lagged one period to tackle potential endogeneity issues. Number of observations in all regressions is 355. Countries in the sample are 16: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, and Uruguay. Time period is 1996-2020.

The time-varying control estimators generally exhibit the expected signs, although not all are statistically significant. As expected, the consumer price index (*CPI.index*) has a negative impact on net capital inflows and net portfolio investment inflows, as indicated by columns (1) and (2). However, unexpectedly, it has a positive impact –but small and insignificant– on net direct investment inflows in column (3). *openness*, as expected according with the rationale explained in the previous section, has a significantly positive impact on net capital inflows (column 1) and net direct investment inflows (column 3), while its effect on net portfolio investment inflows (column 2) is insignificant. *Fiscal.Balance./GDP*, has the expected positive sign for portfolio investment in column (2), but an unexpected, albeit insignificant, negative sign in column (3). *real.GDP.growth* has an unexpected, albeit very small, negative effect on portfolio investment in column (2), but a significant positive effect in columns (1) and (3).¹⁷ *real.interest.rate* is insignificant in all three columns, with an unexpected positive sign in column (3). In column (2), the negative coefficient is consistent with the notion that higher interest rates, potentially reflecting a higher country risk premium, can deter portfolio investment inflows. *Dual.Market*, a dummy variable indicating the presence of a dual exchange rate regime (*Dual.Market* = 1) or a unified exchange rate regime (*Dual.Market* = 0), is, as expected, negatively associated with all three types of capital inflows, although the effect is not statistically significant. This suggests that dual exchange rate regimes may deter investment inflows. This may be exacerbated by the lack of credibility of the monetary authority when choosing dual exchange rate regimes, as shown by Garofalo and Streb (2021). *ToT* is positive and significant in column (3), as expected. Finally, as expected and explained in the previous section, *Inc.Index* is significantly positive in columns (1) and (2) and has a positive, albeit insignificant, sign in column (3).

¹⁷Kaya and de Haan (2022) find the same signs in their work.

Table 5. Estimation results with political variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. Var.	<i>nci</i>	<i>nci</i>	<i>npi</i>	<i>ndi</i>	<i>nci</i>	<i>npi</i>	<i>ndi</i>
Estimators							
<i>RULE.LAW.D</i>	0.988** [0.428]	1.054** [0.436]	0.635** [0.264]	0.524* [0.294]	–	–	–
<i>LEFTIST</i>		0.180 [0.332]	0.016 [0.210]	0.254 [0.232]	0.592 [0.476]	0.640* [0.319]	–0.071 [0.326]
<i>MAJ</i>		1.169** [0.575]	0.285 [0.335]	1.194*** [0.360]	0.993 [0.686]	0.044 [0.455]	0.9744* [0.502]
<i>LEFTIST</i> × <i>MAJ</i>		–3.191*** [0.962]	–1.684** [0.726]	–2.293*** [0.695]	–3.302** [1.496]	–0.128 [1.201]	–3.3521*** [1.077]
Method	GLS	GLS	GLS	GLS	OLS w/FE	OLS w/FE	OLS w/FE

Notes: Results are from the estimation of equation (3.1). Dependent variables: $nci = npi + ndi$, net capital inflows as percentage of potential GDP, npi , net portfolio investment inflows as percentage of potential GDP, ndi , net foreign direct investment inflows as percentage of potential GDP. 1-year-lagged time-varying covariates were included, but not reported: *CPI.index*, *openness*, *Fiscal.Balance./GDP*, *real.GDP.growth*, *real.interest.rate*, *real.interest.rate.US*, *Dual.Market*, *ToT*, *Finc.Index*. GLS methodology were used allowing for country-specific autocorrelation process, and country-wise heteroskedasticity in columns (1), (2), (3), and (4), while OLS with Fixed Effects methodology were used in columns (5), (6), and (7). Number of observations in all regressions is 355. Countries in the sample are 16: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, and Uruguay. Time period is 1996-2020.

Table 5 presents the main innovation of the paper: the inclusion of the three political control variables: *LEFTIST*, a dummy variable indicating a left-wing executive; *MAJ*, the difference in seat shares between the governing and opposition parties in the legislature; and the interaction term $LEFTIST \times MAJ$. Table 5, column (1), replicates the results from Table 4, column (1), providing a baseline for comparison with the subsequent columns. Column (2) shows the estimation of equation (3.1) for *nci* as the dependent variable, column (3) for *npi* as the dependent variable, and column (4) for *ndi* as the dependent variable. Analogously, columns (5) to (7) estimates equation (3.1), as in columns (2)-(4) but using OLS with fixed effects model instead of GLS. Under the OLS with fixed effects model, the rule of law index (*RULE.LAW.D*) is excluded due to its limited variation over time. This low time-series variation would lead to collinearity issues with the country fixed effects. Comparing columns (1) and (2), we observe that the coefficient of *RULE.LAW.D* barely changes once political variables are included. That is, *RULE.LAW.D* is 0.988 in column (1), significant at the 5% level, and 1.054 in column (2), also significant at the 5% level. $LEFTIST \approx 0.18$, although unexpectedly positive, it is small and insignificant, which indicates that capital inflows as a percentage of potential GDP does not change significantly when a left-wing executive is in office and the legislature is balanced (i.e., $MAJ_0 = 0$). We observe $MAJ = 1.169^{**}$, which indicates that *nci* increases by $1.169 \times \Delta MAJ_0$ when a moderate (center/right-wing) executive achieves an increase in the legislative share of seats by $\Delta MAJ_0/2$. For example, if the moderate executive holds a 0.50 share of seats in the legislature, then $MAJ_0 = 0$. But if after, say, a midterm election that share becomes 0.65, then $\Delta MAJ_0 = +0.30$, which implies an increase in *nci* by 1.169×0.30 . Now, we observe that $LEFTIST \times MAJ = -3.191^{***}$, which represents the differential effect if a leftist government is in office instead. So given the same change $\Delta MAJ_0 = +0.30$, relative to a moderate executive, a leftist executive would have experienced *nci* to fall by $3.191 \times 0.30 \approx 1$, being this differential significant at 1% level. These findings clearly indicate the negative effect of

left-wing governments on net capital inflows when they possess a legislative majority. We can arrive to similar conclusions from columns (3) and (4), where net capital inflows (nci) are dis-aggregated into net portfolio (npi) and net direct investment (ndi), respectively. Finally, columns (5) to (7) replicate the estimations from columns (2) to (4) using OLS with fixed effects per country. In this model, the rule of law index ($RULE.LAW.D$) is excluded due to its low time-series variation, which would lead to collinearity with the country fixed effects. Overall, the results from the OLS with fixed effects model (columns 5-7) are largely consistent with those from the GLS model (columns 2-4), with the exception of portfolio investment in column (6), where the interaction term between left-wing government and legislative majority becomes close to zero and insignificant.

5 Extensions and Robustness Checks

5.1 Considering non-linearities of majority in Congress

As shown in equation (3.1), the difference in seat shares between the governing and opposition parties in the legislature (MAJ) enters linearly into the model. To account for potential nonlinear effects, I add to equation (3.1) the square terms MAJ^2 and $LEFTIST \times MAJ^2$:

$$y_{it} = \alpha + \lambda \times y_{it-1} + \beta \times RULE.LAW.D_{it} + \gamma \times LEFTIST_{it} + \theta_1 \times MAJ_{it} + \theta_2 \times MAJ_{it}^2 + \delta_1 \times LEFTIST_{it} \times MAJ_{it} + \delta_2 \times LEFTIST_{it} \times MAJ_{it}^2 + \mathbf{X}'_{it} \boldsymbol{\tau} + u_{it}. \quad (5.1)$$

The hypothesis of significant non-linear effects requires that θ_2 and δ_2 are significantly different from zero. Behind these requirements underlie the condition that the effect of an increase in MAJ on capital inflows must be a function of MAJ . To see this clearly, con-

sider the following linear marginal effects:

$$\begin{aligned}
E\left(\frac{\Delta y}{\Delta MAJ} \mid LEFTIST = 0 \wedge MAJ = MAJ_0\right) &\approx \theta_1 + 2\theta_2 MAJ_0, \\
E\left(\frac{\Delta y}{\Delta MAJ} \mid LEFTIST = 1 \wedge MAJ = MAJ_0\right) &\approx \theta_1 + 2\theta_2 MAJ_0 + \delta_1 + 2\delta_2 MAJ_0.
\end{aligned}
\tag{5.2}$$

Both expected values are functions of MAJ , which corroborates the existence of non-linear effects, unless $\theta_2 \approx 0$ and $\delta_2 \approx 0$. Moreover, the difference between these two effects in (5.2), namely $E\left(\frac{\Delta NCI}{\Delta MAJ} \mid LEFTIST = 1 \wedge MAJ = MAJ_0\right) - E\left(\frac{\Delta NCI}{\Delta MAJ} \mid LEFTIST = 0 \wedge MAJ = MAJ_0\right) = \delta_1 + 2\delta_2 MAJ_0$, also requires that $\delta_2 \approx 0$ to rule out non-linear effects. Results of the estimation of equation (5.1) are shown in Table 6 below.

Table 6. Testing for non-linear effects

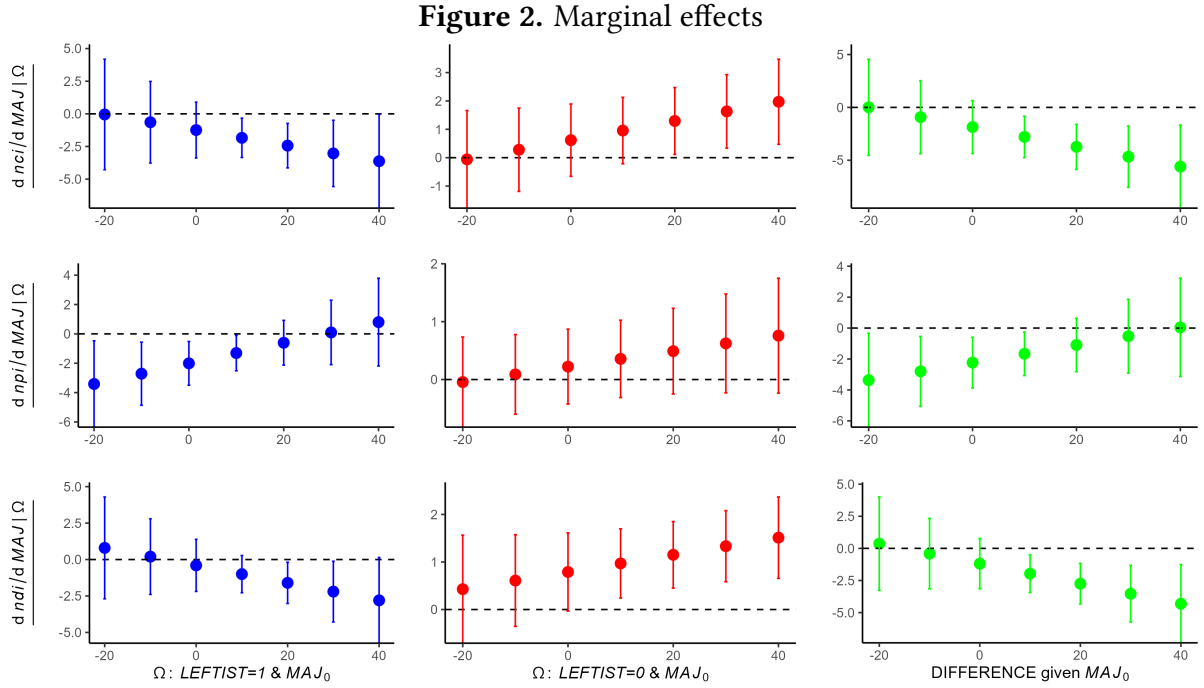
	(1)	(2)	(3)
Dep. Var.	<i>nci</i>	<i>npi</i>	<i>ndi</i>
Estimators			
<i>LEFTIST</i>	0.559 [0.378]	-0.078 [0.246]	0.481* [0.257]
<i>MAJ</i> ($\hat{\theta}_1$)	0.618 [0.637]	0.223 [0.324]	0.790* [0.411]
<i>MAJ</i> ² ($\hat{\theta}_2$)	1.690* [0.926]	0.668 [0.493]	0.903 [0.578]
<i>LEFTIST</i> \times <i>MAJ</i> ($\hat{\delta}_1$)	-1.859 [1.252]	-2.232*** [0.818]	-1.191 [0.978]
<i>LEFTIST</i> \times <i>MAJ</i> ² ($\hat{\delta}_2$)	-4.676 [3.142]	2.844 [2.311]	-3.902 [2.512]

Notes: Results are from the estimation of equation (5.1). Dependent variables: *nci* = *npi* + *ndi*, net capital inflows as percentage of potential GDP, *npi*, net portfolio investment inflows as percentage of potential GDP, *ndi*, net foreign direct investment inflows as percentage of potential GDP. 1-year-lagged time-varying covariates were included, but not reported: *CPI.index*, *openness*, *Fiscal.Balance./GDP*, *real.GDP.growth*, *real.interest.rate*, *real.interest.rate.US*, *Dual.Market*, *ToT*, *Finc.Index*. GLS methodology was used allowing for country-specific auto-correlation process, and country-wise heteroskedasticity. Independent variables are lagged one period to tackle potential endogeneity issues. Number of observations in all regressions is 355. Countries in the sample are 16: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, and Uruguay. Time period is 1996-2020.

In column (1), for total net capital inflows as percentage of potential GDP (*nci*), we observe $\hat{\theta}_1 = 0.618$ and $\hat{\theta}_2 = 1.690^*$, indicating that when the share of legislative seats held by a moderate executive increases, *nci* increases at an increasing rate. Columns (2) and (3) show similar patterns, respectively, for *npi* and *ndi*. Analogously, when it comes to leftist governments, *nci* and *ndi* decreases at a decreasing rate, according to $\hat{\delta}_1 = -1.859$ and $\hat{\delta}_2 = -4.676$ in column (1), and $\hat{\delta}_1 = -1.191$ and $\hat{\delta}_2 = -3.902$ in column (3). However, although none of these estimators are close to zero, they are statistically insignificant, or weakly significant at 10%, so the empirical evidence of non-linear effect is inconclusive.¹⁸

¹⁸Moreover, the F-test for the joint hypothesis that $\hat{\theta}_2 = 0$ and $\hat{\delta}_2 = 0$ is rejected for the three regressions, though with p-values approaching 0.10 from the right.

For this reason, I rely on visual inspection of the marginal effects shown in 5.2 and the difference between them (i.e., $\hat{\delta}_1 + 2\hat{\delta}_2 MAJ_0$) for seven particular values of MAJ : -0.20 , -0.10 , 0 , $+0.10$, $+0.20$, $+0.30$, $+0.40$.¹⁹



Notes: The 9 graphs show the linear combination of the estimators that come from the estimations of equation (5.1), displayed in Table 6. The first three graphs at the left panel, with blue color, estimate the linear combination $E\left(\frac{\Delta y}{\Delta MAJ} | LEFTIST = 1 \wedge MAJ = MAJ_0\right) \approx \hat{\theta}_1 + 2\hat{\theta}_2 MAJ_0 + \hat{\delta}_1 + 2\hat{\delta}_2 MAJ_0$ for net capital inflows as percentage of potential GDP (nci), net portfolio investments as percentage of potential GDP (npi), and net foreign investments as percentage of potential GDP (ndi). Blue dots represent point estimation, while the blue bars 95% confidence intervals. The middle panel, in red color, estimate the linear combination $E\left(\frac{\Delta y}{\Delta MAJ} | LEFTIST = 0 \wedge MAJ = MAJ_0\right) \approx \hat{\theta}_1 + 2\hat{\theta}_2 MAJ_0$ for the three variables, nci , npi , and ndi . The right panel, in green color, estimate the difference of the two previous marginal effects, i.e., $\hat{\delta}_1 + 2\hat{\delta}_2 MAJ_0$, also for the three variables nci , npi , and ndi .

¹⁹The reason why these values are chosen asymmetrically is because the mean of MAJ is 0.25. This is expected because presidential elections in Latin America are usually held simultaneously with parliamentary ones, so it is expected that a party winning the executive branch may also win more seats for the parliament given the coattail effects.

Figure 2 shows a clear pattern of increasing and decreasing trends in the marginal effects. This indicates the presence of nonlinear effect, although not statistically significant according to the evidence shown in Table 6. In the first three graphs at the left, in blue color, we observe the change of capital inflows as percentage of potential GDP when majority increases for leftist governments given the seven majority values chosen (i.e.: -20 , -10 , 0 , $+10$, $+20$, $+30$, $+40$). As expected, all blue dots are negative since the increase in congressional seats of a leftist incumbent affects negatively capital inflows. The graphs on top and bottom of the left column show a clear descend of the marginal effects as MAJ increases. The graph in the middle in the left panel, for portfolio investment inflows as percentage of potential GDP, shows an increasing trend, which is not expected. Analogously, graphs in the middle column, in red color, shows the increasing trends when the executive is not leftist. Not surprisingly, the effects are all positive. Finally, the right graphs, in green bars, shows the difference of the marginal effects between leftist and centrist. Overall, from a graphical standpoint, we see clear non-linear effects.

5.2 Populist Governments

Funke et al. (2023) have examined the economic impact of populist governments, employing Mudde's (2004) definition of populism: A populist leader follows a political style that centers on a conflict between "the people" versus "the elites". More precisely, populist leaders divides the society into two opposed groups, "us", the people, versus "them", the elites. This simple definition allows for the inclusion of left-wing and right-wing populist leaders: "*Left-wing populists frequently attack financial, capitalist, oligarchic elites that supposedly plunder the country at the expense of the people*" (Funke et al., 2023, pp. 3258), while "*right-wing populists predominantly frame their populist discourse in cultural terms and target a third group – foreigners and ethnic and religious minorities, who supposedly threaten the national identity and culture*" (Funke et al., 2023, pp. 3259). They classify leaders, based on Mudde's

(2004) definition of populism, for the period 1900-2020 across 60 countries, which account for over 95% of global GDP. For the 16 Latin American countries included in my sample, Funke et al. (2023) only provide classifications for six. To complete the dataset, I employ GPT prompts to classify the remaining ten countries based on Mudde's (2004) definition of populism. (see Appendix A for prompts details and GPT replies).²⁰ To validate the accuracy of the GPT classifier, I first applied it to the six Latin American countries already classified by Funke et al. (2023). The GPT classifier's classifications aligned with Funke et al.'s for all but two leaders: José Ignacio Lula da Silva and Carlos S. Menem. While Funke et al. did not classify Lula da Silva as populist, the GPT classifier did. Conversely, Funke et al. classified Menem as populist, while the GPT classifier did not. To resolve the discrepancy, I conducted a detailed review of the presidencies of Da Silva and Menem and concluded that the GPT classifier's assessments were more accurate. In the case of Lula da Silva, Lima-de-Sousa et al. (2022) concluded that he has indeed articulated a conflict between two elites, as they describe it: *"Lula, who rose to political prominence in the 1980s, when he ran for the presidency of the republic for the first time, was also identified by the press as a populist with all the negative connotations that the term entailed...According to this ideological construct, the people do not enjoy minimum conditions of welfare because a corrupt elite has stolen from them. This would be the expression of an inclusive populism"* (Lima de Sousa et al., 2022, pp. 107). They then continues: *"highlight the dualist element (people vs. elite) as a striking feature of Lulas populism, one which manifests in opposition to the inequality between rich (elite) and poor (people, a large part of Brazils population being considered poor)."* (Lima de Sousa et al; 2022, pp 107). On the other hand, Carlos S. Menem's political career can be divided into two distinct phases. During his 1988/1989 presidential campaign, his agenda was dominated by nationalist and populist themes, such as the "salariazó" (significant wage increases) and

²⁰Using GPT prompts to classify political speeches has become a common practice. Specifically relevant to this paper, Ornstein et al. (2024) demonstrated how GPT prompts can be applied to a wide range of text-as-data tasks in political science, including social media posts, political advertisement classification, and topic modeling of US Congressional floor speeches.

the domestic industrial revolution and running “his campaign against the establishment and the corruption created by an overblown state which rewards vested interest instead of honest and hard work”. (Armony 2001, 69; Filc 2011, 225; and Funke et al. 2023, in their Online Appendix). Conversely, during his presidency from 1989 to 1999, Menem adopted a more pragmatic, market-oriented approach to address Argentina’s economic challenges. As argued by Biglieri and Perello (2020), Argentina experienced an anti-populist period from the return to democracy in 1983 until the end of Menem’s presidency in 1999. Overall, Funke et al. (2023)’s classification of Menem as populist appears to be primarily based on his campaign promises rather than his actual policies and actions. For this reason, the GPT classifier’s classification of Menem as non-populist seems more accurate.

The question I now seek to answer is whether populist leaders have an additional impact on capital inflows, beyond the effects already identified for left-wing governments. Alternatively, it’s possible that the observed effects of left-wing governments already found are largely driven by the omission of populist leaders, if the two variables are highly correlated. To answer these questions, I estimate an extended version of (3.1) controlling for populist governments:

$$\begin{aligned}
y_{it} = & \alpha + \lambda \times y_{i,t-1} + \beta \times RULE.LAW.D_{it} + \gamma_1 \times LEFTIST_{it} + \gamma_2 \times POPULIST_{it} + \\
& \theta \times MAJ_{it} + \delta_1 \times LEFTIST_{it} \times MAJ_{it} + \delta_2 \times POPULIST_{it} \times MAJ_{it} + \\
& \mu \times LEFTIST_{it} \times POPULIST_{it} \times MAJ_{it} + \mathbf{X}'_{it} \boldsymbol{\tau} + u_{it}, \quad (5.3)
\end{aligned}$$

where *POPULIST* is a dummy variable indicating whether the incumbent is populist. If populism exacerbates the negative impact of left-wing governments on net capital inflows, then *LEFTIST* × *POPULIST* × *MAJ* should be significantly negative.²¹

²¹Note that this is the case because this triple interaction term represents the difference between two differences, i.e., $(E(y|MAJ_0, LEFTIST = 1, POPULIST = 1) - E(y|MAJ_0, LEFTIST = 1, POPULIST = 0)) -$

This suggests that the impact of a populist leader on capital inflows is stronger when the leader is also left-wing compared to right-wing. Table 7 below shows the result of (5.3) for total net capital inflows as percentage of potential GDP (nci), net portfolio investment inflows as percentage of potential GDP (npi), and net foreign direct investment inflows as percentage of potential GDP (ndi), in columns (1), (2), and (3), respectively.

Table 7. Testing for populism effects

	(1)	(2)	(3)
Dep. Var.	nci	npi	ndi
Estimators			
<i>LEFTIST</i>	0.157 [0.359]	-0.001 [0.228]	0.231 [0.245]
<i>POPULIST</i>	-0.122 [0.408]	-0.166 [0.234]	-0.010 [0.272]
<i>MAJ</i>	0.859 [0.653]	0.102 [0.450]	1.000** [0.395]
<i>LEFTIST</i> × <i>MAJ</i>	-2.988** [1.499]	-2.617** [1.186]	-1.494 [0.986]
<i>POPULIST</i> × <i>MAJ</i>	1.352 [1.615]	0.404 [0.785]	1.190 [1.020]
<i>LEFTIST</i> × <i>POPULIST</i> × <i>MAJ</i>	-1.028 [2.402]	1.596 [1.565]	-2.172 [1.667]

Notes: Results are from the estimation of equation (5.3). Dependent variables: $nci = npi + ndi$, net capital inflows as percentage of potential GDP, npi , net portfolio investment inflows as percentage of potential GDP, ndi , net foreign direct investment inflows as percentage of potential GDP. 1-year-lagged time-varying covariates were included, but not reported: *CPI.index*, *openness*, *Fiscal.Balance./GDP*, *real.GDP.growth*, *real.interest.rate*, *real.interest.rate.US*, *Dual.Market*, *ToT*, *Finc.Index*. GLS methodology was used allowing for country-specific auto-correlation process, and country-wise heteroskedasticity. Number of observations in all regressions is 355. Countries in the sample are 16: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, and Uruguay. Time period is 1996-2020.

We observe that $LEFTIST \times POPULIST \times MAJ$ is insignificant in all three columns, despite having the expected sign in columns (1) and (2) for net capital inflows as percentage

$$(E(y|MAJ_0, LEFTIST = 0, POPULIST = 1) - E(y|MAJ_0, LEFTIST = 0, POPULIST = 0))$$

of potential GDP (*nci*) and net direct investment inflows as percentage of potential GDP (*ndi*). Therefore, I find no statistically significant evidence that populism exacerbates the negative impact of left-wing governments on capital inflows.²² We can see this in the estimator $LEFTIST \times MAJ$ in column (1), which is significantly negative, indicating that net capital inflows as percentage of potential GDP (*nci*) decrease significantly when a left-wing, non-populist incumbent is in office, compared to a moderate, non-populist incumbent, holding the legislative majority constant. Instead, such a change is not only insignificant but also positive when a centrist populist incumbent is in office, compared to a centrist non-populist, as indicated by the insignificant coefficient for $POPULIST \times MAJ$. These results suggest that ideology, rather than populism, is the primary political factor driving capital inflows in Latin America.

5.3 K-mean clustering for regrouping LATAM countries

Scholars often group countries in cross-country studies based on geographical location. However, underlying characteristics may differentiate countries within a region, such as Latin America. To account for these differences, I employ a K-means clustering technique to group countries based on several development indicators. These indicators, described in Sections 2 and 3, include the rule of law index, control of corruption index, openness (exports plus imports over GDP), inflation index, and financial development index. To create a one-observation-per-country data, I utilize the initial 1996 value for the rule of law and control of corruption indices. For openness, inflation index, and financial development index, I employ the average value from 1996 to 2020.

To increase the sample size and enable comparisons and matches between Latin Ameri-

²²This result aligns with the findings of Funke et al. (2023), who did not find significant differences in the impact of left-wing and right-wing populist governments on GDP growth. However, while Funke et al. (2023) attributed these effects primarily to populism, regardless of ideology, my findings suggest that left-wing ideology drives the results, with populism not exerting a statistically significant impact.

can countries and those in Western Europe, Eastern Europe, developed Asia, and developing Asia, I extend the analysis to a broader set of countries.²³ Rather than optimizing the number of clusters, which can lead to overfitting and small clusters, I adopt a simpler approach by setting $K = 3$. This allows the algorithm to regroup countries into three clusters based on the five characteristics mentioned above. Generally, Latin American countries are classified as developing or underdeveloped. However, the clustering algorithm may not assign all Latin American countries to the same group, potentially placing some in a cluster with developed countries like Denmark or Sweden. As a robustness check, I will exclude any Latin American countries assigned to developed country clusters and re-estimate equation (3.1) with the remaining Latin American sample to assess the sensitivity of the results to the exclusion of these countries.

Lets define \mathbf{x} a matrix of dimension 5×67 (the 5 variables employed and commented above, times 67 countries). x_i is a 5-dimensional vector representing the variables of country i used for the algorithm. μ_k is a 5-dimensional vector that represents the centers of the cluster $k \in \{1, 2, 3\}$. Let's define $r_{ik} \in \{0, 1\}$, where i represents a country in the sample, and k one of the groups. For example, assume country 1 belongs to group 3, then $r_{13} = 1$, while $r_{12} = 0$ and $r_{11} = 0$. The optimal assignment of countries to clusters comes from the minimization of the following function, as shown in Duchesnay et al. (2021):

$$J_{\min\{r,\mu\}} = \sum_i^N \sum_k^K r_{ik} \|x_i - \mu_k\|^2. \quad (5.4)$$

This represents the sum of the squares of the Euclidean distances of each data point to

²³Latin American countries used are Argentina, Bahamas, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, and Uruguay. European countries are Albania, Austria, Belarus, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Latvia, Lithuania, Norway, Poland, Portugal, Romania, Russia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, UK, and Ukraine. Asian countries are Armenia, Azerbaijan, Bahrain, Bangladesh, Georgia, India, Israel, Japan, Jordan, Kazakhstan, Kuwait, Kyrgyz, Malaysia, Philippines, Singapore, Sri Lanka, Tajikistan, Thailand, and Vietnam.

its assigned vector μ_k . The algorithm task is to find values for all r_{ik} and μ_k such that the function $J(r, \mu)$ is minimized. In a first step, the minimization with respect to the r_{ik} s can be performed after choosing initial values for all μ_k , that is to say keeping μ_k fixed. In a second step, for all r_{ik} found in the first step, the minimization can continue with respect to μ_k , that is to say, leaving fixed now those r_{ik} values found in the first step of the algorithm. This two-step process should continue until convergence. However, the algorithm may converge to a non-minimal solution. That is why it is convenient to assign randomly the initial values of μ_k in several trials to see what is the solution with the smallest $J(r, \mu)$ (for this purpose, it is convenient to have all the x variables standardized). Here, I run the algorithm 25 times, keeping the one with the smallest value of equation (5.4).²⁴

Since r_{ik} enters linearly into function $J(r, \mu)$ displayed in (5.4), the optimization can be performed easily to give a closed form solution. The terms involving different i are independent and so we can optimize for each country i separately by choosing r_{ik} to be 1 for whichever value of k that gives the minimum $\|x_i - \mu_k\|^2$, given the initial values of μ_k chosen.

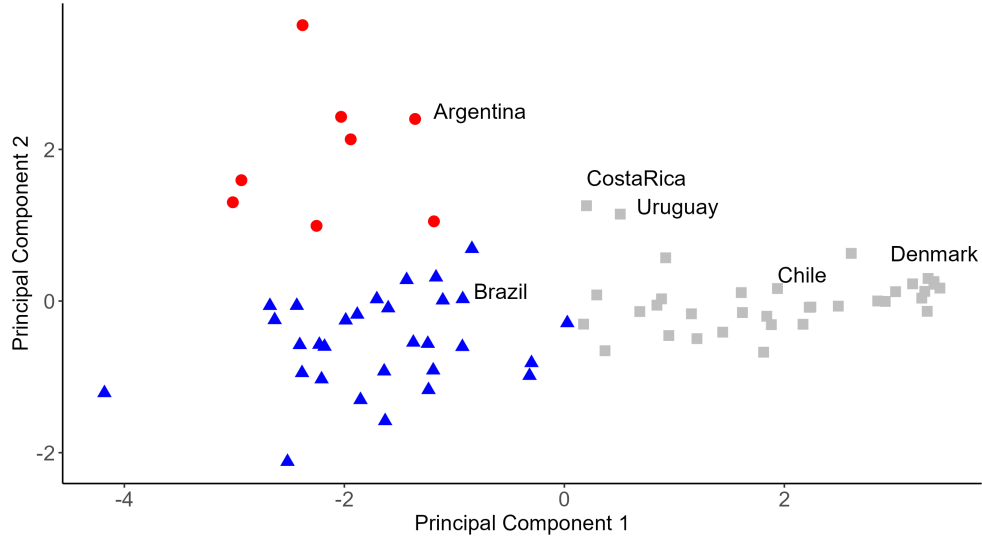
Now we minimize function $J(r, \mu)$, as shown in (5.4), with respect to μ_k , given the values found for r_{ik} and held them fixed. Since function J is quadratic in μ_k , the first derivative equal to zero throws the conditions for the minimum values of μ_k , $2 \times \sum_i r_{ik}(x_i - \mu_k) = 0$. Rearranging we get

$$\mu_k = \frac{\sum_i r_{ik} x_i}{\sum_i r_{ik}},$$

which is the mean of each of the 5 variables per cluster K . This two step process should continue until convergence.

²⁴R or Python can easily do this task. For the former, using the function `kmeans`. For the latter, using the function `cluster.KMeans` under the `scikit-learn` library.

Figure 3. K-Means Clustering: A 2D Visualization of Country Groups



Notes: Cluster 1, in grey squares, cluster 2, in blue triangles, and cluster 3, in red circles were found by minimizing $J(r, \mu)$, shown in equation (5.4) using a 5-dimensional vector representing the variables of country i used for the algorithm. These are the initial 1996 value for rule of law, and for control of corruption, and the 1996-2020 average value of openness (exports plus imports over trend GDP), inflation index, and financial development index. 25 repetitions of the algorithm were used and the smallest $J(r, \mu)$ was kept as the optimal 3-clusters composition. The principal component 1 produces the highest 1-dimensional projected variance, while principal component 2 produces the second highest 1-dimensional projected variance. By construction, both components are orthogonal.

Figure 3 presents a two-dimensional visualization, identified through the first and second principal components of the five-dimensional feature space of the three clusters, which were generated using the 3-mean algorithm explained above. Principal component analysis technique facilitates a visual representation of the clusters, which would not be possible in higher-than-two-dimensional spaces. The first two principal components are used since these are, among all 5 principal components, the ones that maximizes the projected variance of the 5 variables used. The variance-covariance matrix of the 5 standardized variables (i.e., $\frac{1}{N} \mathbf{x}' \mathbf{x}$, with dimension 5×5) used to construct the clusters is projected in a uni-dimensional space to maximize the variance $\mathbf{v}' \left(\frac{1}{N} \mathbf{x}' \mathbf{x} \right) \mathbf{v}$ subject to the restriction $\mathbf{v}' \mathbf{v} = 1$, to avoid indefinite growth on the maximization process. Note that \mathbf{v} is a five-dimensional row vector, and the maximization problem can be stated as a Lagrangian function $\mathbf{v}' \left(\frac{1}{N} \mathbf{x}' \mathbf{x} \right) \mathbf{v} - \lambda (\mathbf{v}' \mathbf{v} - 1)$,

with first order conditions equal to $(\frac{1}{N}\mathbf{x}'\mathbf{x} - \lambda I)\mathbf{v} = \mathbf{0}$, in which nonzero solution of v implies that the eigenvalues (λ s) satisfy that $\det(\frac{1}{N}\mathbf{x}'\mathbf{x} - \lambda I) = 0$. The highest eigenvalue, say λ_1 , has a corresponding eigenvector, say \mathbf{v}_1 , that produces the highest variance in a one-dimensional space, that is $\mathbf{v}_1'(\frac{1}{N}\mathbf{x}'\mathbf{x})\mathbf{v}_1 = \frac{1}{N}(\mathbf{c}_1'\mathbf{c}_1)$, where \mathbf{c}_1 is the first principal component that produces the highest one-dimensional projected variance. The second principal component, \mathbf{c}_2 , produces the second highest projected variance. These two principal components are used to produce Figure 3, where we can see clearly the three clusters formed with the K-mean cluster algorithm.²⁵

In Figure 3, we observe that Denmark, a benchmark developed country, is grouped with three Latin American countries –Chile, Costa Rica, and Uruguay– as well as the rest of developed countries, represented by gray squares (see in Appendix B the entire list of countries per group). "Therefore, we can conclude that the algorithm has classified these countries as similar based on the five characteristics used to create the clusters (rule of law, control of corruption, openness, inflation index, and financial development index). This group can be considered, according to the 5 variables employed, the 'developed' cluster. The remaining two clusters can be considered 'non-developed,' which includes the rest of Latin American countries. Given that Costa Rica, Chile, and Uruguay were classified as 'developed', I conduct a sensitivity analysis by excluding these countries from the Latin American sample and re-estimating equation (3.1). Results are seen in Table 8 below.

²⁵Note that the clusters, which exist in a five-dimensional space, may overlap when projected onto a two-dimensional graph defined by the first two principal components. However, in this specific case, the three clusters are clearly distinguishable in the two-dimensional representation without overlaps.

Table 8. K-Means Clustering and Regression Results

Dep. Var.	(1)	(2)	(3)	(4)	(5)	(6)
	<i>nci</i>	LATAM <i>npi</i>	<i>ndi</i>	LATAM w/o Chile, Costa Rica, Uruguay <i>nci</i> <i>npi</i> <i>ndi</i>		
Estimators						
<i>RULE.LAW.D</i>	1.054** [0.436]	0.635** [0.264]	0.524* [0.294]	0.087 [0.728]	0.216 [0.461]	-0.111 [0.364]
<i>LEFTIST</i>	0.180 [0.332]	0.016 [0.210]	0.254 [0.232]	0.209 [0.377]	-0.013 [0.223]	0.202 [0.245]
<i>MAJ</i>	1.169** [0.575]	0.285 [0.335]	1.194*** [0.360]	1.306** [0.603]	0.314 [0.349]	1.298*** [0.364]
<i>LEFTIST</i> × <i>MAJ</i>	-3.191*** [0.962]	-1.684** [0.726]	-2.293*** [0.695]	-3.277*** [0.981]	-1.506** [0.711]	-2.388*** [0.639]

Notes: Results are from the estimation of equation (3.1). Dependent variables: $nci = npi + ndi$, net capital inflows as percentage of potential GDP, npi , net portfolio investment inflows as percentage of potential GDP, ndi , net foreign direct investment inflows as percentage of potential GDP. 1-year-lagged time-varying covariates were included, but not reported: *CPI.index*, *openness*, *Fiscal.Balance./GDP*, *real.GDP.growth*, *real.interest.rate*, *real.interest.rate.US*, *Dual.Market*, *ToT*, *Finc.Index*. GLS methodology was used allowing for country-specific autocorrelation process, and country-wise heteroskedasticity. Number of observations in regressions of columns (1), (2) and (3) is 355, while 284 in columns (4), (5), and (6). Countries in the sample are 16: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, and Uruguay. Time period is 1996-2020.

Comparing column (1) (replicated from Table 5, column (2) for reference) with column (4) of Table 8, we observe that the results are largely unaffected by the exclusion of Chile, Costa Rica, and Uruguay, which were clustered in the 'developed' group. Similar comparisons can be made between columns (2) and (5) for net portfolio investment as percentage of potential GDP and columns (3) and (6) for net foreign direct investment as percentage of potential GDP.

The near-zero coefficients for *RULE.LAW.D* in columns (4), (5), and (6) are due to the exclusion of Chile, Costa Rica, and Uruguay. With these higher-rule-of-law countries removed, the remaining sample becomes more homogeneous, leading to less variation in the rule of law index and a statistically insignificant coefficient.

5.4 Alternative Proxies of Institutional Quality

So far, I have used the Rule of Law index from the World Bank's Worldwide Governance Indicators as a proxy for institutional quality. In this section, I also explore the Control of Corruption index from the same database to show that the results are not sensitive to the choice of index. I also show results for both indices as indicators and continuous variables.²⁶

²⁶Also from Worldwide Governance Indicator, I used regulatory quality, government effectiveness, voice and accountability, and political stability and lack of violence. Each of them combined with the political variables *LEFTIST*, *MAJ*, and *LEFTIST* × *MAJ*. Qualitatively, results are completely invariant to the institutional quality index used. Results are not shown, but available upon request.

Table 9. Alternative Institutional Quality Measures

		(1)	(2)	(3)	(4)
Dep. Var.	Estimators	Net Capital Inflows as percentage of potential GDP			
		Rule of Law Categorical (X)	Control of Corruption Categorical (X)	Rule of Law Continuous (X)	Control of Corruption Continuous (X)
	Institutional quality Index (X):	1.054** [0.436]	1.054** [0.436]	1.713*** [0.402]	1.794*** [0.351]
	<i>LEFTIST</i>	0.180 [0.332]	0.180 [0.332]	-0.052 [0.327]	-0.263 [0.318]
	<i>MAJ</i>	1.169** [0.575]	1.169** [0.575]	1.076* [0.561]	0.997* [0.549]
	<i>LEFTIST</i> \times <i>MAJ</i>	-3.191*** [0.962]	-3.191*** [0.962]	-3.162*** [0.913]	-2.767*** [0.912]

Notes: Results from the estimation of equation (3.1). 1-year-lagged time-varying covariates were included, but not reported: *CPI.index*, *openness*, *Fiscal.Balance./GDP*, *real.GDP.growth*, *real.interest.rate*, *real.interest.rate.US*, *Dual.Market*, *ToT*, *Finc.Index*. GLS methodology allowing for country-specific autocorrelation process, and country-wise heteroskedasticity. Number of observations is 355. Countries in the sample 16: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, and Uruguay. Time period is 1996-2020.

Table 9, column (1), replicates the results from Table 5, column (3), where *RULE.LAW* is transformed into a categorical variable, taking a value of 1 if its standardized value is greater than 1, and 0 otherwise. In Table 9, column (2), we observe that the same effect is found for a categorical version of the control of corruption index (*CTRL.COR.D*), mirroring the results for *RULE.LAW.D* in Table 9, column (1). This occurs because the high correlation between Rule of Law and Control of Corruption leads to perfect collinearity between their categorical versions. Consequently, the coefficients for *LEFTIST*, *MAJ*, and *LEFTIST* \times *MAJ* are identical in both columns (1) and (2).

Columns (3) and (4) uses the continuous versions of the Rule of Law and Control of Corruption indices in the estimation of equation 3.1. As expected, the results are highly similar, reflecting the strong correlation between these two variables, as shown in Table 2. Additionally, the coefficients for *LEFTIST*, *MAJ*, and *LEFTIST* \times *MAJ* in column (3) (using the continuous rule of law index) are very similar to those in column (1) (using the categorical rule of law index). A similar comparison can be made between columns (4) and (2), which use the continuous and categorical versions of the control of corruption index, respectively.

Due to their high correlation, the categorical versions of the Rule of Law and Control of Corruption indices produce identical results. The continuous versions of these indices yield highly similar results. This section highlights the limitations of using institutional quality indices. In addition to their low time-series variation, as discussed earlier, the high correlation between different institutional quality indices makes it difficult to isolate the individual impact of each index on capital inflows when multiple indices are used simultaneously.

6 Conclusions, Discussion for Further Research, and Implications

This paper examines the impact of the executive party's ideology on net capital inflows to Latin American countries. The findings suggest that net capital inflows, as a percentage of potential GDP, increase by approximately 1 percentage point under a unified left-wing government (i.e., a left-wing executive with a majority in the legislature) relative to a unified moderate government. However, under divided governments, there is no significant difference in the impact of left-wing and moderate executives on capital inflows. This suggests that investors may perceive divided governments as a guarantee of policy stability, regardless of the executive's ideology. Consequently, there is no incentive for investors to alter their investment decisions. The results are robust to alternative regression models and extensions. These include K-means clustering to identify dissimilar Latin American countries, and the inclusion of populist incumbents, which confirms that left-wing governments, rather than populist governments, are the primary driver of the observed effects.

Several Latin American episodes support the idea that leftist governments in Latin America implement policies that compromise capital inflows, as evidenced in this paper. For example, Venezuelan President Hugo Chávez expropriated 285 private companies from 2005 to 2010.²⁷ In 2008, Argentine President Cristina Fernández nationalized pension funds from all the private pension fund administrators, known as Administradoras de Fondos de Jubilaciones y Pensiones (AFJP).²⁸ In 2012, her government also expropriated Yacimientos Petrolíferos Fiscales (YPF), the largest oil company in Argentina at the time.²⁹ Bolivian President Evo Morales has also conducted similar policies. In May 2010, his administration

²⁷<https://www.semana.com/mundo/articulo/este-fue-el-total-de-empresas-expropiadas-por-hugo-chavez-en-venezuela/202211>

²⁸<https://www.lanacion.com.ar/politica/es-ley-la-estatizacion-de-las-jubilaciones-nid1072498/>

²⁹<https://elperiodicodelaenergia.com/la-expropiacion-de-ypf-de-cristina-kirchner-le-sale-muy-cara-a-argentina-tendra-que-pagar-16-000-millones-al-fondo-burford-capital/>

expropriated four electric companies.³⁰ These actions of left-wing executives appear to deter capital inflows to Latin American countries, as evidenced by the estimation of equation (3.1) in Table 5.

My paper has implications for studies on the effects of political factors on economic performance, monetary policy, and fiscal policy. Hicken et al. (2005) argued, following Bueno de Mesquita et al. (2005)'s theory, "*that leaders of countries with larger winning coalition have more powerful incentives to pursue reforms that are conducive to growth recoveries following devaluations*" (Hicken et al., 2005, p. 899) of the exchange rate due to negative macroeconomic shocks. Leaders are more accountable for economic performance when their winning coalitions are larger, making them more likely to implement unpopular policies. Additionally, larger winning coalitions may face fewer obstacles when implementing policy changes. However, would this dynamic hold true for leftist winning coalitions in Latin America? This is an important question for further research in the region for two main reasons. First, leftist governments in Latin America may be less inclined to implement unpopular policies, such as those necessary for economic growth or faster recoveries, as discussed by Flores-Macías (2010). Second, capital inflows are essential for a swift economic recovery following a negative macroeconomic shock. However, this paper finds that capital inflows decline significantly under leftist winning coalitions.

My study also has implications for the findings of Acemoglu et al. (2008) and opens avenues for future research. They investigated the causes of the failure of institutional policy reforms to promote economic performance and growth in developing countries. They developed a model that predicted a "seesaw effect": An "*effective reform in one dimension may lead to deterioration in others, as politicians address the underlying demands through other means*" (Acemoglu et al., 2008, p. 351). To contrast the model's prediction with empirical evidence, the authors examined how central bank reforms have led to increased govern-

³⁰<https://www.elcorreo.com/vizcaya/rc/20130218/economia/cronologia-expropiaciones-bolivia-201302181948.html>.

ment debt. As inflation taxes were no longer available, politicians resorted to other means of financing government spending, often by increasing debt. Assuming that central bank reforms occur under moderate governments, the seesaw effect may be more pronounced in divided governments than in unified governments. This is because divided governments may face greater pressure from opposition parties, particularly left-wing parties, to increase spending, which could lead to higher debt levels. Therefore, this suggests that central bank reforms may be more successful under moderate governments with a legislative majority, potentially mitigating the “seesaw effect”. This could provide additional support for my empirical findings, explaining why reforms under moderate governments may not lead to increased capital inflows when the legislature is controlled by leftist coalitions.

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A Appendix. Classifying Populist Leaders with GPT prompts.

Here, I provide details on the classification of Latin American leaders into populist and non-populist categories. The list is extensive, spanning 148 pages and covering all presidents from 16 Latin American countries between 1985 and 2020. Here, I provide classifications for four presidents as examples of how ChatGPT can be used to identify populist leaders (the entire chat is available upon request). I provide the definition of a populist leader, directly from Funke et al. (2023). To validate the accuracy of the GPT classifier, I compare its classifications for the six Latin American countries that are already classified in Funke et al. (2023). The results are almost identical, with the exception of two presidents, as I have detailed in section (5.2) of the paper. After a detailed review, I determined that the GPT classifier's classifications for these two presidents were more accurate.

Me: If I give you the definition of a populist president/prime minister, can you help me classify some Latin American presidents into populist or non-populist?

ChatGPT: Yes, I'd be happy to help with that. Please provide the definition or criteria you have for classifying a president or prime minister as populist. Once I have that information, we can start classifying Latin American presidents accordingly.

Me: Here Definition of populist: Building on the workhorse definition in political science, we define a leader as populist if he or she divides society into two artificial groups – “the people” vs. “the elites” – and then claims to be the sole representative of the true people. Populists place the alleged struggle of the people (“us”) against the elites (“them”) at the center of their political campaign and governing style. More precisely, populists typically depict “the people” as a suffering, inherently good, virtuous, authentic, ordinary, and common majority, whose

collective will is incarnated in the populist leader. In contrast, “the elite” is an inherently corrupt, self-serving, power-hoarding minority, negatively defined as all those who are not “the people.” The definition sometimes overlaps with other leader characteristics that have been used to define populists in earlier work, for example: (i) a personalistic/paternalistic style and charisma; (ii) an outsider image; (iii) the claim to lead a “movement” beyond traditional politics; (iv) the tendency to oversimplify complex problems; (v) the use of aggressive, polarizing, and provocative language; (vi) the willingness to openly exploit cultural or economic grievances; (vii) authoritarianism; (viii) the appeal to nationalist/rural/inward looking (sometimes nostalgic) worldviews and nativism and identity; (ix) demands for direct democracy via referenda; (x) the sympathy for conspiracy theories; (xi) direct voter communication/linkage, especially via mass/social media; (xii) clientelism/patronage; and (xiii) strongmanship/masculinity. Another important feature of populism many authors stress is anti-pluralism. The defining feature of left-wing populists is that their anti-elitism is predominantly framed in economic terms. Left-wing populists frequently attack financial, capitalist, oligarchic elites that supposedly plunder the country at the expense of the people. They often rally against globalization, banks and hedge funds, multinational companies, and international financial institutions like the IMF or the World Bank. Their polarizing rhetoric therefore centers on the financial and economic dimension, while in cultural terms, left-wing populists tend to be inclusive and in favor of multiculturalism. In contrast, right-wing populists predominantly frame their populist discourse in cultural terms and target a third group – foreigners and ethnic and religious minorities, who supposedly threaten the national identity and culture. They often accuse “the elites” (which are first and foremost political elites) of protecting these minorities against the will of “the people”. In doing so, right wing populists, just like their counterparts on the left, cultivate anti-elitist sentiments, opposition to the system, and defense of the common man. Right-wing populists often foster ethno-nationalist xenophobia, emphasize the supposed decline of traditional values, and appeal to conservative and law and order policies

ChatGPT: Great, I have a clear understanding of the definition. Let's go ahead and classify some Latin American presidents. Please provide a list of the presidents you want to classify, and we can determine whether they fit the definition of populist or not based on the criteria you've given.

Me: President Mauricio Macri, from Argentina

ChatGPT: Mauricio Macri, who served as the President of Argentina from 2015 to 2019, is generally not classified as a populist under the definition provided. Here are the key points: **1. People vs. Elites Narrative:** Macri did not heavily emphasize a "people vs. elites" narrative. His campaign and presidency focused more on economic reforms and reducing the fiscal deficit rather than pitting the populace against a corrupt elite. **2. Economic Focus:** While he pursued economic reforms, his approach was more technocratic and market-oriented rather than framed in a populist, anti-elitist discourse. He did not frequently attack financial or capitalist elites in the manner typical of left-wing populists. **3. Cultural and National Identity:** Macri did not use a populist discourse that framed cultural identity against foreigners or minorities, which is often seen in right-wing populism. **4. Political Style:** His political style was not particularly personalistic or authoritarian. He often sought consensus and worked within the established political system rather than presenting himself as an outsider leading a movement beyond traditional politics. **5. Rhetoric:** Macri's rhetoric was generally not aggressive or polarizing. He did not exploit cultural or economic grievances to the extent characteristic of populist leaders. Based on these points, Mauricio Macri does not fit the comprehensive definition of a populist leader.

Me: President Lula Da Silva, from Brazil

ChatGPT: Luiz Inácio Lula da Silva (Lula), who served as President of Brazil from 2003 to 2011 and was re-elected in 2023, can be classified as a populist based on the provided definition.

Here are the key points: **1. People vs. Elites Narrative:** Lula frequently emphasized a narrative of "the people" versus "the elites." He portrayed himself as a representative of the working class and marginalized communities against the interests of the wealthy and powerful elites. **2. Economic Focus:** Lula's rhetoric and policies often targeted financial and capitalist elites. He criticized economic inequalities and championed the rights of workers and the poor, which aligns with the economic anti-elitism characteristic of left-wing populists. **3. Political Style:** Lula's political style was charismatic and personalistic. He was seen as a leader who connected directly with the people, often bypassing traditional political structures. **4. Rhetoric:** Lula used polarizing language to emphasize the struggles of ordinary Brazilians against a corrupt elite. He also simplified complex problems into clear-cut battles between the common people and the elites. **5. Movement:** Lula positioned himself as the leader of a broader movement for social and economic justice, which extended beyond traditional politics. **6. Direct Communication:** He effectively used mass and social media to communicate directly with voters, enhancing his populist appeal. Based on these points, Lula da Silva fits the definition of a populist leader, particularly as a left-wing populist who framed his discourse in economic terms and championed the cause of the common people against the elites.

Me: *Jair Bolsonaro, from Brazil*

ChatGPT: *Jair Bolsonaro, who served as President of Brazil from January 2019 to December 2022, fits several aspects of the comprehensive definition of a populist leader. Here's how he aligns with the populist framework: 1. People vs. Elites Narrative: Bolsonaro prominently employed a "people vs. elites" narrative. He framed his presidency as a battle against the political establishment, corrupt politicians, and the media. He positioned himself as a defender of the common people against a corrupt elite, including political opponents and traditional media. 2. Economic Focus: Bolsonaro's economic policies were a mix of populist and neoliberal approaches. While he promoted liberal economic reforms, including deregulation and priva-*

tization, his rhetoric often included populist themes, such as criticizing the existing economic elite and promoting nationalistic economic policies. **3. Political Style:** Bolsonaro's political style is charismatic and personalistic. He is known for his direct, often controversial communication style and his ability to connect with a significant segment of the electorate through social media. His leadership is marked by a strong personal brand and a confrontational approach to politics. **4. Rhetoric:** His rhetoric is aggressive, polarizing, and provocative. Bolsonaro frequently used combative language to criticize political opponents, the media, and perceived elites. He employed populist rhetoric to mobilize support and frame political issues as a struggle between the people and the establishment. **5. Movement:** Bolsonaro's rise to power was facilitated by his ability to appeal to a broad base of voters disillusioned with traditional politics. He led a movement that challenged the political status quo and emphasized a reform agenda that resonated with his supporters' desires for change. **6. Direct Communication:** Bolsonaro made extensive use of social media to communicate directly with the public. This direct communication style is a common trait of populist leaders, allowing him to bypass traditional media and engage with his supporters on a personal level. **7. Anti-Establishment:** His discourse is strongly anti-establishment. Bolsonaro positioned himself as a reformer challenging the existing political and economic order. His presidency was characterized by frequent attacks on established institutions, including the judiciary, media, and political parties. **8. Populist Traits:** Bolsonaro exhibits several traits associated with populist leaders, including a personalistic style, polarizing rhetoric, the use of social media for direct communication, and an anti-establishment stance. His approach also includes appeals to nationalism and a focus on issues like law and order. In summary, Jair Bolsonaro fits many aspects of the populist definition. His presidency was marked by a strong "people vs. elites" narrative, aggressive and polarizing rhetoric, a personalistic style, and significant use of direct communication through social media. His approach aligns with the characteristics of populist leadership, including challenging established political and economic systems.

Me: President José Mujica, from Uruguay

ChatGPT: José Mujica served as President of Uruguay from March 1, 2010, to March 1, 2015. His presidency is often discussed in the context of his unique personal style and policies. Here's an analysis of his presidency: **1. People vs. Elites Narrative – Moderate Populism:** Mujica's presidency did not strictly adhere to a "people vs. elites" narrative, but he did embody some elements of populism. His rhetoric often included an emphasis on social justice and the needs of ordinary people, and he was known for his critique of traditional elites and the political establishment. However, he did not engage in aggressive anti-elite rhetoric. **2. Economic Focus – Social Reform and Inclusivity:** Mujica's economic policies focused on social inclusivity and reducing inequality. His administration continued many of the progressive reforms from the Broad Front government, with a focus on social welfare programs and progressive taxation. **3. Political Style – Authentic and Pragmatic:** Mujica was known for his authentic and unpretentious style. He lived modestly and often spoke in plain language. His political style was less about confrontation with elites and more about connecting with ordinary people and promoting social justice. **4. Rhetoric – Social Justice and Equality:** Mujica's rhetoric frequently centered on social justice, humility, and the need to address social inequalities. While his rhetoric had populist elements, it was more focused on advocating for social change rather than direct confrontation with elites. **5. Movement – Broad Front (Frente Amplio):** Mujica was a member of the Broad Front (Frente Amplio), a left-leaning political coalition. His presidency was consistent with the coalition's focus on progressive social policies and reform. **6. Direct Communication – Personal and Relatable:** Mujica's communication style was direct and personal. He often used his speeches to convey his personal values and philosophy, emphasizing humility and social responsibility. **7. Anti-Establishment – Moderate Populism:** While Mujica did critique the political establishment and advocate for reforms, his approach was not extreme. He did not aggressively confront the elite but used his position to

push for social change and inclusivity. 8. Authoritarian Tendencies – Democratic Norms: Mujica’s presidency adhered to democratic norms and did not exhibit authoritarian tendencies. His approach was focused on social reform and governance within the democratic framework. Conclusion José Mujica’s presidency exhibited some populist characteristics, particularly in his rhetoric and focus on social justice. However, his approach was more moderate compared to other populist leaders. He did not engage in a full "people vs. elites" narrative but did critique the political establishment and emphasize social reform. His presidency is best classified as moderately populist, with a strong emphasis on social inclusivity and humility.

B Appendix. Regrouping countries with K=3-Mean clustering – country list.

In section 5.3, I employ a (K=3)-mean clustering technique to group countries based on several characteristics. These characteristics, described in Sections 2 and 3, include the rule of law index, control of corruption index, openness (exports plus imports over GDP), inflation index, and financial development index. To create a one-observation-per-country data, I utilize the initial 1996 value for the rule of law and control of corruption indices. For openness, inflation index, and financial development index, I employ the average value from 1996 to 2020. For further technical details, please refer to the corresponding section 5.3.

I present the complete list of countries assigned to each of the three clusters by the algorithm, with Latin American countries highlighted in bold.

Table B.Distribution of Countries Across Clusters

CLUSTER 1	CLUSTER 2	CLUSTER 3
Austria	Albania	Argentina
Bahamas	Armenia	Bulgaria
Belgium	Bangladesh	Ecuador
Chile	Bolivia	Mongolia
Costa Rica	Bosnia & Herzegovina	Romania
Cyprus	Brazil	Russia
Czech Republic	Colombia	Turkey
Denmark	Croatia	Ukraine
Estonia	Dominican Republic	
Finland	El Salvador	
France	Georgia	
Germany	Guatemala	
Greece	Honduras	
Hungary	India	
Iceland	Indonesia	
Ireland	Jamaica	
Israel	Kyrgyz	
Italy	Latvia	
Japan	Mexico	
Lithuania	Moldova	
Luxembourg	Myanmar	
Malaysia	Nepal	
Malta	Nicaragua	
Netherlands	Pakistan	
Norway	Panama	
Poland	Paraguay	
Portugal	Peru	
Slovak Republic	Philippines	
Slovenia	SriLanka	
Spain	Thailand	
Sweden		
Trinidad & Tobago		
UK		
Uruguay		

We note that Cluster 1 primarily consists of developed countries, particularly from Western Europe. As discussed and shown in section 5.3, this cluster also includes three Latin American countries—Chile, Costa Rica, and Uruguay—which were identified as outliers by the K-means clustering algorithm. Note that two additional Latin American countries, Ba-

hamas and Trinidad & Tobago, with no data availability on capital inflows, are also included in Cluster 1 given their availability of data on the independent variables used to construct the clusters.