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Do institutions and ideology matter for economic growth in Latin America in the first two decades of the 21st century?

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Institutions have a positive, strong and significant impact on GDP growth; in 20 Latin American countries between 2002 and 2018. Government size has a negative impact on GDP growth itself but, in interaction with strong institutions, the effect of government size on growth turns to positive and significant, while political ideology has no significant effect on economic growth.

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1. Introduction

Latin American countries are struggling to achieve an inclusive and sustainable growth. Efforts of most of the countries in the region have for many decades now attempted to address this, for example by increasing public investment in human capital, health and basic services. Yet, economic growth in Latin America has remained sluggish. Why don't we see improvements? Is it the quality of institutions? Is it ideology? Or is it their interplay? We ask these questions to understand the economic developments in Latin America in the first two decades of the 21st century.

Realising economic growth is an easy endeavour if we go by the world of the models of Solow (1956) and Swan (1956): capital, labour, and productivity explain the economic performance in every economy. Then, Lucas (1988) and Romer (1986) added human capital to the equation, suggesting

that competencies of individuals affect their productivity and the productivity of the other economic factors. Barro (1991) included other types of drivers such as fertility rates, government expenditures, political instability, and market distortions as explanatory variables of economic growth.

North (1981) was one of the first authors to introduce institutional quality in economic development. Institutions, as defined by North, are "a set of rules, compliance procedures, and moral ethical behavioural norms designed to constrain the behaviour of individuals in the interests of maximising the wealth or utility of principals" (North, 1981, p. 201). Their impact on economic growth has also been studied by Barro (1999), Acemoglu et al. (2001) and Samarasinghe (2018). However, after more than three decades, there is no general consensus on the impact of institutions on growth.

Growth might also be the result of "ideology" as: ideology might have an impact on investment and, consequently on economic growth (Feng, 2001).

The relative slow growth in Latin America has been a long-time concern. Prebisch (1950) suggested in the 1950 that growth in Latin American was slow because of its reliance on primary commodities while the price of primary commodities declines relative to the price of manufactured goods over the long term. He got support for protected development of local manufacturing and import substitution. In later studies, however, the terms of trade did not appear to have a significant effect on growth (De Gregorio, 1991; Astorga, 2010). They already point out that trade openness and GDP have a positive link via investment, which in turn contributes to growth. Their evidence also shows that macroeconomic instability has been a drag on long-term growth in the region.

Here –in this contribution- we abstract from macro-stability and instead concentrate on Governance (with indicators developed by the World Bank), as a proxy for the quality of institutions which might guide investment and productivity. One of the Governance indicators is the Rule of Law. The Rule of law in a country is one of the measures of institutions and governance, as defined by North. According to this index in 2019, the vast majority of Latin-American countries were ranked in the lower middle (with few exceptions such as Chile, Uruguay, and Costa Rica). Constraints on government powers, corruption, insecurity, low criminal justice, and weak regulatory enforcement were identified as the most critical indicators in the region. A similar picture emerges when analysing the competitiveness index, the Doing Business report, or any other assessment of institutional quality and governance. We shall establish that Governance indeed bears on economic growth in Latin America.

Government expenditures have been "blamed" in much of the literature to lower economic growth. We shall demonstrate for Latin America for the period of the first two decades of the 21st century that such is not the case if the quality of Governance is taken into account. Lastly we look into the effect of political ideology on the left-right scale to ascertain its impact on growth, as suggested by Beck (2000). Political ideology is found to influence macroeconomic indicators like GDP growth, by –for example- Alesina & Roubini (1992), Potrafke (2012, 2017), Osterloh (2012)

This paper is organised as follows: section two will present an overview of the setting for our findings for Latin America: the analytical work that has been done until now about institutions, political ideology, and growth. Section three will present and describe the data. Section four will describe the methodological approach, while section five will present the results of our work regarding institutions and ideology and its impact on growth and investments. The last section (six) will present the conclusions.

2. The setting

Table 1 gives an overview of the empirical studies in the past for comparison with our results for Latin America on economic growth and institutions. Most of these studies follow the neo-classical economic growth model.

Adam Smith, the father of the Classical model of economic growth, argued that many factors explain the economic growth of a country such as the supply and demand within the market, the labour productivity (understood as the skills, dexterity, and judgment with which labour is applied), foreign trade and the increasing returns of the economies of scale (Smith, 1776).

In the 1950s, Solow (1956) and Swan (1956) studied economic growth patterns and suggested that output is produced with the help of mainly two factors of production: accumulation of capital (K) and labour (L). The savings rate is the driving force for capital accumulation and technological progress plays a key role in this result: the neo-classical model of growth.

Later work by Lucas (1988) and Romer (1986) emphasised the role of human capital in economic growth. The theory of human capital, understood as the general skill level of a worker, focused on the fact that labour productivity is affected by the way in which individuals allocate their time over different activities (for example, leisure and work), and human capital not only have an effect on labour productivity but also in the productivity of all other factors of production (external effects). In this way, human capital plays a central role in economic growth. Furthermore, they introduced international trade in the equation and provided a context for discussing import substitution and export promotion as two strategies for economic development.

In another note, Barro (1991) included different types of variables to explain economic growth. For example, he found that GDP per capita was positively associated with initial levels of human capital but negatively related to initial levels of GDP per capita. Furthermore, he found that the ratio of government consumption to GDP was negatively associated with growth as well as political instability was inversely related to growth. Barro also studied how the economic system of a country (socialism, mixed or free market) affects growth and found that socialist systems had a negative effect on economic growth. He was one of the first economists in studying the dynamic between institutional and political aspects of economic growth.

Institutions and economic growth

Regarding institutions and growth, North & Thomas (1973) developed a framework to examine and explain the rise of the Western world, aligned with the Neo-classical theory. As stated by the authors, many historians started relating the economic growth in Western Europe as the result of technological change. Then, investment in human capital was emphasised as the main source of growth and in 1973 other scholars explored the effects of market information, economies of scale, and expansion of population. However, North and Thomas identified all these factors as "growth" itself, not as "causes of growth" and realised that growth will not simply occur unless the economic organisation is efficient. In this sense, for both authors, institutions and property rights were key elements to build a proper environment that fosters growth.

Mauro (1995) was one of the first to study the impact of institutions on growth, finding that corruption is negatively and significantly associated with the investment rate. A one-standard-deviation increase in the corruption index (i.e., an improvement) increased the investment rate by 2.9 percent of GDP. Similarly, a one-standard-deviation in the bureaucratic efficiency index is associated with an increase in the investment rate by 4.75% of GDP.

Barro (1996) found that an increase in 0.167 in the rule of law index was estimated to raise economic growth by 0.5 percentage points[1]. He also found that non-productive government spending, associated

with "big government" (explained as "too much bureaucracy"), reduced the growth rate.

At the beginning of the XXI century —Acemoglu et al. (2001), Dollar & Kraay (2003), Easterly & Levine (2003), Glaeser et al. (2004) and Rodrik et al. (2004) and Acemoglu et al. (2005) — appear to bring consensus about the importance of institutions as a major driver of economic growth, later supported by Dias & Tebaldi (2012). They particularly draw attention to the time-lag involved: institutions do affect growth, but their impacts are only visible in the long run.

However, there is no such consensus in how institutions effectively affect the GDP, but it seems that human capital and physical capital do play a very important role. So, do institutions cause growth, or is, instead, the accumulation of human and physical capital that fosters it? Or might be both? Glaeser et al. (2004) provide empirical evidence that human capital positively affects institutions and therefore economic growth and Dias & Tebaldi (2012) find that structural institutions (deep structures, rooted on the historical development and more related with the education level of the society) positively affect long-term economic growth; but political institutions do not. On the other hand, Hall et al. (2010) find that increases in physical and human capital indeed lead to output growth but only if countries have good institutions. In countries with bad institutions, the increase in capital leads to negative growth rates.

More recent work of Flachaire et al. (2014) attempts to clarify the ways in which institutions affect growth and makes a distinction between political institutions (measuring the degree of democracy by focusing on the competitiveness and openness of executive recruitment, the constraints on the executive, and the competitiveness of political participation) and economic institutions (Economic Freedom – measured as the extent to which property rights are protected and the freedom that individuals have to engage in voluntary transactions). They find that political institutions have no direct impact on growth, but economic institutions do.

Finally, recent work of Afonso & Jalles (2016), finds that bigger governments tend to hamper economic activity, that institutional quality has a positive

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[1] In the rule of law index, 0 indicates the worst maintenance of the rule of law and 1 the best.

impact on the level of real GDP per capita and the negative effect of government size on real GDP per capita is stronger at lower levels of institutional quality. In the same line, Samarasinghe (2018) suggests that governments should not focus only in making policies to deal with foreign direct investment, gross fixed capital formation, government expenditure or international trade (as always do) but should focus instead on making policies for increasing the institutional quality of the country since it's work found that institutions have a greater impact on economic growth. He also found that corruption control was the most relevant determinant of growth considering that one unit increase in the control of corruption indicator increases on average by 6.9% the real per capita GDP.

Political ideology and economic growth

Table 2 presents a selection of studies on economic growth, Government size and ideology. Since the 1950s the impact of governments' political ideology (democracy, authoritarianism, communism, etc.) on economic growth have been subject of analysis. Between 1966 and mid-1980s it appears that authoritarian governments made nations grew faster; but since then and until 1993, democracy has been clearly the path to faster growth (Przeworski & Limongi (1993). Perhaps political regimes do not capture the relevant differences, or the degree of globalisation in the world might have an effect

In terms of political ideology, (that is: left, centre or right-wing parties) —also known as partisan theory—, and its' influence in economic growth, the evidence revealed so far isn't conclusive either. Alvarez et al. (1991) find that left-wing-governments will only hurt economic growth in combination with densely and centrally organised labour movements. Alesina & Roubini (1992) find evidence of temporary partisan differences in GDP growth and unemployment but no evidence of permanent differences.

Kim & Fording (2002) replicated the work done by Alvarez et al. (1991) with a different measure of political ideology, rejecting the findings of Alesina & Roubini (1992).

Bjørnskov (2005) finds that, consistent with the theoretical expectations, political ideology (more rightist) indeed contributes to growth, and with a long run effect.

Potrafke (2012) in contrast finds that government ideology does not permanently influence short-term economic growth yet in countries with a two-parties-systems, annual GDP growth was higher under right-wing governments in the '50s and in the 1991-2006 period. Osterloh (2012) finds a positive impact of market-liberal policies on growth while a negative impact for market intervention and welfare state policies. Any simple left-right classification turns out to be incapable of explaining differences in the economic growth of those OECD countries.

Institutions, political ideology and investments

In Table 3 we summarise a selection of the findings on institutions, ideology and investments. The general assumption is that more leftist oriented Governments are not good for growth as foreign investors might feel less secure, depending on the guarantees presented in the institutions. Habib & Zurawicki (2002) find the expected: corruption negatively affects FDI. This is confirmed by Anghel (2005) and Aysan et al. (2007) for developing countries in the Middle East and North Africa regions, and Ali et al. (2010) for a larger group of 69 developing countries. Biglaiser & Staats (2010) studied not only the impact of institutions on FDI but also the impact of political ideology on FDI in Latin America. In the qualitative analysis they found that the most relevant factor for investment decisions was the level of protection of property rights, followed by the regime type or liberal democracy. Quantitatively they find that a one unit increase in the quality of institutions will increase the FDI (as percentage of GDP) but that political ideology of the executive branch (e.g. centre, left or right-wing) was not significant at all.

Valentini (2015) finds no relation of party orientation of the Government but does find relations between the orientation of Government and FDI.

3. Data

We use data from 20 countries in Latin America (see Table 4) between 2002 and 2018. Table 5 presents an overview of the variables used, while the summary statistics are found in Table 6.

The data used for institutions indicators was taken from the World Bank Governance Indicator Database (full dataset). This dataset contains the 6 indicators mentioned above. For this work, we create

an institution composite index (ins) that is an equally weighted average of the six indicators.

Data used for per capita GDP was obtained from CEPAL. Regarding other economic variables as gross fixed capital formation, government consumption, trade, mineral exports and foreign direct investment the information was obtained from the World Bank Databank. Data about average years of schooling for human capital variable was taken from Barro-Lee database. Data relevant to political ideology was obtained from the Database of Political Institutions of the World Bank and updated or corrected with further investigation about Latin America Political Parties.

A First Inspection of the data

A first impression of the effect of institutions (ins) and political ideology (ideo) on economic performance is arrived at by considering the correlation matrix for 2018:
   – We observe a positive relationship between per capita GDP and average years of schooling. Of course, we have to question whether this is a causal relation. Countries with more years of schooling in the labour force (like as Chile, Uruguay, Panama or Argentina), tend to have also higher income.
   – There is no clear relationship between per capita GDP and gross fixed capital formation (as a percentage of GDP).
   – Government consumption is unrelated to the level of GDP per capita.
   – Higher trade openness is not correlated with higher economic performance.

Institutions and economic growth

Most recent numbers on the quality of institutions in Latin America (2018) are, on average, almost all below 0, which means that those countries have low-quality governance, significantly lower than the results of OECD members in the same period.

Institutions and per capita GDP are positively linked (once again with the question of causality) with the highest correlation coefficient.

The variable: "average years of schooling (school)" has the second-highest correlation with per capita GDP. The famous example of an exception is Cuba,

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[2] Venezuela's data are dubious.

renowned for its free and mandatory primary education.

Political ideology and economic growth

Governments with leftist parties in power showed between 2002 and 2018 higher levels of per capita GDP but with a wider distribution of the interquartile range than the observed in governments of the centre or right.

By analysing the year-to-year per capita GDP growth, it can be observed a more compact distribution in the economic results of governments of the right and centre. The majority of the governments of the left have also had positive growth rates but with some outliers above 10% and below -5%. An interesting fact is that governments with a political ideology classification as centre have had exclusively positive growth rates between 2002 and 2018.

This, however, does not take into account that those countries with the highest income can have both left and rights parties in government throughout the time without significant changes in their per capita GDP level or growth rates.

Another interesting feature in the data is the predominance of the political ideology over time in Latin America. Between 2002 and 2018, 51.8% of the parties in power (yearly counted) were from the left-wing; 33.5% from the right-wing, and 14.7% from the centre. In Cuba and Venezuela left-winged governments ruled for the whole period; other countries as Argentina, Bolivia, Brazil, Chile, Costa Rica, Ecuador, Nicaragua and Uruguay had predominant left-governments and just a few years of centre/right. Some other countries, Guatemala, Haiti, Honduras, Mexico and Paraguay, had predominant right-governments. Colombia, El Salvador and Panama had almost equally distributed governments.

A preliminary analysis of the economic performance of the Latin American countries by groups shows that countries with predominant left governments between 2002 and 2018 had a higher per capita GDP average in the same year as well as higher institutional quality. Countries fully ruled by left governments (Cuba and Venezuela) had the second-highest per capita GDP level[2] but the lowest growth

average and the lowest composite index of institution quality.

It is also an interesting and unexpected fact that countries ruled mainly by right-wing governments between 2002 and 2018 had the lowest per capita GDP. Countries with predominant left governments during this period not only had the highest per capita GDP average but also the highest quality of institutions and the second-highest growth rate on average (without implying causality).

Institutions and political ideology on investments

Gross fixed capital formation as a percentage of GDP (used as a proxy to private investment), between 2002 and 2018, remains above 15% in countries with both weak and strong institutions and have a broader dispersion when countries have an average quality of institutions.

Even more, gross fixed capital formation (as a percentage of GDP) grows over time in governments with weak institutions and, paradoxically, it decreases in governments with strong institutions.

Those results are not necessarily aligned with the theory. It would be more reasonable to see that economies with relatively stronger institutions attract more private investment than those with weaker institutions. However, we should read these results carefully since Latin American countries tend to have the same average or weak institutional quality (with just a few exceptions) and other factors make investments attractive in this region such as high interest rates, relative low wages, abundant natural resources, and market size. Indeed, countries as Chile or Uruguay, with a higher institutional quality have lower gross fixed capital formation to GDP ratio than countries as Panama, Honduras or Haiti.

When analysing Foreign Direct Investment (FDI), results radically change. Countries with strong institutions tend to have higher FDI to GDP ratio, than those with weak institutions which make us think that foreign investment prioritises the country institutional quality when choosing its investment destination.

Countries with weak institutions tend to have lower FDI as percentage to GDP in the region while countries with strong institutions lead towards the opposite. We can see also an unexpected 2.00% in 2018 but it seems to be very specific to this year because on 2017 —and before— the average FDI to GDP rate was higher than the observed in the average and weak classification.

Governments with centred and right-wing political ideologies tend to have higher rates of gross fixed capital formation to GDP than governments of the left-wing. The distribution of FDI to GDP ratio is almost the same in countries with left-wing governments and countries with right-wing governments.

Countries ruled by left governments for the whole period 2002 and 2018 had the lowest rate of gross fixed capital formation over GDP on average. Countries with predominant left governments in the same period have the second-lowest rate; and countries with equally distributed governments have the highest one, despite its institution composite index is -0.15, lower than the institutional quality of those countries with predominant left governments. Regarding FDI, countries totally ruled by left governments also had the lower FDI to GDP average rate (0.95%) while countries with equally distributed governments presented the highest one (4.99% on average).

From this brief descriptive analysis, it can be observed that institutional quality is a key determinant for FDI decisions but not for gross fixed capital formation, while in contrast political ideology appears to be important for gross fixed capital formation but not for FDI decisions.

4. Methodological approach

For analysing the impact of institutions on growth this paper follows the empirical framework of Afonso & Jalles (2016) that, at the same time, fits within Barro (1991) endogenous growth model and North (1990) theoretical framework about institutions, plus a trade openness indicator suggested by Samarasinghe (2018) to prove if the magnitude of the impact of institutions is higher than the other control variables as suggested. Equation (1) describes the basic econometric model that we will be used during the analysis:

(2)

(1)

$$log\_gdp_{it} = \alpha_i + \beta_1 log\_gdp_{it-1} + \beta_2 school$$
$$+ \beta_3 gfcf\_gdp_{it}$$
$$+ \beta_4 govcons\_gdp_{it}$$
$$+ \beta_5 trade\_gdp_{it} + \beta_6 ins_{it}$$
$$+ \varepsilon_{it}$$

The dependent variable is the logarithm of GDP per capita. On the right hand side we have GDP per capita one time period delayed and the other variables as in Table 5.

Following Afonso & Jalles (2016), we introduce in Equation (2) an interaction term between institutions and government size to identify the dynamic between both variables. This will allow an estimation of the change in the impact of institutions on growth will change regarding the different government sizes.

$$(2)\ log\_gdp_{it} = \alpha_i + \beta_1 log\_gdp_{it-1} + \beta_2 school_{it}$$
$$+ \beta_3 gfcf\_gdp_{it}$$
$$+ \beta_4 trade\_gdp_{it} + \beta_5 ins_{it}$$
$$* govcons\_gdp_{it} + \varepsilon_{it}$$

In line with Dias and Tebaldi (2012), we introduce two lags of the aggregated index of institutions in the equation. Equation (3) is then described as follows:

$$(3)\ log\_gdp_{it} = \alpha_i + \beta_1 log\_gdp_{it-1} + \beta_2 school_{it}$$
$$+ \beta_3 gfcf\_gdp_{it}$$
$$+ \beta_4 govcons\_gdp_{it}$$
$$+ \beta_5 trade\_gdp_{it} + \beta_6 ins_{it}$$
$$+ \beta_7 ins_{it-1} + \beta_8 ins_{it-2} + \varepsilon_{it}$$

There is potentially an endogeneity problem in the regression between per capita GDP and institutions (as observed by Dollar & Kraay (2003): it is possible that a higher economic performance affects the quality of institutions (reverse causality). To circumvent this, we take institutions as an endogenous variable and do a two-stage regression to maintain only the exogenous part in the model. To this end, four instrumental variables are used in the first stage: total mineral exports over total exports (minexports), total exports as percentage of GDP (exports_gdp), total imports as percentage of GDP (imports_gdp) and total tax collection over GDP

(tax_gdp). Then, the second stage will follow Equation (1) with a new exogenous variable for institutions (ins_hat).

First stage
$$(4)\ ins_{it} = \alpha_i + \beta_1 minexports_{it}$$
$$+ \beta_2 exports\_gdp_{it}$$
$$+ \beta_3 imports\_gdp_{it}$$
$$+ \beta_4 tax\_gdp_{it} + \varepsilon_{it}$$

Second stage
$$(5)\ log\_gdp_{it} = \alpha_i + \beta_1 log\_gdp_{it-1} + \beta_2 school_{it}$$
$$+ \beta_3 gfcf\_gdp_{it}$$
$$+ \beta_4 govcons\_gdp_{it}$$
$$+ \beta_5 trade\_gdp_{it} + \beta_6 ins\_hat_{it}$$
$$+ \varepsilon_{it}$$

Later on, we introduce in Equation (6) political ideology to analyse its relationship with growth.

$$(6)\ log\_gdp_{it} = \alpha_i + \beta_1 log\_gdp_{it-1} + \beta_2 school_{it}$$
$$+ \beta_3 gfcf\_gdp_{it}$$
$$+ \beta_4 govcons\_gdp_{it}$$
$$+ \beta_5 trade\_gdp_{it} + \beta_6 ins_{it}$$
$$+ \beta_7 Left_{it} + \beta_8 Right_{it} + \varepsilon_{it}$$

And in Equation (7) with an interaction term between institutions and ideology. In this way we can evaluate whether the effect of institutions on growth changes with the different types of ideology in the government. For this purpose, the variable "ideo" will be used.

$$(7)\ log\_gdp_{it} = \alpha_i + \beta_1 log\_gdp_{it-1} + \beta_2 school_{it}$$
$$+ \beta_3 gfcf\_gdp_{it}$$
$$+ \beta_4 govcons\_gdp_{it}$$
$$+ \beta_5 trade\_gdp_{it} + \beta_6 ins_{it}$$
$$* ideo_{it} + \varepsilon_{it}$$

Political ideology might affect economic growth with a time delay, as is captured in Equation (8):

$$(8)\ log\_gdp_{it} = \alpha_i + \beta_1 log\_gdp_{it-1} + \beta_2 school_{it}$$
$$+ \beta_3 gfcf\_gdp_{it}$$
$$+ \beta_4 govcons\_gdp_{it}$$
$$+ \beta_5 trade\_gdp_{it} + \beta_6 ins_{it}$$
$$+ \beta_7 Left_{it} + \beta_8 Left_{it-1}$$
$$+ \beta_9 Left_{it-2} + \beta_{10} Right_{it}$$
$$+ + \beta_{11} Right_{it-1}$$
$$+ + \beta_{12} Right_{it-2} + \varepsilon_{it}$$

Our last analysis (Equations (9) and (10)) takes FDI and total investment as the dependent variables in two different equations with the explanatory variables above mentioned to analyse the impact of institutions on investments.

$$(9)\ log\_gfcf_{it} = \alpha_i + \beta_1 school_{it}$$
$$+ \beta_2 govcons\_gdp_{it}$$
$$+ \beta_3 trade_{gdp} + \beta_4 ins_{it}$$
$$+ \beta_5 left_{it} + \beta_6 right_{it} + \varepsilon_{it}$$

$$(10)\ log\_fdi_{it} = \alpha_i + \beta_1 school_{it}$$
$$+ \beta_2 govcons\_gdp_{it}$$
$$+ \beta_3 trade_{gdp} + \beta_4 ins_{it}$$
$$+ \beta_5 left_{it} + \beta_6 right_{it} + \varepsilon_{it}$$

5. Results

Institutions and economic growth

Equations (1), (2), and (3) have been estimated using panel data techniques, fixed effects model with robust standard errors. Table 8 presents the results. Model (1) is a simple regression on log_gdp using the initial level of per capita GDP, average year of schooling, gross fixed capital formation as percentage of GDP and trade as percentage of GDP, as explanatory variables. Then, in model (2) government consumption (as a proxy of government size) is introduced to analyse its single effect. In model (3) the institution composite index that was created is added. Model (4) analyses the interaction term between institutions and government size; and finally, models (5) and (6) include lags of the institution composite index.

Empirical findings present a positive and strong effect of institutions on economic growth in every model, aligned with the findings of previous research of Table 2: one unit increase in the institutions composite index will increase per capita GDP, on average, by 7.2%.

A positive and strong effect of human capital (school) on growth is also evident and significant as well as the positive effect of private investment and trade. In contrast to some earlier findings, government size it is not significantly related to growth.

We also add model (6) to include lag 3, lag 4 and lag 5 of institutions without much further insight.

Table 8. Regression on per capita GDP

Model	(1)	(2)	(3)	(4)	(5)	(6)
log_gdp_1	0.8836***	0.8918***	0.8656***	0.8556***	0.8421***	0.8507***
	(0.028)	(0.027)	(0.030)	(0.031)	(0.034)	(0.049)
school	0.0101*	0.0104*	0.0131**	0.0138**	0.0100	0.0178***
	(0.005)	(0.005)	(0.004)	(0.005)	(0.0063)	(0.006)
gfcf_gdp	0.0040***	0.0037***	0.0038***	0.0044***	0.0033***	0.0038***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
trade_gdp	0.0005**	0.0004**	0.0005**	0.0005**	0.004**	0.0007**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
govcons_gdp		-0.0023	-0.0022		-0.0017	-0.0023
		(0.001)	(0.002)		(0.002)	(0.002)
ins			0.0720***		0.0979***	0.0734**
			(0.236)		(0.032)	(0.033)
ins*govcons				0.0037**		
				(0.002)		
ins_1					0.0059	-0.0175
					(0.035)	(0.039)
ins_2					-0.0018	-0.0070
					(0.037)	(0.038)
ins_3						0.0298
						(0.020)
ins_4						-0.0215
						(0.030)
ins_5						0.0299
						(0.032)

The models are estimated by fixed-effects. Dependent variable: log of per capita GDP. Robust heteroskedastic standard errors are reported in parenthesis. *,**,*** corresponds to significance at 10%, 5% and 1% levels, respectively.

The interaction between government consumption and institutions is found in Table 9. At lower levels in the composite index of institutions, between -2.5 and -0.5 (weak institutions), the impact of

government size on economic growth is negative. However, for higher levels in the composite index of institutions (above 0.5 —average and strong institutions—), the impact of the government size on growth is positive and it is also increasing.

Table 1. Average marginal effects at different values of ins

dy/dx: govcons_gdp at_	
ins = -2.5	-0.0093** (0.004)
ins = -1.5	-0.0056** (0.002)
ins = -0.5	-0.0019** (0.000)
ins = 0.5	0.0019** (0.000)
ins = 1.5	0.0056** (0.002)
ins = 2.5	0.0093** (0.004)

Robust heteroskedastic standard errors are reported in parenthesis.
*,**,*** corresponds to significance at 10%, 5% and 1% levels, respectively.

Endogeneous institutions

Table 10a presents the results for endogenous institutions (Equation 4). Mineral exports as percentage of GDP will increase the institutions composite index significantly, while additional percentages of exports to GDP will reduce the institutions composite index significantly.

In the second stage of the model (Table 10b) the effect of the new exogenous institutions' variable (ins_hat) is still positive and even higher than in model (3) but it is not significant. The impact of school is positive and higher than in model (3) as well while gross fixed capital formation is positive also but slightly lower. Regarding government consumption, results show a negative effect on growth and, contrary to model (1) this time is significant.

Table 10a. First stage - Regression on ins

Variable	Coef.	[95% Conf. Interval]	
minexports	0.0055** (0.002)	0.0005	0.0104
exports_gdp	-0.0122*** (0.004)	-0.0211	-0.0034
imports_gdp	0.0047 (0.003)	-0.0019	0.0113
tax_gdp	0.0073 (0.010)	-0.0141	0.0287

The model is estimated by fixed-effects. Dependent variable: ins. Robust Heteroskedastic standard errors are reported in parenthesis. *,**,*** corresponds to significance at 10%, 5% and 1% levels, respectively.

Table 10b. Second stage - Regression on log_gdp

Variable	Coef	[95% Conf. Interval]	

	0.9160*** (0.0259)	0.8605	0.9717
Log_gdp_1	0.9160*** (0.0259)	0.8605	0.9717
school	0.0177** (0.007)	0.0030	0.0323
gfcf_gdp	0.0037** (0.002)	0.0001	0.0073
govcons_gdp	-0.0070** (0.003)	-0.0133	-0.0008
trade_gdp	0.0003 (0.001)	-0.0011	0.0016
ins_hat	0.0825 (0.062)	-0.0494	0.2145

The models are estimated by fixed-effects. Dependent variable: log of per capita GDP. Robust heteroskedastic standard errors are reported in parenthesis. *,**,*** corresponds to significance at 10%, 5% and 1% levels, respectively.

Political ideology and economic growth

Equation (6) has been estimated using panel data techniques, following a fixed-effect model, and including three dummies for the political ideology classification. "Right", that takes the value of 1 when the government in power is from a right-wing party; and 0 otherwise; "left", that equals 1 when the government in power is from a left-wing party; 0 otherwise; and "centre", that takes the value of 1 when the party in power is classified as centre, 0 otherwise[3]. Table 11 presents the results for three different models regarding ideology.

Model (3) is the only one with significant coefficients for ideology. This is in combination with institutions. Results show that the impact on per capita GDP of increasing the institutional quality will be higher if the political party in government is from the left. We have also checked whether time delays in ideology might lead to a different insight.

Contrary to the suggestions by Kim & Fording (2002) and Potrafke (2012), none of the coefficients of the political ideology variables where statistically significant in any of the five time-lag models, which evidences that political ideology it is not a relevant factor for economic growth, in Latin America.

Table 2. Growth and ideology

Model	(1)	(2)	(3)
log_gdp_1	0.8631*** (0.032)	0.8893*** (0.028)	0.8660*** (0.031)
school	0.0127** (0.005)	0.0099* (0.006)	0.0135*** (0.005)
gfcf_gdp	0.0039*** (0.001)	0.0038*** (0.001)	0.0039*** (0.001)
govcons_gdp	-0.0023 (0.002)	-0.0024 (0.001)	-0.0022 (0.002)
trade_gdp	0.0005** (0.000)	0.0004* (0.000)	0.0005*** (0.000)
ins	0.0721*** (0.025)		
left	-0.0057 (0.009)	-0.0058 (0.009)	
right	-0.0083 (0.008)	-0.0082 (0.007)	
centre	(omitted)	(omitted)	
ideo*ins 1 2 3			0.0774*** 0.0568** 0.0698***

The models are estimated by fixed-effects. Dependent variable: log of per capita GDP. Robust heteroskedastic standard errors are reported in parenthesis.
*,**,*** corresponds to significance at 10%, 5% and 1% levels, respectively.

Institutions, political ideology and investments

[3] The dummy "center" is used as reference group for the econometric model.

Table 12 presents the results for our research into the impact of institutions and political ideology on investments (Equations 9 and 10).

Institutions play a key role in the prediction of private investment. Political ideology variables are not significant even when including time-lags. The same econometric models are calculated for FDI and results are shown in Table 13. It can be observed that the effect of institutions on FDI growth is even higher than on gross fixed capital formation However, political ideology measures were not statistically significant for FDI.

Table 12. Time-lag models for institutions and political ideology on investments

Model	(1)	(2)	(3)	(4)	(5)
school	0.3732*** (0.079)	0.3652*** (0.081)	0.3613*** (0.077)	0.3271*** (0.073)	0.3294*** (0.074)
govcons_gdp	-0.0083 (0.030)	-0.0131 (0.030)	-0.0131 (0.030)	-0.0107 (0.027)	-0.0097 (0.027)
trade_gdp	0.0035 (0.003)	0.0003 (0.003)	0.0022 (0.003)	0.0011 (0.003)	0.0013 (0.003)
ins	0.7388*** (0.210)		0.7151*** (0.189)	0.7473*** (0.191)	0.7493*** (0.194)
left		0.0741 (0.152)	0.0648 (0.135)		0.0597 (0.074)
right		-0.0375 (0.145)	-0.0307 (0.129)		0.0724 (0.062)
centre		(omitted)	(omitted)		(omitted)
left_1				0.0238 (0.150)	-0.0205 (0.109)
right_1				-0.0723 (0.150)	-0.1219 (0.138)
center_1				(omitted)	(omitted)

The models are estimated by fixed-effects. Dependent variable: log of gross fixed capital formation. Robust heteroskedastic standard errors are reported in parenthesis. *,**,*** corresponds to significance at 10%, 5% and 1% levels, respectively.

Table 13. Time-lag models for institutions and political ideology on FDI

Model	(1)	(2)	(3)	(4)	(5)
school	0.7238*** (0.092)	0.6822*** (0.120)	0.7018*** (0.095)	0.6425*** (0.088)	0.6431*** (0.089)
govcons_gdp	-0.0440 (0.044)	-0.0458 (0.045)	-0.0549 (0.041)	-0.0439 (0.038)	-0.0433 (0.037)
trade_gdp	0.0119 (0.005)	0.0042 (0.005)	0.0094 (0.006)	0.0087 (0.005)	0.0089 (0.006)
ins	1.9154*** (0.432)		1.8742*** (0.419)	1.9850*** (0.455)	1.9751*** (0.449)
left		0.1346 (0.227)	0.1276 (0.206)		-0.0332 (0.206)
right		-0.0902 (0.230)	-0.0580 (0.213)		0.0237 (0.197)
centre		(omitted)	(omitted)		(omitted)
left_1				0.1924 (0.205)	0.2133 (0.199)
right_1				-0.0252	-0.0440

				(0.194)	(0.185)
center_1				(omitted)	(omitted)

The models are estimated by fixed-effects. Dependent variable: log of Foreign Direct Investment inflows. Robust heteroskedastic standard errors are reported in parenthesis. *,**,*** corresponds to significance at 10%, 5% and 1% levels, respectively.

6. Conclusions

Institutions have a positive, strong and significant impact on GDP growth; in twenty Latin American countries between 2002 and 2018. Government size has a negative impact on GDP growth itself but, in interaction with strong institutions, the effect of government size on growth turns out to be positive and significant. Political ideology has no significant effect on economic growth. More-over the impact of institutions on private investment and on FDI is highly significant.

These findings underline Samarasinghe (2018) conclusions: to achieve higher economic growth is would be better to focus on institutions rather than on investments, trade or government consumption itself.

Institutions are to some extent endogenous. Mineral exports as a percentage of GDP turn out to increase the quality of institutions significantly, while exports as a percentage of GDP appears to lower the quality of institutions in the country significantly. This is completely opposite to the Prebisch policy advice advanced in 1956, namely, to protect local manufacturing from external competition.

Ideology is only found to play a role for growth in combination with institutions. The impact on per capita GDP of an increase in the institutional quality will be higher if the political party in government is from the left.

Contrary to the suggestions by Kim & Fording (2002) and Potrafke (2012), none of the coefficients of the political ideology variables where statistically significant in any of the five time-lag models, which evidences that political ideology it is not a relevant factor for economic growth, in Latin America.

Our results are subject to limitations in the data. Accurate data on the variables used are not always available in two of the Latin American countries in our sample: Venezuela and Cuba. There may also be bias in the political ideology variable used.

Developing strong institutions is not an easy endeavour and there is not a magic recipe to achieve it, despite all efforts and discussions at organisations like the World Bank. It is beyond the scope of this paper to evaluate the different approaches to better institutions in the past, like capacity building or Regulatory Impact Assessments, or Government Funding Tracking.

Ethical considerations and potential limitations
There are no ethical challenges in this research since this work is conducted with public information of Latin American countries and without any political motivation. No confidential information is being used and informed consent is no needed.

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TABLES

Table 3. Overview of studies on institutions and economic growth

Author(s)	Data	Dependent variable	Independent variables	Source of Institutions Variables	Results
Mauro (1995)	Cross section of 68 countries. Period: 1960-1985	Per capita GDP growth	GDP in 1960, secondary education in 1960, population growth, primary education in 1960, Government expenditure, revolution and coups, assassinations, investment deflator, political instability index, investments, bureaucratic efficiency index, corruption Index	The Economist Intelligence Unit (1980-1983)	1. A one-standard-deviation improvement in the bureaucratic efficiency index is associated with a 1.3 percentage point increase in the annual growth rate of GDP per capita. 2. A one-standard-deviation improvement in the corruption indicator is associated with a 0.8 absolute increase in the annual growth rate of GDP per capita.
Barro (1996)	Panel data for 100 countries. Period: 1960-1990	Per capita growth rate	Log GDP, male secondary and higher schooling, log of life expectancy, log GDP*male schooling, log of fertility rate, government consumption ratio, rule of law index, terms of trade change, democracy index, democracy index squared, inflation rate, Sub Saharan Africa dummy, Latin America dummy, East Asia dummy.	International Country Risk Guide	A rise by 0.167 in the rule of law variable is estimated to raise the growth rate in 0.5 percentage points.
Acemoglu et al. (2001)	Cross section data for the whole world and a small sample of 64countries. Year: 1995	Log GDP per capita	Average protection against expropriation, Asia dummy, Africa dummy, Other continent dummy.	Political Risk Services (average value between 1985 and 1995), Polity III data set of Ted Robert Gurr and associates.	1. A strong correlation between the measure of institutions and income per capita. 2. Protection against expropriation on income per capita is highly significant, with a coefficient of 0.71 3. Over 50% of the variation in income per capita is associated with variation in the institutions' index.
Dollar & Kraay (2003)	Cross section data for 168 countries. Year: 1995	Log of GDP per capita in 1995	Rule of law, log trade/GDP, landlock, distance from equator, log of population.	Kaufmann et al. (2002)	1. Simple OLS regression of log per capita GDP on rule of law gives a coefficient of 1.01, a very strong correlation between per capita income and institutional quality. However, problems as endogeneity measurement error and omitted variables arise.

					2. In a large cross-section of countries, economic growth, in the long run, high levels of trade, and good institutions go together.
Easterly & Levine (2003)	Cross section data for 72 countries. Year: 1995	Log of GDP per capita in 1995	Institution's index, French legal origin, religion, ethnolinguistic oil diversity, settler mortality, latitude, landlocked, crops/minerals.	Kaufman et al. (1999)	A strong positive impact of institutional development on economic development was found. The coefficient of the institution's index is between 2.10 and 2.22.
Glaeser et al. (2004)	Panel data for 50 countries. Period: 196-2000	Per capita income growth	Initial income per capita, initial education, the share of a country's population in temperate zones, and institutional variables as executive constraints, expropriation risk, autocracy, government effectiveness, judicial independence. Constitutional review, plurality, proportional representation.	International Country Risk Guide, Aggregated index of Kaufmann et al. (2003), Polity IV Dataset.	1. The initial level of education is a strong predictor of subsequent economic growth. 2. A strong correlation between economic growth over a period and the average assessments of institutional quality over that period, including constraints on the executive, risk of expropriation, government effectiveness, and autocracy. 3. The coefficient of expropriation risk on per capita GDP growth is 0.0040, significant at a 1% level. 4. The coefficient of Autocracy on per capita GDP growth is -0.0060, significant at a 10% level. 5. The coefficient of government effectiveness on per capita GDP is 0.0075, significant at a 1% level. 6. No relationship between growth and constitutional measures of institutions such as judicial independence, constitutional review, plurality, and proportional representation. 7. Exploring the causal link between institutions and growth has been extremely difficult because of conceptual problems to

					measure institutions and the limitations of econometric techniques. 8. Institutions play only a secondary role in economic performance. Human capital and social capital have the main role and shape both the institutional and productive capacities of a country.
Rodrik et al. (2004)	Cross section data for three samples of countries (64, 79 and 137). Year: 1995	Log of GDP per capita in 1995	Geography (latitude of the country), Institutions (Rule of law), Openness or integration (ration of nominal trade to nominal GDP).	Kaufmann et al. (2002)	1. The signs of institution, openness, and geography are statistically significant. Countries with stronger institutions, more open economies, and more distant from the equator are likely to have higher levels of income. 2. A unit shock to the institutional quality equation ultimately produces an increase in log incomes of 1.85. 3. Institutions is a stock variable. The cumulative outcome of past policies. Then, it is inappropriate to regress income levels on institutional quality. This could be addressed by taking long-term averages.
Dias & Tebaldi (2012)	Panel data for 61 countries. Period:1965-2005	GDP per capita growth	Lagged growth of real GDP per capita, human capital growth (t, t-1, t-2), physical capital growth (t, t-1), structural institutions (t, t-1, t-2), Polity IV index, human capital level, physical capital level.	Polity IV Project	1. Structural institutions positively affect long-term economic performance. 2. The coefficient of current structural institutions on per capita GDP growth is mainly negative but not significant. 3. The coefficient of the first lag of structural institutions on growth is positive, between 0.0266 and 0.0323, and significant. 4. Political institutions are not correlated with productivity and long-term growth.

Hall et al. (2010)	Cross section of 96 countries. Period: 1980-2000	Growth of output per worker	Independent: growth of schooling per worker, growth of physical capital per worker, growth of schooling per worker*Risk of expropriation, Growth of physical capital per worker*Risk of expropriation, Percentage of population within 100km of coast, air distance from major trading centers, percentage of land are located in tropics.	International Country Risk Guide	1. For countries with a risk of expropriation scores below 4.90 (bad institutional quality), increases in the stock of both human and physical capital have a negative effect on the growth of output per worker. For countries with a risk of expropriation between 4.90 and 7.33 (better institutional quality), increases in physical capital per worker have a positive impact. 2. Physical and human capital increases only have a positive impact on growth once a break-even level of institutional quality has been reached.
Flachaire et al. (2014)	Panel of 79 countries. Period: 1975 - 2005. Observations are averaged over 5-year periods.	Output growth	Log of initial real GDP per capita, Log of population growth, Log of investment rate, Log of initial average years of education, Index of political institutions, Index of economic institutions.	Economic Institutions: Index of Economic Freedom of the World (EFW) from the Fraser Institute. Political Institutions: Polity IV.	1. The data evidence the existence of two growth regimes. The first one with slightly higher growth rates (averaging 1.8%) while the second with lower and dispersed growth rates (mean of 1.2%). 2. Political institutions are key determinants for membership in regime 1 or 2, but when focusing on the determinants of growth rates, economic institutions rather than political institutions play a role. 3. The coefficient of economic institutions on growth is positive and between 0.735 and 0.830, significant at a 1% level.

Alfonso & Jalles (2016)	Unbalanced panel of 140 countries. Period: 1970 - 2010. Periods of 5-year average.	Log of real GDP per capita	Physical capital (gross fixed capital formation), human capital, public consumption, institutions (civil lberties, political rights, polity, democracy index, regime durability, Vanhanen democracy, government fractionalization, governance).	Freedom House's Political Rights, Civil Liberties. Polity 2 index, Polity's 4 Database, Index of democratization of Vanhanen (2005), World Bank Governance Indicators, Quality of Government Dataset, KOF indices of economic, political and social dimensions of globalization, World Bank's Database on Political Institutions.	1. Bigger governments tend to hamper economic activity. 2. Institutional quality has a positive impact on the level of real GDP per capita. 3. The coefficient of institutions on the log of per capita GDP, when institutions are measured using civil, political rights, polity, democracy index, or regime durability as proxies, is always positive and between 0.119 and 0.465. 4. The negative effect of government size on real GDP per capita is stronger at lower levels of institutional quality. 5. The positive effect of institutional quality on GDP per capita is stronger at smaller levels of government size.
Saramasinghe (2018)	Panel data for 145 countries. Period: 2002-2014	Log of real GDP per capita	Control of corruption, political stability and absence of violence, voice and accountability, foreign direct investments, gross capital formation, trade openness, government consumption.	World Bank Governance Indicators Database	Governance quality affects economic growth significantly. Corruption control is the most important determinant. A one-unit increase in control of corruption raises the real GDP per capita growth on average by 6.9%.

Table 4. Overview of studies on political ideology and economic growth

Author(s)	Data	Dependent variable	Independent variables	Source of Political Ideology Variables	Results / Conclusions
Alvarez, Garret & Lange (1991)	Panel data for 16 industrial democracies. Period: 1967-1984	GDP	Lagged GDP, Vulnerability to OECD demand conditions, Vulnerability to OECD supply conditions (export prices & import prices), Labor organization index, Leftist participation in cabines government, Labor organization index*Leftist participation in cabinet government.	Cameron (1984), Lange and Garret (1985) and Swank (1989).	1. Even when domestic and international economic forces were taken into account, the political and organization variables remained powerful influences on GDP. 2. Encompassing labour movements influence better economic performance when the Left was politically powerful. Weaker labour movements had desirable consequences on growth when governments were dominated by Right parties.
Alesina & Roubini (1992)	Panel data for OECD countries. Period: 1960-1987 (quarterly data)	GDP growth	GDP growth t-1, GDP growth t-2, World Growth average, Election dates, dates of changes of governments, political orientation.	Alt (1985) and Banks (1987)	There is evidence of temporary partisan differences in output and unemployment and of long-run partisan differences in the inflation rate. However, there is no evidence of permanent partisan differences in output growth and unemployment
Kim & Fording (2002)	Panel data for 16 countries between 1971 and 1984; and panel data for 14 countries between 1968 and 1984	Economic growth	Lagged GDP, Vulnerability to OECD demand conditions, Vulnerability to OECD supply conditions (export prices & import prices), Labor organization index, Leftist participation in cabines government, Labor organization index*Leftist participation in cabinet, Government ideology (manifestos), Government ideology*Labor organization index	Manifesto data collected and processed by Kim & Fording (1998)	How political ideology is measured is a key aspect. Government ideology (measured as the percentage of cabinet portfolios held by leftist parties) is negative and not significant.

Bjørnskov (2005)	58 countries between 1970 and 2000	Decadal growth in the 1970s, 1980s and 1990s	Initial GDP per capita, political ideology, openness (exports plus imports, divided by GDP), number of years of school, government size, government share of GDP, legal quality, market distortions.	Categorization by Beck, Clarke, Groff, Keefer and Walsh (2001)	The coefficient of political ideology is positive and statistically significant at 5%. Shocking the political ideology of an average country by one standard deviation yields one quarter of a percent additional growth per year.
Potrafke (2012)	21 OECD Countries. Period: 1951 - 2006	Annual GDP growth	Election year, ideology of the government, GDP growth trading partners, exchange rate regime, change in log of trade (as a share of GDP), institutional constraints, lagged GDP growth.	Index of government's ideological position by Budge et al. (1993) and updated by Woldendorp et al. (1998, 2000); and Henisz (2000) database on political outcomes.	1. Electoral motives and government ideology did not permanently influence short-term economic performance. 2. Annual GDP growth was higher under rigthwing governments in the 1950s and higher under leftwing governments in the 1991-2006 period.
Osterloh (2012)	Panel data for 23 OECD countries. Period: 1971 - 2004	Annual growth rate of real GDP per capita	Ideology, lagged GDP per capita, human capital (share of population in the working age), investment share, election year, number of parties, lagged investment price, population growth, lagged public expenditure, enrollment secondary, globalization, lagged inflation, fertility rate.	Comparative Manifesto Project (CMP) and Database of political institutions (DPI)	The choice of the measure for ideology has a major impact in the results. The application of the DPI data does not detect a significant impact on annual GDP growth while the data obtained from CMP suggests that legislatures dominated bu right-wing parties positively affect the economic performance.

Table 5. Overview of studies on institutions, political ideology and investments

Author(s)	Data	Dependent variable	Independent variables	Source of Political Ideology Variables	Results / Conclusions
Habib & Zurawicki (2002)	Panel data for 89 countries between developed and developing. Period: 1996-1998	Log of FDI	Log of population, GDP growth, Log of per capita GDP, unemployment, Trade over GDP, Science & Technology, Cultural distance, Log distance, economic ties, Corruption Perception Index (CPI), Political stability, TI chapters.	Transparency International (TI)	1. Corruption Perception Index (CPI) is significant and negatively affects FDI (higher CPI means less corruption). 2. CPI coefficient is between 0.19 and 0.26
Anghel (2005)	Cross-sectional data for 77 countries. Period: 1996-2000 (average data)	FDI net inflows (as % of GDP, average 1996-2000)	Political stability, government effectiveness, regulatory quality, rule of law, control of corruption, property rights index, business regulation index, bureaucratic delays, growth rate of gdp (average 1996-2000), inflation rate (average 1996-2000), terms of trade (change over 1996-2000) and Log of trade openness	World Governance Indicators by Kaufmann, Krayy and Mastruzzi (2004); and La Porta, Lopez-de-Silanes, Shleifer and Vishny (1999)	Poor institutions negatively affect the FDI levels of a country.
Aysan et al. (2007)	Panel data for 32 developing countries. Period: 1970-2002	Private investment as % of GDP	Quality of administration, political accountability, political stability, government consumption, structural reforms, human capital, oil exports, GDP per capita, real interest rate, economic growth, tenure of the system, Middle East and North Africa dummy.	International Country Risk Guide and Freedom House	The quality of governance is a key factor for private investment decisions in developing countries.

Ali et al. (2010)	Panel data of 69 countries. Period: 1981-2005	Log of net FDI inflows (as percentage of GDP)	Property right security, Log of per capita GDP, GDP growth, trade to GDP, number of telephone lines, mean of tariff rate, inflation rate, log of the top marginal corporate income tax rate	International Country Risk Guide (ICRG) provided by Political Risk Services (PRS) group.	1. Institutions play a main role on FDI inflows. 2. Positive and significant coefficient of the institution's variable, between 0.103 and 0.187.
Biglaiser & Staats (2010)	Cross-sectional data for 138 developing countries. Period: 1976-2004	Net FDI inflows (as a percentage of GDP)	POLCONV (political constraint index), conflict, executive ideology, log of GDP, log of per capita GDP, GDP growth, trade openness, capital liberalization, current account balance and natural resource stocks.	Henisz (2002) for POLCONV and T.Beck et al. (2002) for executive ideology	1. The effect of the political constraint index (POLCONV) is positive and significant (0.631) 2. The effect of Executive ideology is not significant.
Valentini (2015)	Panel data for all countries and for OECD countries. Period: 1992-2014	Log of FDI inflows	Right-left party orientation of the chief executive, party orientation using ordinal IV, party orientation using a dummy variable, trade, market size, GDP growth, democracy, government deficit, FDI inflows controls and Human Capital.	Database of Political Institutions 2012 by Beck et al., Political Risk Services (PRS) and Manifesto Project Data	1. One unit increase of right-left party orientation leads to an increase of 18.7% in FDI inflows 2. A transition from a right-wing government to a left-wing government increases in 35.7% the FDI inflows.

Table 6. Countries in sample

#	Countries	#	Countries
1	Argentina	11	Guatemala
2	Bolivia	12	Haiti
3	Brasil	13	Honduras
4	Chile	14	Mexico
5	Colombia	15	Nicaragua
6	Costa Rica	16	Panama
7	Cuba	17	Paraguay
8	Dominican Republic	18	Peru
9	Ecuador	19	Uruguay
10	El Salvador	20	Venezuela

Table 7. Variables description

log_gdp	Logarithm of GDP per capita (constant 2010 US$)
log_gdp_1	First lag of log_gdp
school	Average years of schooling (Barro-Lee)
log_gfcf	Log of Gross fixed capital formation (constant 2010 US$)
gfcg_gdp	Gross fixed capital formation (as % of GDP)
govcons_gdp	General government final consumption (as % of GDP)
trade_gdp	Trade (as % of GDP)
minexports	Ores and metals exports (as % of merchandise exports)
exports_gdp	Exports of goods and services (as% of GDP)
imports_gdp	Imports of goods and services (as % of GDP)
tax_gdp	Tax revenue (as % of GDP)
fdi_inflow	Foreign direct investment, net inflows (BoP, current US$)
fdi_inflow_gdp	Foreign direct investment, net inflows (as % of GDP)
CC	Control of corruption
GE	Government effectiveness
PV	Political Stability & No Violence
RQ	Regulatory Quality
RL	Rule of Law
VA	Voice and Accountability
ins	Composite index that averages CC, GE, PV, RQ, RL and VA
left	Dummy. Takes the value of 1 if the government in power is from the left-wing; 0 otherwise.
right	Dummy. Takes the value of 1 if the government in power is from the right-wing; 0 otherwise.
ideo	Political ideology category. 1 if left, 2 if centre, 3 if right.

Table 8. Summary of the variables

Variable	Obs.	Unique	Mean	Min	Max
year	340	17	2010	2002	2018
gdp	340	340	6,198.32	674.19	15,111.70
school	320	78	7.68	3.5	11.8
gfcg_gdp	323	323	20.41	7.30	40.63
govcons_gdp	328	328	14.25	7.20	39.88
trade_gdp	335	335	64.27	22.11	166.70
minexports	298	298	10.41	0.04	65.05
exports_gdp	335	335	29.63	10.71	78.23
imports_gdp	335	335	34.64	11.25	88.61
tax_gdp	226	226	14.08	7.84	23.71
fdi_inflow_gdp	319	319	3.63	-4.90	16.23
ins	340	340	-0.28	-1.75	1.29
left	340	2	0.52	0	1
right	340	2	0.15	0	1
ideo	340	3	1.82	1	3

Table 7. Correlation matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) gdp	1.000						
(2) gdp_1	0.998	1.000					
(3) school	0.607	0.602	1.000				
(4) gfcf_gdp	0.030	0.023	-0.158	1.000			
(5) govcons_gdp	0.011	0.016	0.371	-0.508	1.000		
(6) trade_gdp	-0.341	-0.353	-0.253	0.539	-0.276	1.000	
(7) ins	0.654	0.644	0.372	0.040	-0.059	0.010	1.000

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