Capital Controls Reconsidered:
The Politics behind Emerging Markets' Financial Policies in the 2000s
(DRAFT)

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Abstract
This paper examines the use of capital controls by developing countries during the globalization era. It hypothesizes that policy about capital controls on inflows of investment not only depends on macroeconomic variables but also on the political characteristics of governments in place. However, politicians’ decisions are constrained by certain domestic and international institutions such as the Central Bank, Free Trade Agreements and Bilateral Investment Treaties that previous administrations have signed.

These hypotheses are assessed through a quantitative analysis of a group of 13 Latin American countries from 1997 to 2010. The contribution of this study is to reconsider available theoretical explanations around the determinants of capital controls in developing countries by undertaking a more fine grained analysis. Rather than using the aggregate Chinn- Ito index prior studies have used I resort to a novel dataset that provides specific measures of the presence of capital controls and distinguishes by types of flows: portfolio, bonds and FDI and their direction (inward or outward). Moreover unlike available studies which focus in periods prior to the 2000 this one focuses in a post-liberalization setting. I find that certain constraints such as an independent central bank and a high number of bilateral investment treaties a country limit left or right governments in their attempts to use capital controls for political (and distributional?) purposes.
1. Introduction

Unlike the 1980s and 1990s economic and financial crises which left developing countries with scant sources of capital, in the 2000s several of them increasingly became destinations for foreign investment. This trend was reinforced after 2008 when the developed world was hit hard by the most recent crisis and developing countries experienced an upsurge of capital inflows both portfolio and FDI (See figure 1 in the Appendix).

Policymakers in the South have implemented a variety of measures to deal with the impacts of incoming investment among which are capital controls. The Asian crisis marked a watershed as countries like Indonesia and Malaysia chose to impose restrictions despite the general trend for liberalization. During the 2008 financial crisis some countries also decided to implement controls on certain types of investment. For instance at the end of 2009, Brazil imposed a tax on certain foreign exchange transactions, supplementing it with another tax on some equity inflows in 2010 (Kokenyne, 2010). Other countries like Peru, Korea and India also imposed capital controls. Meanwhile Mexico, Colombia and Chile refrained from doing so (Pasricha 2012). What for long remained a censured policy became gradually accepted. Even the IMF acknowledged capital controls as part of a “toolkit” that governments, particularly those with largely or fully open capital accounts, can use to respond to inflow surges (Ostry, et.al. 2011).

Scholarly work about this new wave of capital controls focuses mostly on their domestic and global effects. An important yet unaddressed question is: **Why do policymakers in some developing countries impose capital controls on short-term inflows whereas others don’t?** Particularly considering the mixed evidence regarding the effects of capital controls and the availability of two other policy options: macroeconomic policies and prudential regulations.¹

¹ After examining the effectiveness of short vs. long term capital controls, Klein (2012) suggests that: “There may be political reasons that make it difficult to impose capital controls during booms.” (4). Jinjarak, Now and Zheng (2012) also suggest that motivations might be beyond being purely economic: “The reasons for instituting these policies, of course, may be political and electoral in nature, rather than being truly guided by a desire to obtain any of the impacts we described” (16). But they do not develop a deeper explanation.
There is a vast amount of literature regarding the correlates of capital controls in developed and developing countries for periods prior to the 2000s which has tested for political, economic and international explanations (Alesina, Milesi-Ferreti and Grilli 1993, Goodman and Pauly 1994, Li and Smith 2002, Kastner and Rector 2005, Quinn and Inclan 1997, Brooks 2004, Brooks and Kurtz 2007, Chwieroth 2007, Quinn and Toyoda 2007, Mukherjee and Singer 2010). Drawing on these studies I hypothesize that the imposition of capital controls depends largely upon the political and institutional characteristics of governments in place, more specifically partisanship and the level of central bank independence. Two other potential institutional constraints for governments should be the bilateral investment treaties and a signed free trade agreement with the United States. I test the explanations through logistic analysis with a sample of Latin American countries from 1997 to 2010.

The contribution of this study is to reconsider existing explanations around the determinants of capital controls in developing countries in light of a new measure of capital controls and in the context of higher levels of financial liberalization. Rather than using the Chinn-Ito index of capital account openness I resort to a novel dataset that distinguishes restrictions by direction of flows: inflows and outflows; and types of flows: portfolio and foreign direct investment (FDI). The analysis challenges conventional wisdom which considers that left governments impose or retain restrictions towards all types of foreign investment, neglecting they are often constrained by institutions set up by prior administrations which might be difficult to change.

The remaining of the paper is structured into five sections. The next one provides an overview of extant literature and highlights its findings and shortcomings. The third section introduces the theoretical framework and the hypothesis. The fourth section explains data and methods. And the main findings and conclusions are presented in the final section.
2. Literature Review

There is a rich research program addressing the determinants of capital controls that first focused on developed countries (Alesina, Milesi-Ferreti and Grilli 1993, Goodman and Pauly 1994, Li and Smith 2002, Kastner and Rector 2005) but that at some points considered developing countries behavior too (Milesi-Ferreti and Grilli 1995, Leblang 1997, Alfaro 2004). Scholars have highlighted different political, economic and international factors and actors that impact the decision of governments to allow or restrict inflows and outflows of capital.

One shortcoming of the literature is that most authors assumed that investment flows were all alike and did not differentiate between government’s policy towards direct investment and portfolio capital. As the financial system has become increasingly integrated it is no longer possible to ignore that the time horizon of FDI and portfolio capital is quite different, FDI in general is considered to be long term whereas portfolio capital has a narrower span. Their economic effects and their distributional impacts (i.e. employment, taxation) also vary sharply.

On a closely related subject there is a body of literature studying the determinants of capital account liberalization in developing countries during the 1980s and 1990s (Quinn and Inclan 1997, Brooks 2004, Brooks and Kurtz 2007, Chwieroth 2007, Quinn and Toyoda 2007, Mukherjee and Singer 2010). Whereas this second set of analyses drew on the theories of capital controls in the industrial world in terms of their explanatory variables, it also differentiated from prior studies in a substantive way: rather than focusing only on restrictions to investment it took a more encompassing approach by examining other types of measures related to capital account like: 1. Exchange rate arrangements separate exchange rates for some or all capital transactions; 2. Restrictions on payments for current transactions 3. Restrictions on payments for capital transactions.2

In fact most of the works studying capital controls in developing countries used Chinn and Ito index3 of capital account openness as their outcome variable (except Quinn and Inclan 1997 and Quinn and Toyoda 2007). This can be a weakness in terms of correctly measuring the determinants

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3 Chinn and Ito’s Kaopen index “attempts to measure the intensity of capital controls” (Chinn and Ito 2006:169). They use four binary categories from the tables in the IMF’s AREAER to construct their index. They include data on capital account restrictions (k3). Kaopen also includes data on the presence or absence of multiple exchange rates (k1), current account restrictions (k2), and requirements to surrender export proceeds (k4). Chinn and Ito include k1, k2, and k4 because they “interpret these variables as indicators of the intensity of capital controls” (Chinn and Ito 2002:9). Karcher and Steinberg (2009) remark that “the inclusion of a 5-year moving average makes Kaopen an invalid measure of capital account openness in any single year” (129).
behind this specific type of financial policies. Recently Karcher and Steinberg (2013) revealed how the use of Chinn Ito index has led to measurement errors and an underestimation of the effects of political variables.

The explanations of why governments choose to allow or restrict capital flows can be organized by whether they mainly focused on the domestic or international dimension.

2.1. Domestic Level

2.1.1. Economic Explanations

The single most robust regularity in the literature about capital controls in developed countries according to Eichengreen (2001) is the negative association between per capita income and the presence of restrictions. The more developed the country, the more likely it will remove restrictions on capital flows. The explanation is that high income countries can better accommodate capital account liberalization.

The association of restrictions with exchange rate regime has also been studied. Countries with pegged exchange rates are more likely to have a closed capital account as capital mobility increases the difficulty of managing a currency peg (Leblang 1997, Milesi-Ferreti 1998, Garrett, Guisinger and Sorens 2000).

Magud, Reinhart and Rogoff (2011) meta-analysis of the literature identified four “fears” behind the decision to adopt or preserve capital controls in the context of the trilemma⁴:

1. Fear of appreciation: being the preferred destination of financial investors confers the privilege of ample access to funds at favorable cost. Yet the capital inflows create upward pressure on the exchange value of currency, eroding the international competitiveness of domestic manufacturers. One policy alternative to address this challenge is to accumulate foreign reserves. Although over time, sterilizing such reserve accumulation becomes more difficult, rendering more direct intervention more attractive.

2. Fear of hot money: if investment is considered as temporary the sudden injection of funds raises concern about the future capital flight. To deal with this Tobin proposed a tax to dissuade such inflows and prevent the pains of adjustment.

⁴ The trilemma argues that a country can only choose two of three alternative positions: monetary policy autonomy, fixed exchange rate and capital mobility.
3. Fear of large inflows: as Magud, Reinhart and Rogoff point out: “not all money is hot but sometimes the sheer volume of flows matters”. Large quantities of capital inflows cause distortions in the financial system. This in turn can lead to excessive risk taking and asset price bubbles.

4. Fear of loss of monetary autonomy: the impossible trinity (fixed exchange rate, monetary policy autonomy, and open capital markets) causes that countries that want to retain some monetary policy autonomy under an open exchange regime may have to decrease the degree of openness on capital markets.

The aforementioned motivations are exclusively linked to macroeconomic variables. Only the fear of loss of monetary autonomy could be interpreted as “political”. Unfortunately the authors do not test these explanations. Instead they present a meta-analysis of the available literature on the consequences of capital controls by selecting papers that study the imposition of restrictions by emerging markets during the 1990s.

More recently, Aizenman and Parischa (2013) considered and tested the macroeconomic causes of changes in capital controls on outflows in 22 emerging market economies. The authors laid out five sets of economic explanations: fiscal concerns, overheating concerns, foreign exchange valuation concerns, macroeconomic stability and financial stability concerns. They found that in the decision to liberalize capital outflow controls concerns related to net capital inflows such as higher appreciation pressure in the exchange market, higher real exchange rate volatility, and greater accumulation of reserves, predominated over fiscal concerns. Unlike the 1980’s, the authors found very limited importance of fiscal variables in explaining liberalization of capital outflow controls.

2.2. Political Economy Explanations

Other scholars have suggested that besides pure economic motivations the kind of policy choice towards capital flows is shaped by political and institutional factors. In a set of seminal studies, Alesina, Milesi-Ferreti and Grilli (1993,1995) argued that government partisanship matters and also considered the institutional restrictions such as the level of central bank independence, whether the executive has a majority in the legislature and the number of veto players.
Regarding partisanship, Quinn and Inclan (1997) posited that left governments, especially social democratic governments, have both employment and tax redistribution reasons for supporting capital restrictions, and conservative governments have competing reasons for supporting liberalization of capital accounts. Center parties on average might support liberalization as they lack concentrated economic interests. In their empirical test using 21 OECD countries from 1950 through 1988 the authors found that partisanship and partisanship in interaction with economic structure were significant across specifications.

In a formal model, Alfaro (2004) argued that when governed by the left, capital importing countries (those resorting on external sources of funding) will remove capital controls whereas capital exporting countries will impose capital controls. Her test only covered OECD members. Furthermore the model assumptions’ neglected situations where capital inflows result from an exogenous shock.

In a rare example of mixed-methods, Kastner and Rector (2005) examined the role of partisan politics in the liberalization of financial markets within 12 Western European democracies (1960-1986). They found that right governments were more likely than left governments to enact liberalization. Left governments were no more likely to impose new restrictions. But the level of Central Bank independence was not controlled for.

As for developing countries capital account liberalization, Brooks and Kurtz (2007) demonstrated the importance of partisanship of executive and the degree of legislative fragmentation after accounting for economic contextual variables testing their hypotheses with a sample of 19 Latin American countries (1985-1999). Unfortunately the authors did not consider Central Bank independence either. This variable may be an important determinant because one of the strategies followed by liberalizers to lock in market reforms and insulate it from political changes was to grant the Central Bank more independence from the executive power.

Evidence from developed countries supports this idea. Alesina et.al. (1993) found that capital controls were more likely to be imposed by strong governments which had a relatively “free” hand over monetary policy because the Central Bank was not very independent. And Quinn and Inclan (1997) demonstrated that the presence of an independent central bank reduces the likelihood that a government will attempt an inflation tax. So an independent central bank decreases the likelihood
that a government will maintain capital controls. The authors cautioned about the possibility of a third variable problem, that both central bank independence and financial openness are caused by a nation’s underlying liberalism (785).

Between domestic and international level explanations, Haggard and Maxfield (1996) argued that increasing economic interdependence enlarged the weight of domestic actors with foreign ties and of foreign investors in the country, expanding the array of interests likely to benefit from and demand greater openness of financial markets. After conducting a qualitative study of Mexico, Indonesia, Chile and South Korea the authors concluded that the proximate cause for financial market opening in developing countries comes more often from pressures generated by balance of payments crises.

2.3. **International level**

2.3.1. **Systemic constraints**

Studies focusing on the international dimension underscore the importance of systemic constraints, such as the level of trade and financial interdependence of a country and the role of international institutions. The impact of emulation caused by the sharing of ideas and diffusion processes has been considered as well.

Leblang (1997) hypothesized that enlarged international financial integration would increase the governments’ incentives to remove capital controls because there is more political pressure from domestic firms, multinational corporations and international financial institutions. After a quantitative test including 91 OECD and non-OECD countries he concluded that the impact of financial globalization must not be exaggerated.

Another type of external pressure that has been tested is the role of the International Financial Institutions as constraining factors. Mukherkjee and Singer (2013) find that developing countries that had an IMF program increased capital account liberalization, while the existence of a BIT with the US did not have an impact. In other tests international influences were assessed but none proved significant (Brooks and Kurtz 2007 and Chwieroth 2007). Chwieroth (2007) concluded that after controlling for the role of neoliberal ideology in government the effect of most international variables (except IMF program) disappeared.
2.3.2. Diffusion

The role that policy diffusion and the spread of ideas play in the liberalization of capital account has been explored too. Among the findings are that countries are more likely to remove restrictions if their neighbors have taken similar measures (Garrett, Guisinger and Sorens 2000, Simmons and Elkins 2004, Chwieroth 2007).

To date there is no consensus about which of these sets of explanations domestic and international, are more useful to understand why a country decides to maintain, remove or impose capital controls. Moreover, existing research focuses on years prior to the 2000s and the international and domestic contexts have dramatically changed. On the domestic arena, unlike past processes of liberalization undertaken in authoritarian or democratizing regimes, today several developing countries are at least electoral democracies where policymakers and parties compete and are accountable to citizens in the ballots. Deep trade and financial opening have generated new interest groups and international commitments.

On the international dimension there is a more integrated international financial system that turned developing countries into recipients of both portfolio and direct foreign investment. The Asian financial crisis (late 1990s) forced governments to reevaluate financial liberalization, adopt a more cautious approach towards capital flows and some countries have resorted to capital controls when needed. In some of them Chinese demand for commodities has caused export booms offering alternative sources of finance increasing the leverage governments have.

Finally, a few recent works have attempted to take a narrower, more precise scope. Peppinski (2013) explores the liberalization of finance but focusing on the banking sector. And Pinto (2010) develops and tests a model about the role of partisanship and FDI. For him the regulation of foreign investment is a function of the preferences of owners of factors of production in the host country, their relative power, their potential to influence the policy-making process and the receptiveness of the incumbent party to the demands of labor or capital owners. His main hypothesis is that when a party of the left (right) is in government, foreign direct investment regimes will be more open (restrictive). I take part of this trend by considering policies towards portfolio investment in the developing countries.
3. Research Question and Hypotheses

Prior work provides several complementary explanations to the question of why do policymakers in developing countries impose capital controls on portfolio inflows whereas others don’t? In the next section I derive the hypotheses that will be tested. I argue that besides some economic conditions that make capital controls more likely, some political and institutional variables are fundamental: partisanship and central bank independence can explain why some countries impose restrictions. For developing countries, international constraints are also in place so their government’s behavior is shaped by them.

Assuming that left governments represent workers interests and right governments the owners of capital preferences:

**Hypothesis 1: Left governments are more likely to maintain capital controls on (restrict flows of) short-term investment (portfolio)**

The rationale of this hypothesis is the following: Parties in government seek to protect their constituents. Therefore left governments care about the potential impacts of financial instability in workers’ welfare because past crises placed the burden of economic adjustment on them (Lustig 1995, 5). Moreover the currency appreciation generated by an upsurge of capital inflows decreases export competitiveness and puts manufacturing employments at risk. Governments can fight exchange rate appreciation by accumulating international reserves, but that entails an opportunity cost as money could be invested in infrastructure or social programs so they will prefer to impose capital controls.

Brooks and Kurtz (2007) note that with regards to capital account deregulation, which includes capital controls, “right governments should be more amenable on basic ideological grounds...left governments by contrast, should be particularly averse to this, not so much because of ex ante pressures by organized constituents, but rather because of the ways in which open capital accounts place substantial restrictions on the viability of heterodox economic policies or the ability to engage in expansionary fiscal policies (Mosley 2003). Moreover the potential benefits for their constituents are typically few, as lower-income workers are less able to take advantage of expanded investment options to hedge against new risks attendant upon financial openness” (707).

Two related questions are: Under what conditions do left governments impose capital
controls? What is the role of Central Bank Independence or other veto players? And how do international constraints limit the behavior of governments? In an era of increased financial liberalization it may be difficult to impose capital controls. Prior studies have shown how institutional and contextual variables matter (Haggard and Maxfield 1996, Kastner and Rector 2007). Thus scope conditions are considered.

**Hypothesis 1.1.: Capital controls will be less likely if there is an independent central bank**

During the 1990s several developing economies took steps to grant central banks with more independence. This translated into a reduction in the margin of maneuver for the executive. Theoretically the independence of central bankers means that their decisions will be based in technical measures rather than in an assessment of who the winners and losers will be. It also means that their appointment usually goes beyond electoral cycles. In fact prior studies such as Alesina et.al. (1993 ) and Quinn and Inclan (1997) focused in developed countries found that even if a left party is in place and will advocate for restrictions on short term inflows, the likelihood to be able to impose them will decrease if the central bank is independent.

**Hypothesis 1.2.: Capital controls will be less likely the more international constraints a country has.**

Developing countries behavior has always been subject to international forces. In the past external debt and IMF programs played a significant role in pushing for capital account liberalization (Mukherjee and Singer 2013, Chwieroth 2007), and new commitments and constraints have emerged in recent years. Among them are the bilateral investment treaties which create mechanisms for dispute settlement between governments and investors. Free Trade Agreements with the United States are also expected to be determinant in policies towards the financial sector. And finally, the degree of trade liberalization is also expected to decrease the capacity of governments to impose capital controls.
4. Data and Methods

The question and hypotheses specified above apply to all developing countries, particularly to Emerging Markets which receive the bulk of investment. So the ideal test would focus on them. Nonetheless data on the partisanship of Emerging Markets, is very incomplete (with several countries missing) and has a poor match with regional experts’ assessment (at least with regards to Latin America). Thus as a first step and to ensure the quality of the data, I use a sample of 13 Latin American countries from 1997-2010: Argentina, Brazil, Costa Rica, Chile, Colombia, Guatemala, Dominican Republic, Ecuador, El Salvador, Mexico, Peru, Uruguay and Venezuela. A summary of the variables is provided in the appendix.

Latin America is an interesting place to test the hypotheses about capital controls for several reasons. First during the 2000s increasing inflows of both, direct and foreign investment arrived to the region (see figure 2 in Appendix). Also the region underwent substantial liberalization throughout the nineties, however after a period of relative openness governments started to follow different strategies towards inward investment. By 2010, different measures of financial openness show that on average liberalization processes stopped and in some cases even reversed (see figure 3 in Appendix).

On the political side, within countries there has been alternance between left and right parties, and across the region there is a variety of governments that range from the radical left (i.e.Hugo Chavez in Venezuela) to the conservative right (Colombia and Mexico) (see figure 4 in Appendix). The region also has diverse degrees of Central Bank Independence and international constraints (US Free Trade Agreements, number of Bilateral Investment Treaties).

The main dependent variable in this paper is capital controls defined as restrictions imposed on all types of investment (bonds, money market instruments, equities) purchased locally by non-residents and on sales or issuance abroad by residents; as well as inflows of collective investments, inflows of financial credit and direct investment. To operationalize it I use two measures of financial restrictions from Klein’s (2000) dataset. Besides providing a general index of capital controls on inflows, Klein’s dataset also provides a disaggregated account of controls in place for different types of capital flows documented by the IMF AREAR. It distinguishes between
restrictions on inflows and outflows, as well as types of flows such as portfolio, FDI, bonds etc. Therefore the dependent variable from the dataset is Capital controls on equity inflows (eqic) a dichotomous variable that takes a value of 1 if there are restrictions and 0 if equities are free to flow.

Even when the measure is more precise than the Chinn-Ito Index because it focuses only in restrictions towards investment, it still has some shortcomings. The first one is that because it is a yearly measure it does not capture possible policy changes that last less than one year. Secondly, its binary nature does not allow us to capture the nuances or degrees of capital controls. A better measure would be one that captured the degree of capital controls or the number of policy changes.

To test for the hypotheses I use the following independent variables:

*Partisanship* refers to the ideological orientation of government. To measure it I take Baker and Greene’s (2011) measure who constructed a 20 point scale ranging from 1 (extreme left) to 20 (extreme right) and captures the level of support for candidates with leftist ideologies in a particular election by considering the ideological positions and relative electoral success of all competitors that win votes.

As a robustness check I also created two dummy variables Left and Right using information from the Dataset on Political Ideology of Presidents and Parties in Latin America (Murillo, Oliveros and Vaishnav 2010). The dataset contains an index of presidential ideology that ranges from one (far right) to five (far left). Leftmur is coded 1 if the index takes the measures of 1 and 2 and 0 otherwise. Rightmur takes the value of 1 if the index is 4 or 5 that is if the government is Center, Right or Far Right.

The measure of central bank independence is based on the legal characteristics of the central bank and is weighted by the amount of turnovers of central bank directors. (see Cukierman et.al.) I use Hicks and Bodea (2013) dataset which contains an update of the measure. The index ranges from 0 to 1, 0 being the least independent and 1 is being completely independent.

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5 A drawback of all available measures of capital controls in developing countries is that they are based on the AREAR report which is annual. Sometimes, capital controls are temporary and last less than a year. So these measures will be left out in the analysis. Ideally, one would have to have a monthly measure (See Aizenman and Pasricha forthcoming).

6 For both measures data was available until 2009 so I imputed the values when the same president was still in power as of 2010.
Other studies have resorted to more aggregate measures of constraints to government, particularly the number of veto players. To test for this alternative I use Henisz Polcon V which codes for different types of institutional restrictions.

Besides domestic institutions, developing countries may have international constraints. To test for the related hypotheses I use two variables: BITS which is the number of Bilateral Investment treaties signed by a country until 2011 (Graham, Johnston and Kingsley 2011) and USFTA which is a dummy variable that takes the value of 1 if a Free Trade Agreement with the US has been ratified.

Capital controls policies in states are partly influenced by the behavior of other states in the international system, particularly neighbors. As diffusion studies have shown (Simmons and Elkins 2004) financial liberalization is more likely when other similar countries are also liberalizing. For each type of investment I include a control equal to the total number of countries with capital controls within the 13 countries in the sample for the year in question (countries with capital controls on equities). Kastner and Rector (2005) argue that this kind of variables also control for other unobserved systemic factors that may cause state’s behavior.

To account for several economic conditions that influence the decisions around capital controls I use a set of variables that often appear in the literature. It is interesting to note though that there seems to be no consensus regarding which ones are more important than others. Prior work shows how the level of development decreases the likelihood of capital controls because governments have other mechanisms through which collect taxes and address the instability generated by inflows of capital, so I include LnGdppc that is the natural logarithm of GDP per capita, measured in constant (2005) US dlls to represent development levels. Data comes from the World Bank World Development Indicators.

The exchange rate arrangement of a country is another relevant factor. Prior studies have shown that capital controls should be more prevalent during fixed and managed exchange rate regimes because they can cushion speculative attacks and allow to maintain the currency values in their levels. This variable goes from 1 to 5 where 1 refers to fixed exchange regimes and 5 is free floating. It is from Ilzetzki, Reinhardt and Rogoff 2011) dataset which uses information from the IMF Annual Report on Exchange Rate Arrangements.
Milesi et.al.(1993) argue that the level of trade openness of a country affects the degree to which governments can control fluctuations of exchange rate. Because it makes monitoring capital flows more difficult. So we should expect a negative relationship with capital controls. The variable *trade* measures the sum of imports and exports as a percentage of GDP and comes from the World Bank WDI.

As a measure of volatility I include the difference of the *real exchange rate* (*reer*) as the real exchange rate may impact the patterns of capital controls and *inflation*. I also include a control for the amount of international reserves as a share of GDP a country has *Reserves*. These variables come from the World Bank.

Table 1 presents a summary of the variables and expected relationships. The statistics is provided in the Appendix.

<table>
<thead>
<tr>
<th>Type of explanation</th>
<th>Variable</th>
<th>Controls on Portfolio Inflows (eqi)</th>
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<tbody>
<tr>
<td><strong>Political Economy</strong></td>
<td>Partisanship</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>Central Bank Independence</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td><em>Partisanship x CBI</em></td>
<td>+/-</td>
</tr>
<tr>
<td><strong>International Constraints</strong></td>
<td>Total number of BITs</td>
<td>-</td>
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<tr>
<td></td>
<td>FTA with US</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Number of countries in the region</td>
<td>+</td>
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<tr>
<td></td>
<td>with Capital Controls</td>
<td></td>
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<tr>
<td><strong>Economic controls</strong></td>
<td>lnGDPPC</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Trade</td>
<td>+</td>
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<tr>
<td></td>
<td>Portfolio inflows $t-1$</td>
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<tr>
<td></td>
<td>REER$_t$</td>
<td>+/-</td>
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<tr>
<td></td>
<td>In Reserves $t$</td>
<td>+</td>
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<tr>
<td></td>
<td>Exchange Rate Arrangement (Fixed=1, Free=5)</td>
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</table>
Given the binary nature of the dependent variable, I employ logit analysis. To deal with heteroskedasticity which is often present in cross-national data, I use clustered robust standard errors. To avoid simultaneities between the covariates most independent variables, the economic indicators, are lagged by one year. Temporal dependence is inherent to the outcome variable, as the presence or absence of controls may affect the decision to impose additional or remove them therefore I include the lagged dependent variable to attenuate the effects of such temporal dependence.

5. Main Findings and Conclusions

In this section I first present the results of the tests on the determinants of capital controls of portfolio inflows and draw some general conclusions. As this is work in progress the analysis is preliminary.

Table 2 shows the output of the logistic analysis using the measure of restrictions on equities as dependent variable, all estimations included clustered robust standard errors. The variable of interest for hypothesis 1, partisanship, behaves as expected across different specifications, with a negative sign though it is not significant. This goes contrary to prior studies’ findings, particularly those focusing in Latin America (Brooks 2004, and Brooks and Kurtz 2007) which found it was significant. A potential explanation is that such studies considered an era where the executive power was less constrained both institutionally and politically (1980s-1990s) and even when they included measures of legislative fragmentation they did not control for central bank independence which is key in these decisions.

In fact one of the main findings is that central bank independence is a factor that to a certain extent explains whether countries are more likely to have capital controls on portfolio investment. This entails that even if leftist governments would be more likely to resort to capital controls if the central bank has a high level of autonomy, they will find it difficult. Hypothesis 1.2. is partially confirmed as Central Bank Independence is negatively related to the presence of capital controls and significant in models (1-3) yet its significance does not hold once the international constraints are considered like the measure for trade liberalization and the number of Bilateral Investment Treaties (models 4-7).
Hypothesis 1.2.2 about the role of international constraints is supported. The level of trade is negatively related to capital controls and significant across the models which fits with the theoretical expectations. This also coincides with the findings of other analyses.

Prior work had not tested the impact of the number of bilateral investment treaties has. And as the results show, this variable is negative and significant which confirms that once countries have entered into them their margin for maneuver is very limited. The ratification of a US Free Trade Agreement was not significant. However this may be related to the fact that several countries only ratified their agreements until the late 2000s. This may be further explored in a more recent period by studying Latin American countries reactions to the 2008 financial crisis especially during 2010 and 2011.

The sign of the exchange rate arrangement goes in the expected direction. That is if the country has a free floating exchange rate it will most likely avoid capital controls. And if it has a fixed or managed currency it will probably resort to capital controls. However it is only significant in one of the models.

Finally, the level of development of the economy proxied by GDP per capita was not significant and the sign goes against the expectations and the single most robust regularity in the literature about capital controls in developed countries according to Eichengreen (2001). Perhaps, higher levels of GDP per capita allow developing countries to have the capacity to impose capital controls without risking sending a “negative signal” to investors and put other priorities first as long as they do not have a very independent central bank and have not too many bilateral investment treaties.
### Table 2. Determinants of Capital controls on Portfolio Inflows in Latin American countries (1997-2010)

**DV: Restrictions on Equities Inflows**

<table>
<thead>
<tr>
<th>Partisanship</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<tbody>
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<td>-0.061</td>
<td>-0.031</td>
<td>-0.009</td>
<td>-0.070</td>
<td>-0.112</td>
<td>-0.1601</td>
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<tr>
<td></td>
<td>(0.083)</td>
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*p<.10 , **p<.05 , ***p<.01 ; Standard Errors statistics shown in parenthesis.

All estimations are Logit with clustered robust standard errors
Overall, more analysis is needed to understand what kinds of political interactions and processes lead to the decision of emerging markets countries to impose or retain capital controls towards inflows of portfolio investment. The scope of this study was limited to Latin American countries thus additional tests for other Emerging Markets are in order.

Conducting case studies might be another very useful and complementary strategy. For instance comparing the cases of Brazil, Chile and South Korea during the 2008 financial crisis. The fact that Brazilian authorities imposed restrictions on equities in 2009 points towards that potential explanation. South Korea is another country that has done that. On the other hand Chile despite having used capital controls in the early 1990s, this time refrained from using them. The fact that the right won elections in 2010 (Sebastian Piñera) suggests that the left was under strong constraints. Furthermore, its Central Bank is deemed highly independent and the financial sector is sophisticated, with substantial foreign presence (IMF 2011, and BCG 2011).

Finally, unpacking the types of restrictions that government uses reveals that further theorization and empirical analysis is in order to examine whether governments are adopting differentiated policies towards portfolio capital and foreign direct investment depending on their time-horizon and the expected impacts and benefits.
Appendix

Figure 1. Inward Investment flows to Emerging Markets and Use of Capital Controls

Source: Aizenman and Pasricha (2013)
Figure 2. Inward Investment flows to Latin America

Note: Portfolio investments are transactions in marketable securities —public or private— such as stock and bonds, as well as money market instruments. Investments that carry a significant degree of influence over investee management (in practice, when the shareholding exceeds 10%) are not regarded as portfolio investments but rather FDI. “Other investments” are, mainly, non-securitized loans.
Figure 3. Financial openness and capital controls on inflows in Latin America.

Source: Elaborated by the author with data from Chinn and Ito (2008)

Figure 4. Partisanship in Latin American Executive Power

Source: Elaborated by the author with data from Baker and Greene (2011)
### Table 4. Summary Statistics

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