

THE POLITICAL ECONOMY OF CAPITAL ACCOUNT LIBERALIZATION

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1. Introduction

A wave of capital account liberalization (reducing policy barriers to the purchase and sale of assets across national borders) swept the world in the 1990s.¹ This trend emboldened the Interim Committee of the International Monetary Fund (IMF) to recommend in 1997 that Fund members amend their Articles of Agreement to take on a new formal commitment to capital account openness. The rationale for this proposal was simple: like free trade, international capital mobility increases aggregate welfare by facilitating the efficient allocation of investment irrespective of political boundaries. The Committee's proposal, however, was the dead on arrival, falling victim to the Asian financial crisis. Capital controls have subsequently re-entered the policy debate as a potentially desirable way to mitigate volatility in international capital markets and to maintain national policy autonomy, as critics have argued that the theoretical efficiency gains from capital account openness are often not realized in practice. Notwithstanding the dramatic wave of liberalization in the 1990s, more than half the countries in the world still today retain significant restrictions on their capital accounts, and the wave of liberalization may well be coming to an end.

What explains the pattern of capital account liberalization we have observed? First Deputy Managing Director of the IMF, Stanley Fischer, (1998: 8) recently concluded: "The economics profession knows a great deal about current account liberalization, its desirability, and effective ways of liberalizing. It knows far less about capital account liberalization. It is time to bring order both to thinking and policy on the capital account" (see Eichengreen 2000 for an recent review of the literature). Our article is a contribution to this effort. We begin by developing a set of hypotheses about the fundamental economic and political forces affecting capital account policy. We then test these hypotheses using a newly developed 10-point (0-9) scale measuring capital account policy that is available for 140 countries for each year in the period 1976-1998.

Our analysis underscores two basic economic drivers of capital account policy. First, and consistent with the Mundell-Fleming framework, countries with fixed exchange rates have had less open capital accounts – presumably because of fears of losing national policy autonomy (see also Berger, Sturm and de Haan 2001).² Second, capital account liberalization has also been less frequent and less extensive in poorer countries that lack the kind of domestic institutions that now even the IMF recognizes are likely to be preconditions for reaping the benefits of free finance.

But there is more to policy choice than the goal of maximizing aggregate social welfare. We highlight three political economy dynamics that have influenced capital account liberalization. First, the traded goods sector and multinational firms are effective supporters of liberalization. The more reliant a country is on trade and the more important foreign direct investment is to it, the more open its capital account.³ Second, government spending and capital account liberalization tend to go hand in hand. This may be evidence that governments that have chosen to liberalize the capital account have simultaneously sought to cushion the attendant dislocations by expanding the public economy. Finally, we show both that stable democracies tend to have more open capital accounts and that democratization has precipitated capital account liberalization.

The remainder of the article is divided into five primary sections. Section 2 develops our theoretical arguments about the economics and politics of capital account policy. Section 3 introduces our new 0-9 point scale of capital account openness. Section 4 discusses methodological issues. We present our results in section 5. Finally in section 6 we speculate about the broader implications of our study for the globalization debate.

2. Theory

Economics

Exchange Rates

In an effort to create an open but stable international economy, the Bretton Woods planners married trade liberalization with fixed exchange rates. It is often forgotten, however, that the IMF's founding Articles of Agreement explicitly allowed member states to impose restrictions on capital account transactions.⁴ Those who constructed the new international order, led by Keynes himself, believed that capital controls served two important functions – reducing volatility in international capital movements and allowing governments to run independent macroeconomic policies.

Beginning in the early 1970s, however, capital account liberalization became increasingly widespread. One obvious explanation for this trend was the demise of the Bretton Woods system of fixed exchange rates. Per the Mundell-Fleming approach to open economy macroeconomics, fixed exchange rates, capital mobility and domestic policy autonomy constitute an “unholy trinity” (Cohen 1996). Most importantly, governments that simultaneously fix the exchange rate and open the capital account give up monetary policy autonomy – because their interest rates cannot deviate from those in countries to which their currencies are pegged.⁵ Assuming that governments value the ability to use monetary policy to smooth national business cycles, one would thus hypothesize that:

H1: countries with fixed exchange rates are less likely to open their capital accounts.

Level of Development

But H1 cannot tell the whole story about the economics of capital account policy because numerous countries – most notably members of the European Union – have chosen simultaneously to fix their exchange rates and to open their capital accounts.⁶ The simplest neoclassical explanation for capital account liberalization is that it is welfare enhancing. Maurice Obstfeld (1998: 2) summarizes this logic succinctly: “International financial markets allow residents of different countries to pool various risks ... a country suffering a temporary recession

or natural disaster can borrow abroad. Developing countries with little capital can borrow to finance investment, thereby promoting economic growth without sharp increases in savings rates”.

But the neoclassical position has come under attack in recent years.⁷ The starting point of most critiques is the claim that international capital markets are adversely affected by the classic incomplete and asymmetric information problems – adverse selection and moral hazard.⁸ One potential result of these problems is credit rationing, but in recent years their manifestation has been somewhat different – too much risky lending in boom periods, followed by precipitous capital flight. As the headline financial crises of the 1990s attest, the markets are subject to wild swings in sentiment that are, if not irrational, certainly unpredictable. Even those who believe “bad fundamentals” have been at the root of these crises acknowledge that it is very difficult to know precisely when outcomes will switch from “good” equilibria (rapid growth fueled by vast capital inflows) to “bad” ones (widespread capital flight precipitating deep recession) (Rogoff 1999).

Thus scholars have begun to ask whether the longer run macroeconomic benefits of allocative efficiency outweigh the instability costs of capital account openness? Dennis Quinn (1997) provides evidence in support of the neoclassical view with respect to growth rates in a group of OECD nations and Newly Industrialized Countries (NICs in East Asian and Latin America). Using a larger sample of nations, Dani Rodrik (1998a) argues there is essentially no relationship between capital account policy and economic growth. Ethan Kaplan and Rodrik (2001) have subsequently argued that the Malaysian capital controls imposed after the Asia crisis “worked” – speeding up the recovery process.

Recent research by Sebastian Edwards (2001) and Geoffrey Garrett (2001a) offers a way to reconcile these conflicting views on the macroeconomic effects of capital account policy.⁹ They find that capital mobility is associated with better growth rates in more developed countries, whereas capital account openness has more deleterious effects in poorer nations. The

rationale for these findings is that countries can only reap the efficiency benefits of capital account liberalization without incurring its instability costs when they possess prudential financial sector institutions that establish regulations for capital adequacy, reserve requirements and the like, that monitor closely the behavior of actors in the financial sector, and that are transparent to the outside world. This type of prudential regulation is now commonplace in the OECD, but it is invariably lacking in least developed countries.

This line of argument suggests a simple hypothesis about the effects of the level of development:

H2: Countries with higher per capita incomes are more likely to open their capital accounts

Politics

The arguments in the preceding section are based on the economist's notion of an aggregate welfare maximizing government. Governments – as benevolent social planners – are expected only to open the capital account when this will increase aggregate social welfare. Of course, the first move of political economy is to note that “bad policy” (from the social welfare perspective) is often “good politics” (for a recent review, see Robinson 1998). The literature on foreign economic policies such as trade and capital account liberalization focuses on two dynamics. First, the constellation of power and interests in society may sometimes lead governments to pursue policies that benefit one coalition at the expense of aggregate welfare (Frieden and Rogowski 1996). Second, political institutions affect which societal actors are able to influence government policy choices (Garrett and Lange 1995).¹⁰

Interest Group Politics

The political economy of trade policy is well understood. The “endogenous tariffs” approach argues that there is an inherent protectionist bias to politics because the winners from free trade – consumers – are dispersed and the benefits they receive are relatively small, whereas the losers – import-competing sectors – are concentrated and consider trade policy a life and

death issue (Magee et. al. 1989). This does not explain, however, the recent trend to trade liberalization (see Alt et. al. 1996 for a recent review). One possible reason for this is that exporters may have moved from the sidelines of the trade debate (the endogenous tariffs approach views them as disinterested in import restrictions) to being more involved as free trade boosters, either to reduce the possibility of retaliation in foreign markets for domestic protection or because their multinational production regimes rely increasingly on imported inputs (Garrett 2000).

Frieden and Rogowski (1996) suggest that it should be a relatively straightforward matter to extend the political economy of trade policy to the capital account. Citizens benefit from liberalization because it is welfare improving; less competitive domestic capital should oppose liberalization; more competitive capital would support it. In this case, however, the position of citizens as consumers is more complicated – since it is unclear whether they benefit in a macroeconomic sense from liberalization. Indeed, the survey evidence tends to suggest that citizens, particularly the less skilled and poorer, oppose all forms of globalization (Slaughter and Scheve 2001). But whereas some aspects of globalization are tangible – immigrants at home and job losses to foreign locations – the capital account seems quite esoteric.

Thus, it seems reasonable as a first approximation to make a simple pluralist proposition about capital account politics. Exporters, multinational firms and globally connected financiers are likely to be the strongest domestic supporters of capital account liberalization. The larger and more powerful these actors are in a given country, the greater the pressure for open capital accounts.¹¹ It is reasonable, in turn, to use the extent to which national economies are integrated into international markets as a proxy for these calculations. Thus, we hypothesize:

H3: Countries that are more connected into the international economy are more likely to open their capital accounts.

We then seek to capture broader societal pressures indirectly, using the size of the public economy as a proxy for a country's commitment to the redistribution of market-generated wealth

and risk. There are at least three different ways to think about the connection between capital account policy and the size of the public economy. First, it is commonly assumed these days that capital mobility undermines redistributive public economies in a policy “race to the bottom” (Rodrik 1997). From this perspective, one could hypothesize that countries with larger public economies would be less likely to liberalize the capital account, so as to protect the redistributive capacity of the state:

H4a. Countries with larger public economies are less likely to open their capital accounts.

Second, one could also argue exactly the opposite. Extensive public spending may be a prerequisite for open capital accounts because redistributive public policies cushion citizens from the vicissitudes of global market forces, thereby providing political support for liberalization. Rodrik (1998b) has recently made this case with respect to trade, but he is considerably more skeptical about whether this “embedded liberalism” perspective extends to capital mobility (Rodrik 1997). Nonetheless, recent work by Garrett (2001b), Garrett and Mitchell (2001) and Quinn (1997) suggests that the “compensation” thesis may also apply to capital account policy (see Garrett 1998a for a broader discussion of this question) If this were the case, we would hypothesize:

H4b. Countries with larger public economies are more likely to open their capital accounts.

Finally, one might use the “race to the bottom” perspective to provide a very different explanation for predicting a positive correlation between the size of the public economy and capital account openness (i.e. H4b). If one assumes that capital account liberalization puts downward pressure on the public economy, and that large government reduces economic growth (Barro 1998), it would follow that efficiency-seeking governments that inherit large public economies would choose to open the capital account as an indirect (and hence more politically palatable) way of cutting government spending.

In our empirical work, we seek to draw inferences about which of these dynamics is actually at work in the relationships between government spending and capital account policy by distinguishing between the effects of large accumulated levels of public sector activity and the short term marginal changes in spending levels that incumbent governments can implement.

Regime Type

Let us turn now to the effects of political institutions on capital account policy. Here we focus on the effects of democracy. The literature on the impact of regime type on economic policies and economic outcomes is large, incoherent and inconclusive (see Przeworski and Limongi 1993). There are multiple reasons for this lack of consensus about the effects of regime type. First, we do not have a good handle on when autocrats use their insulation from public pressures to act as “benevolent dictators” (the stylized East Asian miracle) rather than as “cleptocrats” feathering their own nests (and those of their cronies) at the expense of the common weal (the Sub-Saharan African paradigm). Second, it is not clear to whom democracy transfers power. Median voter models imply that democracies should be heavily downwardly redistributive, in marked contrast with both “special interest politics” models and Marxian conceptions of the “privileged position of business” derived from the centrality of private investment under capitalism. Third, the political and policy dynamics associated with transitions to democracy might be quite different from the steady state impact of stable democracy, and these differences could go in either direction (Przeworski 1991). The post-communist pattern seems to have been one of radical market reform in the early transition years, eroded over time as democratic politics have stabilized. The Latin American experience (Chile excepted) apparently went in the opposite direction – more strenuous market reforms postdated democratic consolidation.

With respect to the specific case of the capital account, if one assumes that rank and file citizens are opposed to liberalization, and that these citizens are empowered by democracy, one would predict:

H5a: Democracies are less likely to have open capital accounts.

But the poor tend not to vote, capital account policy is esoteric, and most citizens probably do not understand its effects on them. In contrast, capital account is of great importance to sophisticated economic actors who operate in global markets. To the extent that autocracies tend to protect the interest of a largely inwardly looking (and uncompetitive) domestic elites, one might thus suspect that transitions to democracy would empower the supporters of capital account openness. And democratization might also bring with it an ideology of, and broad support at the citizen level for (at least in the short term), liberalization – associating political and economic freedom as two halves of the same acorn. This would imply:¹²

H5b. Democracies are more likely to have open capital accounts.

3. Measuring Capital Account Policy

There are two broad types of variables used in the literature on the freedom of capital to move across borders. One measures capital mobility directly, in terms of either convergence in rates of return across countries (Frankel 1993) or the extent to which domestic savings rates affect domestic investment (Feldstein and Horioka 1980). In this article, however, we are concerned not with capital mobility as a behavioral outcome (no doubt affected by things such as the state of information technology and the home country biases of investors, see Garrett 2000). Rather, we wish to explain the direct efforts of governments to affect cross-border capital flows – that is, the extent to which purchases and sales of assets that cross national borders are restricted by government regulations.

The first systematic attempt to analyze cross-national capital account policy was undertaken by Alberto Alesina, Vittorio Grilli and Gian Maria Milesi-Ferreti (1994). Using data reported in the International Monetary Fund's *Annual Report on Exchange Arrangements and Exchange Restrictions* (AREAER), they coded policy among the OECD countries for the decade

of the 1980s using a 0-1 dummy variable. Subsequent studies have used the same variable but extended the country and year coverage (Leblang 1997, Simmons and Elkins (2000)). Dennis Quinn and collaborators (Quinn 1997, Quinn and Inclan 1997) then went beyond this dummy variable approach by creating a 0-4 scale for restrictions on the capital account during two time periods (the mid-1970s and the mid- to late-1980s) for a sample of developed and developing countries. But Quinn's approach does not take into account payments and proceeds of "invisibles" (payments for services, such as financial or legal advise, royalties, transfers to overseas residents, etc.) that are an important part of the capital account. Nor does it distinguish between restrictions on inflows and outflows of capital, nor among different types of capital transactions (portfolio vs. FDI, etc.).

Beginning in 1996, the AREAER began explicitly to note the degree of openness on different categories of capital controls. Johnston and Tamirisa (1998) used this data to code nine categories of capital controls for the single year of 1996. Our Capital Account Openness Index (CAOI) extends this analysis both forward to 1999 and backward (by coding the descriptive data in older issues of AREAER according to the 1996 scheme).¹³ CAOI is available for 173 countries over the period 1973-1999. It is based on nine categories of capital account transactions: (1) payments from invisible transactions; (2) proceeds from invisible transactions; (3) inward controls on money market transactions; (4) outward controls on money market transactions; (5) inward controls on credit operations; (6) outward controls on credit operations; (7) inward controls on foreign direct investment and real estate; (8) outward controls on foreign direct investment and real estate; (9) and controls on provisions and operations of commercial and credit institutions. Each category is coded as either having significant restrictions ("closed") or not ("open"). Table 1 describes each of the categories in more detail.

Table 1 about here

We then add the scores for these dummy variables to create the overall index, with a range of possible scores from 0 (fully closed) to 9 (fully open). The overall CAOI was highly

correlated with each of its components (correlations of at least 0.8, see Table 2). The correlations between inflows and outflows across the different types of capital account transactions of CAOI were generally quite high, but this was not the case for restrictions on inflows and outflows of FDI, for which the correlation was only .40. These differences with CAOI merit investigation in future work. Nonetheless, we are quite confident that CAOI is a good overall indicator of capital account policy and that it is the appropriate variable to be analyzed in our initial exploration of the data.

More importantly for present purposes, CAOI is also quite highly correlated with other measures of capital account openness for those countries and years for which we have comparable data. For example, correlation between the CAOI and the Johnson-Tamirisa 1996 dataset is 0.88, and the correlation with the frequently used IMF AREAER dummy variable is 0.78. The correlation between CAOI and Quinn's (1997) capital account index is somewhat lower (0.67), largely the result of his giving higher ordinal scores for openness to some OECD countries in the 1970s than is justified using our coding scheme.

Table 2 about here

In the remainder of this section, we present some descriptive data on over time and cross-national trends in capital account openness from the early 1970s to the late 1990s. Figure 1 plots over time (unweighted) averages for countries at different levels of development – high, middle and low groupings based on per capita income.¹⁴ Two things stand out in these data. First, richer countries have always had more open capital accounts, and there is no evidence of convergence over time among these country groupings. Second, whereas there has been a gradual but accelerating trend towards capital account liberalization from the early 1970s to the present among the high-income countries, there were no aggregate increases in capital account openness in the low and middle-income grouping until 1991 – when a period of rapid and dramatic liberalization began.

Figure 1 about here

Figures 2a and 2b break down capital account policy by region. Beginning with the regions that have had more open capital accounts (Figure 2a), it is clear that the US and Canada led the way – with most important liberalizing reforms occurring before 1973. The countries of Western Europe had much more closed capital accounts than North America until the mid 1980s, when more than a decade of substantial liberalization began (in large measure in the context of the European Union’s drive to complete its “internal market” – the “1992” program). Latin America resembled Western Europe in the 1970s in terms of capital account openness, but the debt crisis of the early 1980s forced many Latin American countries to impose greater restrictions, which they maintained until the early 1990s. The oil exporters of the Middle East and North Africa have long had more open accounts than most developing countries. However, the liberalization wave of the 1990s was less apparent in these countries than in any other region.

Figures 2a and 2b about here

Figure 2b describes trends in regions that have historically had very closed capital accounts. It is for these regions that the liberalization trend in the 1990s is most apparent. Two other features of this figure are also worth noting. First, the East Asian NICs began to open their capital accounts in the 1970s, with the pace of liberalization steadily increasing over time. Second, as on so many dimensions, the changes associated with the transitions away from communism in the countries of Eastern and Central Europe were rapid and extreme. In the first three years after the fall of the Berlin wall, the capital accounts of these countries went from being completely closed on all dimensions codified in CAOI to being at least as open as the East Asian NICs.

Appendix 1 presents the data on capital account policy on a country-by-country basis for the 1990s and in terms of changes from the 1970s. Here we only draw attention to some of the

major nations in the world and to other countries that stand out against the typical pattern for their regions or levels of development.

In the high-income category, some may be surprised to see that the U.S. fell in the lower half of OECD nations in the 1990s in terms of the CAOI. Unlike almost all other high-income countries, the U.S. capital account became somewhat less open from the 1970s (when it had among the world's most open policy) to the 1990s. It should not be surprising that the countries at the very top of the CAOI standings in the 1990s were small countries that are highly integrated into the world economy on most dimensions, including Hong Kong, Belgium, Netherlands, and oil-exporting Qatar. At the other end of the spectrum, the poorer members of the rich countries' club tended to have the most closed capital accounts.

Among the middle-income countries, Panama and Uruguay had capital accounts in the 1990s that were just as open as those in the most liberalized OECD nations, but two of the largest Latin American nations – Brazil and Chile (a paradigm of free market liberalism on most dimensions) – steadfastly resisted the trend of removing restrictions on the capital account.¹⁵ In contrast, the East Asian NICs tended to retain restrictions on most capital account transactions. The other significant trend among middle-income countries was the dramatic liberalization during the 1990s among the transition economies, with the exception of Hungary and Russia.

Liberia, a small coastal African country with considerable raw material wealth, has long stood out as the only low-income country with essentially open capital accounts. While the norm continues to be closed capital accounts in Sub-Saharan Africa, some countries in the region did open their borders to international capital from the 1970s to the 1990s – notably the Congo, Uganda, Kenya, and Zambia. The world's two most populous countries – China and India – maintained restrictions throughout the 1990s on every type of capital account transaction monitored by the IMF.

We conclude our discussion of the descriptive data by dividing countries into democracies and non-democracies. Figure 3 demonstrates that capital accounts have always been

more open in democracies, and that the gap between these regimes and non-democracies only increased over time. This distinction is all the more impressive when one remembers how many countries became democratic during the period under analysis. Of course, we cannot infer from these descriptive data alone that democracy is systematically related to capital account openness since many other things – most notably per capita income – are also highly correlated with regime type. We now move on to a more detailed empirical investigation of the determinants of capital account policy around the world.

Figure 3 about here

4.Data and Methods

Estimation Procedures

Given that our capital account policy data vary both over time and across countries, we can and should ask two questions: What enduring attributes of countries make them more likely to have more open capital accounts? What changes in conditions within countries have been associated with capital account liberalization? We address the first question with regression models using panel corrected standard errors and taking into account serially correlated error terms. We then move to a fixed effects specification (i.e. including dummy variables for each country in the analysis) to assay the over time dynamics of capital account policy within countries.

Once data limitations among the explanatory variables are taken into account, we only had sufficient information to include in the regression analysis 140 countries for the period 1976-1998.¹⁶ The maximum possible data matrix thus contained $140 \times 23 = 3220$ observations, but missing data meant that our sample was limited to 2446 observations (we also excluded all countries with fewer than 5 annual observations).¹⁷

Estimation of regression equations with panel data of this kind generates several problems. First, the short time dimension of our panel means that the generalized least squares

procedure is likely to underestimate standard errors. Second, our panel is unbalanced; only 51 of the 134 countries included in the analysis have all the relevant data for all 23 possible years. Fortunately, the Panel Corrected Standard Error (PCSE) procedure developed by Nathaniel Beck and Jonathan Katz (1995, 1996) not only generates less biased standard errors but also can deal with unbalanced panels. PCSE also corrects for heteroscedasticity and for contemporaneous correlations in the disturbance term.

We use an AR(1) correction to correct for the time weighted influence of earlier disturbances on current levels. Our analysis also assumes an autoregressive.¹⁸ Back and Katz suggest that the autocorrelation correction should be based on a single estimate of ρ , the serial correlation coefficient, for the whole data set. In this case, however, there is considerable variance in ρ 's among the very diverse set of countries in our sample.¹⁹ We thus report results based on AR(1) corrections with country specific ρ 's. The magnitude and statistical significance of the variables of interest, however, were extremely similar between equations estimated with common and panel-specific ρ 's.²⁰

The general form of the equations estimated with respect to levels of capital account openness was:

$$CAOI_{it} = \alpha + \beta_1 PCGNP_{it-1} + \beta_2 FIX_{it-1} + \beta_3 INTERNAT_{it-1} + \beta_4 GOVT_{it-1} + \beta_5 DEMOC_{it-1} + \beta_k CONTROLS_{kit-1} + \rho_i e_{it-1} + v_{it} \quad (1)$$

In this equation, CAOI is our capital account openness index. We lagged all explanatory variables by one year to take into account the possibility of reverse causation. See Appendix 2 for descriptive statistics and Appendix 3 for sources and methods for all variables used in the regression analysis.

PCGNP is per capita Gross National Product (PPP) expressed in constant 1995 US dollars in thousands. Per H1, we expect β_1 to be positive. FIX is a dummy variable for whether a country had a fixed exchange rate regime (fix=1; float=0).²¹ Following H2, we expect β_2 to be

negative. INTERNAT is our battery of variables denoting the extent to which a country is integrated into the international economy – total trade and the inward and outward stock of FDI, all as portions of GDP. We compiled the FDI stocks from Lane and Milesi-Ferreti (1999), supplemented by the United Nations Commission on Trade and Development’s (UNCTAD) *World Investment Report* (various years). We expect β_3 to be positive (H3). GOVT is general government consumption, that is, the wage bill for all levels of government as a portion of GDP. This is the most widely available measure of the size of the public economy and is the common variable in studies of this type (Rodrik 1998b). If β_4 is negative, this would be consistent with H4a, whereas if $\beta_4 > 0$, this would support H4b. We expect β_4 to be negative. Finally, DEMOC is a dummy variable coded as 1 for a democracy, and otherwise zero based on the regime type classification developed by Przeworski et. al. (2000) (note this coding is the reverse of that in the ACLP data set). Positive (negative) estimates of β_5 would be consistent with H5a (H5b). β_k is a set of control variables that we discuss in the next subsection.

We then estimate a second set of equations to determine whether the determinants of capital account openness within countries (equation 2) are similar to those among nations (equation 1). We do so by using a fixed effects model that allows the intercepts for each country (β_n) to vary:

$$CAOI_{it} = \beta_1 PCGNP_{it-1} + \beta_2 FIX_{it-1} + \beta_3 INTERNAT_{it-1} + \beta_4 GOVT_{it-1} + \beta_5 DEMOC_{it-1} + \beta_k CONTROLS_{kit-1} + B_n COUNTRY_{ni} + \rho_i e_{it-1} + v_{it} \quad (2)$$

We estimated equations 1 and 2 on three different data sets: the whole sample of countries, developed (high-income) countries, and developing (low and middle-income) countries. We divided the sample in this way because there are numerous reasons why the political economy of capital account policy might differ between developed and developing countries. Similarities in results between the two sub-samples, in contrast, would increase our confidence in the robustness of the underlying effects of policy choice.

Control variables

We employ several control variables in the equations. First, countries with low domestic savings rates may need to open their capital accounts to attract foreign investment. Second, we control for country size (the log of population) to take into account the fact that smaller countries are more likely to open their capital accounts because the costs of autarky are higher for them. It is important to distinguish between the effects of size, per se, and other others variables of interest that are highly correlated with size – most notably integration into the world economy.²² Third, countries with slower rates of economic growth and higher rates of inflation may feel the need to open their capital accounts in an effort to improve economic performance.²³

We also controlled for the outstanding obligations owed by countries to the IMF and the World Bank. Many people assume that pressure from these international financial institutions to liberalize has been consequential in many developing countries (see, for example, Przeworski and Vreeland 2000), and presumably the effectiveness of this pressure should be increasing in the money owed to the institutions. In none of the equations we estimate, however, were the estimated parameters for the IMF or the World Bank variables statistically significant.

Finally, we included two dummy variables taking into account unusual conditions in the 1990s. First, we use a dummy variable for each of the years 1990-1996 because as we have already shown, the 1990s was a decade of extensive capital account liberalization around the world. Second, we also include a separate dummy for the years 1997 and 1998, however, to determine whether the Asian financial crisis led countries, in addition to the well known case of Malaysia, to re-impose capital controls.²⁴

5. Results

Levels Regressions

Let us begin with the levels regression for all countries in our sample. None of our control variables was significant in this equation except the two dummy variables for the 1990s. As expected, our capital account index was, all else equal, 0.33 higher in the years 1990-1996

than in the 1976-1989 period. More interestingly, the estimated parameter was even somewhat higher in 1997-1998 when one might have expected a backlash against open capital accounts in response to the Asian crisis. If such an effect has materialized, it was not evident by the end of 1998.

Table 2 about here

The all countries equation lent considerable support to our two basic economic hypotheses. First, countries with higher per capita national incomes had more open capital accounts (H1). A one standard deviation increase in per capita income for the whole sample (\$8834 in 1995 USD) is estimated to have increased a country's CAOI by 1.15 units (on the 0-9 scale). Given that the mean CAOI score for the whole sample was 1.70 this was a substantial effect. Second, consistent with H2, countries with fixed exchange rates were likely to have somewhat more closed capital accounts (0.19 units lower).

There was also good evidence in our baseline equation that countries that were more integrated into international markets tended to have more open capital accounts (H3). These effects were statistically significant at better than the .01 level in the full sample for trade and for the inward stock of FDI, but not for outward FDI stock (perhaps implying that foreign multinationals have more influence over domestic policy than locally-based ones). A one standard deviation increase in trade (38.2% of GDP) is estimated to have increased the CAOI by 0.23 units; a one standard deviation increase in inward FDI stock (15.9% of GDP) would have increased the CAOI by 0.21 points.

Neither general government consumption (H4) nor democracy (H5) had a significant effect on capital account policy in the full sample, but things were different when we divided the countries into developing and developed categories (see below).

The results when our levels equation was estimated only on the sample of developing countries were generally quite similar to those for the full sample.²⁵ Again, richer developing countries had more open capital accounts (H1), whereas those with fixed exchange rates tended

to impose more controls on cross-border capital flows (H2). Bigger traders and countries with larger inward and outward stocks of FDI tended to have more open capital accounts (H3).

There were, however, two notable differences between the full sample and developing countries results. First, higher levels of government consumption were associated with less open capital accounts in the developing world (consistent with H4a concerning efforts of governments to protect high levels of public spending from the downward pressures associated with footloose finance). But the magnitude of this effect should not be overstated. A one standard deviation change in government consumption (7.4% of GDP) led to 0.14 decrease in CAOI. Second, in the developing countries regression, democracies had CAOI scores that were 0.194 units higher than for non-democracies (consistent with H5a).

Finally, the results for the levels regressions estimated for the developed countries were distinctive in several ways, though there were some baseline similarities with what we have reported above for the full sample and the developing countries sub sample. Again, higher per capita incomes were associated with more open capital accounts. Some support was also evident for H3, though the only significant association was the positive effect of inward stocks of FDI on capital account policy. But in contrast with H2 and the results presented above, developed countries with fixed exchange rates had more open capital accounts (though this association was only significant at the .10 level). This demonstrates the fact that most European countries were part of the Exchange Rate Mechanism in the 1980s and the 1990s, and tended to liberalize their capital accounts over this period as part of their “1992” commitments. To square this with the Mundell-Fleming approach, one would have to argue that the European economies form an optimal currency area, significantly reducing the costs of losing national monetary policy autonomy – but this is a keenly contested issue among students of monetary arrangements in the EU (see, for example, Garrett 1998c).

Another important difference from the developing country results was that government consumption was positively and significantly associated with capital account openness among

the developed countries (consistent with H4b). In this case, a one standard deviation increase in government spending (5.4 % of GDP) would have produced a 0.58 percentage point increase in CAOI. It is difficult to tell for these countries what causal processes lie behind this result. The political rhetoric of recent years would suggest that governments with large public economies have looked to capital account policy as a way to impose disciplines on government spending when more direct attacks on the welfare state are politically difficult. But it could also be the case, per the compensation view, that governments have sought to build political support for capital account openness by expanding the public economy. The latter interpretation would be strengthened if the positive spending-capital account openness relationship were also apparent in the year-to-year changes regression (as we find below).

Perhaps the most unexpected result in the developed country sample concerns democracy – more democratic regimes tended to have more closed capital accounts (per H5a). But we should not place much emphasis on this result because it is essentially driven by the fact that two wealthy oil producers were non-democratic and had highly open capital accounts – Kuwait and the United Arab Emirates. When these two outliers were removed, democracy had no impact on capital account policy, as one would expect given the preponderance of stable democracies during the period under analysis among the world’s wealthiest countries.

Fixed Effects Regressions

Table 3 reports the results of our fixed effects regressions that isolate within-country dynamics in capital account policy. In general, the results are quite similar to those reported in Table 2. Perhaps more importantly, the parameter estimates for the variables testing our hypotheses tended to be of similar magnitudes in the fixed effects and levels specifications. That is, the substantive impact of our variables were more or less the same moving from country to country as they were moving from year to year within a country. These consistencies are

encouraging since they imply that the factors affecting over time and cross-national differences in capital account policy are more or less the same.

Table 3 about here

In this subsection, we focus on three major differences between the two sets of estimations (i.e. comparing Table 3 with Table 2). First, for the whole sample and for the sub sample of developing countries, countries in which trade increased more over the 1976-1998 period were likely to have closed their capital accounts during the period. Moreover, these over-time effects were larger than the positive parameter estimates in Table 2.²⁶ Recall that our basic argument concerning trade was that those in the exposed sector of the economy would benefit from and hence support capital account liberalization. This association was manifest in the levels equations, but it was reversed for the developing countries when we moved to the year-to-year change analysis. Why did countries in which trade increased the most during the 1976-1998 period tend to close their capital accounts over this period? One possible explanation harkens back to the founding of the Bretton Woods – perhaps developing countries that were increasingly exposed to trade sought to mitigate the volatility that this would entail by closing their capital accounts. This was the pattern in the social democracies of northern Europe until the mid 1980s, when even these countries chose to liberalize the capital account (Garrett 1998b). One might expect that over time, this would also happen in developing countries – though there is no reason to expect this to happen any time soon.

Second, increases in government consumption were consistently associated with increases in capital account openness for the whole sample, the developed countries, and the developing countries. Thus, even though there was a negative association between government spending and capital account policy in the levels equation for the developing world, when we moved to the dynamics of policy choice faster growth in government spending and capital account liberalization went hand in hand. Given that these are essentially change regressions, the interpretation that fits most easily with these results is the compensation hypothesis –

governments have coupled the two policies so as to cushion the dislocations associated with openness, and hence to curry political support for liberalization.

Third, democratization – that is, regime change from non-democracy to democracy – was associated with faster capital account liberalization for the full sample and for the developing countries (given that most of the developed nations were already democracies in 1976, it is not surprising that this variable was insignificant in the middle panel of Table 3). As we discussed in the theory section with respect to H5b, there are two forces driving this association between liberalization and democratization. Democratization has often carried with it considerable neo-liberal ideological fervor (at least in the short run) – like all good things, political and economic openness are two halves of the same acorn. But it may also be the case that democratization has increased the power of internationally oriented and competitive actors at the expense of the domestically oriented and non-competitive elites associated with autocratic regimes.

6. Conclusion

This article makes two primary contributions to the literature on capital account policy. On the one hand, we have introduced a new measure of capital account policy, summarized in our CAOI. This variable is both considerably more fine-grained than the crude dummy variable commonly used in the literature and also available for a larger sample of countries and years than any existing data sets. In this article we have not explored the various components of our Index – restrictions on different types of transactions (FDI vs. invisibles, for example) and on inflows versus outflows of capital. This research should be undertaken, but we offer our general results here as a baseline against which to compare the dynamics of different aspects of capital account policy choice. using the finding presented here as a baseline. On the other hand, we have sought to illuminate what we consider to be the fundamental economic and political processes

underpinning government behavior in this area. Table 4 summarizes our empirical results with respect to the five hypotheses we proposed.

Table 4 about here

First, there is ample evidence that countries at higher levels of economic development are more likely to have open capital accounts. One might be tempted to claim that this reflects the fact that capital account liberalization stimulates economic growth, but the evidence is actually quite mixed on this subject. A more reasonable interpretation of this development-liberalization correlation is that countries at higher levels of development are more likely to have the kinds of institutional infrastructure – most importantly, prudential regulation of banks – that is likely to allow them to reap the benefits of open capital accounts while mitigating the potential costs of openness. In turn, this suggests that the IMF is right to have tempered its policy recommendations so as to advocate a sequencing of reforms, with domestic financial reform preceding capital account liberalization.

Second, the policy choices of developing countries have been consistent with the Mundell-Fleming approach to open economy macroeconomics. Less developed countries that have chosen to fix their exchange rates (often in efforts to control domestic inflation) have been reluctant to open their capital accounts, and hence to give up autonomy over domestic monetary policy. Of course, this combination is only an imperfect “commitment technology” and hence we should not be surprised that fixed exchange rates have not proved an anti-inflation panacea in many developing countries.

In marked contrast to the developing country experience, fixed exchange rates and capital account openness have gone hand in hand among high-income countries. This is a European phenomenon, with most countries in western Europe employing various forms of fixed exchange rates (from the snake to the EMS and ultimately to the euro) since the breakdown of the Bretton Woods system. There is a long and heated debate about the economic merits of, and the political considerations underpinning, exchange rate arrangements in Europe. From our perspective, the

most important element of this debate is that the closer Europe is to an optimal currency area (i.e. a group of countries for whom a single monetary policy because their business cycles are coordinated, migration is easy, etc.), the less anomalous the capital account policy choices of their government are. Thus, for the “core” of the European monetary area (most notably, France, Germany, the Benelux countries and Austria) the move to creating the euro makes good economic sense. But things are less clearcut for more peripheral countries in Europe.

Third, countries that are more integrated into international markets tend to have more open capital accounts. We have interpreted this largely in terms of interest group politics – countries that are bigger traders or more integrated into global production and distribution networks have more powerful pro-liberalization interests – but one could alternatively explain this findings in terms of complementarities – countries that have more internationally integrated real economies need to be more integrated financially as well. However, this latter interpretation does not jibe with an important result from our fixed effects regressions. Developing countries in which trade grew more quickly in the past two decades were more likely to have closed their capital accounts in the same period. It seems that these countries have made a policy choice that is similar to that of many OECD countries in the immediate post WWII period – to pursue an active trade liberalization agenda, but to leaven the dislocations might generate by closing the capital account. If this is the case, we should not expect much capital account liberalization in the developing world for some time to come, particularly if the WTO agenda expands.

Fourth, government spending and capital account liberalization tend to go hand in hand. Most importantly, countries in which the public economy expanded more quickly after 1976 were more likely to have opened their capital accounts in the same period. One might be tempted to interpret this result in terms of government attempts to rein in public spending by unleashing the competitive pressures of global capital on the domestic economy. However, there is little evidence that this works (i.e. that capital mobility actually constrains government spending). Thus the more reasonable interpretation of our findings is that governments choose to open the

account for other reasons, but then increase government spending in an effort to cushion the social dislocations associated with this and hence to maintain political support for openness (i.e. the compensation hypothesis).

Finally, in the developing world, the presence of democracies and the process of democratization have both been associated with more open capital accounts. This finding obviously cannot be explained by a perspective arguing that first that democracy empowers the poor and the less skilled and second that these people oppose liberalization. Rank and file citizens in developing countries may, like their counterparts in the west, tend to be skeptical about globalization. They might, alternatively, believe the neoclassical position that integration into global markets is the key to improving their material conditions. However, we think it is more realistic to assume that most citizens are largely ignorant about capital account policy and hence that the primary effect of democracy in developing countries is to change the balance of power among elites. Rent-seeking autocracies are often in the business of distributing favors among their cronies in the domestic economy. Democratization destabilizes this equilibrium and gives more political clout to those groups in developing countries who would benefit from and hence advocated liberalization – externally-oriented and internationally competitive actors, who are heavily dependent on this system.

In sum, we have sketched a basic political economy of capital account policy that involves the major structural features of open economy politics – exchange rates, level of development, position in the international division of labor, the constellation of domestic interests, and political institutions. There is surely considerable work still to be done on this topic. It will be important to develop more fine grained arguments about the politics of liberalization and to take into account interactive effects among different processes. Equally important, we should delve into the political dynamics of different aspects of capital account policy. Economists have recently argued, for example, that restrictions on capital account inflows are more effective than those on outflows, and that restrictions on short term flows are

more desirable than those on foreign direct investment. We should thus know whether the political constraints differ with respect to implementing these different types of liberalization reforms. Nonetheless, the research reported in this article provides a solid foundation on which to build future research.

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Table 1. Components (9) of the Capital Account Openness Index

OVERALL CAPITAL ACCOUNT OPENNESS = IN + OUT + ICM + OCM + ICR + OCR+ IFDI + OFDI + FIN			
	<i>INFLOWS</i>		<i>OUTFLOWS</i>
IN	<p>Controls on Inflows of Invisible Transactions</p> <ul style="list-style-type: none"> • Proceeds from Exports and/or Invisible Transactions • Repatriation Requirements, Surrender Requirements 	OUT	<p>Controls on Outflows of Invisible Transactions</p> <ul style="list-style-type: none"> • Payments for Invisible Transactions and Current Transfers
ICM	<p>Controls on Inflows Pertaining to Capital & Money Market Securities</p> <ul style="list-style-type: none"> • Shares or other Securities of a Participating Nature • Bonds or Other Debt Securities • Money Market Instruments • Collective Investment Securities • Derivatives and Other Instruments <p><i>Purchase Locally by Nonresidents</i> <i>Sale of Issue Abroad by Residents</i></p>	OCM	<p>Controls on Outflows Pertaining to Capital & Money Market Securities</p> <ul style="list-style-type: none"> • Shares or other Securities of a Participating Nature • Bonds or Other Debt Securities • Money Market Instruments • Collective Investment Securities • Derivatives and Other Instruments <p><i>Sale or Issue Locally by Non Residents</i> <i>Purchase Abroad by Residents</i></p>
ICR	<p>Controls on Inflows Pertaining to Credit Operations</p> <ul style="list-style-type: none"> • Commercial and Financial Credits • Guarantees, Sureties, and Financial Backup Facilities <p><i>To Residents from Nonresidents</i></p>	OCR	<p>Controls on Outflows Pertaining to Credit Operations</p> <ul style="list-style-type: none"> • Commercial & Financial Credits • Guarantees, Sureties, & Financial Backup Facilities <p><i>By Residents to Non Residents</i></p>
IFDI	<p>Controls on Inward Direct Investment and Purchase of Real Estate</p> <ul style="list-style-type: none"> • Inward Direct Investment • Real Estate Transactions <p><i>Purchase Locally by Non Residents</i></p>	OFDI	<p>Controls on Outward Direct Investment and Purchase of Real Estate</p> <ul style="list-style-type: none"> • Outward Direct Investment • Controls on Liquidation of Direct Investment <p><i>Purchase Abroad by Residents</i> <i>Sale Locally by Non Residents</i></p>
FIN	<p>Provisions Specific to Commercial Banks</p> <ul style="list-style-type: none"> • Non resident Deposits & Deposit Overseas • Borrowing Abroad & Foreign Loans 		

Table 2. The Determinants of Capital Account Liberalization, 1976-1998

INDEPENDENT VARIABLES	ALL COUNTRIES				DEVELOPED COUNTRIES				DEVELOPING COUNTRIES			
	Coef.	Std. Err.	z	P> z	Coef.	Std. Err.	z	P> z	Coef.	Std. Err.	z	P> z
Intercept	1.048	1.153	0.909	0.364	-13.873	4.292	-3.233	0.001	3.597	1.212	2.967	0.003
CONTROLS												
Dom. savings (%GDP)	-0.002	0.003	-0.632	0.527	0.040	0.017	2.383	0.017	-0.003	0.003	-0.979	0.327
Population (logged)	-0.028	0.064	-0.436	0.663	0.730	0.224	3.255	0.001	-0.183	0.070	-2.612	0.009
GDP growth (%)	-0.060	0.187	-0.322	0.747	-0.901	0.774	-1.164	0.244	-0.086	0.192	-0.448	0.654
Inflation (sq.root of %)	-0.004	0.004	-1.126	0.260	-0.045	0.028	-1.620	0.105	-0.004	0.004	-0.881	0.379
WB Debt (%GDP)	-0.708	0.461	-1.534	0.125					-0.367	0.403	-0.913	0.362
IMF Debt (%GDP)	0.025	1.493	0.017	0.987					-0.133	1.459	-0.091	0.927
Asian Shock (1997-1998)	0.396	0.206	1.919	0.055	0.870	0.436	1.996	0.046	0.288	0.158	1.829	0.067
1990-1996	0.330	0.127	2.598	0.009	0.780	0.277	2.815	0.005	0.236	0.103	2.284	0.022
HYPOTHESES												
GNP per capita ('000s)	0.130	0.021	6.092	0.000	0.106	0.022	4.784	0.000	0.359	0.060	5.957	0.000
Fixed exchange rate	-0.194	0.074	-2.621	0.009	0.337	0.185	1.822	0.069	-0.343	0.075	-4.574	0.000
Trade (% GDP)	0.006	0.002	3.203	0.001	0.009	0.008	1.251	0.211	0.005	0.002	3.103	0.002
FDI outward stock (%GDP)	0.006	0.005	1.412	0.158	-0.001	0.003	-0.368	0.713	0.040	0.013	2.982	0.003
FDI inward stock (%GDP)	0.013	0.004	3.524	0.000	0.097	0.024	4.023	0.000	0.005	0.003	1.424	0.155
Govt. cons. (%GDP)	-0.008	0.006	-1.271	0.204	0.107	0.033	3.213	0.001	-0.018	0.006	-3.011	0.003
Democracy	0.125	0.087	1.426	0.154	-1.353	0.600	-2.256	0.024	0.194	0.090	2.156	0.031
	Number of obs	=	2446		Number of obs	=	586		Number of obs	=	1860	
	Number of groups	=	140		Number of groups	=	28		Number of groups	=	112	
	Obs per group:				Obs per group:				Obs per group:			
	min	=	5		min	=	5		min	=	5	
	avg	=	17.471		avg	=	20.929		avg	=	16.607	
	max	=	23		max	=	23		max	=	23	
	R-squared	=	0.128		R-squared	=	0.295		R-squared	=	0.144	
	Wald chi2(15)	=	104.07		Wald chi2(13)	=	66.1		Wald chi2(15)	=	109.54	
	Prob > chi2	=	0.000		Prob > chi2	=	0.000		Prob > chi2	=	0.000	

Table 3. The Determinants of Capital Account Liberalization, 1976-1998 (with fixed effects, country dummies not reported)

INDEPENDENT VARIABLES	ALL COUNTRIES				DEVELOPED COUNTRIES				DEVELOPING COUNTRIES			
	Coef.	Std. Err.	z	P> z	Coef.	Std. Err.	z	P> z	Coef.	Std. Err.	z	P> z
controls												
Dom. savings (%GDP)	-0.007	0.003	-2.182	0.029	-0.012	0.020	-0.602	0.547	-0.005	0.003	-1.631	0.103
GDP growth (%)	-0.124	0.199	-0.623	0.533	-1.568	0.770	-2.037	0.042	0.282	0.197	1.430	0.153
Inflation (sq.root of %)	-0.005	0.004	-1.158	0.247	-0.020	0.030	-0.677	0.498	-0.005	0.004	-1.197	0.231
WB Debt (%GDP)	-0.066	0.446	-0.147	0.883					0.218	0.423	0.517	0.605
IMF Debt (%GDP)	-0.513	1.444	-0.355	0.722					-1.310	1.564	-0.838	0.402
Asian Shock (1997-1998)	0.482	0.189	2.558	0.011	0.779	0.365	2.135	0.033	0.388	0.161	2.410	0.016
1990-1996	0.386	0.117	3.309	0.001	0.716	0.234	3.060	0.002	0.272	0.099	2.745	0.006
HYPOTHESES												
GNP per capita ('000s)	0.234	0.037	6.405	0.000	0.248	0.039	6.362	0.000	-0.068	0.070	-0.975	0.330
Fixed exchange rate	-0.015	0.007	-2.228	0.026	0.029	0.037	0.796	0.426	-0.020	0.007	-2.928	0.003
Trade (% GDP)	-0.190	0.072	-2.652	0.008	0.319	0.187	1.710	0.087	-0.377	0.073	-5.179	0.000
FDI outward stock (%GDP)	0.005	0.002	2.487	0.013	-0.003	0.010	-0.305	0.760	0.005	0.002	2.652	0.008
FDI inward stock (%GDP)	0.008	0.004	2.060	0.039	0.003	0.003	0.814	0.416	-0.004	0.008	-0.506	0.613
Govt. cons. (%GDP)	0.011	0.003	3.382	0.001	0.109	0.026	4.209	0.000	0.004	0.003	1.612	0.107
Democracy	0.162	0.084	1.928	0.054	0.027	0.797	0.034	0.973	0.188	0.085	2.198	0.028
	Number of obs	=	2446		Number of obs	=	586		Number of obs	=	1860	
	Number of groups	=	140		Number of groups	=	28		Number of groups	=	112	
	Obs per group:				Obs per group:				Obs per group:			
	min	=	5		min	=	5		min	=	5	
	avg	=	17.471		avg	=	20.929		avg	=	16.607	
	max	=	23		max	=	23		max	=	23	
	R-squared	=	0.698		R-squared	=	0.574		R-squared	=	0.808	
	Wald chi2(62)	=	43638		Wald chi2(38)	=	38612.7		Wald chi2(58)	=	124352	
	Prob > chi2	=	0.000		Prob > chi2	=	0.000		Prob > chi2	=	0.000	

Table 4. The Political Economy of Capital Account Openness

	All countries		Developed countries		Developing countries	
	Levels	Changes	Levels	Changes	Levels	Changes
H1: More economically developed (complementary institutions) <input checked="" type="checkbox"/>	+	+	+	+	+	0
H2: Fixed exchange rates (loss of policy autonomy) <input checked="" type="checkbox"/>	-	-	+	0	-	-
H3: Higher trade ratios Greater Outward FDI stock Greater Inward FDI stock (more integrated economies) <input checked="" type="checkbox"/>	+	-	0	+	+	-
	0	+	0	0	+	+
	+	+	+	0	0	0
H4: Larger public economy H4a (insulate) <input checked="" type="checkbox"/> H4b (compensate) <input checked="" type="checkbox"/>	0				-	0
		+	+	+		
H5: democratic political regime H5a (citizen opposition) <input checked="" type="checkbox"/> H5b (pro-market groups) <input checked="" type="checkbox"/>	0			0		
			-			
		+			+	+

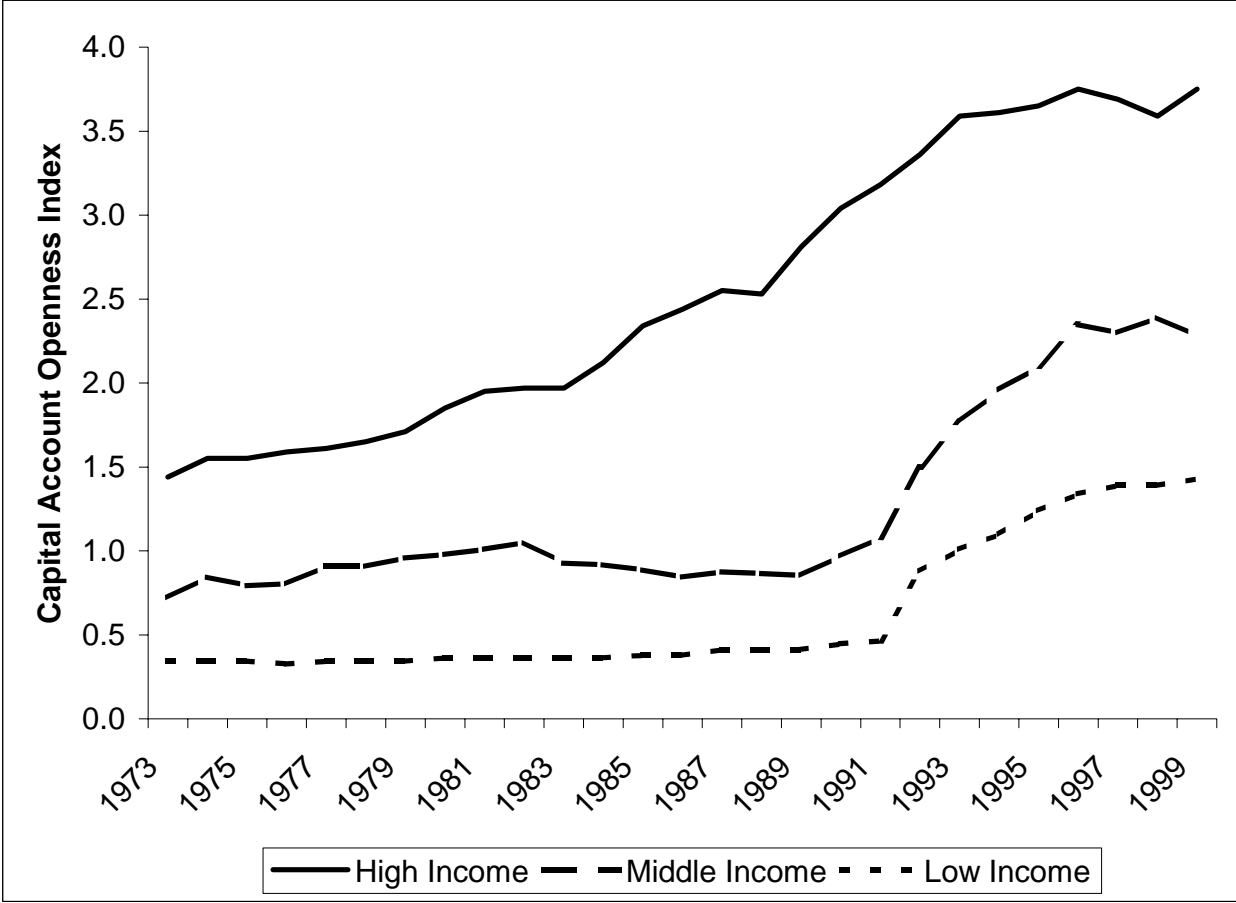
+ Statistically significant positive association with capital account openness ($p < .10$)

- Statistically significant negative association with capital account openness ($p < .10$)

0 Insignificant

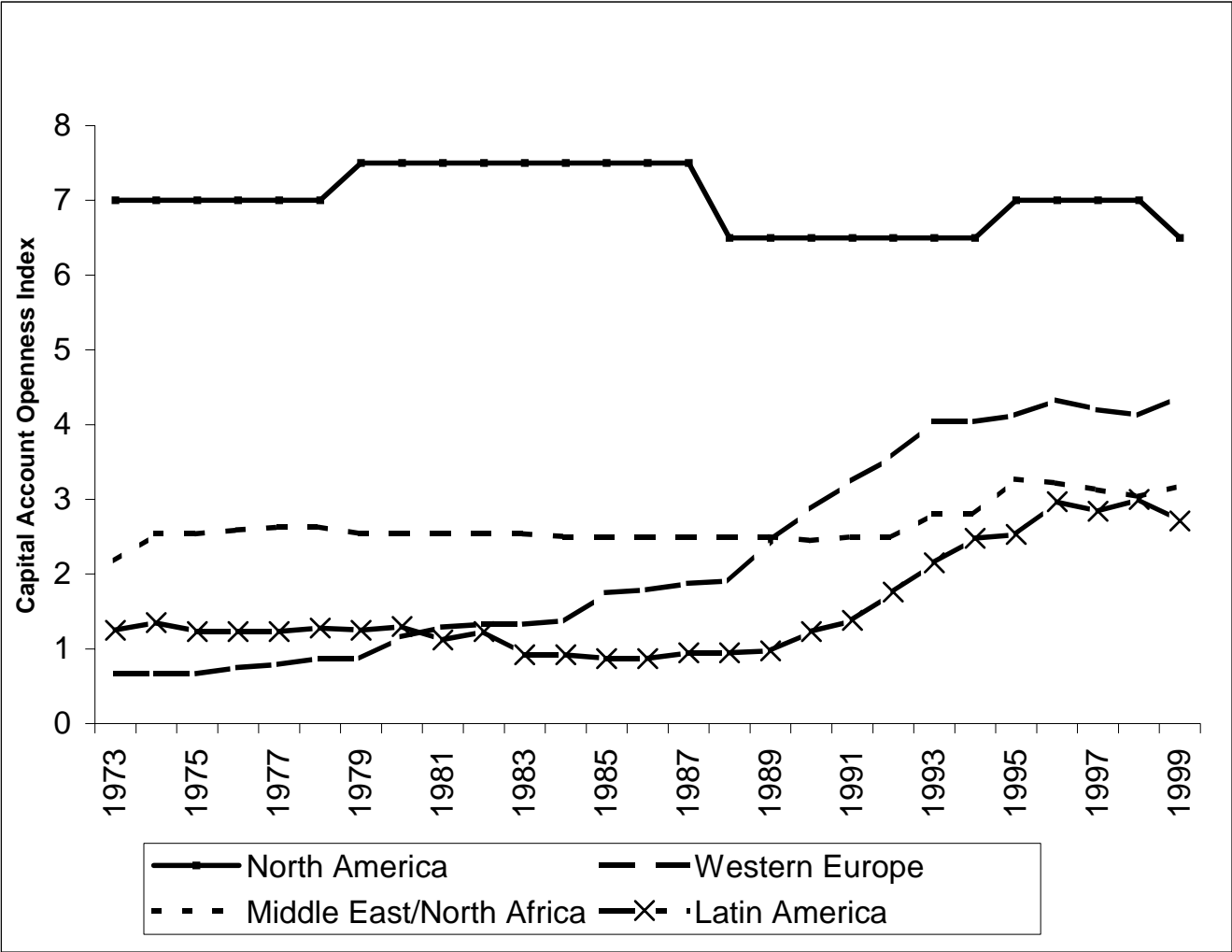
Levels results taken from Table 2; changes results from Table 3.

Figure 1. Capital Account Openness by Level of National Income, 1973-1999



Data are unweighted averages for all countries based on World Bank's per capita income level classifications for 1990 (low income: \$580 or less; middle income: \$581 - \$5999; high income: \$6000 and above).

Figure 2a. Regions with Higher Levels of Capital Account Openness



Data unweighted averages for all countries in each region.

Figure 2b. Regions with Lower Levels of Capital Account Openness

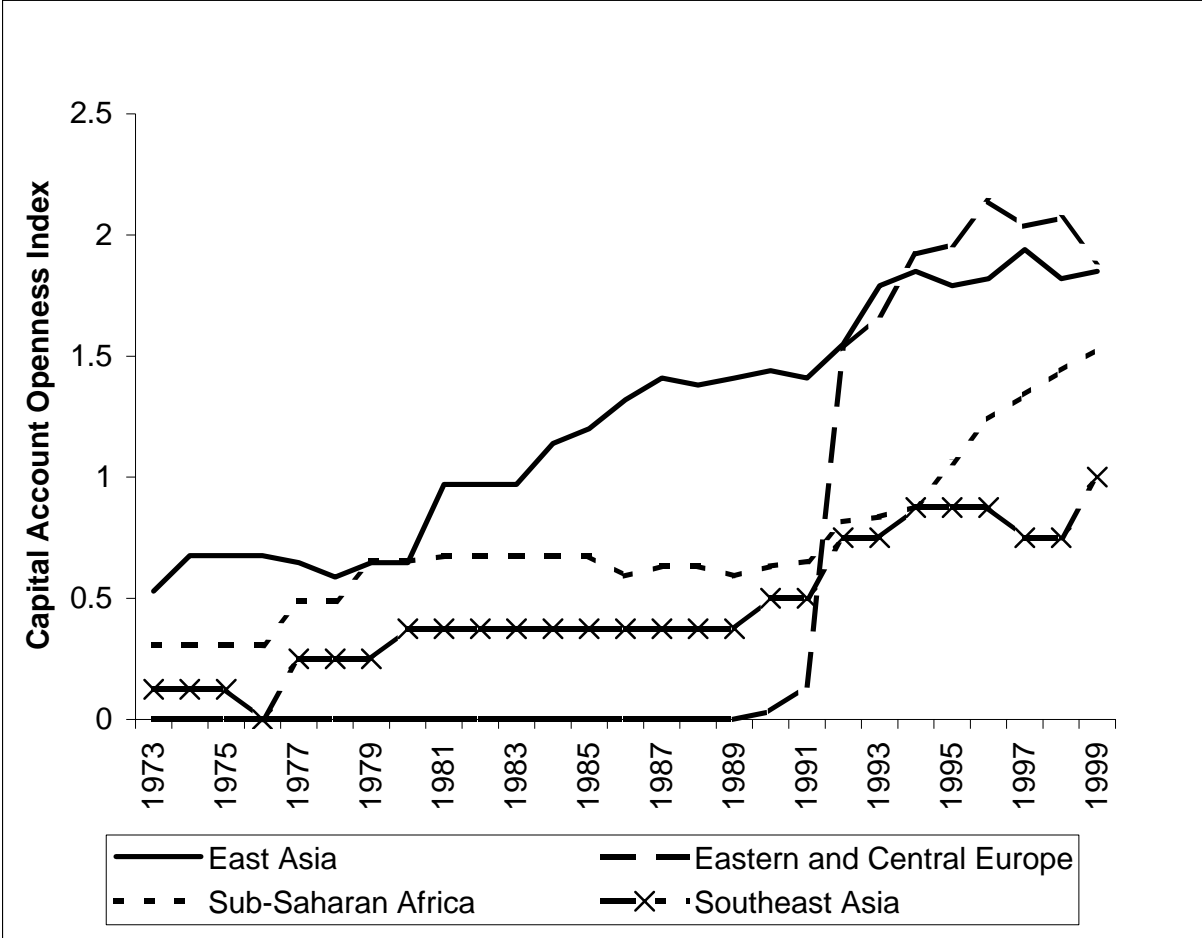
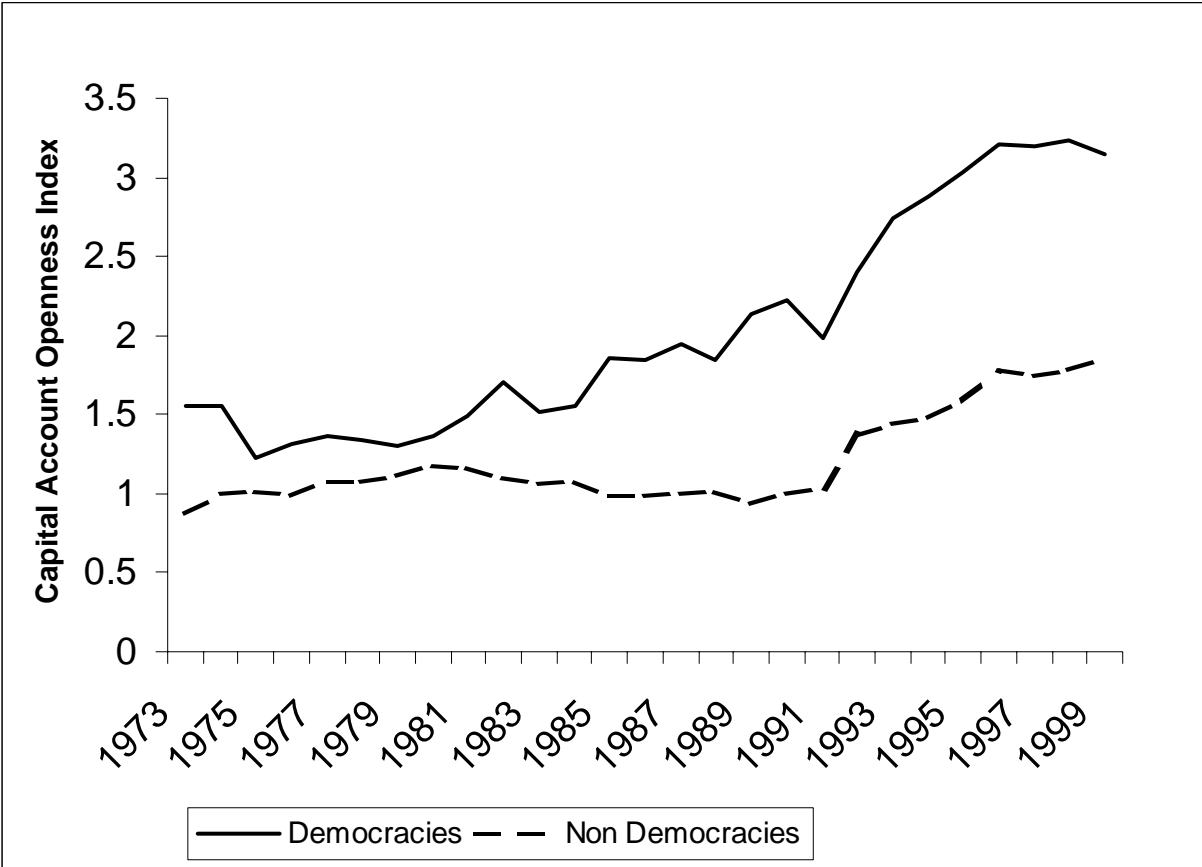


Figure 3. Capital Account Openness in Democracies and Non-Democracies



Unweighted averages for all countries classified as democracies or non-democracies by Przeworski et. al. (2000).

Appendix 1. Cross-National Data on the Capital Account Openness Index

I. High-income countries	1990s ^a	$\Delta(1990s - 1970s)^b$
Hong Kong, China	9	0.0
Denmark	8	8.0
Netherlands	8	6.4
New Zealand	8	8.0
Qatar	8	0.0
Germany	7.7	1.6
Bahrain	7.5	-0.5
Belgium	7.5	3.1
Canada	7.5	0.5
Italy	7.3	7.3
United Kingdom	7	7.0
Switzerland	6.7	3.7
Norway	6.5	6.5
Austria	6.4	4.4
Sweden	6.4	5.4
Finland	6.1	6.1
Singapore	6	2.3
United States	5.9	-1.2
Ireland	5.6	5.6
France	5.1	5.1
United Arab Emirates	5	0.2
Australia	4.8	4.8
Kuwait	4.7	-0.3
Japan	4.1	3.1
Saudi Arabia	3.4	-0.6
Iceland	3.1	3.1
Israel	2.5	0.5
Spain	2.1	2.1
Netherlands Antilles	2	2.0
Slovenia	0.8	0.8
Andorra	0	0.0
Aruba	0	0.0
Bahamas, The	0	0.0
Barbados	0	0.0
Bermuda	0	0.0
Brunei	0	0.0
Cayman Islands	0	0.0
Channel Islands	0	0.0
Cyprus	0	0.0
Faeroe Islands	0	0.0
French Polynesia	0	0.0
Greenland	0	0.0
Guam	0	0.0
Monaco	0	0.0
New Caledonia	0	0.0
Northern Mariana Islands	0	0.0
Virgin Islands (U.S.)	0	0.0
Average	3.5	1.9

II. Middle-income countries	1990s	Change from 1970s
Vanuatu	9	9.0
Djibouti	7.8	6.7
Uruguay	7.7	0.7
Panama	7.3	0.3
Yemen, Rep.	7.1	0.7
Antigua and Barbuda	6.8	6.8
Guatemala	6	-0.6
Latvia	5.8	5.8
Lebanon	5.7	-0.6
Oman	5.7	-1.3
Mauritius	5.6	1.6
Costa Rica	5.3	0.7
Estonia	5.3	5.3
Georgia	5.3	5.3
Jamaica	5.3	5.3
El Salvador	4.9	4.9
Argentina	4.8	4.2
Lithuania	4.8	4.8
Trinidad and Tobago	4.8	4.8
Portugal	4.7	4.7
Peru	4.6	4.6
Bolivia	4.3	-1.7
Jordan	4.3	1.3
Nicaragua	3.3	1.6
Ecuador	2.9	2.9
Greece	2.8	2.8
Honduras	2.6	-0.4
Paraguay	2.4	1.4
Czech Republic	2.3	2.3
Venezuela, RB	2.3	-0.7
Egypt, Arab Rep.	2.2	2.2
Dominican Republic	2	-0.6
Kiribati	2	2.0
Seychelles	2	-1.9
Albania	1.7	1.7
Mexico	1.7	-2.6
Thailand	1.5	1.5
Croatia	1.4	1.4
Marshall Islands	1.4	1.4
Micronesia, Fed. Sts.	1.4	1.4
St. Kitts and Nevis	1.4	1.4
Colombia	1.2	1.2
Papua New Guinea	1.2	1.2
Turkey	1.2	1.2
Namibia	1	1.0
Tonga	1	1.0
Botswana	0.9	0.9
Bosnia and Herzegovina	0.8	0.8
Hungary	0.8	0.8
Russian Federation	0.8	0.8

Malaysia	0.7	-0.2
Philippines	0.7	0.7
St. Lucia	0.7	0.7
St. Vincent and the Grenadines	0.7	0.7
Bulgaria	0.6	0.6
Slovak Republic	0.6	0.6
South Africa	0.5	0.5
Zimbabwe	0.5	0.5
Uzbekistan	0.4	0.4
Cote d'Ivoire	0.3	0.3
Grenada	0.2	0.2
Iran, Islamic Rep.	0.1	-0.9
Algeria	0	0.0
American Samoa	0	0.0
Angola	0	0.0
Belarus	0	0.0
Belize	0	0.0
Brazil	0	0.0
Cameroon	0	0.0
Cape Verde	0	0.0
Chile	0	0.0
Congo, Rep.	0	0.0
Cuba	0	0.0
Dominica	0	0.0
Fiji	0	-1.4
Gabon	0	0.0
Iraq	0	0.0
Isle of Man	0	0.0
Kazakhstan	0	0.0
Korea, Rep.	0	0.0
Libya	0	0.0
Macao, China	0	0.0
Macedonia, FYR	0	0.0
Malta	0	0.0
Mayotte	0	0.0
Morocco	0	0.0
Palau	0	0.0
Poland	0	0.0
Puerto Rico	0	0.0
Romania	0	0.0
Samoa	0	0.0
Senegal	0	0.0
Suriname	0	0.0
Swaziland	0	0.0
Syrian Arab Republic	0	0.0
Tunisia	0	0.0
Ukraine	0	0.0
West Bank and Gaza	0	0.0
Yugoslavia, FR (Serbia/Montenegro)	0	0.0
Average	1.8	1.0

III. Low-income countries	1990s	Change from 1970s
Liberia	8.1	0.1
Zambia	5.1	5.1
Indonesia	4.1	-0.9
Gambia, The	3.6	2.6
Maldives	3.6	2.7
Kyrgyz Republic	3.5	3.5
Tajikistan	3.3	3.3
Armenia	3	3.0
Guyana	2.9	2.9
Uganda	2.9	2.9
Kenya	2.6	2.6
Congo, Dem. Rep.	2.5	2.5
Mongolia	2.4	2.4
Haiti	2	0.0
Guinea-Bissau	1.9	1.9
Malawi	1.3	-0.7
Bangladesh	1	1.0
Rwanda	1	1.0
Nepal	0.9	0.9
Azerbaijan	0.8	0.8
Nigeria	0.8	0.8
Cambodia	0.6	0.6
Lao PDR	0.6	0.0
Sri Lanka	0.6	0.6
Burkina Faso	0.5	0.5
Mauritania	0.5	0.5
Eritrea	0.4	0.4
Tanzania	0.4	0.4
Madagascar	0.3	0.3
Sierra Leone	0.3	0.3
Sao Tome and Principe	0.2	0.2
Vietnam	0.2	0.2
Myanmar	0.1	0.1
Niger	0.1	0.1
Togo	0.1	0.1
Afghanistan	0	-0.4
Benin	0	0.0
Bhutan	0	0.0
Burundi	0	0.0
Central African Republic	0	0.0
Chad	0	0.0
China	0	0.0
Comoros	0	0.0
Equatorial Guinea	0	0.0
Ethiopia	0	0.0
Ghana	0	0.0
Guinea	0	0.0
India	0	0.0
Korea, Dem. Rep.	0	0.0

Lesotho	0	0.0
Mali	0	0.0
Moldova	0	0.0
Mozambique	0	0.0
Pakistan	0	0.0
Solomon Islands	0	0.0
Somalia	0	0.0
Sudan	0	0.0
Turkmenistan	0	0.0
Average	1.2	0.8

- a. Average for 1990-1999.
- b. Average CAOI for 1990-1999 minus average for 1973-1799.

Appendix 2. Descriptive statistics

Variables	ALL COUNTRIES				DEVELOPED COUNTRIES				DEVELOPING COUNTRIES			
	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max
CAOI	1.70	2.59	0	9	3.25	3.03	0	9	1.21	2.22	0	9
<i>Control Variables:</i>												
Dom. Savings (%GDP)	0.17	0.14	-0.99	0.78	0.23	0.08	-0.03	0.78	0.15	0.15	-0.99	0.76
Population (logged)	15.69	1.96	10.62	20.91	15.96	1.67	12.25	19.40	15.61	2.04	10.62	20.91
GDP Growth (%)	0.03	0.05	-0.50	0.38	0.03	0.04	-0.21	0.34	0.04	0.06	-0.50	0.38
Inflation (sq.root of %)	3.80	5.84	-10.00	163.59	2.69	1.93	-5.07	19.77	4.15	6.57	-10.00	163.59
WB Debt (%GDP)	6.67	11.07	0.00	117.82	0.00	0.00	0.00	0.00	8.77	11.95	0.00	117.82
IMF Debt (%GDP)	2.13	4.47	0.00	51.56	0.00	0.00	0.00	0.00	2.81	4.94	0.00	51.56
<i>Hypotheses Variables:</i>												
GNP pc ('000s \$1995)	6.02	8.83	0.08	47.84	19.55	8.59	4.99	47.84	1.76	1.89	0.08	11.59
Fixed exchange rate	0.65	0.48	0	1	0.56	0.50	0	1	0.68	0.47	0	1
Trade (%GDP)	69.73	38.24	6.32	282.40	69.93	33.96	16.31	203.54	69.66	39.50	6.32	282
FDI out. stock (%GDP)	3.13	8.81	0.00	147.00	8.86	12.70	0.00	147.00	1.32	6.14	0.00	79
FDI in. stock (%GDP)	12.52	15.87	0.00	145.70	10.20	8.67	0.00	49.70	13.26	17.47	0.00	146
Gov't Consump. (%GDP)	16.28	7.09	1.62	63.55	18.40	5.43	7.32	43.41	15.62	7.41	1.62	64
Democracy	0.50	0.50	0.00	1.00	0.93	0.25	0	1	0.37	0.48	0	1

Appendix 3 Data and Methods

The independent variables were all lagged one year (except the time dummies).

Control Variables

Dom. savings (%GDP): Gross Domestic Savings as a percentage of GDP, from the World Bank's World Development Indicators, 2000 CD-ROM (henceforth WDI2000). Gross savings are the difference between GDP and total consumption.

Population (logged): Population is from WDI2000, taken in natural logarithms to mitigate the right hand skew in the data set.

GDP growth (%): Real annual GDP growth is from WDI2000.

Inflation (sq.root of %): The inflation measure is the WDI 2000 implicit price deflator for the "the average annual rate of price change in the economy as a whole". Square roots rather than logs were taken to reduce skewness because there were several large negative values in the data set.

WB Debt (%GDP): World Bank Debt as a percentage of GDP is calculated from the combined market sum of International Bank for Reconstruction and Development (IBRD) loans and International Development Association (IDA) credits (in current dollars) extended by the World Bank Group (WDI2000).

IMF Debt (%GDP): IMF debt as a percentage of GDP is calculated from the WDI2000 variable "Use of IMF credit", denoting "repurchase obligations to the IMF for all uses of IMF resources (excluding those resulting from drawings on the reserve tranche)."

Asian Shock (1997-1998): dummy variable coded as "1" for the years 1997 and 1998, otherwise "0".

1990-1996: dummy variable coded as "1" for the years 1990 through 1996, otherwise "0".

Hypotheses

GNP per capita ('000s): GNP per capita in thousands of constant 1995 \$US, from WDI2000.

Fixed exchange rate: A dummy variable derived from Leblang (1999) and supplemented using the IMF's AREAER. We coded as fixed ("1") pegs to the dollar, sterling or franc, and pegs to a basket of currencies or other individual currencies, and cases the IMF codes as pegs with limited flexibility. We coded as "0" crawling pegs, managed floats and independently floating exchange rates.

Trade (% GDP): Trade as a percentage of GDP is based on the sum of exports and imports of goods and services (WDI 2000).

FDI outward stock (%GDP): Estimates of the annual outward stock of FDI (cumulative flows adjusted for relative prices) are from Lane and Milesi-Ferretti (1999), supplemented by UNCTAD's *World Investment Report* (various years).

FDI inward stock (%GDP): Estimates of the annual inward stock of FDI (cumulative flows adjusted for relative prices) are from Lane and Milesi-Ferretti (1999), supplemented by UNCTAD's *World Investment Report* (various years).

Govt. cons. (%GDP): General government consumption as a percentage of GDP is from WDI2000. Government consumption is all current spending for purchases of goods and services (i.e. excluding income transfers, capital expenditures, subsidies).

Democracy: Democracy is a dummy variable coded "1" if elections were contestable, otherwise "0", from Przeworski, Alvarez, Cheibub and Limongi (2000). Note this coding is the reverse of that in Przeworski et. al.

Endnotes

¹ The current account, in contrast, concerns cross border transactions in goods and services.

² Of course, governments also make choices among different exchange rate regimes. We address below the issue of simultaneity in capital account and exchange rate policy choice below.

³ These are more fine-grained measures of support for open capital accounts than broader variables such as the manufacturing share in GDP that Frieden, Ghezzi and Stein (2001) use for similar purposes in a study of exchange rate policy.

⁴ For an excellent summary of the monetary and financial aspects of Bretton Woods, see (Eichengreen 1996: chapter 4).

⁵ Strictly speaking, the Mundell-Fleming approach suggests that while fixed exchange rates and capital mobility vitiated monetary policy autonomy, it also makes fiscal policy more effective (see Clark 2001). Most analysts assume, however, that monetary policy is a more important tool for economic adjustment these days than fiscal policy.

⁶ One might argue from a rational expectations perspective that governments may voluntarily choose to give up monetary policy autonomy to mitigate the “time inconsistency” problem that bedevil them. Politicians will always be tempted to commit to macroeconomic stability ex ante and then to pursue expansionary policies ex post – and all market actors know this. Creating an independent central bank, however, may be a better way for governments to tie their own hands than fixing the exchange rate because the central bank’s policy choices will be driven by domestic conditions rather than to those in currency anchor or in a monetary union as a whole.

⁷ For a recent summary of the literature, see Garrett (2000). For more detailed discussions by and debates among economists, see the symposium on “International Financial Instability” in *Journal of Economic Perspectives*, 13(4) Fall 1999 and the contributions to “Should the IMF Pursue Capital Account Convertibility?”, *Essays in International Finance* 207, Department of Economics, Princeton University, 1998.

⁸ Adverse selection occurs before a transaction: worse credit risks are more likely to seek out loans at a given price. Moral hazard takes place after the transaction: all borrowers have incentives to invest in riskier projects than were agreed to at the time of contract.

⁹ For a more detailed analysis of the costs and benefits of capital account liberalization, see Arteta, Eichengreen and Wyplosz (2001).

¹⁰ We also address a third type of argument in our empirical work. Actors outside a country might put pressure on governments to pursue policies other than those they would choose for themselves. In this context, however, we find no evidence that countries that owing money to either the IMF or the World Bank has no impact on the capital account policy choices governments make. This is very different, for example, than the case of privatization where there is strong evidence that the IMF in particular has been successful in using conditionality to induce developing countries to sell off state owned assets (Brune, Garrett and Kogut 2001).

¹¹ There is also a “complementarities” version of this hypothesis: countries that are bigger traders and that are more tied into multinational production and distribution networks benefit more, in a macroeconomic sense, from liberalization. One way to unite the two views is simply to observe that the political power of interests supporting openness is likely to be correlated with their economic importance.

¹² There are likely to be significant interaction effects among the hypotheses we have presented in this section. For example, the effects of democracy (H5) might be conditional on the constellation of interests in society (H3 and H4) and on the likely macroeconomic effects of capital account liberalization (H1 and H2). We believe, however, that the best way to proceed in this article is to lay out some simple arguments about the political economy of capital account policy and to test them as well as we can. Future work can build upon the foundations we provide in this article.

¹³ Brune (2000) was the first paper to use the new index.

¹⁴ Income groupings were based on the World Bank’s classification in 1990.

¹⁵ The Chilean experiment with controls on capital controls has been widely analyzed (see for example Edwards 1999)

¹⁶ The developed countries were: Andorra, Aruba, Australia, Austria, Bahamas, The, Belgium, Bermuda, Brunei, Canada, Cayman Islands, Channel Islands, Cyprus, Denmark, Faeroe Islands, Finland, France, French Polynesia, Germany, Greece, Greenland, Guam, Hong Kong, China, Iceland, Ireland, Israel, Italy, Japan, Kuwait, Liechtenstein, Luxembourg, Macao, China, Malta, Monaco, Netherlands, Netherlands Antilles, New Caledonia, New Zealand, Northern Mariana Islands, Norway, Portugal, Qatar, Singapore, Slovenia, Spain, Sweden, Switzerland, United Arab Emirates, United Kingdom, United States, Virgin Islands (U.S.) The developing countries were: Afghanistan, Albania, Algeria, American Samoa, Angola, Antigua and Barbuda, Argentina, Armenia, Azerbaijan, Bahrain, Bangladesh, Barbados, Belarus, Belize, Benin, Bhutan, Bolivia, Bosnia and Herzegovina, Botswana, Brazil, Bulgaria, Burkina Faso, Burundi, Cambodia, Cameroon, Cape Verde, Central African Republic, Chad, Chile, China, Colombia, Comoros, Congo, Dem. Rep., Congo, Rep., Costa Rica,

Cote d'Ivoire, Croatia, Cuba, Czech Republic, Djibouti, Dominica, Dominican Republic, Ecuador, Egypt, Arab Rep., El Salvador, Equatorial Guinea, Eritrea, Estonia, Ethiopia, Fiji, Gabon, Gambia, The, Georgia, Ghana, Grenada, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, Hungary, India, Indonesia, Iran, Islamic Rep., Iraq, Isle of Man, Jamaica, Jordan, Kazakhstan, Kenya, Kiribati, Korea, Dem. Rep., Korea, Rep., Kyrgyz Republic, Lao PDR, Latvia, Lebanon, Lesotho, Liberia, Libya, Lithuania, Macedonia, FYR, Madagascar, Malawi, Malaysia, Maldives, Mali, Marshall Islands, Mauritania, Mauritius, Mayotte, Mexico, Micronesia, Fed. Sts., Moldova, Mongolia, Morocco, Mozambique, Myanmar, Namibia, Nepal, Nicaragua, Niger, Nigeria, Oman, Pakistan, Palau, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Puerto Rico, Romania, Russian Federation, Rwanda, Samoa, Sao Tome and Principe, Saudi Arabia, Senegal, Seychelles, Sierra Leone, Slovak Republic, Solomon Islands, Somalia, South Africa, Sri Lanka, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Sudan, Suriname, Swaziland, Syrian Arab Republic, Tajikistan, Tanzania, Thailand, Togo, Tonga, Trinidad and Tobago, Tunisia, Turkey, Turkmenistan, Uganda, Ukraine, Uruguay, Uzbekistan, Vanuatu, Venezuela, RB, Vietnam, West Bank and Gaza, Yemen, Rep., Yugoslavia, FR (Serbia/Montenegro), Zambia, Zimbabwe

¹⁷ The missing country-years tended to have low levels of capital openness (a mean 2.11), low GNP per capita (just over \$4,200), to be non-democratic and to have fixed exchange rates. On this basis, this pattern of missing data may underestimate the effects of level of development, democracy and exchange rates on capital account policy. And this would be even more pronounced when it is remembered that the countries that the IMF does not codify in terms of capital account policy tend to be very poor autocracies that presumably also have closed capital accounts.

¹⁸ The common ρ 's tended to be around .9 in most models, but drop to as low as .79 in some equations estimated only for the developed countries. Once the AR(1) corrections were undertaken, there was no evidence of higher order serial correlation.

¹⁹ Indeed, it is easy to reject the hypothesis that the country specific ρ 's are drawn from the same populations using the Kruskal-Wallis test.

²⁰ The one exception is noted in the results section. The results using common ρ 's are available from the authors.

²¹ The IMF in AREAER divides exchange rate regimes into 10 categories. We denote as "fixed" currency unions, dollarization, currency boards and other pegged arrangements as "fixed". We call crawling pegs, managed floats and independently floating exchange rates "floats".

²² Given the stickiness in national population over time, we excluded this variable from the fixed effects regressions.

²³ We took the square root of the inflation rate (rather than, say, logs) to take into account long tails in both positive and negative inflation rates.

²⁴ We also tested for the effects of money supply inflation, or seigniorage, on capital account policy. Others have found that countries with rapid money supply inflation tend to impose capital controls (Alesina, Grilli and Milesi-Ferreti 1994, Leblang 1997). However, we did not find any significant effects of seigniorage on policy in our sample. We do not report the results here because including the variable reduced our usable sample size considerably.

²⁵ The estimated parameters tended to be larger, but the substantive effects of these coefficients were mitigated by the fact that the standard deviations for these variables were smaller in the developing countries sub-sample.

²⁶ Faster trade growth, however, was still associated with somewhat more open capital accounts among developed countries.