

## **UC Irvine**

### **Symposium: Democracy and Its Development 2005-2011**

#### **Title**

Rethinking Capital Mobility and Democratization: The Size of Political Regimes and Endogenous Capital Mobility

#### **Permalink**

<https://escholarship.org/uc/item/7mt1k2mk>

#### **Author**

Wong, Stan

#### **Publication Date**

2008-05-29

# The Size of Supporting Coalition and Endogenous Capital Mobility

Stan Hok-Wui Wong\*

Department of Political Science

University of California, Los Angeles

[wonghok@ucla.edu](mailto:wonghok@ucla.edu)

Presented at The CSD Graduate Student Conference

on "Democracy and its Development."

February 2, 2008

\*I would like to thank Barbara Geddes, James Honaker, Ronald Rogowski, Jeff Lewis, Barry O'Neill, Jean-Laurent Rosenthal, and Cari Coe for their valuable comments. I also thank Henry Tang for reading the various drafts of this paper. I am grateful for financial support from the Institute on Global Conflict and Cooperation. I am solely responsible for the remaining errors.

## **Abstract**

Existing theories argue that democratization is likely to take place in countries with high capital mobility. These theories usually assume that a country's capital mobility is exogenous. However, it is not uncommon to see politicians affect capital mobility when doing so serves their political interests. If dictators are able to control capital mobility and capital mobility affects the chance of democratic transitions, why would dictators allow for high capital mobility? In this paper, I argue that capital mobility can be endogenously determined by political leaders who optimize capital controls to maximize the chance of their survival. I also argue that the direction of capital movements also matters. While inflows tend to strengthen the leader's governing power, outflows may threaten regime survival by damaging the economy. Thus, political leaders generally welcome inflows, but fear outflows. Yet they cannot eliminate outflows completely because their supporters may demand outflows. The ruling elite demands high capital mobility only when they have sufficient funds to invest abroad. Whether they have sufficient funds or not is in part determined by the size of the ruling coalition. Consequently, we can predict a country's level of restrictions on capital outflows by examining the size of the regime's ruling coalition. Several empirical tests support my arguments.

Subfield: International Political Economy, Regime Transitions, Authoritarian Politics

## Introduction

The year 1998 was a hard one for Indonesians because of the Asian financial crisis. Indonesia's gross domestic product contracted by 17 per cent, while its currency devalued by 7 times. The capitalization of the Jakarta Stock Exchange also underwent a drastic shrinkage, from 118 billion to 17 billion.<sup>1</sup> The crisis left many Indonesians jobless and often homeless as well. Angry Indonesians took to the street, protesting the government's inability to prevent the crisis and demanding the end of cronyism, the perceived cause of the financial crisis. Suharto, the dictator who ruled Indonesia for over three decades, soon found himself engulfed in the biggest political turmoil of his rule. By May 20, Suharto had stepped down and Indonesia became a democracy.

While 1998 represented a year of unrest for Indonesia, it was yet another year of stable growth for China. The Asian giant recorded a 7.8 per cent increase in its gross domestic product from the previous year. Its currency stood undisturbed, while its export market continued to show resilience. Under such sound economic conditions, the Communist Party had little difficulty keeping its political power unchallenged.

How was China able to remain insulated from the Asian financial turmoil? Many (Bhagwati, 1998; Krugman, 1998; Rodrik, 1997; Sitglitz, 2000) suggest that it was due to China's highly regulated capital market; its currency could not be actively traded and hence speculated.<sup>2</sup> Consequently, China avoided the financial epidemic that wreaked havoc on the other Asian economies. The absence of financial turbulence was clearly a political blessing to Chinese leaders, whose authoritarian rule could thus remain intact.

Boix (2003) argues that countries with higher capital mobility are more likely to

---

<sup>1</sup>See Winters (1999) "Indonesia: On the Mostly Negative Role of Transnational Capital in Democratization."

<sup>2</sup>Only a few foreign banks were allowed to do renminbi business in China and such business is tightly regulated (Langlois, 2001). Note that China discouraged short-term capital flows, but welcomed long-term investment. It has been the largest recipient of foreign direct investment for years.

become democracies. The reason is that when the ruling elite can easily transfer their assets abroad, they become less afraid of the potential income redistribution after democratization, and hence less resistant to the transition to democracy.

The above tale of two dictatorships, albeit stylized, seems to support this famous argument about democratization because capital mobility in Indonesia was higher than it was in China and Indonesia became a democracy in 1998 while China did not. Upon scrutiny, however, the China-Indonesia comparison differs from Boix's argument in an important way. For Boix, capital mobility is assumed exogenously given.<sup>3</sup> In the above comparison, however, China's low capital mobility – the fact that its currency cannot not be actively traded – comes from a government's decision.<sup>4</sup>

If capital mobility turns out not to be as exogenous as the existing theory predicts, then we are confronted with a paradox: why would a dictator want to increase a country's capital mobility, when high capital mobility is likely to topple his rule?<sup>56</sup>

In this paper, I answer the above question by arguing that rather than waiting passively for capital mobility to shape their political future, political leaders actively regulate capital movements to maximize their chances of survival. Specifically, I argue that capital mobility inherently consists of two processes: mobility with respect to capital inflows and mobility with respect to outflows. While inflows tend to strengthen the leader's governing power, outflows may threaten regime survival by damaging the economy. For this reason, political leaders generally welcome inflows, but fear outflows. Yet, political leaders cannot shut down capital outflows completely because eliminating outflows is likely to eliminate inflows as well and more important, their

---

<sup>3</sup>For example, Boix argues that democratization is less likely to occur in oil-exporting countries because they have inherited an asset with low capital mobility. Apparently, how much oil a country has is exogenously given.

<sup>4</sup>Note also that Indonesia was a net exporter of oil, while China was not.

<sup>5</sup>Here I take a standard assumption in political science that politicians prefer staying in office.

<sup>6</sup>Many observe that monarchs in the eighteenth century were aware of the destabilizing effect of capital mobility (e.g. Moore, 1966; Boix, 2003).

supporters may have a demand for capital outflows as a way to hedge domestic economic and political risks. Interestingly, the larger the size of a leader's supporting coalition, the more restrictions he can set on capital outflows.

Empirical tests support my arguments. First, restrictions on capital inflows do not vary by the size of the ruling coalition (proxied by regime types). Second, as for restrictions on capital outflows, empirical evidence shows that regimes that depend on a small ruling coalition tend to permit higher outward capital mobility. In particular, many Middle Eastern monarchies, whose political power depends on oil, a fixed asset, actually favor greater capital outflows than many democracies. This result contradicts Boix's observation that oil-exporting countries are associated with low capital mobility.

The paper is organized into four sections. The first section reviews the literature. I outline a formal model to explain my arguments in the second section. The third section presents empirical tests of my model's predictions and their results. The final section concludes.

## **Literature Review**

Economists have long observed politicians' ability to alter capital mobility. Robert Mundell (1963) and Marcus Fleming (1962) identify an economic policy trilemma, known as the "Unholy Trinity", confronting politicians: capital mobility, discretionary monetary policy, and stable exchange rates. They argue that all three are desirable, but governments can achieve at most two. Which one would governments sacrifice? The post-war history tells us that sacrificing capital mobility seems to be the rule for most countries.

A prime example is the Bretton Woods system, which was set up by the United

States and some European countries after World War II. Under the auspices of the Bretton Woods agreement, these countries adhered to a fixed exchange rate to encourage international trade and investment. At the same time, countries continued to use monetary policies to deal with inflation or unemployment. The difference in national policies led to a difference in interest rates across countries; Germany bore interest rates one or two per cent higher than those in Italy and France (Frieden, 2006). Such a gap invited international investors to engage in financial arbitrage. In order to keep stable exchange rates and defend their monetary autonomy, members of the Bretton Woods system chose to compromise capital mobility. They set up regulations to prohibit money moving across borders for speculative purposes.

As the Bretton Woods system collapsed in the 1970s, international capital movements have escalated. John Goodman and Louis Pauly (1993) suggest that governments' utility from capital controls has decreased significantly due to a variety of reasons, including pressure from multi-national corporations, the need to develop international financial centers, and the need to attract foreign capital. That said, many governments still use capital controls to advance other policy aims. The extent to which a country limits capital flows depends on domestic political and economic conditions. Geoffrey Garrett (1995) points out that there are more capital controls in countries dominated by the left and organized labor than in those with weak leftist parties and unions. Thomas Oatley (1999) provides an explanation: leftist governments run larger deficits than rightist governments, so they have an incentive to use capital controls to reduce the risk premia charged by financial markets, particularly when a fixed exchange rate is adopted.

In addition to differences in capital controls that result from the traditional left-right partisan line, Jeffrey Frieden (1991) suggests that political interests regarding capital controls are likely divided between those who favor a fixed exchange rate and

those who do not. William Bernhard and David Leblang (2003) find that countries with high costs associated with electoral defeat and with exogenous electoral timing prefer floating exchange rates, implying that preferences over capital controls vary depending upon political institution.

The above studies show that, on the one hand, politicians have incentives and the ability to control capital mobility. This is probably because, as Gunther Schulze (2000) argues, capital controls have a revenue-generating and a redistributive function. Yet on the other hand, politicians' incentives and ability may be affected by domestic political costs. For example, Scott Basinger and Mark Hallerberg (2004) argue that there exist two sources of political costs associated with changing capital controls: transaction costs due to the presence of multiple political veto players and constituency costs due to ideological opposition to policy changes.

In his book, "*Democracy and Redistribution*", Boix (2003) argues that countries with higher capital mobility are more likely to become democracies. The reason is that when the ruling elite can easily transfer their assets abroad, they become less afraid of the potential income redistribution after democratization, and hence less resistant to the transition to democracy. His argument hinges on the assumption that capital mobility is exogenously given. As the above literature review shows, this assumption is problematic.

In this paper, by relaxing Boix's exogenous capital mobility assumption, I analyze his causal argument in reverse order; that is, how political leaders select an optimal level of capital mobility to advance their likelihood of political survival. I present a formal model to illustrate my argument in the next section.



## Theory

The following model assumes three players: a political leader (L),<sup>7</sup> a representative member<sup>8</sup> of the political leader's ruling coalition (S), and a representative member of the residents (C). The political leader (also known as the incumbent) holds the highest political office in the regime. Note that the political leader can be a person or a group of individuals who collectively share the political office.

The political leader inherits a ruling coalition (also known as the coalition of support) of size  $n$ , where  $n$  is a subset of the population,  $N$ . The value of  $n$  is exogenously given.<sup>9</sup>

The members of the ruling coalition are known as the selectors.

**Definition 1.** *The  $n$  selectors differ from the  $\tilde{n} \equiv N - n$  residents in that the support of the selectors is needed if the leader is to remain in power.*

To understand the distinction between the selectors and the residents, some examples are necessary. First, consider a Middle Eastern monarchy, where the ruling coalition is composed of the members of the royal family. Under normal circumstances, only the members of the royal family, the selectors, can affect the outcome of leadership transitions.

For another example, consider a democracy consisting of two social groups: a rich minority and a poor majority. In this case, the former belongs to the residents group,

---

<sup>7</sup>Also known as the incumbent.

<sup>8</sup>One can interpret the representative member as the median voter in the ruling coalition.

<sup>9</sup>Since I aim to build a parsimonious theory, in this model I do not make any special reference to the common characterization of political regimes, for example, the rule of law, civil liberty, and political freedom. Nor do I make use of the typical classification of regime types such as democracy v. dictatorship. Rather, I adopt the approach used by Bueno de Mesquita and colleagues (2003) that focuses on the size of the ruling coalition, or in their term, the selectorate. What distinguishes one regime from another is the size of  $n$ . In other words, a regime can be completely characterized by the size of its ruling coalition. A democracy, thus, is simply a special case of regimes that have a large  $n$ . Note, however, that my model differs from theirs in that it only deals with three players, instead of four (residents, a selectorate, a winning coalition, and leaders).

while the latter the selectors.<sup>10</sup> The reason is that if a democratic leader needs to side with only one group in order to remain in power, she would pursue the support of the poor majority.

Suppose that there exist some routinized mechanisms (either formal or informal) that allow the selectors and residents to remove the incumbent. For example, the mechanism could be regular elections. Note that in some authoritarian regimes, there are no elections for regular citizens (i.e. the residents) to select political leadership. Yet whether there really are elections in which residents can participate is unimportant because, by Definition 1, the support of the residents is not required for the leader to remain in power. In other words, even if there exist such elections, the residents can hardly change the electoral outcomes, either because the residents do not have enough votes (e.g. the rich in a democracy) or because the elections are simply rigged (e.g. elections in many authoritarian regimes).

Assume that there is no within-group income variation, which suggests the polity consists of two economic classes: each selector (resident) has a fixed wealth  $w_s$  ( $w_c$ ). Many comparativists adopt this two-class structure to simplify their analysis (most notably, Boix, 2003 and Acemoglu and Robinson, 2006). For simplicity, normalize  $w_s$  to 1.

Members of each group can set aside a fraction  $(1 - r)$  of their income to invest abroad where  $r \in [0, 1]$  is the level of restrictions imposed by the leader on capital outflows, with a high  $r$  denoting more restrictions. The rest of their income is invested in domestic markets.

Let  $d_f$  and  $d_d$  be the respective rates of return to foreign and domestic investment. Normalize  $d_d$  to 1 and assume that  $d_f > d_d$ . I believe that this is a valid assumption for three reasons. First, domestic markets are usually small and hence offer fewer invest-

---

<sup>10</sup>For democracies that do not have clear majority and minority groups, then there would be no distinction between the selectors and the residents; the entire citizenry belongs to the ruling coalition.

ment opportunities than foreign markets. Second, it is harder to tax foreign investment than domestic investment. Finally, by investing abroad, investors can hedge against domestic economic and political risks such as debt service default<sup>11</sup> and regime failure.

Suppose that investing abroad requires a fixed cost  $c$ , which is randomly distributed according to some function  $g(\cdot)$  over  $[0, \infty)$ . There are many ways to interpret this fixed cost. It can be the information cost that investors have to pay in order to discover business opportunities in foreign markets. It can also be interpreted as the basic consumption that investors need to satisfy before pursuing luxuries, such as making investment. Hence, one would invest abroad if only if

$$(w - c)d_f > w.$$

Rearranging, we have

$$w > \frac{cd_f}{d_f - 1} = \bar{w}. \quad (1)$$

The income level  $\bar{w}$  divides people into those who can invest abroad and those who cannot. Define a variable  $x_i$  for group  $i$  such that

$$x_i = \begin{cases} 1 & \text{if } w_i > \bar{w}, \\ 0 & \text{if } w_i \leq \bar{w}. \end{cases}$$

Suppose that the leader levies a tax  $\tau \in [0, 1]$  on all her subjects within the country.<sup>12</sup> The total tax revenue  $T$  collected by the leader is

---

<sup>11</sup>Boyce (1993) points out that when a debtor country defaults on its foreign loans, the creditor country may force the debtor country to impose austerity measures, which often harm the working classes and the ruling elite because the latter group evades the consequences by holding foreign assets.

<sup>12</sup>Owing to the space limit, I assume  $\tau$  to be exogenously given in what follows. This assumption does not change the main results. In a richer model, I relax this assumption and allow the leader to

$$T = T^F + T^D \quad (2)$$

where  $T^F$  denotes the tax collected from foreigners who have brought capital into the country and  $T^D$  denotes the tax collected from the locals. To simplify the analysis, tentatively assume that there is no foreign capital coming to the country; that is,  $T^F = 0$ .

Suppose that the leader is able to tax only the domestic assets of the locals. The total tax revenue collected is

$$T = T^D = \tilde{n}\tau w_c k_c + n\tau k_s - C(\tau) \quad (3)$$

where  $k_i = (1 + x_i r - x_i)$ , with  $i \in \{s, c\}$ , and  $C(\cdot)$  denotes the cost of raising tax from individual residents members, with  $C' > 0$  and  $C'' > 0$ .

This cost function aims to capture the "Laffer Curve" effect in economics (Acemoglu and Robinson 2003). The idea of the "Laffer Curve" is that the relationship between a government's tax revenue and the tax rate takes an inverted U shape; raising the tax rate is effective in improving the tax revenue only up to a point, above which the tax revenue would decrease as the tax rate rises. The reason is intuitive: when the tax rate is very high, people lose incentive to produce or they withdraw from the formal economy. Consequently, the pool of taxable income shrinks.

The term  $k_c = (1 + x_c r - x_c)$  (or  $k_s = (1 + x_s r - x_s)$ ) in (3) is intended to distinguish different scenarios. For instance, If the pre-tax income of the residents is insufficient for foreign investment ( $x_c = 0$ ), then the total revenue collected  $T$  is reduced to  $\tilde{n}\tau w_c + n\tau k_s - C(\tau)$ . But if  $x_c = 1$  and  $r \neq 0$ , then the left hand side is  $\tilde{n}\tau w_c r + n\tau k_s - C(\tau)$ .

---

optimize  $\tau$ . The main concern for the leader when selecting  $\tau$  is how the disenfranchised would react to the tax. Too heavy the tax may induce the disenfranchised to revolt. Thus, endogenizing  $\tau$  will add a revolution constraint to the leader's optimization problem. (See Acemoglu and Robinson, 2007, p. 120 for details). The results of the richer model is available from the author upon request.

From the formulation of  $T$ , it is easy to see that the leader's tax revenue depends on the restrictions on capital outflows  $r$ .

Suppose that the leader distributes all the tax revenue among the ruling coalition as private benefits, leaving each member in the ruling coalition a post-tax income of  $1 - \tau k_s + T/n$ . Subsequently, the selectors devise an investment portfolio to maximize their income. As was mentioned, their investment decision is affected by the level of restrictions on capital outflows  $r$  as well as the level of their post-tax income, namely the value of  $x_s$ . The selector's indirect utility function is essentially his investment portfolio:

$$V_s \equiv (1 - \tau k_s + \frac{T}{n} - c)(x_s - x_s r) d_f + (1 - \tau k_s + \frac{T}{n} - c x_s) k_s \quad (4)$$

The first term of (4) is the return on foreign investment. It consists of the selector's post-tax income  $1 - \tau k_s$  and private benefits received from the incumbent  $T/n$ , minus the cost of making foreign investment  $c$ , weighted by the extent to which they are allowed to invest abroad  $(x_s - x_s r)$ , times the rate of return on foreign investment  $d_f$ . The variable  $x_s$  determines whether the selector has sufficient funds to invest abroad in the first place.

The second term is the return on domestic investment. Again, this term consists of the selector's post-tax income minus the cost of investing abroad  $(1 - \tau k_s + T/n - c x_s)$ , if any, which is then multiplied by another term  $k_s$ . As in (3), this latter term helps distinguish different scenarios. For example, when the selector's wealth  $(1 - \tau k_s + T/n)$  is insufficient for making foreign investment ( $x_s = 0$ ), then the second term is reduced to  $(1 - \tau r + T/n)$ . But if  $x_s = 1$  and  $r \neq 0$ , then the second term becomes  $(1 - \tau r + T/n - c)r$ .

Since all selectors share the same level of initial income, (4) is also the representa-

tive selector's indirect utility function.

If the leader wants to continue to stay in power, she has to solve for (4)

$$\max_r \left(1 - \tau k_s + \frac{T}{n} - c\right)(x_s - x_s r) d_f + \left(1 - \tau k_s + \frac{T}{n} - c x_s\right) k_s \quad (5)$$

where  $T = \tilde{n}\tau w_c k_c + n\tau k_s - C(\tau)$  and  $k_s = 1 + x_s r - x_s$ .

The timing of the game is as follows:

- (i). The leader sets the levels of taxation and controls on capital outflows.
- (ii). The selectors decide whether to keep the incumbent and accept her policy offers or to vote for an alternative candidate from the selectorate, who is assumed to be available at all times. If the representative selector accepts her offer, the incumbent stays in power. If not, an alternative candidate would be elected and the game is over.

## Optimal Outward Capital Restrictions

The optimal outward capital controls depend on whether the selectors and the residents have enough wealth to invest abroad.

We can distinguish four possible scenarios.

The optimal outward capital controls depend on whether the selectors and the residents have enough wealth to invest abroad.

We can distinguish four possible scenarios.

*Scenario 1.*  $w_c \leq \bar{w}$  and  $w_s \leq \bar{w}$

Under this case, every group in the polity is so poor that no group amasses enough wealth to invest abroad. Hence, neither the selectors' indirect utility function nor the revolution constraint depends on  $r$ . In other words, the leader can freely choose whatever  $r$  she wants.

*Scenario 2.*  $w_c \leq \bar{w}$  and  $w_s > \bar{w}$

This is the situation in which only the ruling class has sufficient funds to transfer assets abroad. With  $w_c < \bar{w}$  and  $w_s > \bar{w}$ , we have  $x_c = 0$  and  $x_s = 1$ . The optimization problem of (5), thus, becomes

$$\max_r \left(1 - \tau r + \frac{T}{n} - c\right)(1 - r)d_f + \left(1 - \tau r + \frac{T}{n} - c\right)r$$

where  $T = \tilde{n}\tau w_c + n\tau r - C(\tau)$ .

As one can see, outward capital restrictions can affect only the selectors. Since the return on foreign investment  $d_f$  is greater than 1 and since the selectorate is rich enough to overcome the fixed cost of making foreign investment  $c$ , the representative selector's utility decreases in  $r$ . For this reason, the optimal restrictions on outward capital under Scenario 2 should simply be set at zero ( $r^* = 0$ ). This result is intuitive: when the incumbent's tax revenue does not depend on  $r$ ,<sup>13</sup> she should satisfy the selectors' demand for low outward capital restrictions.

*Scenario 3.*  $w_c > \bar{w}$  and  $w_s \leq \bar{w}$

Scenario 3 is the reverse of Scenario 2. Here, it is the ruling coalition, not the residents, who lack the ability to invest abroad, thereby  $x_c = 1$  and  $x_s = 0$ . Plug these values back in the leader's optimization problem, and we have

$$\max_r \left(1 - \tau + \frac{T}{n}\right)$$

where  $T = \tilde{n}\tau w_c r + n\tau - C(\tau)$ .

Now  $r$  affects the selectors only through  $T$ . When  $r$  is small, so that the residents can easily transfer assets abroad, the leader's tax revenue would decline, which in turn reduces the private benefits received by the selectorate. For this reason, the selectors want to set  $r$  as high as possible in order to prevent any loss of tax revenue  $T$  due to

---

<sup>13</sup>Note that the tax collected from the selectors is eventually distributed back to them in the form of private benefits.

capital flight by the well-off residents. The optimal level of outward capital restrictions is simply 1.

*Scenario 4.*  $w_c > \bar{w}$  and  $w_s > \bar{w}$

In this case, both the selectors and the residents are rich enough to invest abroad. The leader's optimization problem has the following structure:

$$\max_r \left(1 - \tau r + \frac{T}{n} - c\right)(1 - r)d_f + \left(1 - \tau r + \frac{T}{n} - c\right)r$$

where  $T = \tilde{n}\tau w_c r + n\tau r - C(\tau)$ .

The optimal level of capital restrictions is less obvious in this case. On one hand, the selectors demand fewer capital restrictions, so that they can invest abroad to reap more profits. On the other, setting a low level of capital restrictions would dry up tax revenue because the residents, from whom the tax is collected, can also transfer assets abroad to escape taxation.

We can solve for  $r$  by using the first order condition of the leader's objective function with respect to  $r$ . It can be shown that

$$r^* = \frac{C(\tau) + n(c - 1)}{\tilde{n}\tau w_c} + \frac{d_f}{d_f - 1}.$$

Figure 1 displays the four scenarios. For the ease of exposition, in the Figure, I relax the assumption that wealth is constant within groups.

Summarizing this analysis, we have the following:

**Proposition 1.** *All else held constant, a unique solution of outward capital controls  $r^*$  in the leader's optimization problem described in (5) may exist, depending on the respective wealth level of the selectors and the residents. Formally, it is such that for the threshold  $\bar{w}$  specified in (1):*

$$\text{If } w_c \leq \bar{w} \text{ and } w_s \leq \bar{w}, r^* \in [0, 1].$$



If  $w_c \leq \bar{w}$  and  $w_s > \bar{w}$ ,  $r^* = 0$ .

If  $w_c > \bar{w}$  and  $w_s \leq \bar{w}$ ,  $r^* = 1$ .

If  $w_c > \bar{w}$  and  $w_s > \bar{w}$ ,  $r^* = \frac{C(\tau)+n(c-1)}{\bar{n}\tau w_c} + \frac{d_f}{d_f-1}$ .

Thus far, we have discussed four mathematical possibilities regarding the choice of the optimal level of outward capital controls. Substantively, Scenario 2 and 3 are closer to reality. It is uncommon (though not impossible) to see a country that is so impoverished that even the ruling class is too poor to transfer assets abroad. Equally rare is a country that is so rich that even the average residents member has sufficient wealth to invest abroad (remember that foreign investment comes with a high information cost).

What can we say about Scenario 2 and 3? One can associate Scenario 2, where only the ruling class is rich enough to invest abroad, with dictatorships and Scenario 3, where those who are rich enough to invest abroad are not in power, with democracies that have distinct majority and minority groups classified by wealth.

That said, two caveats are in order. First, the optimal levels of outward capital restrictions for Scenario 2 and Scenario 3 – that is,  $r^* = 0$  and  $r^* = 1$ , respectively – are indicative only. Regimes that fit squarely in the conditions of Scenario 2 may maintain a certain level of capital restrictions, whereas regimes that can be perfectly described as Scenario 3 may allow a certain level of outward capital mobility. There are two reasons to this empirical variation. The first is that the model assumes within-group wealth variation is absent. In reality, however, we often observe a continuous distribution of wealth within each class and their respective distribution may even overlap with each other. The second reason, especially for Scenario 2, is that with perfect capital mobility, the selectors may lose incentive to defend the regime in times of political crisis. I will elaborate on this in the next section.<sup>14</sup>

---

<sup>14</sup>Notwithstanding these potential empirical irregularities, the model predictions should in general be correct; that is, a "Scenario 2" regime should maintain fewer capital restrictions, while a "Scenario 3" regime should have more.

The second caveat is that there are authoritarian regimes that maintain a support base among the poor rather than the rich, for example, the single-party dictatorship led by the Partido Revolucionario Institucional (PRI) of Mexico prior to 1988. There are also authoritarian regimes in which the leaders deliberately exclude the rich from political power. For example, Suharto deprived ethnic Chinese, who were traditionally the rich minority, of their power to participate in politics, while simultaneously granting them a great deal of economic freedom, so that they could continue to serve as the cash cow for the regime.

These examples reflect the limit of the conventional classification of political regime types in understanding the political economy of capital mobility. In fact, what influences a country's level of capital mobility is not so much about whether the regime is democratic or not, but rather the size of the ruling coalition  $n$ .

It is easy to see why  $n$  can predict the level of capital mobility. As  $n$  decreases, the private benefits received by each individual selector  $T/n$  increases. Consequently, the post-tax income of the selectors also rises. The smaller the value of  $n$ , the more likely is it that the selectors' post-tax income surpasses the threshold  $\bar{w}$ . Scenario 2 is more likely in this situation.

To derive this comparative static result more formally, note that  $d_f$  is a constant and the fixed cost of making foreign investment,  $c$ , is randomly distributed according to  $g(\cdot)$ . Therefore,  $\bar{w}$ , by 1, also follows a probability distribution  $g(\cdot)$ . Define  $G = \int g(\bar{w})d\bar{w}$  and denote the supporters' post-tax income by  $w^P \equiv 1 - \tau k_s + T/n$ . From the above analysis, we know that the supporters would not press for a low level of capital restrictions if  $x_s = 0$ ; that is, when  $w^P \leq \bar{w}$ . The probability that  $w^P \leq \bar{w}$  is simply  $G(w^P)$ . Since  $dw^P/dn < 0$  and  $G(\cdot)$  is monotonic in  $\bar{w}$ ,  $dG(w^P)/dn < 0$ . Thus, as  $n$  increases, the probability that  $x_s = 0$  also increases.

With the above analysis, we can state the following:

**Proposition 2.** *As the size of the ruling coalition increases, the probability that the selectors demand a low level of outward capital restrictions decreases.*

## Inward Capital Restrictions

Thus far, the model has focused on outward capital restrictions. Yet it is easy to extend the current model to include inward capital restrictions as well. Let  $r^{OUT}$  and  $r^{IN}$  denote outward and inward capital restrictions, respectively, both of which are bounded by 0 and 1 inclusive, with high values representing more restrictions. Define  $K(r^{IN})$  a function of capital inflows, where  $K' < 0$ . Recall Equation (2),

$$T = T^F + T^D.$$

$T^F$  refers to the tax imposed on foreign capital brought to the country; hence, it is a function of  $K(\cdot)$ . It is easy to check that unlike restrictions on outward capital, restrictions on inward capital do not depend on the size of the ruling coalition.<sup>15</sup>

**Proposition 3.** *The size of the ruling coalition does not predict the level of restrictions imposed on inward capital mobility.*

## Non-routinized Leadership Transition

Hitherto, we have considered only routinized procedures of removing a leader, such as elections. There exist, however, other non-routinized procedures of unseating the incumbent. I define non-routinized procedures as attempts to oust the incumbent organized by those who cannot do so under routinized procedures. These people may include the residents and minority members within the ruling coalition. The attempts

---

<sup>15</sup>A more formal derivation is available from the author upon request.

organized by the residents are known as revolutions, while those organized by the latter group are *coups d'etat*.<sup>16</sup>

When it is possible to oust the leader through non-routinized procedures, the leader may have incentive to restrict outward capital movements, given that the selectors are rich enough to invest abroad, for the following reason. As Boix (2003) argues, when the ruling elite can easily transfer their assets abroad, they would have less incentive to defend the regime in times of political crisis. When they cannot transfer their assets abroad, however, losing the regime means losing everything; hence, they have strong incentive to fight for the regime.

It can be shown that when non-routinized removal is imminent and when the selectors are rich enough to send their assets abroad, the leader tends to impose more restrictions on outward capital movements.<sup>17</sup> An alternative way to say this is that only in times of extreme political crisis, in which the incumbent is more likely to be removed under non-routinized removal procedure than in routinized one, does the leader deviate from the  $r^*$  as specified in Proposition 1. That is to say, Proposition 1 applies in most situations. This is intuitive because though we observe revolutions and *coups d'etat* in many countries (democratic or authoritarian), these events are more the exception than the rule, when compared to regular leadership transition processes.

## Empirics

In this section, I will panel data to test my argument that regime type affects capital mobility. The dependent variable is capital mobility, while the variable of interest is the size of the ruling coalition supporting political regimes.

---

<sup>16</sup>According to Edward Luttwak's (1968), *coups d'etat* refer to *the infiltration of a small but critical segment of the state apparatus, which is then used to displace the government from its control of the remainder*.

<sup>17</sup>A formal derivation of this result is available from the author upon request.

## Dependent Variable

There are two general approaches to measuring capital mobility. On the one hand, we can gauge the exact volume of capital flows across borders (the *de facto* approach). On the other, we can examine the official restrictions imposed on capital movement (the *de jure* approach). To measure *de facto* capital movement, there are various economic variables that researchers may employ. For example, Feldstein and Horioka (1980) look at the correlation between national saving and national investment rates. A high correlation indicates scarce foreign investment, thereby suggesting low capital mobility. Other researchers (for example, Kraay, 1998; Lane and Milesi-Ferretti, 2001) make use of actual capital flow data such as portfolio and direct investment assets and liabilities to gauge the *de facto* movement.

Other researchers adopt the *de jure* approach by looking at the rules and regulations affecting capital movements in each country. While some (Bekaert, Harvey, and Lundblad, 2001; Henry, 2000a and b; Levine and Zervos, 1998; Tornell, Westermann, and Martinez, 2004) study the liberalization dates of various markets,<sup>18</sup> others (Miniane, 2004; Montiel and Reinhart, 1999; Quinn, 1997) try to capture the intensity of official capital restrictions.<sup>19</sup> For the former group, the variable of interest is binary by nature, the value of "1" is assigned to the year in which the liberalization took place and "0" to the preceding years, the typical data format in event-history studies. For the latter group, more disaggregated variables are used. Montiel and Reinhart (1999) construct an indicator that ranges from 0 to 2, with higher values for greater restrictions. Miniane (2004) and Quinn (1997) respectively create a composite index based on several categories of capital controls.

---

<sup>18</sup>Bekaert, Harvey and Lundblad (2001), Henry (2000a and b), and Levine and Zervos (1998) focus on stock market liberalization, while Tornell, Westermann, and Martinez (2004) includes trade liberalization dates as well.

<sup>19</sup>Empirical measures of capital restrictions abound. For a complete list of the literature, see Edison et al (2004) and Quinn (1997).

*De facto* and *de jure* measures are correlated with each other, as we would expect. When one plots *de facto* capital movements, measured by foreign direct investment or portfolio investment, against *de jure* measures, taken from, for example, Miniane (2004) and Quinn (1997), one can see that the two measures are generally correlated.<sup>20</sup> What is interesting is that the strength of the correlation depends on the type of flows; actual outflows are more strongly correlated with *de jure* measures than are actual inflows. There are three reasons to account for this. The first is measurement error. Miniane's and Quinn's indices measure capital controls in general, not controls on a specific type of capital movement. Hence, it is natural that their measures do not correlate perfectly with, say, portfolio investment alone. Second, inflows tend to be influenced by more external factors than outflows. For instance, if the global economic environment is bad, then countries are likely to receive less foreign capital, no matter how weak the controls on capital inflows are.

The third factor is that the *de jure* measurement is essentially the official rules set by national governments. Oftentimes, however, what is written in law is one thing, while what is practiced in reality is quite another. One reason that there are instances where the two measurements do not agree with each other has to do with law enforcement. The existence of black markets and bureaucratic corruption often hinders the implementation of capital restrictions.

For the above reasons, *de facto* and *de jure* measures provide quite different information. If we are interested in studying official preferences, we should rely more on *de jure* measures. Since the objective of this chapter is to test whether different types of regimes have different preferred levels of capital mobility, the main results should refer to *de jure* measures, though I also use *de facto* measures, which are available for more years, as a robustness check in the following analysis.

---

<sup>20</sup>These graphs are available from the author upon request.

## **Data Sources**

The existing measures of capital controls (either de facto or de jure) do not distinguish between capital inflows and outflows. To test my theory, however, it is indispensable to distinguish between the two. For this reason, I construct two separate indices, one measuring capital controls on inward flows and the other on outward capital flows, based on the information available in the International Monetary Fund's Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER).

## **New Measures of Capital Controls**

The information collected in the AREAER was in the form of descriptive text prior to 1996. One needs to delve into the dense paragraphs in order to extract information from the pre-1996 editions. The process is highly subjective and inefficient. More important, the IMF did not distinguish between restrictions on inflows and outflows in many country reports, which means that cross-national comparisons at this disaggregated level is impossible.

To facilitate cross-national comparison, the IMF adopted a new reporting procedure in 1996, in which the information is tabulated into numerous categories, consistent across all countries. Thirteen categories are related to restrictions on capital movement (See Table 3.1).<sup>21</sup> Under each category, the AREAER reports the specific arrangements of the country. The AREAER also provides a summary table of all the categories across countries. In the summary table, empty cells reflect absence of controls, while dotted cells indicate the existence of controls. Miniane (2004) relies on this summary table to construct his capital restriction index.

Unfortunately, the summary table makes no distinction between restrictions on

---

<sup>21</sup>The AREAER reported only twelve categories of capital controls in the 1996 and 1997 editions. Starting with the 1998 edition, it adds a new category: controls on personal transactions.

inflows and those restricting outflows. To extract that information, one needs to go back to the main text of the AREAER, which does contain separate descriptions for inflows and outflows. I use this text to develop new measures of capital controls.

Based on the thirteen categories of capital controls, I create two separate lists, one for inflows and another for outflows, using information available in the main text. For example, in 2002, there exist controls on incoming capital market securities in the United States, but no controls on outgoing capital market securities. I assign a value of "1" to the list of inflows, and "0" to the list of outflows, both under the category of capital market securities.

With the above coding scheme, I can classify most categories for most countries in most years unambiguously. In a small subset of cases, however, controversy arises. To ensure consistency, I develop a more detailed coding rule.<sup>22</sup> After coding all these categories, I construct an index for outward capital control and another for inward capital control by aggregating the scores of these categories for each country in each year examined.<sup>23</sup>

## Data Coverage

The capital control indices cover some 170 member countries<sup>24</sup> of the IMF over a period of nine years, from 1995 to 2003.<sup>25</sup> The short period covered is due to the fact that the current reporting procedure began only with the AREAER's 1996 edition.<sup>26</sup>

---

<sup>22</sup>This is available from the author upon request.

<sup>23</sup>Detailed score aggregation method is available from the author upon request.

<sup>24</sup>Only 52 countries were included in the first year, 1995, however.

<sup>25</sup>Each edition documents the capital transaction restrictions in the previous year.

<sup>26</sup>Miniane (2004) uses a method of "filling by default" to recover information in the pre-1996 edition. What he does is to use the 1996-edition, where the current reporting procedure was first adopted, as the baseline and then check for changes in the main text in both the 1995 edition and 1996 edition. After filling in all the 1995 entries, use 1995 as the new baseline year to backtrack the information for 1994. Logical as it seems, I find this method dubious, as the AREAER often provides no explicit information for all categories in the pre-1996 editions, especially when it comes to distinctions between inflows and outflows. For this reason, I would rather rely on a modestly-sized, but accurate dataset than on one that



## Variable of Interest & Hypotheses

The theory elaborated in the previous section leads to the expectation that the demand for outward capital mobility decreases in the size of the coalition supporting the government. For democracies, the coalition of support or the selectors, according to my definition laid down in the previous section, is the proportion of voters who voted for the incumbent and expect to benefit from the incumbent party's rule. For non-democracies, identifying support coalitions is much less clear-cut due to a lack of publicly observable information and opaque and sometimes informal transition procedures (such as primogeniture in some monarchies). As a result, it is impossible to pin down the exact size of the coalition supporting each authoritarian regime.

Since different kinds of authoritarianism differ from each other in systematic ways, however, we can use authoritarian regime type, as classified by Geddes (2003), as a proxy for size of the support coalition.<sup>27</sup> This proxy is far from perfect, but it can be used to order types of regimes by the usual size of support coalition for each regime type. For example, many regimes are governed by a military officer, and few besides, high-ranking officers have a say in the national decision-making. We may classify them as military dictatorships. Other regimes may be dominated by a single party, that controls most access to power and government offices. We may put these regimes in the category of single-party. Using Geddes' (2003) classification rule, extended by Wright's (2007), I identify four generic types of authoritarian regimes: military, monarchic, personalistic, and single-party. By definition,<sup>28</sup> single-party regimes, on average, should have largest coalition of support among the four, as ruling party membership often involves a significant subset of the population. It is difficult to rank the

---

is big, but contains more inaccuracy.

<sup>27</sup>By regimes, I rely on Geddes' (2000) definition, which refers to a set of formal and informal rules and procedures for selecting leaders and policies.

<sup>28</sup>The definitions of these regimes are available from the author upon request.

remaining three types, but one thing is certain; their supporting coalitions should be smaller than those of single-party regimes and democracies.<sup>29</sup> For this reason, I choose not to construct an ordinal scale for coalition size. Rather, I use dichotomous variables, representing these regime types, so that we can assess their effects empirically without making assumptions about them.<sup>30</sup>

The linkage between regime types and my theoretical argument is presented graphically in Figure 2. The figure shows a hypothetical income distribution of a population. The shaded region of each diagram represents the income group to which the ruling elite of a corresponding regime type usually belongs. Note that these graphs are intended to illustrate the conceptual distinction characterizing different regimes, though not all regimes fit perfectly into this.

As can be seen from Figure 2, the ruling coalitions of personalistic dictatorships and monarchies are composed of a small group of rich people. The reason is that, as I argue in the previous section, the existence of a huge resident population generates, through taxation, an enormous amount of private benefits that the political leaders

---

<sup>29</sup>The data for democracies are taken from Przeworski et al (2000).

<sup>30</sup>When using Geddes' and Wright's datasets, two caveats deserve mentioning. First, sometimes we may observe that political leaders transform their regimes from one type to another. For instance, Mao successfully purged his peer within the Communist Party leadership in the sixties and personalized the single-party regime in China. After Mao's death, his successor, Hua Guofeng, tried to replicate Mao's personality cult, but to no avail. The Chinese Communist Party soon got rid of Hua and restored its previous single-party characteristics. Geddes does not count Mao's regime personalization as a transition nor does she count the subsequent restoration as another, since doing so would be inconsistent with we call regimes in everyday language. Rather, she codes regimes by the category in which they become stabilized.

The second caveat is that there exist some hybrid regimes. Ideally, all authoritarian regimes should fall into one of the four generic categories (i.e. personalistic, single-party, monarchies, or military). Reality is more complicated, however. As Geddes suggests, "in the real world, many regimes have characteristics of more than one regime type." For this reason, her dataset contains some hybrid categories. The hybrid categories are military/personalistic hybrid, single-party hybrid with either the military or the personalistic, and military/single-party/personalistic amalgam.

These hybrid categories are used for regimes with approximately equal numbers of the traits used to code regime type for two or more types, and sometimes they reflect a lack of agreement among area specialists. To prevent measurement errors introduced by these controversial cases, I included only the unambiguous cases – that is, those belonging to one of the four generic types – in the statistical models. Cases coded as pure types make up more than 75 per cent of total cases.

use to reward their supporters. As the size of the ruling coalitions in personalistic dictatorships and monarchies tends to be small, members of these ruling coalitions benefit handsomely from the leaders' largess.

The top right panel of Figure 2 shows a hypothetical income distribution in a democracy with two distinct socio-economic groups: a poor majority (the shaded region) and a rich minority. The two groups are essentially divided between those who can invest abroad and those who cannot.

Single-party dictatorships also tend to maintain a sizable support coalition. Although the exact size and shape of the shaded region may vary from regime to regime, many single-party dictatorships rely on the support of the income group as shaded in Figure 2, the first panel. The prime example is the Partido Revolucionario Institucional (PRI) of Mexico prior to 1988. The PRI ruling coalition included neither the very top of the income distribution nor the bottom and party careers were one of the surest routes to upward mobility.<sup>31</sup>

The ruling coalition of military regimes is quite unusual in the sense that, although it is composed of a small group of ruling elites (indicated by the narrow shaded region in top right panel of Figure 2), this group does not occupy the rich end of the income distribution. The reason stems from the fact that military supporters mainly consist of professional soldiers who usually engage in regular and specialized duties that are of a non-productive nature in the military establishment. Thus, it is more appropriate to classify them as the middle or upper middle class.<sup>32</sup>

---

<sup>31</sup>Note that the shaded region indicates the range of income levels to which the coalition members belong. The converse may not be true; that is, people who are in this range may not necessarily be members of the ruling coalition. Even one is located in the mid range of the income distribution of Mexico, one may not be able to become a member of the PRI. Thus, it is possible that the shaded region of single-party dictatorships is larger than that of democracies.

<sup>32</sup>There is no reason to believe that military dictators cannot transform the ruling coalition into the rich by allowing their supporters, namely professional soldiers, to engage in production. For example, Suharto, the former dictator of Indonesia, permitted his fellow officers to do business such as logging through which they reaped handsome profits. Subsequently, many became the upper class in the coun-

Owing to the unique composition of the support base of military regimes, it is difficult to make a clear theoretical prediction about their preferences with regard to outward capital mobility. Although their ruling coalition tends to be small, the coalition members, namely professional soldiers, are generally not very well paid. It is possible that their salary is sufficient to enable them to invest abroad. But another possibility is that their salary is so meager that they never contemplate the chance of moving their assets abroad. My conjecture is that the latter case is more consistent with reality because military regimes can only be found in developing countries and the middle class of developing countries seem unlikely to be rich enough to make substantial foreign investment.

With both the dependent and variable of interest specified, I can now state the hypotheses to be tested.

**Hypothesis 1.** *Restrictions on outward capital mobility should be fewer in personalistic regimes or monarchies than in democracies and single-party dictatorships.*

**Hypothesis 2.** *Restrictions on inward capital mobility does not vary systemically across regime types.*

### **Control Variables**

In order to test these hypotheses, other factors that affect levels of controls on capital must be accounted for. The control variables include logged GDP per capital, logged population, landlockedness, lagged growth rate, fuel dependence, dummies for decades, and dummies for geographical regions.

---

try. Cases like this, however, are normally not coded by Geddes as military regimes, for they have characteristics of more than one regime type.

## Estimation Strategy

The estimation strategy is ordinary least squares (OLS) with panel-corrected standard errors (PCSE's), recommended by Beck and Katz (1995). I will regress the dependent variables, the *de jure* capital controls on inflows and outflows respectively, on coalition size as proxied by regime types and a set of control variables. The dependent variables are official rules controlling capital inflows and outflows, which may change overtime, though slowly. This may induce an autocorrelation in the error terms and result in biased OLS estimates. To check if autocorrelation exists in the dependent variables, I use the Woodridge test for autocorrelation in panel data, which shows that first-order serial correlation does exist. I correct the problem by using an autoregressive model (AR1) in the OLS with PCSE.

## Results

Table 1 shows the regression results. Two features stand out. First, regime type is a significant determinant of capital policy only in the case of capital outflow policy. None of the regime dummies achieves statistical significance even at 10 per cent in the models (model (3) and (4)) of inflows. This result supports Hypothesis 2 that political leaders generally welcome capital inflows regardless of the size of coalition that supports them, as incoming capital contributes to strengthening the probability of survival of the leaders. Hence, we do not observe any systematic variation in the level of controls on incoming capital that is associated with regime type.

The second striking feature is that all other regime types have, on average, fewer restrictions on capital outflows than do military regimes, the left out regime category. For example in model (1) and (2), all regime dummies have a negative coefficient, and all are statistically significant. This result seems to agree with my conjecture that

military supporters generally have no sufficient wealth to invest abroad and hence, do not demand high outward capital mobility. What is striking is that military regimes are more repressive of outward capital movements not only in the case of other regimes with comparable coalition size, but also in the case of regimes with greater coalition size.

The results also support Hypothesis 1. Consider first regimes with larger coalitions – that is, single-party dictatorships and democracies. These regimes prefer  $\approx 0.16$  fewer restrictions than military regimes. On a 0-1 scale of the dependent variable, this difference should not be ignored. Regimes with smaller coalitions – personalistic and monarchies – prefer even fewer restrictions,  $\approx 0.28$  less than the military dictatorships' on average. This quantity covers almost one third of the possible range of the dependent variable and thus constitutes a substantively significant difference. Taking these results together, we see a clear picture: controls on capital outflows increase with the size of supporting coalitions, except in military regimes.

One might argue that what model (1) and (2) are showing is essentially the difference between each of these regimes and the reference regime, the military dictatorship, and thus the models do not necessarily test the difference of the fixed effects between small and large coalitions. To test Hypothesis 1 more rigorously, I combine personalistic regimes and monarchies as small coalitions, and similarly the regime dummies for single-party autocracies and democracies as large coalition regimes. Then, I re-run model (2) using these new variables instead of the original dummies, while keeping the military dummy as the reference group. Finally, I perform a difference of means test with respect to the coefficients of SMALL and LARGE. The effect of small coalitions is different from that of large coalitions with statistical significance at 10 per cent (see Table 2, row 1).

Similarly, I perform the same difference of means test for model (4). As can be seen

in Table 2 row 2, for capital inflows, there is no significant difference between regimes with small coalitions and those with large ones. Hypothesis 2 is again confirmed.

It is important to note that, according to the results, monarchies maintain the least restrictions on capital outflows, which runs counter to other theorists' predictions. For example, Boix (2003) argues that many monarchies in the Middle East have lasted a long time because the capital mobility of these oil-rich countries is low. Yet, as is evident in Table 1, monarchical regimes have the freest capital mobility, at least in terms of outflows.

Nevertheless, one may argue that the capital mobility as measured in these regressions is different from the capital mobility as defined in the previous theories, which are concerned primarily about natural resources. Natural resources may well be a lurking variable influencing both monarchies and rules about capital mobility. On one hand, the natural endowments may lengthen the life expectancy of monarchies. On the other, fuel exports make a country rich and rich countries tolerate higher capital mobility. Hence, the relationship between monarchy and capital mobility may be spurious.

As can be seen in model (2), however, controlling for dependence on fuel exports does not change the effect of coalition size on capital controls. Hence, there is no evidence that the relationship between monarchies and very moderate controls on capital outflows is spurious.

Now consider the effects of the other control variables. In the outflow regressions (model (1) and (2)), besides LOG GDP PER CAPITA, none of the control variables is statistically significant. The negative coefficient of LOG GDP PER CAPITA indicates that richer countries tend to have fewer restrictions on capital outflows. It is possible that governments of richer countries have less fear of capital flight.

In the inflows regressions, the only variables that are statistically significant are LOG GDP PER CAPITA and LOG POPULATION. For the former effect, richer countries

have more tolerance of capital inflows than poor countries, though it is possible that fewer restrictions on capital inflows make countries rich. The existing models are unable to tease out the causal directions. The positive coefficient for LOG POPULATION is consistent with the argument that countries with a larger domestic market tend to be more self-sufficient and hence less friendly to inward capital flows.

## **Discussion**

This paper challenges the existing theory about the effects of capital mobility on democratization by arguing that political leaders do not wait passively to see their political career be influenced by capital mobility. Rather, they actively use capital restrictions to maximize their chance of political survival.

The contribution of the paper is twofold. First, it challenges the existing theory of capital mobility and democratization by arguing that that capital mobility essentially consists of two different processes: mobility with regard to capital inflows and mobility with regard to capital outflows. The two processes have different effects on political stability and hence, we should expect to see political leaders have different attitudes toward them.

The second contribution of this paper is that it shows how political leaders react to the two processes differently. For outflows, leaders generally do not like outflows, as outflows can destabilize the economy or even the leaders' political survival. There is, however, a limit to which leaders can set capital restrictions because the ruling elite, whose support is crucial to the leaders' survival, may demand, when they have sufficient funds to invest abroad, greater outward capital mobility as an insurance policy against domestic economic and political risks. For this reason, political leaders need to calculate the considerations of their supporters when setting restrictions on outward



capita mobility. Their calculation is reflected by the size of the political regimes.

As for inward capital restrictions, since there exists no conflicting interest between political leaders and ruling elites (both want to have more capital inflows) we should not expect to see any systematic difference across regime size.

I construct different measures for capital mobility to test my arguments, which are supported by the data.

In fact, the empirical evidence not only supports my arguments, but also shows some interesting patterns. First, democracy is associated with lower outward capital mobility. Second, oil-producing monarchies tend to permit greater outward capital mobility than other types of regime, as opposed to the prediction of the existing theories which argue that oil-producing countries are associated with low capital mobility. The result is not surprising. Although oil is immobile, the profits generated from selling oil are.

This finding is not to say that capital mobility has no effect on democratization or regime transitions in general. Yet, it does point out that, when we study the effects of capital mobility on regime transitions, we cannot simply assume that capital mobility is exogenous. There are indeed many regimes, for example the People's Republic of China, which manipulate capital mobility policy to maximize their chance of political survival.

## Appendix: Robustness Check

The regressions shown in the main text use *de jure* measures of capital controls as the dependent variables. Though these measures more accurately reflect the preferences of different governments, they are available for a relatively short time span (nine years). Whether the results hold up for a longer time period remains unknown. To check the robustness of the previous results, I re-run the regressions using actual capital inflows and outflows as the dependent variables. The actual capital flows serve as a proxy for *de jure* measures of capital controls. Though not perfectly correlated, the actual capital flows more or less reflect the official restrictions on capital movements.

There are many different kinds of capital. Here I use foreign direct investment (FDI) and portfolio investment, for which data are available from as far back as the 1950s.<sup>33</sup>

The sheer volume of capital flows across borders may not have comparable effects due to differences in the size of different economies. Thus, I normalized FDI and portfolio investment as a proportion of country GDP. It is noteworthy that the distributions of these variables are highly skewed: some countries attract a lot of foreign direct investment, while others receive virtually none. The skewness of the dependent variable may impair statistical inference. Hence, I logged these quantities to correct for their skewness.<sup>34</sup> Since these are measures of investment volume, high values indicate

---

<sup>33</sup>The distinction between FDI and portfolio investment is that FDI investors intend to establish a lasting controls over the management of the companies in which they invest, while portfolio investors have no such intention. FDI investors expect to remain invested for reasonably long time periods, whereas portfolio investment can be very volatile. Empirically, for statistical convenience, FDI is defined as any investment that holds at least ten per cent of the ownership of a company.

<sup>34</sup>Note that data with negative values will be dropped after logging. But this should not concern us because the reason for negative FDI outflows is that domestic investors repatriate enough profits from previous investment abroad to outweigh capital sent abroad. Since we are primarily interested in whether governments allow capital to flow out of the country, not how much capital is being repatriated back, we should focus on the positive values. That said, one may still argue that the volume of capital repatriation can be affected by government policies. For instance, a political leader might order the business elite to repatriate money from abroad. This argument rests on two assumptions, however.

fewer restrictions, in contrast to the interpretation of the *de jure* capital controls.

Table 3 shows that the same results carry over into this larger sample. First, we observe no systematic difference with respect to inflows of FDI across regime types. This suggests that government leaders generally welcome foreign direct investment, regardless of the size of the coalition that supports them.<sup>35</sup> Different kinds of regimes, however, demonstrate different levels of tolerance for investment abroad in the form of FDI. Regimes with smaller coalitions, personalistic dictatorships and monarchies, permit greater capital outflows, whereas regimes supported by larger coalitions, single-party autocracies and democracies, are less tolerant of outward capital flows. All regime types, except democracies, are statistically significant. These regime coefficients are also of considerable substantive importance. For instance, consider monarchies. Direct investment flowing from monarchies to other countries is almost seven times larger than the average level of direct investment abroad for the sample as a whole (the average is 0.11). In other words, contrary to Boix's expectations, oil producing monarchies in fact have unusually high outward capital mobility.

As in the previous section, I performed a difference of means test between regimes supported by small coalitions and those supported by large ones. Table 2, rows 3 and 4, shows that the difference between these two groups is statistically significant at 10 per cent for outflows of FDI, but not inflows.

Table 4 displays some factors affecting portfolio investment flows. Here again, there is no systematic difference in the tolerance of incoming portfolio investment across regime types. For outgoing portfolio investment, monarchies are the most per-

---

First, it assumes that the business elite necessarily obey the political leader, which would contradict our understanding of the effect of capital mobility on elite power (i.e. when the elite owns mobile assets, they would become more independent from government). The second assumption is that capital repatriation is systemically influenced by domestic political considerations. Both assumptions are unlikely to be true.

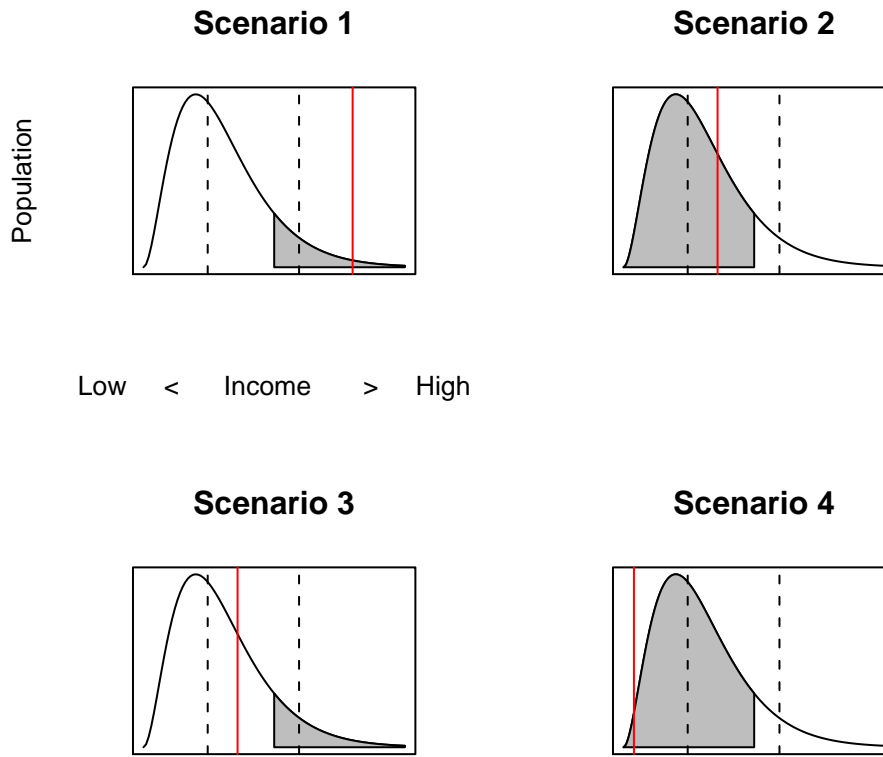
<sup>35</sup>It may also suggest that investors care little about the type of regime in power in the countries they invest in.

missive regime type. Single-party regimes and democracies, with their larger support coalitions, seem to impose more restrictions on portfolio investment outflows. All three dummies are statistically significant. There is no effect of personalistic regimes on outward portfolio investment.

A difference of means test indicates that there is no significant difference between small- and large-coalition regimes when it comes to either outward portfolio investment or inward flows of portfolio investment (see Table 2, rows 5 and 6). The lack of statistically significant differences for outflows of portfolio investment may be due to the fact that people who live under personalistic dictatorships engage very little in portfolio investment. Although I do not have a systematic explanation for this empirical irregularity, my conjecture is that since portfolio investment did not become prominent in international finance until the seventies, the relatively short period of observation may render the data on portfolio investment less conclusive.

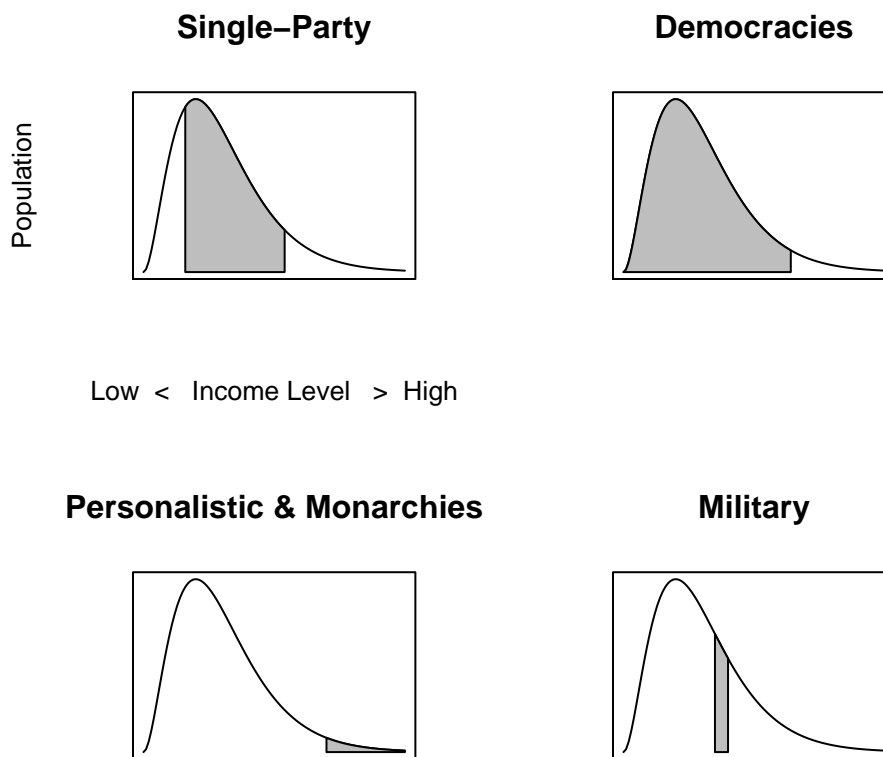
As is shown in both Table 3 and 4, military regimes are the least permissive with regard to capital outflows. This is in accord with the results obtained from the regressions run with *de jure* capital control measures.

Figure 1: Four Hypothetical Scenarios of Income Distribution.



Note: The shaded regions represent the income brackets to which the ruling elite belong. Red lines denote the cut point,  $\bar{w}$ , dividing those who can invest abroad from those who cannot, while dashed lines denote the income levels of the median member (i.e. the representative member) of the ruling coalition and of the residents, respectively.

Figure 2: Hypothetical Locations of the Ruling Elite in Income Distribution in Different Regimes.



Note: The shaded regions approximate the income bracket to which members of the ruling coalition belong in different regimes. Note, however, that the converse may not be true; that is, people who belong to the shaded region may not necessarily be a member of the ruling elite. These graphs are intended to capture the conceptual distinctions of different regimes.

Table 1: The Effects of Regime Types on De Jure Capital Controls

	Controls on Capital Outflows		Controls on Capital Inflows	
	(1)	(2)	(3)	(4)
<i>Regime Dummies</i>				
Personalistic	-0.27*** (0.06)	-0.27*** (0.06)	-0.02 (0.09)	-0.03 (0.09)
Monarchy	-0.30*** (0.08)	-0.30*** (0.08)	0.09 (0.10)	0.08 (0.10)
Single-Party	-0.17** (0.07)	-0.17** (0.07)	0.16 (0.10)	0.16 (0.10)
Democracy	-0.16** (0.07)	-0.16** (0.07)	0.07 (0.10)	0.07 (0.10)
<i>Controls</i>				
Landlocked (scale=0 - 1 dummy)	-0.02 (0.06)	-0.02 (0.06)	-0.00 (0.04)	-0.00 (0.04)
Log GDP per capita (mean=3.74, s.d.=0.71, range=1.95-6.11)	-0.10* (0.05)	-0.10* (0.05)	-0.12** (0.03)	-0.12*** (0.03)
Log Population (mean=3.97, s.d.=0.75, range=1.95-6.11)	0.03 (0.03)	0.03 (0.03)	0.05*** (0.01)	0.05*** (0.01)
Lagged Growth Rate (mean=2.38, s.d.=6.98, range=-45.7-77.65)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)
Fuel Dependence (scale=0-1 dummy)		-0.00 (0.02)		-0.02 (0.02)
Constant	1.00*** (0.27)	1.00*** (0.27)	0.85*** (0.18)	0.86*** (0.18)
$R^2$	0.35	0.35	0.37	0.37
Number of Observations	1127	1127	1127	1127
$\rho$	0.85	0.85	0.76	0.76

Note: Dependent variables are de jure controls on capital outflows and inflows respectively. Controls on outflows: mean=0.51, s.d.=0.37, range=0-1; Controls on inflows: mean=0.50, s.d.=0.29, range=0-1, the higher the more controls. Panel corrected standard errors are in paranthesis. Regional and decade dummies are not reported. Fuel dependence is coded "1" if a country's fuel exports as a share of GDP exceed 50. Autoregressive model AR1 is used, with pairwise selection. Military regimes serve as the base group. \*p<0.1, \*\*p<0.5, \*\*\*p<0.01.

Table 2: Difference of Means Test

	$z$	$P >  z $ *
<b>Capital Outflows, de jure</b>	<b>-1.41</b>	<b>0.08</b>
Capital Inflows, de jure	-0.64	0.26
<b>Log FDI Outflows</b>	<b>1.51</b>	<b>0.07</b>
Log FDI Inflows	-0.84	0.20
Log Portfolio Investment Outflows	-0.31	0.38
Log Portfolio Investment Inflows	0.53	0.30

\*one-tailed p-value is reported.



Table 3: The Effects of Regime Types on De Facto Capital Controls, FDI

	Log FDI Outflows		Log FDI Inflows	
	(1)	(2)	(3)	(4)
<i>Regime Dummies</i>				
Personalistic	0.40** (0.19)	0.40** (0.19)	-0.04 (0.09)	-0.04 (0.09)
Monarchy	0.67*** (0.19)	0.66*** (0.19)	-0.01 (0.15)	-0.01 (0.15)
Single-Party	0.29* (0.18)	0.29* (0.18)	0.10 (0.09)	0.10 (0.09)
Democracy	0.15 (0.13)	0.16 (0.13)	0.03 (0.07)	0.03 (0.07)
<i>Controls</i>				
Landlocked (scale=0 - 1 dummy)	-0.22* (0.12)	-0.22* (0.12)	-0.03 (0.06)	-0.03 (0.06)
Log GDP per capita (mean=3.60, s.d.=0.50, range=2.52-4.93)	1.42*** (0.12)	1.41*** (0.12)	0.27*** (0.03)	0.27*** (0.10)
Log Population (mean=3.91, s.d.=0.71, range=1.95-6.11)	-0.00 (0.04)	-0.00 (0.04)	-0.26*** (0.03)	-0.26*** (0.03)
Lagged Growth Rate (mean=2.03, s.d.=6.96, range=-63.32-151.06)	0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
Fuel Dependence (scale=0-1 dummy)		0.04 (0.11)		-0.00 (0.06)
Constant	-7.08*** (0.62)	-7.07*** (0.62)	-0.27 (0.37)	-0.27 (0.38)
$R^2$	0.35	0.35	0.10	0.10
Number of Observations	1580	1580	2624	2624
$\rho$	0.68	0.68	0.67	0.67

Note: Dependent variables are log FDI outflows and log FDI inflows respectively, which serve as proxies for de facto capital controls. Log FDI outflows: mean=0.11, s.d.=1.02, range=-3.84 - 2.50; Log FDI inflows: mean=0.59, s.d.=0.73, range=-2.83 - 2.57, the higher the fewer controls. Panel corrected standard errors are in paranthesis. Regional and decade dummies are not reported. Fuel dependence is coded "1." if a country's fuel exports as a share of GDP exceed 50 %. Autoregressive model AR1 is used, with pairwise selection. Military regimes serve as the base group. \*p<0.1, \*\*p<0.5, \*\*\*p<0.01.

Table 4: The Effects of Regime Types on De Facto Capital Controls, Portfolio Investment

	Log PI Outflows		Log PI Inflows	
	(1)	(2)	(3)	(4)
<i>Regime Dummies</i>				
Personalistic	0.32 (0.24)	0.31 (0.24)	-0.07 (0.24)	-0.07 (0.24)
Monarchy	0.81** (0.34)	0.80** (0.34)	-0.38 (0.30)	-0.36 (0.31)
Single-Party	0.50** (0.23)	0.50** (0.123)	0.09 (0.19)	0.09 (0.19)
Democracy	0.54** (0.22)	0.54** (0.22)	0.28 (0.20)	0.28 (0.20)
<i>Controls</i>				
Landlocked (scale=0 - 1 dummy)	0.12 (0.12)	0.12 (0.12)	0.02 (0.13)	0.02 (0.13)
Log GDP per capita (mean=3.60, s.d.=0.50, range=2.52-4.93)	1.42*** (0.14)	1.42*** (0.14)	1.27*** (0.18)	1.27*** (0.18)
Log Population (mean=3.91, s.d.=0.71, range=1.95-6.11)	-0.05 (0.05)	-0.05 (0.05)	-0.04 (0.05)	-0.03 (0.05)
Lagged Growth Rate (mean=2.03, s.d.=6.96, range=-63.32-151.06)	-0.00 (0.00)	-0.01 (0.00)	-0.00 (0.00)	-0.00 (0.00)
Fuel Dependence (scale=0-1 dummy)		0.05 (0.11)		-0.04 (0.15)
Constant	-8.00*** (0.67)	-7.98*** (0.68)	-5.32*** (0.76)	-5.34*** (0.76)
$R^2$	0.38	0.38	0.34	0.34
Number of Observations	1252	1252	1345	1345
$\rho$	0.59	0.59	0.49	0.49

Note: Dependent variables are log portfolio investment outflows and log portfolio investment inflows respectively, which serve as proxies for de facto capital controls. Log portfolio investment outflows: mean=0.28, s.d.=1.14, range=-3.94 - 3.16; Log portfolio investment inflows: mean=0.51, s.d.=1.00, range=-3.34 - 3.12, the higher the fewer controls. Panel corrected standard errors are in paranthesis. Regional and decade dummies are not reported. Fuel dependence is coded "1." if a country's fuel exports as a share of GDP exceed 50 %. Autoregressive model AR1 is used, with pairwise selection. Military regimes serve as the base group. \*p<0.1, \*\*p<0.5, \*\*\*p<0.01.