

***POLITICAL DETERMINANTS OF CENTRAL BANK  
MISGOVERNANCE:***

***ASIA AND LATIN AMERICA UNDER LIBERAL CAPITAL  
FLOWS***

**SHANKER SATYANATH  
NEW YORK UNIVERSITY  
9/28/01**

# CHAPTER 1

## INTRODUCTION

In 1987 the Philippines adopted a constitutional provision calling for the creation of a new central bank. The Central Bank of the Philippines had been burdened by massive debts that had largely been accumulated because there were no checks on political interference in central bank operations from president Ferdinand Marcos in prior decades. In creating a new central bank many politicians saw an opportunity to introduce checks on interference by the chief executive. They thus demanded that legislators have the right to screen central bank budgets, and nominees for the governorship of the institution.

The final form taken by the new central bank, when it was finally opened in 1993, embodied very few, if any, checks on the chief executive's control over the institution. Despite the fact that that the New Central Bank Act deemed the central bank an independent institution, President Fidel Ramos maneuvered to appoint a friend since childhood, who had actually participated in his election campaign, as governor. The right to dismiss the governor also rested solely with the president. What is surprising is that on this occasion the absence of checks on the president was not associated with a decline in governance standards. Would the Philippine central bank have displayed better or worse governance if Ramos' control over the central bank had been checked by other politicians. Why?

These questions can be reframed in broader academic terms as follows. Under conditions where a central bank is *de facto* not independent, is the cause of good central bank governance in developing countries best served by placing this institution under the centralized control of a single politician, or under the decentralized control of multiple politicians? Why? Interestingly enough the academic literature on governance has long failed to offer a clear answer to this question. While scholars have long analyzed whether centralization or dispersal of governance powers between political actors would best serve the cause of good governance, there continues to be a rift on which one is ideal. The rift is as follows. Scholars who are primarily concerned with flexibility in governance favor highly centralized decision making environments, where there are few institutional constraints to changes in policy. Scholars who are primarily concerned with the credibility of commitments to good governance favor environments where decision making powers are dispersed, and departures from good governance are thus hard to implement.

This rift in the governance literature has gained the renewed attention of scholars in the wake of the recent Asian financial crisis. This crisis began with the devaluation of the Thai baht in July of 1997, and rapidly spread to other developing economies in the region, many of which experienced devaluations of 40-80% and economic contractions of 8-15%. Several economists have attributed this catastrophe to failures in domestic financial governance. The depth of the crisis and its explicit link to financial misgovernance have provoked a close re-examination of the current prescriptions for good governance as applied to the financial realm.

The most prominent of these re-examinations, following the Asian crisis, has come from Andrew MacIntyre.<sup>1</sup> MacIntyre has argued that neither high centralization nor high fragmentation offers the key to good financial governance. Whereas centralization offers flexibility, it also facilitates excessive volatility in policy making. Whereas the wide dispersal of powers facilitates credible commitments, it also generates a propensity for policy rigidity.

MacIntyre focused his empirical attention on variations in financial governance between four Asian economies that had dismantled controls on cross-border movements of capital, and had combined this choice with a decision to fix their currencies to the value of the dollar. (As will be described, this is the combination that has been associated with severe currency crises in the 1990s.) Based on an analysis of these economies MacIntyre has offered a solution to the trade off between centralization and fragmentation presented above. MacIntyre argues that environments which fall between the extremes of centralization and fragmentation should neither generate extreme volatility or extreme rigidity in financial policy making.<sup>2</sup> Thus, financial governance in developing countries would be best served by having institutional environments with an intermediate level of centralization/fragmentation. For MacIntyre this conclusion applies irrespective of whether it is a democratic or an authoritarian regime that is being considered.

---

<sup>1</sup> MacIntyre 2001.

<sup>2</sup> MacIntyre 2001.

In this book I present a very different view. I show that centralization's effect on financial governance depends on the type of regime being considered. Focusing on a critically important area of financial governance, central bank governance, I demonstrate that developing country **democracies** would in fact be best served by high centralization. I show that in developing democracies where the central bank is not independent, good central bank governance is most likely to occur when this institution is under the control of a single politician. I also demonstrate why centralization may not be conducive to good central bank governance in authoritarian contexts.

I base my theory on a game theoretic analysis, that takes account of asymmetric information between politicians and voters on governance decisions. As far as empirics are concerned, like MacIntyre, I study developing countries that combine fixed exchange rates and liberal capital flows, a combination that has generated some spectacular acts of misgovernance. The focus of my case studies is on variations in central bank governance in Asia and Latin America in the years leading up to their respective financial crises of 1997 and 1994.

I begin by offering a brief overview of the intuition underlying my claims. (The model is presented in full in Chapter 3.) I then present an overview of the empirics. I conclude with a description of my plan for the rest of the book.

### **1.1) Overview of the intuition-**

Central banks in developing countries perform several critical functions. First they implement monetary policy, which in turn affects the interest rate, the exchange rate, growth rate, and inflation levels. Second they regulate and supervise the banking sector. In addition they, “guarantee the domestic and international payments system, and provide some range of financial services to the government.”<sup>3</sup> The focus of this book is on the monetary policy and bank regulatory functions, since it is variations in misgovernance in these areas, under the combination of fixed exchange rates and liberal capital flows, that have attracted the attention of scholars in recent years.

There are good reasons for the recent explosion of interest in monetary policy and bank regulatory misgovernance, in developing countries which combine liberal capital flows with fixed exchange rates. Central bank misgovernance in countries with this combination had a significant role to play in the major financial crashes of the last decade, the Tequila crisis of 1994 and the Asian crisis of 1997. In the literature on the “Tequila Crisis” of 1994, many scholars blame the Mexican central bank for poor bank regulation, and obfuscation over the level of foreign reserves. In the literature on the Asian crisis of 1997, scholars blame the Thai central bank, as well as several others in the region, for questionable monetary policy decisions as well as lax bank regulation.

Specifically, in these crises, misgovernance in two realms has gained the attention of scholars.

---

<sup>3</sup> Maxfield 1997, 5.

I first address misgovernance in the realm of monetary policy. As per standard macro economic theory it is not possible to simultaneously resist a monetary contraction and defend the exchange rate where there are few impediments to capital outflows, if there is downward pressure on the currency. (Foreign reserves will run out because interest rates are too low to stanch capital outflows, forcing an adjustment in the exchange rate.) It follows that good governance calls for one of two responses to downward pressure on the currency.

One conventional path of good governance consists trying to alleviate downward pressure by adopting a contractionary monetary policy/high interest rates. The other conventional path of good governance consists of devaluing in a timely fashion before pressure builds for a massive exchange rate correction, which would constitute a full-blown currency crisis.

Several central banks in the developing world parted from the paths of good governance. Some tried to evade the trade off between controlling money supply and the exchange rate *via* acts of deception. Specifically they tried to alleviate downward pressure on their currencies, and thus spare themselves further monetary contractions, by failing to present accurate foreign reserve statistics to international financial markets. The goal of such a maneuver is to trick currency traders into thinking that there are ample reserves even when they are actually close to running out. Such a subterfuge could potentially serve to persuade traders to stop betting against the currency, and thus alleviate downward pressure on the currency. This, however, counts as bad governance because revelation of

this subterfuge carries the risk of causing a massive loss of confidence, and a currency crisis, rather than a potentially moderate exchange rate correction.

Some other central banks undertook volatile shifts between controlling the exchange rate and the money supply in the hope of avoiding excessive adjustments to either. This also counts as bad governance because it generates uncertainty about the priorities of the government, that could generate a massive loss of confidence and a currency crisis, instead of a potentially moderate devaluation.

I now address misgovernance in the realm of bank regulation. Regulators in many countries imposed few restraints on banks lending heavily to high risk ventures, and financing these loans with potentially volatile short term debt. Several also allowed their banking sectors to operate with an extremely low capital buffer. All this renders the banking sector vulnerable to collapse in the event of either a sharp interest rate increase or a devaluation. (High risk borrowers have a high propensity to default in the face of significant interest rate increases. In the absence of an adequate capital buffer this can drive banks into bankruptcy. Devaluations raise the short-term dollar obligations of high risk borrowers as well as banks well beyond what they can handle, and this can also precipitate a banking sector collapse.) Perhaps most notably, since either devaluing or sharply raising interest rates could bring down the banking sector where bank regulation is poor, poor regulation carries the risk of leaving the central bank with no good options in response to downward pressure on the currency and this could precipitate a currency

crisis. Given that it contributes significantly to the risk of a currency crisis, lax bank regulation counts as central bank misgovernance.

What is interesting is that not all developing countries that combined fixed exchange rates with liberal capital flows engaged in central bank misgovernance. As far as the Asian crisis is concerned, scholars have uncovered evidence of misgovernance in Thailand, Indonesia, Malaysia, and South Korea, but not in the Philippines and Taiwan. In Latin America scholars have found the Mexican central bank culpable of misgovernance, but not the Argentine central bank. In this book I offer a simple explanation for these variations in central bank governance. I first address the case of democracies, and then of authoritarian regimes.

I assume that politicians in democracies make the choice between good and bad central bank governance anticipating the degree to which voters will punish them for bad governance, in the event that it precipitates an economic contraction inducing currency crisis. Where the central bank is under the control of a single politician, there is no uncertainty for voters as to who made decision to adopt bad governance. (This follows from the fact that there is no other politician with the power to make this decision.) In contrast, where the central bank is under the control of multiple politicians, each of these politicians operates behind a veil of uncertainty regarding their role in governance decisions. (For instance, it is unclear to voters which of the multiple politicians is truly responsible for pressing the central bank to present false reserves statistics.) In this case when bad governance results in a currency crisis, voters cannot **definitively** assign blame

for the crisis to any given politician. (This is in contrast to the case when a single politician controls the central bank, and it is thus clear who is to be blamed for the government's choice of bad governance.) A positive probability that they may not be found culpable by voters, reduces the expected value of the electoral punishment for precipitating a crisis for politicians. This, in turn weakens the incentives for good governance, rendering misgovernance more likely when there are multiple politicians controlling the central bank.

I offer below a simple numerical example that illustrates the above logic. The model that underpins the above result is presented in Chapter 3.

I assume that politicians think of central bank misgovernance as a gamble. What makes the gamble potentially attractive to politicians is that they believe that **if they get away with misgovernance without precipitating a currency crisis**, they can raise their likelihood of retaining office above what it would be if they chose good governance. The logic is as follows.

Assume that utility to voters from retaining a politician in office is declining in economic contractions and in the degree of blame that they attach to the politician for the contraction. If there is no currency crisis, the economy continues to grow, and voters do not assign blame for central bank governance decisions. Politicians thus anticipate that if a crisis does not occur, there is no difference between good and bad governance from the perspective of blame. Politicians, however, believe that as long the consequence is not a

currency crisis, lax regulation of bank credit and monetary policy expansions can increase the rate of GDP growth above growth levels that would be achieved when explosions of credit are restrained by bank regulators, and monetary policy is not used in a discretionary fashion to promote growth. Politicians thus operate on the assumption that, as long as its does not precipitate a crisis, misgovernance generates a higher likelihood of retaining office than good governance.

Politicians are, however, also assumed to be aware of the fact that the choice of misgovernance also offers a downside risk. If it does precipitate a currency crisis this, in the developing world, generally results in a banking sector that is illiquid or insolvent for the reasons mentioned earlier.<sup>4</sup> This causes a sharp economic contraction because businesses are deprived of cash flow to meet orders, as well as funds for investment.

A currency crisis may also occur in the wake of good governance thanks to contagion. Assume however that politicians anticipate that, in the event of a crisis, voters will be harsher (assign greater blame) on politicians who exhibited bad rather than good governance. (Note for example how the president of Taiwan attracted very little blame for the Asian crisis, because it was clear that he had done nothing to precipitate the crisis.) Even assuming that a crisis following on good governance yields the same contraction as one following on bad governance the assumption regarding blame means that, **in the event of a crisis**, the anticipated probability of retaining office would be lower if bad, rather than good governance was chosen.

---

<sup>4</sup> See Mishkin 1996.

The following simplistic numerical example provides an idea of what politicians' payoffs would look like under the above conception. (I provide a far more general formulation in Chapter 3.) Assume that the following are the payoffs to a politician, when he exclusively controls the central bank.

Payoff from misgovernance if a crisis does not occur- 60% probability of retaining office.

Payoff from good governance if a crisis does not occur- 52%

Payoff from good governance if a crisis occurs- 48%

Payoff from misgovernance if a crisis occurs- 40%

Let us assume that the politician anticipates that the probability of a crisis in the wake of good governance is less than the probability of a crisis in the wake of bad governance.

Labelling the former probability  $r$  and the latter  $q$ , assume for the purposes of this numerical example that  $r=1/2q$ .

With the above payoffs a politician will only gain a higher expected utility from good governance if he anticipates a probability of a crisis, in the wake of misgovernance, of at least 44%.  $[48 (1/2q) + 52 (1-1/2q)]$  is the expected payoff from good governance.  $40q +$

$60(1-q)$  is the expected payoff from bad governance. The former will be equal to or greater than the latter if and only if  $q \geq .44$ .] In this example, then, 44% is the probability of a crisis resulting from bad governance, that a politician must at least anticipate, in order for good governance to be the outcome. I call this probability the threshold probability for good governance to be the outcome.

It is plausible that institutional environments with low thresholds are more likely to display good governance on an ongoing basis than institutional environments where the threshold is high. (In the former case we should see good governance even when politicians anticipate low odds of a currency crisis resulting from misgovernance.) I show below that, among democracies, highly centralized environments have lower thresholds than decentralized environments, and are thus most likely to display good governance.

Assume that voters can directly observe whether good or bad governance was the government's choice. However, assume that they cannot directly observe **who** made the decision to adopt good or bad governance. When a single politician controls the central bank this information asymmetry does not generate any uncertainty over who made the governance decision. (Since there is only a single politician controlling the central bank, voters can easily infer that only he could have made this decision.) When we shift to an environment where more than one politician controls the central bank, however, there is uncertainty because any of the politicians may have been responsible for choosing bad governance. Assuming that voters would prefer to levy a heavier punishment on a

politician who is responsible for the government's choice of bad governance than one who is not responsible, uncertainty over who is responsible mutes the punishment levied on any given politician for choosing bad governance, in the event of a crisis. In the numerical example the consequence of uncertainty generated by the presence of multiple politicians controlling the central bank is that politicians' payoff, in the event of a crisis following on the government's choice of bad governance, rises above 40%. As I show below, this in turn raises the threshold probability that must be met for good governance to be the outcome, and renders good governance less likely.

Suppose a shift from one politician controlling the central bank to two, and the associated uncertainty over who is responsible for choosing bad governance, raises the payoff to a politician from misgovernance that leads to a crisis from 40% to 45%. The consequence of decentralization here is to raise the expected payoff from bad governance from  $40q + 60(1-q)$  to  $45q + 60(1-q)$ . This change raises the threshold anticipated probability of a crisis resulting from bad governance, that must be met for good governance to be chosen, from 0.44 to 0.62. Given that higher thresholds are less likely to be achieved than lower thresholds on an ongoing basis, we are more likely to see misgovernance under decentralization than under centralization in a democracy.

The above logic hinges on the assumptions that voters are willing and free to punish politicians who control the central bank in the wake of currency crises. As far as willingness is concerned it is well known that currency crises generally inflict enormous

economic contractions in the developing world.<sup>5</sup> It is thus plausible to assume that voters will be willing to punish in the wake of a currency crisis. Since we are considering democracies, which by definition have competitive elections, voters have the freedom to punish politicians.

In the context of authoritarian regimes, however, citizens (or elites) may not be able to punish politicians. I demonstrate below why this implies that centralization may not have the same consequences in an authoritarian context as in a democracy.

The case for centralization in a democratic context hinged on a lower expected payoff in the event of a crisis following on misgovernance under centralization, than under decentralization. (40% vs 45% in the example.) Unlike a democratic incumbent, a dictator who controls the central bank and who has exceptional repressive ability may anticipate that he can repress threats to his hold on office in the event of a currency crisis, such that the lowest likelihood that he retains office is 45%. In such a circumstance the threshold for good governance would be the same under centralization as under decentralization, and in both cases good governance would be just as unlikely. (Unlikely relative to the case of a democracy where a single politician controls the central bank.).

In sum, in democratic contexts, greater certainty over who is responsible for precipitating a currency crisis renders high centralization relatively likely to produce good central bank governance outcomes. However in a repressive authoritarian context centralization may

---

<sup>5</sup> See Mishkin 1996.

be just as unlikely to produce good governance as decentralization. In the next section I show that these expectations from my theory are borne out from a close examination of the Asian and Tequila crises.

## **2) SUMMARY OF EMPIRICAL RESULTS**

This section is in two parts. I first present my criteria for case selection. I then present a brief overview of my results.

### **2.1) Criteria for Case Selection**

The relevant universe for this study is all developing countries that have combined open capital accounts with fixed exchange rates, where the central bank is not independent. Consideration of the entire universe was, however, ruled out because reliable bank regulation data is only available for regions of the developing world that have recently experienced major banking related currency crises. (Official banking sector data is notoriously inaccurate, forcing scholars to rely on independent estimates that are generally made in the lead-up to, and following, a crisis.) Thus, I was forced to limit my analysis to variations in political interference within two developing regions, Asia and Latin America, in the periods surrounding their respective crises of 1997 and 1994.

For capital account openness I used Barry Johnston of the IMF's latest Exchange and Capital Controls index,<sup>6</sup> supplemented by additional secondary research into individual central bank documents for cases not covered by him. Johnston's index runs from a scale of 0 to 1. (The lower the score, the more liberal the environment.) I considered countries with scores of 0.4 or less to have liberalized capital flows. The rationale is that these were the countries where liberalization resulted in environments that were unambiguously more than half way toward completely free capital flows. (A slightly looser criterion would have led me to classify Chile, which most economists consider to have substantial controls, as a country with liberal capital flows. A slightly tighter criterion would have led me to implausibly classify Korea as a country which had not yet entered the realm of liberal flows.) See Appendix 2 for scores of countries referred to here. (A comprehensive listing is available in Johnston 1999.)

As far as fixed exchange rates are concerned, developing countries often report themselves as having floating exchange rates for symbolic purposes, and then proceed to defend their exchange rate against the smallest fluctuations. This creates a major disjuncture between financial analysts' view of the fixity of an exchange rate and the coding officially reported to the IMF. Thus, instead of using the IMF's codings, I classified countries whose exchange rate only experienced marginal changes in the years leading up to the Asian and "Tequila" crises, as having fixed exchange rates.

---

<sup>6</sup> Johnston 1999.

With respect to bureaucratic autonomy, I only accepted a central bank as embodying *de facto* independence where the regional economics and political science literature converged on such an assessment. In other words I did not consider a central bank as autonomous simply because the law, or politicians, claimed that it was so.

In Asia, Thailand, the Philippines, Malaysia, Indonesia, Taiwan, and South Korea met all the criteria and were thus included in the analysis. In Latin America, Argentina, and Mexico met all the criteria for selection.

I left out Singapore and Hong Kong because their economies are so exceptionally dependent on their status as well governed international financial centers. There would be little surprise in finding good financial governance under such circumstances, which in fact was the case.

I excluded Chile, both because it embodied substantial capital controls, and because it is one of the only cases in the developing world where a plausible case can be made that the central bank is independent. (See Appendix 2 for scores on Johnston's capital controls index, and Delia Boylan's work for a discussion of Chilean central bank independence.<sup>7</sup>) I excluded Brazil because it embodied substantial capital controls. I also excluded China because it embodied heavy capital controls, while I left out Uruguay on account of a paucity of reliable bank regulation data. In sum I was left with a sample of eight countries which was, unfortunately, too small to be subjected to statistical analysis.

---

<sup>7</sup> Boylan, book manuscript.

## **2.2) Summary of Empirical Results**

The Philippines, Argentina, and Taiwan were the three democracies in the sample where there was a single politician controlling the central bank. All three of these countries consistently displayed good governance, in the realms of monetary policy as well as bank regulation, through the 1990s.

The Philippines had its first competitive presidential election since the 1960s in 1993, almost concurrently with liberalizing capital flows. The manner in which the Philippine president took control of the central bank shortly thereafter, was described at the outset of this chapter. The Philippines' performance on the dependent variable, central bank governance, is consistent with what I predict for a democracy where a single politician controls the central bank.

On the monetary policy front there is no evidence of efforts by the Philippine central bank to use false foreign reserve statistics to simultaneously control the exchange rate and money supply in the 1990s. (The last episode was under Marcos' authoritarian auspices in the early 1980s.) All through the 1990s the so called "Fernandez formula," named after a former central bank governor, was in effect. As per this formula, the money supply contracts as a means of limiting declines in the exchange rate. Even after attacks on the peso forced a severe monetary contraction in mid-late 1997, as a consequence of contagion from Thailand, the central bank desisted from the temptation to resort to subterfuge. The Philippine central bank's efforts to limit the hardships imposed

by high interest rates were limited to attempts at forcing domestic banks to reduce the spread between their borrowing and lending rates.

As far as bank regulation is concerned the Philippine central bank implemented regulations on bank capital that were considerably stricter than the international standard recommended by the Bank for International Settlements. Problem loans were also closely monitored. Furthermore, financially shaky enterprises were kept out of the banking system. Despite a devaluation of 40% only one small bank collapsed, and unlike most other countries in the region the banking sector did not require rehabilitation after the Asian crisis.

As far as Argentina is concerned, this country liberalized capital flows in 1991. Argentina had completed its transition to democracy eight years before this step. In September 1992, the Argentine legislature passed a new charter for the Central Bank which granted it “formal independence from the Administration, banning any significant new lending to the Public Sector and establishing that the Bank’s primary and paramount mission is to preserve the value of the currency.”<sup>8</sup> However, this did not mean that the central bank was truly independent. The president was free to appoint bureaucrats of his choice to the board of directors of the central bank.<sup>9</sup> This freedom came from the fact that as per the new charter these appointments are made “in agreement with the Senate,” and the president’s party enjoyed a comfortable majority in this body. In brief, the new

---

<sup>8</sup> Lagos 2000, 1.

<sup>9</sup> See BCRA Charter Article 6.

charter left the president in control of the central bank in the years leading up to the Tequila crisis.

On the monetary policy front, the president pushed through legislation establishing a currency board system in 1991. Under a currency board the money supply is automatically determined by the foreign reserve level. Despite losing a third of reserves during the Tequila crisis, which amounts to a massive monetary contraction, there is no evidence that the central bank tampered with money supply or with the accurate reporting of foreign reserve levels.

As far as bank regulation is concerned a major program to clean up the banking sector was put into effect. Several inefficient state owned banks were privatized, and regulations on bank capital that were more rigorous than the Bank for International Settlements' recommendation were enforced.

Taiwan was in the closing years of its transition to democracy in the 1990s. (See Appendix 1 for democracy ratings in the 1990s, which are very close to the Philippines and Argentina.) While many aspects of economic policy were subject to negotiations with the legislature during this period, the central bank continued to be exclusively under the president's control.

There is no evidence of clandestine efforts to simultaneously control the exchange rate and expand money supply in this period. Taiwan has always been well known for its

massive foreign reserves, amounting to \$90 billion. When the currency turmoil struck Asia the Taiwanese central bank first transparently ran down some of its reserves to defend the currency. Once it became clear that this strategy was not working, the central bank floated the currency in October of 1997.

As far as bank regulation is concerned, the Taiwanese banking sector prior was largely controlled by the state till and during the time of the currency turmoil, and was managed in a highly conservative fashion. Regulations on bank capital were considerably stricter than the Bank for International Settlements' recommendation, and strict controls were in place limiting exposure to volatile sectors such as real estate.

Korea was also a democracy in the years leading up to the currency crisis, with a civilian having assumed the presidency following a competitive election in 1993. (See Appendix 1 for democracy rating.) Capital flows were liberalized shortly thereafter, in 1993 and 1994. It was Korea's misfortune that almost at the precise moment when the propensity for currency crises that were inherent in the country's development model became apparent to politicians, it shifted from becoming a democracy with one politician controlling the central bank to one with two controlling the central bank.

The Korean development model, that had delivered high growth rates for decades, was based on conglomerates carrying large levels of debt. Massive lending to conglomerates by banks was not based on the assessment of the profitability of the investments to which loans were applied, but rather driven by the goal of supporting the aggressive pursuit of

market share by these conglomerates. Accordingly, Korean bank regulators were insensitive to the risks to banks presented by over-investment, and ratios of debt to equity that amounted to four times that seen in Taiwan. The fact that such a model could make Korea vulnerable to a massive loss of confidence, and a resulting currency crisis, only became truly apparent to politicians when a slump in exports led to the collapse of several conglomerates in late 1996-early 1997, and left the banking sector reeling under the effect of massive loan defaults.

1997, however, was the final year in the term of president Kim Young Sam, and he was constitutionally barred from running for re-election. The ruling party's likely candidate for the next election thus effectively became a second politician with control over the central bank at the same time that that the links between Korea's development model and currency crises were clearly understood by politicians. Consistent with what my model predicts South Korea failed to make critical changes in governance in 1997. Important changes that were recommended by a specially appointed commission for financial reform were not implemented. Furthermore, when currency turmoil hit the region the Korean central bank presented false reserve statistics to sustain its exchange rate.

Thailand offers a more extreme case of decentralization than Korea. Thanks to an electoral system that contributed to fragmentation of the vote, this country had a five to seven member coalition government controlling the central bank from its transition to democracy, in 1992, till the end of the decade. Consistent with the presence of decentralization, central bank governance was poor after capital account liberalization

was completed in 1993. Efforts were made to simultaneously control the exchange rate and expand money supply to bail out failing finance companies. The foreign reserve statistic was over-reported since it did not indicate that, by mid-1997, almost the entire reported amount was borrowed in secret swap transactions. Furthermore, essential bank regulatory reforms involving limits on real estate lending, the implementation of international capital-asset ratio standards, and the closure of undercapitalized finance companies, were indefinitely delayed, and this played no small part in precipitating the Asian crisis.

Malaysia had a single politician, the Prime Minister, controlling the central bank, but was also not a democracy. (See Appendix 1.) This country's performance on central bank governance was not good. Bank lending to the highly speculative real estate sector and the stock market were very weakly regulated all through the 1990s. In addition, foreign reserves were secretly deployed to gamble on foreign currency markets in 1993 and 1994, resulting in massive losses. Furthermore, between June 1997 when the currency came under downward pressure and May 1998, when capital controls were finally re-imposed, the central bank alternated between controlling money supply and the exchange rate.

Likewise, Indonesia, which had an authoritarian regime with the president controlling the central bank, displayed poor central bank governance. After the currency crisis struck, the central bank secretly pumped billions of dollars into the accounts of bankers close to president Soeharto. Such an action, of course, worked against the expressed need for high interest rates to check the exodus from the rupiah. In addition, even prior to the

crisis, bank regulation was exceedingly weak especially in the realms of bank owners lending money to themselves, and state owned banks pumping vast funds into the projects of President Soeharto's cronies.

Finally Mexico, which was an authoritarian regime where the president controlled the central bank, also displayed poor central bank governance. Bank regulation was exceedingly weak. The ratio of capital to assets for banks was close to half the level recommended by the Bank for International Settlements. In addition, banks engaged in a boom in consumer lending without being restrained by the central bank. Many of these loans, made without regard to credit histories of the borrowers, ended up in default. In addition to failures in bank regulation, the Mexican central bank deliberately obfuscated over foreign reserve levels in 1994, as a means of masking efforts to simultaneously control the exchange rate and money supply.

#### **IV) PLAN FOR THE BOOK**

In the next chapter I describe the reasons for academics' and policy makers' recent concern with central bank governance in the developing world, outline the prescriptions that have emerged from this concern, and locate my contribution to the literature. In Chapter 3 I provide a detailed description of my theory. In Chapters 4, 5, 6, and 7 I offer theoretically grounded accounts of central bank governance in the Philippines, Thailand, Indonesia, and Malaysia in the 1990s. An analysis of four South Asian cases thus constitutes the empirical core of this book. In Chapter 8 I assess how well my argument travels to regions outside South-East Asia, considering the cases of Argentina and

Mexico in the years leading up to the 1994 Tequila crisis, and Taiwan and South Korea in the years leading up to the 1997 Asian crisis. Chapter 9 is the conclusion.

## CHAPTER 3

### THEORY

Let me reiterate the questions that are being addressed here. Under conditions where a central bank is not independent, is the cause of good central bank governance in developing countries best served by placing this institution under the centralized control of a single politician, or under the decentralized control of multiple politicians? Why? Recall that I seek to answer this question for developing countries that combine fixed exchange rates with liberal capital flows.

I operationalize centralization by using George Tsebelis' concept of veto players. A veto player is a political actor whose agreement is necessary for any shift in governance from the status quo. A highly centralized environment for central bank governance decisions is defined as one where there is a single veto player controlling the central bank. The presence of additional veto players indicates increasing degrees of decentralization.

I assume that the governance status quo when capital flows are liberalized is bad governance, relative to the standards of bank regulation and monetary policy transparency that are called for when operating in a liberal environment. There are two reasons for this assumption. First, developing countries generally do not have stringent bank regulation when they embark on capital account liberalization. Second, at the time the capital account is opened, the reporting of foreign reserves in developing countries generally does not meet the norms of transparency established in the developed world.

Furthermore, under closed capital accounts governments are not required to relinquish control over monetary policy. (As per the Mundell Fleming theory, the government can control monetary policy and the exchange rate behind the cover of capital controls.)

I demonstrate below that in democracies the presence of a single veto player controlling the central bank is most conducive to a shift and subsequent adherence to good central bank governance. However, I also show why the presence of a single veto player need not generate a high likelihood of good central bank governance in authoritarian contexts.

I base my argument on a comparison of governance equilibria in three games. The first two games are for democratic environments; the first is for an environment with one veto player controlling the central bank and the second is for an environment with more than one veto player. The third game is for an authoritarian environment. I now present each of these games.

### **Game 1- A Single Veto Player in a Democratic Context**

The order of moves in this game is as follows:

Period 1- The lone veto player chooses between good and bad governance.

Period 2- An economic contraction inducing currency crisis (henceforth simply referred to as a crisis) occurs or does not occur. The probability of a crisis is  $q$  if bad governance is chosen, and  $r$  if good governance is chosen. I assume that  $q > r$ . For simplicity I assume

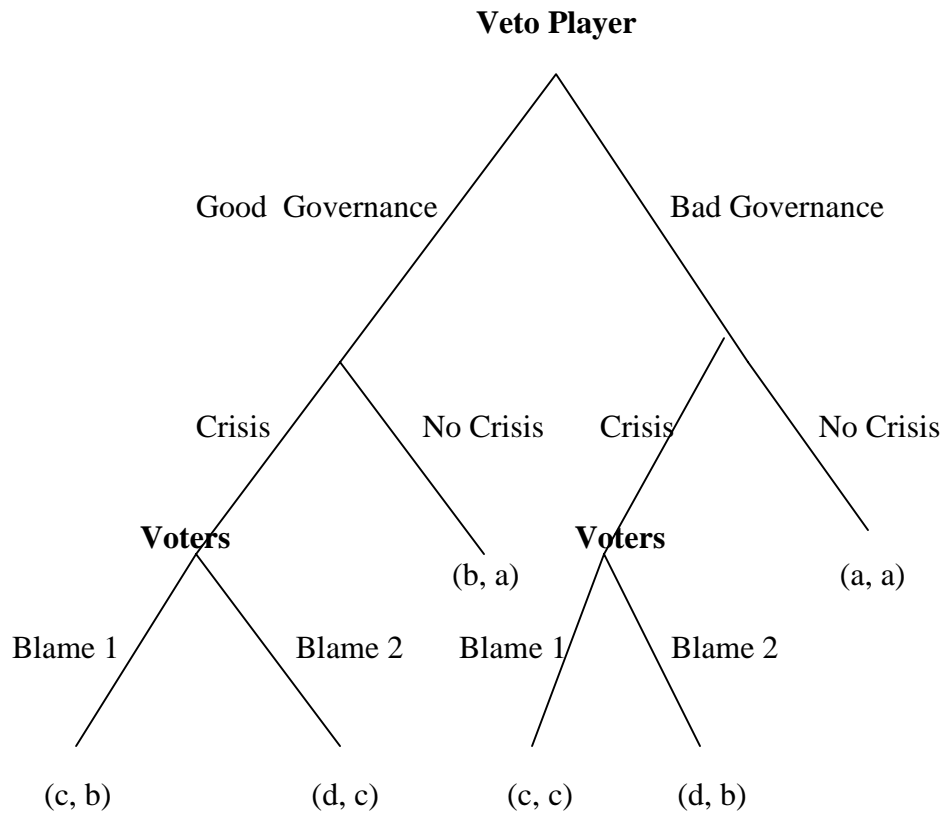
for all games in this chapter that  $r=1/2q$ , and subject this to comparative statics in Appendix 3. (See Mishkin 1996 for why currency crises generally cause economic contractions in the developing world.)

Period 3- Voters observe whether good or bad governance has been chosen in Period 1. Since there is only one veto player, the decision could have only been made by the single veto player. If a crisis occurs voters decide how much to blame the veto player for the crisis. Voters have a choice between two levels of blame, which I label Blame 1 and Blame 2, where  $\text{Blame 2} > \text{Blame 1}$ . If a crisis does not occur voters do not blame the veto player for his governance decision.

This order of moves is depicted in Figure 3.1 (next page). The payoffs in the figure are described next.

**FIGURE 3.1**

**GAME 1**



Note: The Veto Player's payoff is first.

The payoffs are as follows:

Voters-

I assume that voters get a higher payoff when there is no crisis compared to when there is a crisis. This is because voters' utility plausibly increases in growth, and a crisis results in an economic contraction.

If a crisis occurs in the wake of good governance, I assume that voters prefer to assign Blame 1 over Blame 2 for the veto player. This is plausible since the veto player is not responsible for precipitating the crisis. (Such crises could occur on account of contagion, panic, the manipulations of speculators, or some combination of these factors. In these cases, outsiders are likely to get the lion's share of the blame. Consider, for example, how Taiwan's president escaped major blame for the Asian crisis.)

If a crisis occurs in the wake of bad governance, however, I assume that voters prefer to assign Blame 2. This is plausible because the veto player's decision to reject the good governance option played a role in raising the likelihood of a crisis.

In Figure 3.1, payoff levels are labeled a, b, c, and d with  $d < c < b < a$ . For simplicity I define  $a - b = b - c = c - d$ .

## The Veto Player-

The veto player's goal is to maximize the probability that he remains a veto player. I assume that this probability is declining in economic contractions, and in the degree of blame assigned to the veto player for the contraction. Recall that payoffs, in this case the probability of remaining a veto player, are on a scale such that  $d < c < b < a$ .

In this context, if a crisis occurs the veto player gets a payoff of  $d$  if he is assigned Blame 2 by voters. If he is assigned Blame 1 he gets a payoff of  $c$ . These payoffs apply irrespective of whether he chose good or bad governance.

However, if there is no crisis bad governance is assumed to yield a higher payoff than good governance ( $a > b$ ). This is based on the assumption that politicians believe that **in the absence of a crisis** bad central bank governance, i.e. monetary expansions and/or a willingness to countenance rapid expansions in bank lending, yields faster growth rates than good governance. (Note that to create a hard case for good governance in this and the other two games, I do not grant an analogous advantage from good governance in the event of a crisis.)

Putting all of the above together, the ordering of the veto player's payoffs is:

Bad Governance, No Crisis > Good Governance, No Crisis > Good Governance, Crisis,  
 Blame 1 = Bad Governance, Crisis, Blame 1 > Bad Governance, Crisis, Blame 2 = Good  
 Governance, Crisis, Blame 2.

The veto player must decide between good and bad governance based on which one offers him greater expected utility. Given voters' responses to good and bad governance, this is based on the following calculation:

Choose good governance if,  $EU(\text{Good}) = r(c) + (1-r)b \geq EU(\text{Bad}) = q(d) + (1-q)(a)$ .

Recall that  $q$  is the probability of a crisis when bad governance is chosen, and  $r$  is the probability of a crisis when good governance is chosen. With  $r=1/2q$ , as assumed at the outset, the above equation will hold whenever:

$$q \geq 2(a-b)/[2(a-d)+c-b]$$

With  $a-b = b-c = c-d$ , as defined at the outset, the veto player will choose good governance whenever  $q \geq 0.4$ . I now show that once we move from one to more than one veto player this threshold rises significantly.

## **Game 2 – Multiple Veto Players in a Democratic Context**

When we move from one to multiple veto players there is an important change that must be made to the game. In Game 1, there was no uncertainty for voters in determining which veto player rejected good governance. (Since there was only one veto player it could not possibly have been anybody else.) When we move to two or more veto players, though, voters become uncertain which veto player(s) was/were responsible for rejecting the good governance option. They are thus rendered uncertain about how much they should blame a given veto player for precipitating the crisis. (As will become obvious, the result is unaffected by whether we consider two or more than two veto players in this game, since a shift from one to two is sufficient to move to an environment with uncertainty/incomplete information.)

I capture this increased uncertainty under multiple veto players by altering Game 1 as follows. I identify two types of veto players: a type which has the discretion to shift the status quo toward good governance (called D), and a type which has no discretion to shift the status quo (called ND). (The only type in Game 1 was the D type, since no other politician was present to limit his discretion.)

The D type is one whose decision can determine whether good or bad governance is the choice of the government. This type would exist in an environment where all the other veto players are in favor of good governance. If this veto player accepts the views of other veto players good governance is the government's choice, but if he rejects it the bad governance status quo is the government's choice.

The ND type is one who does not have discretion over the governance decision. One of the other veto players has rejected a shift from the status quo, and so the government's choice is the bad governance status quo, irrespective of this veto player's views.

The payoffs for the D type are the same as for the single veto player analyzed in the previous game, since both enjoy discretion. Recall that voters preferred to allocate Blame 2 over Blame 1 to the lone veto player in the previous game in the event of a crisis following on bad governance. (This was the case because he had the discretion to choose good governance, but still did not do so.) As far as the ND type is concerned, I assume that voters would prefer to assign Blame 1 over Blame 2, since he did not have discretion over the governance decision.

To accommodate the presence of two types of veto players I add a Period 0 in which nature decides the veto player's type. The prior probability,  $p$ , that a veto player is the D type is assumed to be greater than 0 and less than 1.

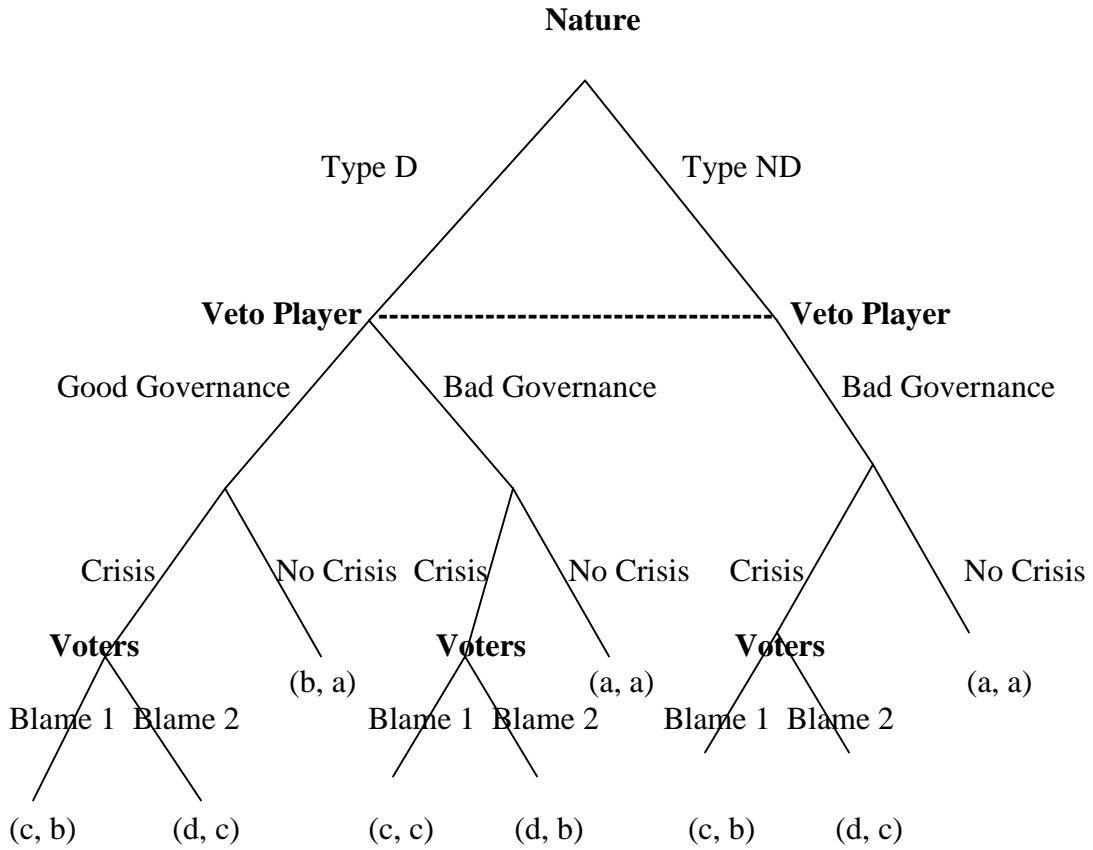
The players in this game are any one of the multiple veto players and his voters. (All the veto players face the same incentives in this game, so they are mutually replaceable.) In Period 1 the ND type does not have the option of choosing good governance, while the D type does. In period 2 a crisis occurs or does not occur as before. In Period 3, voters know whether bad or good governance was chosen. However, they do not know if a given veto player had discretion or not. Voters thus have to decide whether to assign

Blame 1 or Blame 2 on a veto player, not knowing his type. This decision is based on updated probabilities, using the Bayesian procedure.

The game tree for this game of incomplete information is presented in Figure 3.2.

**FIGURE 3.2**

**GAME 2**



The payoffs in summary are:

For voters:

When the veto player is the D type:

As in Game 1;

Blame 2 > Blame 1 when a crisis occurs in the wake of bad governance.

Blame 1 > Blame 2 when a crisis occurs in the wake of good governance.

When the veto player is the ND type:

Blame 1 > Blame 2 when a crisis occurs in the wake of bad governance.

The veto player:

When he is the D type-

As in Game 1;

Bad Governance, No Crisis > Good Governance, No Crisis > Good Governance, Crisis,

Blame 1 = Bad Governance, Crisis, Blame 1 > Bad Governance, Crisis, Blame 2 = Good

Governance, Crisis, Blame 2.

When he is the ND type-

Bad Governance, No Crisis > Bad Governance, Crisis, Blame 1 > Bad Governance,

Crisis, Blame 2.

Given the above payoffs voters decide between Blame 1 and Blame 2 based on the following.

On observing good governance, voters know that it could only have come from the D type and assign Blame 1 after a crisis.

On observing bad governance voters assign Blame 2 if:

If  $EU(\text{Blame 2} \mid \text{Bad}) = p(D \mid \text{Bad}) (\text{Payoff from Blame 2} \mid D) + (1-p(D \mid \text{Bad})) (\text{Payoff from Blame 2} \mid \text{ND}) \geq EU(\text{Blame 1} \mid \text{Bad}) = p(D \mid \text{Bad}) (\text{Payoff from Blame 1} \mid D) + (1-p(D \mid \text{Bad})) (\text{Payoff from Blame 1} \mid \text{ND})$ .

Thus voters will assign Blame 2 if  $p(D \mid B) b + (1-p(D \mid B)) c \geq p(D \mid B) c + (1-p(D \mid B)) b$ .

b. With these assumptions voters will assign Blame 2 in the aftermath of a crisis if  $p(D \mid \text{Bad}) > 0.5$ , Blame 1 if  $p(D \mid \text{Bad}) < 0.5$ , and could choose either if  $p(D \mid \text{Bad}) = 0.5$ .

The veto player's response is as follows.

When  $p(D \mid \text{Bad}) > 0.5$ , voters will respond to a crisis in the wake of bad governance with Blame 2. A D type veto player will then choose good governance if:

$EU(\text{Good}) = r(c) + (1-r)b \geq EU(\text{Bad}) = q(d) + (1-q)(a)$ .

With  $r=1/2q$ , as was assumed at the outset, the above equation will hold whenever:

$$q \geq 2(a-b)/[2(a-d)+c-b]$$

With  $a-b=b-c=c-d$ , as was defined at the outset, the veto player will choose good governance whenever  $q \geq 0.4$ .

On the other hand when  $p(D | \text{Bad}) < 0.5$  voters will respond to a crisis in the wake of bad governance with Blame 1. In this case  $EU(\text{Bad}) = q(c) + (1-q)(a)$ . This means that a D type veto player will only choose good governance if  $r(c) + (1-r)b \geq q(c) + (1-q)(a)$ .

With the same assumptions as above he will only choose good governance when  $q \geq 2/3$ .

If  $p(D | \text{Bad}) = 0.5$  the former or the latter of the above scenarios would apply depending on whether voters choose Blame 1 or Blame 2. (Recall that they rationally could do either.)

With the above assumptions for a D type veto player to choose good governance in a Perfect Bayesian equilibrium,  $q$  has to equal or exceed  $2/3$ . This was in contrast to the  $0.4$  threshold when there was a single veto player. The rationale is as follows.

Since the veto player's choice of good governance immediately results in  $p(D | B) = 0 < 0.5$  in Bayesian updating, voters will only rationally choose Blame 1. Good governance

is only a rational choice when voters choose Blame 1 if  $q \geq 2/3$ , as demonstrated earlier. The Perfect Bayesian equilibrium with good governance in Game 2 must then take the form of (Good | D, Bad | ND; Blame 1 | Good, Blame 1 | Bad;  $p(D | B) = 0$ ,  $p(D | G) = 1$ ,  $q \geq 2/3$ ).

Since  $q \geq 2/3$  is likely to be fulfilled less often than  $q \geq 0.4$ , which was the threshold for a single veto player environment, it follows that we are more likely to observe good governance in a democracy when there is one veto player.

### **Game 3- An Authoritarian Regime With a Single Veto Player**

In authoritarian regime, the players in the final stage of the game may be more accurately labeled citizens rather than voters. The impact of citizens' actions on the ruler's likelihood of remaining a veto player does not operate through the electoral process, but through the likelihood of a coup or an uprising.

The substantive difference between Game 1 and Game 3 is that an authoritarian ruler may anticipate that he can repress the effects of blame from a crisis on the probability that he will remain a veto player. This can be represented by allowing the authoritarian ruler to use repression to limit his lowest payoff, i.e. that from Bad Governance, Crisis, Blame 2 to a level  $x$ , where  $x > d$ . (Recall that  $d$  was the lowest probability of remaining a veto player in a democracy.)

Recall from Game 1 that under democracy the single veto player would choose good governance if  $q \geq 2(a-b)/[2(a-d)+c-b]$ . It can be easily seen that if  $x > d$ , as is plausible where repression is an option, the threshold  $q$  for good governance to be chosen will go up. Thus, access to repression may render a centralized authoritarian regime more prone to misgovernance than a centralized democratic regime. If access to repression is so high that  $x$  approaches  $c$ , the threshold for good governance in a centralized authoritarian regime would be similar to that for a decentralized environment. (With  $a-b=b-c$  the threshold  $q$  for good governance would approach  $2/3$  as  $x$  approaches  $c$ .)

In sum, thanks to access to repression a centralized authoritarian regime may embody a greater propensity for central bank misgovernance than a centralized democratic regime, and may offer as great a likelihood of bad governance under centralization as under decentralization.

In sum, my theory generates the following empirical expectations. Democracies where there is a single veto player controlling the central bank should be relatively unlikely to display bad central bank governance. Democracies where multiple veto players control the central bank should be relatively likely to display bad central bank governance, as may authoritarian regimes (even those with a single veto player). I now take these expectations and see if they are borne out in evidence from Asia and Latin America prior to their respective currency crises of 1997 and 1994.