

STRATEGIC POLITICS OF IMF CONDITIONALITY

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Abstract

Why do some IMF programs contain more conditions than others? In this paper, I offer a theoretical account of under what circumstances competing domestic political logics prevails over the other and explain why some IMF programs contain more conditions than others. The theoretical model shows that the effect of domestic politics on IMF program design depends on the interaction of three institutional parameters: sensitivity to vote losses; reform-mindedness of the government; and the strength of affected special interest groups. Specifically, the model yields the proposition that a government that is more sensitive to vote losses and less reform-minded is more likely to extract a more lenient conditionality from the IMF. A government that is less sensitive to vote losses and more reform-minded is likely to pursue more extensive reforms siding with the IMF and is constrained by domestic politics only when there exist strong special interest groups that can hinder proper implementation of agreed conditions.

My empirical analysis of public sector conditions supports the domestic politics hypotheses generated from the model and yields four main findings. First, democratic countries that are more sensitive to vote losses receive fewer conditions than those that are freer from electoral competition, suggesting that the IMF is strategic in limiting how much it pushes vulnerable negotiating partners. This conclusion is bolstered by the second and the third findings. The second finding shows that within democracies, governments that won the previous election by narrow margins have fewer conditions than those that have won the previous election with wider margins. The third finding suggests that within democracies, governments that have more proximate elections have fewer conditions than those that have more time to next elections. Finally, strong public sector interests reduces the number of conditions in autocratic countries but bears little influence over the number of conditions in democratic countries, suggesting that democratic governments are more sensitive to popular pressures (voters) and autocratic governments are more sensitive to strong organized interests (public sector employees).

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1 Introduction

Why do some IMF programs contain more conditions than others? In any given year, the International Monetary Fund(IMF) lends loans to more than a dozen countries experiencing balance of payments problems.¹ A typical IMF loan is provided under an “arrangement” or a “program” between the IMF and a country, which includes specific policy measures that a country has to commit to implement for an arranged period. Commonly known as “IMF conditionality” refers to these policy measures that first negotiated by a government and IMF staff, then approved by the Executive Board of the IMF. The policy measures are called “conditions,” as continued access to IMF’s financial resources is granted conditional on implementing these policy measures. Then what decides how lenient or severe conditionality that a country has to implement in order to receive an IMF loan? Put the question differently, why do some IMF arrangements contain more extensive or numerous conditions than others?²

Existing studies in the two-level games literature provide a useful ground to build a theoretical account of how domestic politics affects IMF program negotiations. These studies generally suggest either of two competing logics that domestic politics affects outcomes of international negotiations. On the one hand, the government can tie its hands to an international negotiation partner, the IMF in the IMF program negotiation case, to force reforms on domestic interest groups. On the other hand, the government can tie its hands to domestic constituents to extract a better deal from an international negotiation partner in general, or a more lenient deal from the IMF in the IMF program negotiation case. While the two-level games literature is rich to have many studies to support either of the two logics, there is few theoretical argument of when and why one logic may prevail over the other and vice versa.

In this paper, I offer a theoretical account of under what circumstances one of the two alternative logics prevails over the other and explain why some IMF programs contain more conditions than others. In order to provide a theoretical account of domestic politics of IMF program design, I present a game theoretic model of IMF conditionality design and implementation in which I allow both of the two competing logics can play out. The model captures the dynamic linkage between the deliberate negotiations over conditionality and domestic politics of conditionality implementation.

The theoretical model shows that the effect of domestic politics on IMF program design depends on the interaction of three institutional parameters: sensitivity to vote losses; reform-mindedness of the government; and the strength of affected special interest groups. Specifically, the model yields the proposition that a government that is more sensitive to vote losses and less reform-minded is more likely to extract a more lenient conditionality from the IMF. A government that is less sensitive to vote losses and more reform-minded is likely to pursue more extensive reforms siding

¹The average number of programs signed in a year is about 21 between 1994 and 2006. During the 13 years of period, 275 new IMF programs had been arranged. Borrowing records of every member country are available at <http://www.imf.org/external/np/fin/tad/exfin1.aspx>.

²The variation of conditions can be captured in various dimensions. For instance, Stone (2008) uses the scope of conditionality. The most common measure is the number of conditions. Presumably, the number of conditions will be correlated with the scope and the specificity of conditionality.

with the IMF and is constrained by domestic politics only when there exist strong special interest groups that can hinder proper implementation of agreed conditions.

To test these propositions, I construct an original dataset in which I code 263 letters of intent signed between 1994 and 2006 for structural conditions they contain. Conditions are classified by their types and affected economic sectors. I disaggregate IMF conditions into four affected economic sectors and analyze them separately. By doing so, I allow that factors relevant to designing a set of IMF conditions over an economic sector vary by sectors. For instance, domestic politics may play a larger role in designing conditions over some economic sectors while international politics behind the IMF and internal, organizational, and bureaucratic incentives of the IMF can play a greater role in designing conditions over other economic sectors.

My empirical analysis of public sector conditions supports the domestic politics hypotheses generated from the model and yields four main findings. First, democratic countries that are more sensitive to vote losses receive fewer conditions than those that are freer from electoral competition, suggesting that the IMF is strategic in limiting how much it pushes vulnerable negotiating partners. This conclusion is bolstered by the second and the third findings. The second finding shows that within democracies, governments that won the previous election by narrow margins have fewer conditions than those that have won the previous election with wider margins. The third finding suggests that within democracies, governments that have more proximate elections have fewer conditions than those that have more time to next elections. Finally, strong public sector interests reduces the number of conditions in autocratic countries but bears little influence over the number of conditions in democratic countries, suggesting that democratic governments are more sensitive to popular pressures (voters) and autocratic governments are more sensitive to strong organized interests (public sector employees).

2 Literature Review

2.1 Economic Account

As countries turn to the IMF when they need money, many scholars focus on various economic indicators to explain IMF program participation.³ Among others, three closely related variables garner empirical supports from studies on IMF participation. First of all, balance of payments should matter as it is the primary object of the IMF. The Articles of Agreement of the IMF mandate that the IMF “provides member countries with opportunity to correct maladjustments in their balance of payments without resorting to measures destructive of national or international prosperity” and helps to “shorten the duration and lessen the degree of disequilibrium in the international balances of payments of members (Article I. (v) (vi)).” Thus balance of payments should let countries more likely to turn to the IMF and the IMF should be more willing to arrange loans when countries face serious balance of payments problems. This argument receives mixed empirical supports. While some empirical studies indeed find that balance of payments deficit

³See (Strum 2005, Knight 1997)

matters (Vreeland 2007), others find that the predicted relationship does not hold (Bird 1994, Thacker 1999). Second, Many studies find that low foreign reserves trigger countries to participate in IMF programs. Specifically, studies find that countries are more likely to participate in IMF programs when the ratio of foreign reserves to imports or exports is low (Przeworski & Vreeland 2000, Dreher 2004). The logic is straightforward. When countries have lower foreign reserves while continuing to import, those countries are in need of hard currencies, hence turn to IMF for temporary loans. Finally, countries are more likely to turn to the IMF when countries owe more debt. The logic runs similar to that for the foreign reserves. Countries who are to pay more debt back need more hard currencies and the needs should make countries turn to the IMF more readily. Studies generally confirms that increase in the ratio of debt service to GDP increases country's likelihood to turn to the IMF (Vreeland 2007).

While empirical studies of IMF participation find that these three economic variables are important predictors of IMF program participation, there are few studies that explore how these economic variables would affect the design of IMF conditionality. One exception is Dreher and Jensen's recent study. Dreher and Jensen (2007) explore how the economic variables shape the number of conditions that IMF programs contain. They find that "a country's real GDP growth, government consumption, the government's budget deficit, the change in international reserves and the current account balance do not significantly influence the number of conditions (Dreher & Jensen 2007, p.13)." Although they do test the relationship between these economic variables and the number of conditions, they do not provide any explicit predictions or logics behind them. Their first hypothesis only states "the IMF will set conditions based on domestic economic conditions including the growth rate of real GDP, the government's consumption, the budget deficit, the rate of monetary expansion and the current account balance (Dreher & Jensen 2007, p.6)."

Then why and how should these economic variables matter? Should, for instance, the current account balance negatively or positively be related with the number of conditions? To make more explicit hypotheses, one needs to go back to why the IMF proposes conditions for economic crisis hit countries. Note that IMF conditionality is devised to help countries fix economic and social policies that have directly and indirectly caused current crises. As the IMF use conditionality as a mean to fix maladjusted economic and social policies, if we make a reasonable assumption on the linkages between the degree of economic crises, measures by the size of debt, foreign reserves, and balance of payments, and the degree of maladjustment of economic policies, then we can conjecture that as the economy fares worse with more debt, lower foreign reserves, and more severe balance of payments problems, other things equal, there are more problems with current economic and social policies, hence more conditions are needed to fix them.

Alternatively, we can more directly address the question if we can capture how maladjusted or how far off a country's economic policies are from the policy criteria that the IMF sees as necessary for economic recovery. Thus, as the distance between current economic and social policies and the policy criteria that the IMF advocates as necessary to run a country's economy in contemporary world economy, i.e. policies congruent with neoliberalism, gets larger, the number of conditions

should increase.

Indeed, this is the approach the Independent Evaluation Office of the IMF, the independent body that oversights various functions of the IMF, takes when it review structural conditionality in IMF-supported programs in 2007. While the empirical analysis is preliminary based on correlations between variables, the overall trend suggests that the above expectation is consistent with the data. With the sector-wise disaggregated conditions, the analysis shows that more financial conditions are assigned when the index of financial liberalization is lower. Similarly, when the trade is less open, trade related structural conditions tend to increase and as government intervention in the economy increases, it also increases privatization related conditions (Independent Evaluation Office 2007*b*).

2.2 Political Account

There are two sets of actors in IMF lending decision making and designing an IMF program. The first decision is made by the “suppliers” of financial resources - the IMF and actors behind them: principals of the IMF including G-7; their domestic constituents and private financial institutions. Here, researchers focus on what influences the IMF’s decision to lend and with what conditions attached. Answers to these questions are reviewed under “Supply” side story. The second decision is rendered by borrowers. Here, researches focus on why or why not governments sign IMF programs. Existing answers to these questions are reviewed under ”Demand” side story.

2.3 Supply Story

2.3.1 IMF Bureaucratic Interests

Coming from public choice tradition, some scholars argue that bureaucratic interests of the IMF shape IMF’s lending decision. Vaubel argues that “international bureaucrats try to maximize their power in terms of budget size, staff and freedom of discretion and appreciate some leisure on the job (Vaubel 1986, p.52).” To support his argument, Vaubel (1996) demonstrates that there is tendency of “hurry-up lending” as the next quota review approaches. Since IMF resources come primarily from IMF quotas, every five year when members review the quotas, the IMF hurries up its lending so as to increase or maintain its pool of resources. IMF historian James Boughton agrees that one of the main goals of the IMF as an organization is to maintain their resources. He states, “the main challenge for the future is safeguarding the IMF’s identity and its resources, so that it can continue to provide adequate support to its now universal membership (IMF Survey 1994).”⁴ While there is no explicit argument regarding IMF conditions from this view, one can extend the argument and come up with a reasonable hypothesis. Since the IMF hurries up its lending before a regular budget review, the IMF is more likely to engage in active lending and become more flexible and accommodative when the next quota review is near. Specifically, the IMF would be willing to lend with fewer conditions when the quota review is scheduled soon. Conversely, when the IMF is over with regular quota review, the IMF might become tougher, demanding more conditions as the IMF

⁴This is cited in (Vreeland 2007).

has secured the quota for the next five years. Thus, we may see a cyclical ebbs and flows of the number of IMF programs and their conditions.

2.3.2 Sociology of the IMF

Organizational sociologist Sarah Babb also emphasizes the influence of the IMF and its staff over IMF's lending. Yet, she focuses more on dominant ideas and interests of the IMF staff, rather than bureaucratic and material incentives (Babb 2003). As organizations often have ambiguous mandates, she argues, it is largely up to the professionals working in those organizations how to interpret and apply those mandates to cases. Since the IMF is populated by economists whose thinking is mostly congruent with the "Washington Consensus" since 1990s, "it is natural for the IMF to simultaneously endorse the goals of low inflation and economic growth through government downsizing (Babb 2003, p.20)." This also implies that the IMF conditionality would reflect the contemporary dominant ideology. When neoliberal "Washington Consensus" dominates economists thinking, the conditionality will also be designed based on "Washington Consensus." In contrast, when Keynesian economy was in mainstream, conditions with more emphasis on government's role in the market might prevail.

2.3.3 Principals of the IMF

More political explanations come from principal-agent framework. In this line of research, scholars emphasize the influence of the principals of the IMF - the major shareholders of the IMF, hence major decision makers of the IMF, the United States and other G-7 countries. Numerous anecdotes exist ranging from Cold War era IMF lending to West-allied countries to War on Terrorism era lending to strategically important countries like Turkey and Pakistan. For instance, in his Washington Post article, Paul Blustein, an expert journalist on the IMF, wrote on American favoritism toward Pakistan in the wake of the terrorist attack in September 2001: ⁵

[A]ccording to a senior IMF staffer, the expectation among some of the people dealing with Pakistan before Sept. 11 was that the chances for board approval were 50-50, because although the Pakistani government had kept many of its pledges, it had failed to deliver on others, including tax collection. After Sept. 11, the political atmosphere was transformed - so at Wednesday's meeting, board members representing the IMF's member countries heaped praise on Islamabad's economic performance. (October 4th (Thursday), 2001, Washington Post, "A Tighter Hand in Doling Out Global Aid?")

And there are a number of studies backing up these newspaper articles and popular speculations. For instance, Bessma Momani (2004*a*, 2004*b*) finds that the U.S.'s geopolitical interest intervened

⁵Blustein has written excellent accounts of global financial crises based on detailed interviews with policy makers of both borrowing countries, G-7 governments, private bankers, and IMF staff members. On the Asian financial crisis, see Blustein (2001). On Argentina's long lasting relations with the IMF and its latest financial crisis in 2001, see Blustein (2005).

in IMF decision making procedures. She argues that “two IMF-Egyptian agreements were facilitated by the United States in 1987 and 1991, in order to protect the Egyptian regime from tough conditions and to reward the regime for its participation in the Persian Gulf War (Momani 2004*a*, p.881).” In the first systematic large-N study of the influence of the U.S. on the IMF, Thacker (1999) finds that countries moving toward favorable to the U.S. foreign policy indeed are more likely to get loans from the IMF than those moving away from the U.S.’s foreign policy position. In more recent study, Dreher and Jensen (2007) also report that U.S.’s influence is present in the IMF conditionality design. While economic variables do not fare well to explain variation in the number of IMF conditions, they find that closer allies of the U.S. receive IMF loans with fewer conditions. With different measurement, Stone (2008) reports similar findings. He finds that “countries receiving more U.S. foreign aid are subject to dramatically reduced degrees of conditionality,” but “only when the borrower has a pressing need for IMF support (Stone 2008, p.22).” Others further elaborate on this line of inquiries and broaden the scope of sovereign principals of the IMF. For instance, Dreher, Sturm, and Vreeland (Dreher & Jensen 2007) examine the effect of the United Nations Security Council membership on the IMF lending, Oatley and Yackee (2004) examine the effect of the amount of US bank exposure in a borrowing countries on the amount of loans, and Broz and Hawes investigate the effect of the total amount of U.S. lending as a proportion of a developing country’s GDP on the lending practice of the IMF (Broz & Hawes 2006*a*, Broz & Hawes 2006*b*). These studies generally agree that more favorable IMF programs, with larger amount of loans with less conditions, are made when American financial and foreign policy interests at stake are deemed significant.

Finally, pointing out that IMF loan is only a small fraction of funds that a borrowing country needs at a time of financial crisis, Erica Gould (2003, 2006) examines the influence of other suppliers of international financial resources - the supplementary financiers. Her argument is two folds. First, statically, the composition of debt is a significant predictor of IMF conditionality. When supplementary financing comes from private financial institutions, the IMF program is more likely to include private bank friendly conditions - for example, setting aside certain fiscal revenues to match international loans with fiscal revenues, using a certain percentage of the IMF loan for debt reduction payments or replenishment of reserves, and making debt service payments as agreed with commercial banks official. Second, Gould’s argument has also dynamic implications. As the primary creditors historically change from sovereign states to private financial institutions, the bank friendly conditions are more likely to be present in recent IMF programs than older IMF programs.

Gould (2006) illustrates the influence of a private financial institution with a stark example:

As SBA (Stand-By Agreement) with Ghana in 1983 stipulated that the IMF loan to Ghana be deposited directly in a Bank of Ghana account held at the Bank of England, and that the Bank of England was to transfer the deposit directly to the Standard Chartered Bank to repay a short term loan it had made to Ghana. So the IMF loan never even reached Ghana, but rather went directly to repay a commercial bank.

Overall, the literature emphasizes actors in chains of principal-agent relations in the command of the IMF; IMF staff, principals of the IMF such as Executive Board members and their governments, and principals of principals of the IMF such as voters and private financial institutions. Hence, the important factors in approving and designing IMF programs reflect interests of these actors; bureaucratic and ideational interests of IMF staff members; interests of IMF's major quota holders, most notably those of the U.S.; domestic politics of major shareholders of the IMF; and private financial institutions who supplement IMF loans.

2.4 Demand Story

While the supply side of the IMF lending process has been under more attention, the demand side of the story has attracted far less attention. This may be because of the popular view of "inevitable" IMF participation and "imposed" IMF conditionality. That is, more often than not, IMF participation by a sovereign county is depicted as an unavoidable, forced choice and attached IMF conditionality is also seen as assigned or imposed, unilaterally designed by IMF technocrats. While this illustration may be correct to some extent, it misses the point that sovereign countries can choose not to participate in IMF programs. Even in the middle of the Asian financial crisis in 1997, Malaysia opted not to sign an agreement. Instead, Malaysia imposes stricter short-term capital control unilaterally (Sundaram 2006). Similarly, India and South Africa did not participate in IMF programs at times of looming financial crises. James Vreeland also reports a handful of countries which had extremely low hard currency reserves - average reserves as low as or less than 0.1 times of monthly imports - did not participate in IMF programs (Vreeland 2003, p.23). In general, Miles Kahler (1993) shows that even heavily indebted, the least developed countries often refuse to participate in IMF programs.

Moreover, some politically important countries are reported to have strong bargaining leverage in IMF negotiation. For instance, Russia under a financial crisis was told to have more than deserving bargaining leverages because it was too nuclear and too big economically to fail (Aslund 1999). Kendall Stiles also concludes that bargaining and compromise is the most central dynamic of IMF policy making rather than coercion, after a series of interviews with IMF officials and brief case studies (Stiles 1987, Stiles 1990). Axel Dreher and Nathan Jensen (2007) also acknowledge:

After all, the number and stringency of conditions are the outcome of a bargaining process, and the Fund, eager to lend, is probably prepared to endorse fewer conditions if it feels that this is necessary to reach an agreement. IMF participation is a joint decision between the Fund and the borrower. (2007, p.14)

Thus scholars need to fully reconsider the process of IMF program design as an interdependent decision making process by the IMF and the borrowing country in order to better understand political dynamics of IMF program design. If the government does not want to sign into the IMF agreement for any reasons, the government may not sign the program. This naturally points out the needs for studying the other side of the negotiation table - the borrowing country. And

taking the politics of the borrowing country seriously involves accounting for domestic politics of implementation to appreciate the complete picture of IMF lending and its consequences. Lack of attention to demand side of the story may lead biased inference based solely on “why the IMF lends” story and risks falsely attributing some causal weight of excluded demand side factors to included supply side variables, unless there is little to gain by adding domestic dynamics of borrowers. Yet, there are enough reasons to believe that domestic dynamics do matter in IMF program negotiations.

Notable exception for the rule is Vreeland (Vreeland 2003, Vreeland N.d. *a*, Vreeland N.d. *b*). In his ground-breaking study of domestic politics of IMF programs, James Vreeland (2003) argues that the government may bring in the IMF to gain leverage against domestic opposition. He reasons that bringing the IMF in is useful for the government since it increases the rejection cost for domestic opposition, hence deters rejection of the IMF program by domestic opposition. After the government successfully brings in the IMF and signs an agreement, the rejection cost for the domestic opposition gets higher as it now becomes not only rejecting the government’s reform initiatives but also the international commitment made with the IMF. Since, defecting from the international commitment by rejecting the IMF program may send a bad signal to foreign creditors and investors in times of economic crisis, domestic opposition is more likely to acquiesce. Thus, governments with high “political will” to engage in economic reform have an incentive beside the IMF loan to participate in IMF programs - conditionality. In this case, IMF conditionality becomes politically desirable for the government. It allows the government to tie its hands with IMF conditionality against potential domestic opposition.

2.5 Two-Level Games Literature

In more theoretical vein, the dissertation borrows insights from and builds on studies that concern interactions of international and domestic politics. And there are no shortage of studies in this body of literature.⁶ Since international economic negotiations always brings domestic consequences, scholars have seek to understand how international bargaining interacts with domestic political actors and institutions. Broadly grouped as “two-level games” literature, a number of studies have been done to advance our understanding of this complex phenomenon.

Yet, when it comes to applying the insights generated from the literature, one would find two logically established and empirically supported explanations competing with each other. While equally plausible, they generate quite opposite predictions regarding international negotiation outcomes, thus yield different implications. That is, two-level games is underspecified.

On the one hand, scholars contend that governments can utilize domestic opposition to extract better deals in international bargaining. For instance, Lisa Martin (2000) argues that the U.S. can make their bargaining proposal more credible as they have stronger and independent legislature. As the American Congress constraints the president, the president can tie its hand against its

⁶There are a number of excellent volumes of studies in the literature. See the seminal article by Putnam (1988), the original volume on two-level games by Evans *et al.* (1993), a more recent studies by Milner (1997) and by Drezner (2003).

international counterpart and extract better deal for the U.S. Cowhey (1993) compares Japanese and U.S. cases and concludes that stronger domestic checks and balances in the U.S. allowed the U.S. government extract a better deal than its Japanese counterpart. Miles Kahler (1993)'s study of IMF stabilization programs in Jamaica and Somalia demonstrates that domestic constraints on least developed countries' governments, over which the IMF has little control, undermine IMF's seemingly dominant position. In short, a government may utilize domestic opposition to extract a better deal from its international counterparts. In his original contribution, Putnam highlights the mechanism in the IMF context:

The actors at Level II (domestic) may represent bureaucratic agencies, interest groups, social classes, or even "public opinion." For example, if labor unions in a debtor country withhold necessary cooperation from an austerity program that the government has negotiated with the IMF, Level II ratification of the agreement may be said to have failed; ex ante expectations about that prospect will surely influence the Level I (international) negotiations between the government and the IMF (Putnam 1988, p.439).

On the other hand, there are a group of scholars who focus on how a government uses an external influence to tip the balance against domestic opposition. Vreeland (2003) argues that governments with political will to reform would sign an IMF agreement to tip the balance against domestic opposition. This would work as opposition's rejection to the reform measures endorsed by the IMF would send a bad signal to investors and hence bringing the IMF would raise the cost of rejection for opposition. Similarly, Mayer and Mourmouras (Forthcoming) contend that "under ideal conditions, IFI (the IMF and World Bank) assistance can help tip the balance of the authorities' political calculations in the direction of desiring to reduce policy distortions (which are currently in favor of domestic special interest groups)." Vaubel (1986) also argues that the IMF relieves countries of unpleasant tasks by serving as a scapegoat and imposing policy conditions on borrowing governments which want to evade the responsibility of unpleasant measures. More specific to conditionality, Drazen (2002) contends that conditionality is necessary if there are heterogeneous interests and conflicts within a borrowing country and claims that in these cases "conditionality can strengthen the hands of the reformers who are committed to carrying out reform but face domestic opposition[p.43]." The mechanism is also applicable to other topics in international political economy. For instance, Goldstein (1996) contends that international organizations provide solutions for the government to overcome difficult domestic problems. In the Canadian-U.S. Free Trade Agreement context, she shows that "the FTA (between Canada and the US) and NAFTA reduced the autonomy (of trade bureaucracy in the U.S.) and were therefore preferred by the President even though it reduced the ability of the United States to retaliate to unfair trade competition abroad (Goldstein 1996, p.556-557)." While in different context, this line of argument is also well supported in democratization literature. External forces, i.e. membership of international organizations increase the probability of successful democratization against potential domestic opponents (Pevehouse 2003).

3 The Model

In order to comprehend the complex dynamics of the IMF program design and implementation, I construct the game theoretic model and deduce a set of testable implications from the model.

3.1 Conditionality

A number of policy conditions are included in a typical IMF program and these conditions are often categorized by targeted economic sectors. For instance, a report prepared by the Policy Development and Review Department of the IMF classifies all structural conditions into 14 economic sectors (The Policy Development and Review Department 2001). Among the 14 economic sectors, policy conditions tend to be concentrated in a few sectors such as public enterprise reform and restructuring, privatization, fiscal sector and financial sector. Similarly, a report prepared by the Independent Evaluation Office of the IMF uses 9 reform categories to classify reform conditions (Independent Evaluation Office 2007*b*). The Independent Evaluation Office reduces the number of categories by collapsing a few minor sectors into “Other Fund Core” and “Other World Bank Core.” The main categories again cover tax policy and public expenditure management, financial sector reforms and development, and state owned economy reform, civil service reform, and privatization.

Considering the domestic effect of policy conditions, then IMF conditionality is multidimensional. Each set of policy conditions affects a specific economic sector yet bears little consequence to other economic sectors. For instance, conditions targeting the financial sector, such as tighter regulations of the financial sector, tighter banking supervision, and corrective actions in problem banks, have a immediate effect on the financial sector yet have little direct effect on the public sector or the agricultural sector. Likewise, state-owned enterprise reforms and privatization have a direct consequence over on welfare of the public sector yet do not have such an effect on the private sector employees.

Treating multidimensional IMF conditionality as unidimensional is potentially problematic. Existing studies of IMF conditionality, excluding occasional IMF reports, generally treat IMF conditionality as a single dimension. The common measure of IMF conditionality in the literature is the number of all policy conditions. This is understandable given the main focus of the extant studies are how international politics around the IMF and internal factors within the IMF determine the degree of severity or leniency of conditions over a country’s economy (Dreher & Jensen 2007, Copelovitch 2008). Yet, there is a possibility that certain international and organizational factors affect a particular set of policy conditions and explain the variation in the particular set of conditions without having significant influence over the others. Without treating IMF conditionality multidimensionally and disaggregating policy conditions by targeted sectors, it is hard to tell if those international and organizational factors equally affect policy conditions over all economic sectors or disproportionately affect a few selected sectors without affecting the others.

Therefore, in order to model how domestic interests affect the finally negotiated conditions by the IMF and the government, it is especially important to look at conditions by targeted sectors.

Agricultural interests of a country will be interested in influencing the conditions pertaining to agricultural policies while financial interests of the country will want to exert influence over financial sector reforms, but agricultural interests would have little incentive in influencing the design of financial sector conditions and vice versa. Thus, it is important to treat IMF conditionality multidimensionally by targeted sectors. This then allows us to identify precisely who will be the important domestic interest groups that would try to influence the design of a particular set of conditions targeting the sector.

Conditionality is the variable of interest in the model. Being disaggregated by targeted sectors, a particular set of conditions is then negotiated by anticipating domestic political consequences of the targeted sector. For instance, public sector conditions are designed by the IMF and the government anticipating response from the public sector. Similarly, financial sector conditions are designed in consideration of the reaction from the financial sector interest. Then the whole set of conditions can be thought as the additions of entire sets of conditions over all targeted sectors.

3.2 The Players

There are three strategic players in the IMF model. The first one is the IMF. The IMF needs to negotiate and decide first whether it is willing to arrange an IMF program with a potential borrowing country, and how much it would lend with what conditions attached. Note that the IMF is treated as a strategic actor in this model. The IMF has its own preference driven ideologically, bureaucratically, or politically, over a set of policies that a potential borrower has to implement and its lending decision is based on a strategic calculation of expected benefits and costs of a loan arrangement.

At the other end of the negotiation table is a government. The government directly negotiates with the IMF whether it can receive financial assistance from the IMF and with what conditions. When the IMF and the government find a mutually acceptable set of policy measures, they sign an IMF program. When they fail to do so, there is no IMF program.

Finally, there is a targeted domestic interest that is going to be adversely affected by a set of conditions included in an IMF program. Thus the targeted domestic interest is *ex post* determined by the set of conditions we are interested in. This notion of a targeted domestic interest is consistent with the very broad definition of a special interest group by Grossman and Helpman (2001, p.75), defined as the group of members who “covet policies that would not be considered desirable by the average citizen.” The targeted domestic interest has a distinct policy preference over the reform measures targeting it which departs from the preference of the average citizen who at best is agnostic about the reform measures.

In the current IMF context, a targeted domestic interest, which I denote as Special Interest Group (SIG), can be any faction of population that shares a similar preference over a potential set of IMF conditions. For instance, it may be employees in the public sector. Since IMF programs often include several specific conditions on the public sector, public sector employees have a shared interest to minimize these damaging conditions. These conditions often include restructuring of

public enterprises, privatization of non-financial State Owned Enterprises and wage and employment limits in civil service (Independent Evaluation Office 2007*a*). Sometimes, the public sector employees are represented by the union(s). Alternatively, SIG could be a financial sector in a country. Especially during and after the Asian financial crisis in 1997, many conditions targeting a financial sector are often included in IMF programs as the Fund started to emphasize the soundness and transparency of the financial sector. These often require a government to install laws to regulate strictly the financial sector and to establish firmer supervisions and corrective actions in problematic banks (Independent Evaluation Office 2007*a*). More broadly, a SIG can be comprised of workers or the urban middle class. As studies show, there is general consensus that the effect of IMF programs on labor and the urban class is not beneficial (Vreeland 2002, Garuda 2000). These harmful effects can be via many different mechanisms. For instance, as private and public firms go through restructuring, workers may be in danger of losing their jobs. In addition, as part of austerity policy, a government may be required to increase tax rates while cutting governmental spending on education, health care, and various subsidies, which are more sensitively received by the ones who benefit the most - the urban poor. Finally, and most broadly, a SIG can be the ones whose interests are hurt by IMF programs including the ones mentioned above. In this case, the SIG is equivalent to the losers of an IMF program.

3.3 Sequence of the Game

The IMF and the government negotiate over a single dimensional policy space $P \in [P_{\min}, P_{\max}]$ in the “design” stage. P can be thought as the severity of the conditions. It can be positioned anywhere in between the minimum P , denoted P_{\min} and the maximum P , denoted P_{\max} . To make the model as simple as possible, I adopt take-it-or-leave-it bargaining protocol. Thus, upon receiving the offer from the government, the IMF decides whether it wants to approve or to disapprove the program. The take-it-or-leave it offer can be thought as the one formulated through rounds of talks held between government officials and IMF staff. Then the approval decision by the IMF can be thought of as the Executive Board approval procedure. When the IMF approves P_G , the particular P that is stipulated in the offered Letter of Intent, the designing stage ends. The approved P_G becomes a part of the IMF program. When the IMF rejects the offer, the design phase ends without an IMF program. This is when there exists no mutually acceptable IMF program design. I call this outcome “No Agreement” which I denote as “NA” for notational convenience. When the IMF accepts the offer, then the IMF program is arranged with P_G and the implementation stage begins.

The whole set of IMF conditions can be thought as the outcome of multidimensional negotiations happening simultaneously.

Entering the “Implementation” stage, the government complies⁷ and a special interest group(SIG)

⁷I can make the game such that a government can decide whether it wants to comply to P_G or not, but under complete information, this bears no analytic significance because if the government prefers non compliance, it can decide not to offer or offer such that the IMF would not want to accept. Hence, I assume when a government signs an agreement, it tries to implement the program.

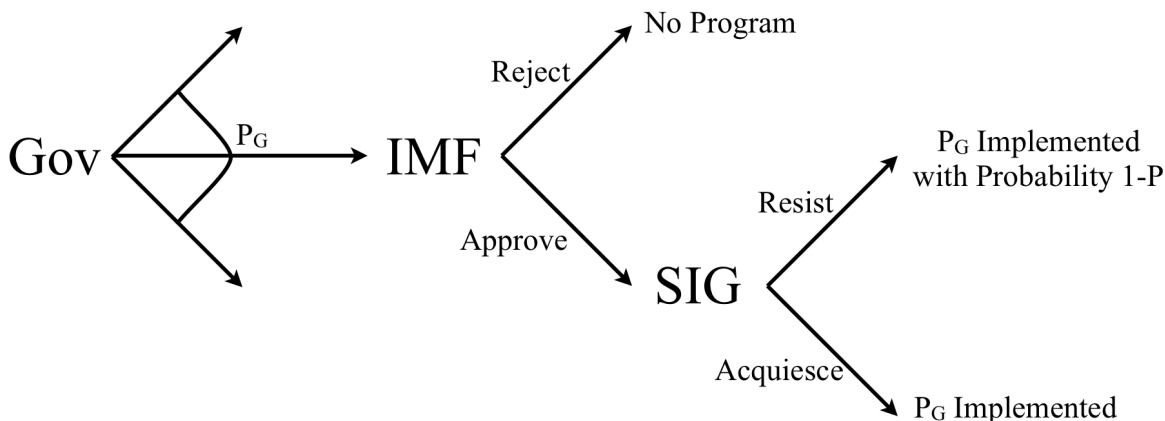


Figure 1: IMF Game Tree

gets to move. Given the level of P_G , the SIG chooses whether it wants to acquiesce or to resist to the IMF program. When the SIG acquiesce, the IMF program is implemented without a problem. I call this outcome “Implementation” and denote it as “IMP” for simplicity. Finally, when the SIG tries to resist, the IMF program can still be implemented with probability $1 - p$ and the program is aborted with probability p where p is proportional to the size of the SIG. Here I posit that as the size of the SIG increases, there is a linear increase in the probability of successful resistance in case the SIG opts to do so. I call this outcome “SIG resistance” and denote it as “SIGR.”

Note that only SIGs whose interests are adversely affected by a set of IMF conditions get to move and choose to resist. The rest of the population whose interests are not harmfully affected by the IMF program are assumed to enjoy benefits passively. In addition, the model is general, in the sense that the SIG can still be any group of people and the precise nature of the relevant SIG becomes fixed only when a set of policy conditions are fixed. Thus, when one looks at the policy conditions that harmfully affect the interests of the public sector, the relevant SIG becomes those who are employed in the public sector.

3.4 Payoffs

As the model tries to understand the design of an IMF program, the variable of the primary interest is P_G . P_G represents the degree of conditions - how lenient or severe agreed conditions are for the SIG. Severe conditions may mean breadth and depth of the particular set of conditions targeting the SIG. Broader conditions mean that the covered issue areas are not limited but wide. Deeper conditions mean that conditions require fundamental changes, i.e., revision of laws and institutional reforms.⁸

P_G varies from P_{\min} to P_{\max} in a one-dimensional Euclidean space, where the former is the

⁸The IMF’s Monitoring Arrangements (MONA) dataset differentiates conditions requiring change of law that has long lasting effects, conditions requiring one time institutional change, and conditions requiring no such changes.

ideal point for the SIG, i.e., no specific policy conditions on the special interest group and the latter is the ideal point for the IMF. The latter can be thought of as the policy measures that the IMF wants in the ideal situation where there is no potential resistance from a government and there is no political constraint for the government domestically. Furthermore, I normalize the space of P_G by setting $P_{\min} = 0$ and $P_{\max} = 1$. Thus P_G varies between 0 and 1. As illustrated, the higher P_G gets, the more severe the conditions are for the SIG and closer they are to the ideal point of the IMF.

I normalize the utilities of the status quo or NA for all parties involved equal to zero. Below I briefly discuss the payoffs for the Fund, the SIG and the government in turn. The subscript represents each player (F for the Fund, G for the government, SIG for the special interest group) and acronyms within parentheses represent outcomes.⁹

Table 1: Parameters in the Model

Terms	Description	Note
B_F	Benefit of an IMF program to the Fund: proportional to a country's size of economy interests of the US, other sovereign creditors and PFIs	
C_F	Cost of an IMF program for the Fund: proportional to the size of loans Prob. of default, potentially following reputational costs	$0 < C_F < B_F$
B_G	Benefit of staying in power for the government	
P_G	Conditionality	$0 \leq P_G \leq 1$
N	Size of total population	
s	Size of the special interest group	
w_i	Status quo welfare of an individual i in s	
β	Degree of organization of the special interest group	
$\Pr(\text{SR})$	$\beta \frac{s}{N}$	
$\Pr(\text{FR})$	$1 - \beta \frac{s}{N}$	
r	Proportion of the cost to the IMF in case of program interruption	$0 < r < 1$
c_s	Cost of resistance for each special interest group member	
ρ	Electoral sensitivity to a vote loss	$0 < \rho < 1$
γ	Reform-mindedness of the government	$0 \leq \gamma \leq 1$
σ	individual's ideological bias	
ϕ	the height of the distribution of ideology	
α	population share of a group	
δ	the popularity of the challenger	
ψ	the height of the distribution of popularity	

⁹The payoffs below are largely consistent with economic models of special interest groups. There are a few articles using the model of Grossman and Helpman (2001) to understand domestic political dynamics of IMF programs. They generally focus on special interest groups whose interests are to be compromised with a new IMF program and how conditionality reduces inefficiently distorted economic policies which had existed in favor of special interests. See articles by Wolfgang Mayer and Alex Mourmouras (Mayer & Mourmouras Forthcoming, Mayer & Mourmouras 2004, Mayer & Mourmouras 2002).

3.4.1 Payoffs for the IMF

Formally, the payoffs for the Fund can be expressed with the probability of successful resistance (SR) defined as $\Pr(\text{SR})$ and the probability of failed resistance (FR) denoted as $\Pr(\text{FR})$. $\Pr(\text{SR}) + \Pr(\text{FR}) = 1$.

- $U_F(\text{NA}) = 0$
- $U_F(\text{IMP}) = \text{Benefits} - \text{Costs of the IMF program}$
 $= B_F * (\sqrt{P_G} - P_{\min}) - C_F$
 As P_G varies between $P_{\min} = 0$ and $P_{\max} = 1$, this can be rewritten as
 $U_F(\text{IMP}) = B_F * \sqrt{P_G} - C_F$
- $U_F(\text{SIGR}) = \Pr(\text{FR}) * U_F(\text{IMP}) + \Pr(\text{SR}) * (\text{Costs of the stopped IMF program})$
 $= (1 - \beta * \frac{s}{N})(B_F * \sqrt{P_G} - C_F) + (\beta * \frac{s}{N}) * (-rC_F)$

First of all, when there is no agreement the payoff for the Fund is standardized to 0. Secondly, when the program is implemented without special interest group resistance, the payoff for the Fund is a portion of the full potential benefit when there is an ideal IMF program for the Fund (B_F) minus the cost of an IMF program for the Fund (C_F). The benefit, B_F , can be thought as the benefit for the IMF of agreeing on the IMF program, disbursing the loan and subsequently implementing the economic reforms. The model is agnostic about the source of the benefits and B_F can be the sum of benefits from financial stabilization of the borrowing country, bureaucratic benefits with better reputation and increased resources, and interests earned from the loan. The cost to the Fund, C_F , can be thought of as various risks involved in the loan arrangement. It includes the risk of no or delayed repayments from the borrowing country and associated reputational damages to the Fund. I assume that the realized benefit for the Fund is an increasing function of the level of the conditionality P_G . Thus, the realized benefit decreases as P_G decreases.¹⁰ In other words, the benefit increases when conditionality gets closer to the IMF's ideal policy criteria and decreases with lenient conditions, i.e., closer to no conditions. This is justifiable, given that the IMF conditions are to correct wrong economic policies that have caused the balance-of-payments problem, thereby to increase the probability of timely repayment of the loan. Finally, when there is special interest resistance, the payoff of implementation for the Fund is realized with probability $\Pr(\text{FR}) = 1 - \Pr(\text{SR})$, where $\Pr(\text{SR})$ is proportional to the size of the SIG. The size of the SIG, denoted as s is a fraction of the entire population, denoted as N . With probability $\Pr(\text{SR})$, then resistance is successful and the program is aborted, and the Fund pays a part of the cost (r of C_F) without realized benefits. When the size of the SIG increases, so does the probability of successful resistance. Finally, I let β translate the size of the SIG into actual influence of the special interest

¹⁰Alternatively, I can divide the benefit with the distance between the ideal point of the Fund and the proposed conditionality. This makes mathematics slightly more complicated without an added insight, so here I multiply the distance between the ideal point of a SIG and the proposed conditionality. I assume that the marginal benefit decreases over the distance as an alternative specification with constant marginal benefit does not make a qualitative difference and the decreasing marginal benefit seems to capture the idea better.

group with β greater than 0. So β can be regarded as the parameter of how well the special interest group is organized. When β is unity, it directly translates the size into influence. When it is less than unity, the special interest group is relatively poorly organized and the influence is less than its potential. A classical example of this kind of group is consumers. Conversely, when it is greater than unity, the influence is greater than deserving influence given its size. This may be the case of a well organized economic sector that has much larger influence in foreign economic policy than its group size, i.e., the agricultural sector in advanced economies.

3.4.2 Payoffs for the Government

The payoffs for the Government are assigned as follow.

- $U_G(\text{NA}) = 0$
- $U_G(\text{IMP}) = \text{Benefits from the Loan} + \text{Benefits from reforms} + \text{Electoral Consequences}$
 $= Nv + \gamma * sw * \sqrt{P_G} + \rho * \psi(v - \frac{sw}{N} * \sqrt{P_G})B_G$
- $U_G(\text{SIGR}) = \text{Pr}(\text{FR}) * U_G(\text{IMP}) + \text{Pr}(\text{SR}) * U_G(\text{NA})$
 $= (1 - \beta * \frac{s}{N})[Nv + \gamma * sw * \sqrt{P_G} + \rho * \psi(v - \frac{sw}{N} * \sqrt{P_G})B_G]$

First of all, when there is no agreement the payoff for a government is standardized to 0. This includes the expected utility of staying in power without having an IMF agreement. When the program is implemented without special interest group resistance, the utility for the government comes from three parts; one, the overall welfare increase for the population as a whole (Nv) thanks to the loan, where N is the size of population and v is the benefit for an individual in the population; two, the benefit from the reform which depends on government's reform-mindedness and the level of conditionality; and three, the benefit of staying in power. γ measures the reform-mindedness of the government or how much the government is biased toward the policy reforms. When it is 0, it does not care about the magnitude of the reform. When it is positive to unity, it means the government's utility increases when there is larger reform, hence it represents a reform-oriented government. ρ is an electoral sensitivity parameter or alternatively, it measures the degree of citizens' control over government's survival.¹¹ When constituents have no control over selection of their leaders, i.e., authoritarian governments without meaningful elections, ρ gets closer to 0. Conversely, when constituents exercise total control over selection of their leaders, i.e., democracies with highly competitive elections, ρ is close to 1. B_G denotes the benefit for a government to stay in power. Finally, when there is special interest resistance, the utility of implementation for the government is realized with probability $\text{Pr}(\text{FR}) = 1 - \text{Pr}(\text{SR})$, and with probability $\text{Pr}(\text{SR})$, the SIG resistance is successful, the IMF program is stopped, and the utility for the government is equal to that of NA.

¹¹The parameter is adopted from the model by Xinyuan Dai (Dai 2005).

I adopt the probabilistic voting model for assigning the government's utility (Coughlin 1992, Persson & Tabellini 2002).¹² For the probabilistic voting model, I assume the population consists of two distinct groups J s, here the special interest group and the rest of the population.¹³ Thus, let $J = \text{SIG}, \text{Others}$. The special interest group will be hurt by a particular set of IMF conditionality while the rest will benefit from stabilization of economy, increased foreign investment, or subdued inflation brought by the IMF program. Let the population share of group J be α^J . Hence, $\alpha^{\text{SIG}} = \frac{s}{N}$, and $\alpha^{\text{Others}} = \frac{N-s}{N}$. Naturally then

$$\sum_{J=\text{SIG}}^{\text{Others}} \alpha^J = \frac{s}{N} + \frac{N-s}{N} = 1$$

At the time of the elections, voters base their voting decision both on the IMF conditionality negotiated by the government and on the two candidates (the incumbent and the challenger)' ideologies and popularity. Specifically, voter i in group J prefers candidate of the incumbent government if:

$$W^J(\text{IMF Program}) > W^J(\text{No IMF Program}) + \sigma^{iJ} + \delta$$

where $W^J(\text{IMF Program})$ is the utility of having an IMF program for a member i in group J and $W^J(\text{No IMF Program})$ is the utility of having no IMF program for a member i in group J . I assume that only the incumbent can initiate the IMF program, as it is the incumbent government's decision to enter into an IMF agreement, and the challenger endorses the status quo, i.e., no IMF program. σ^{iJ} is an individual-specific parameter that can take on negative as well as positive values. It measures voter i 's individual ideological bias toward the challenger. A positive value of σ^{iJ} implies that voter i has a bias in favor of the challenging candidate whereas voters with $\sigma^{iJ} = 0$ are ideologically neutral, that is, they care only about economic policy in general, or in this case, the IMF program. I assume that this parameter has group-specific uniform distributions on

- $[-\frac{1}{2\phi^{\text{SIG}}}, \frac{1}{2\phi^{\text{SIG}}}]$ for the SIG
- $[-\frac{1}{2\phi^{\text{Others}}}, \frac{1}{2\phi^{\text{Others}}}]$ for the others

The population as a whole is assumed to have a uniform distribution on $[-\frac{1}{2\phi}, \frac{1}{2\phi}]$. Later, I further assume that there is no difference between these distributions of ideological biases across different groups. In other words, voters' ideological bias is independent of the group to which they belong.¹⁴ These distributions have density of $\phi^{\text{SIG}}, \phi^{\text{Others}}, \phi$ respectively and each group has

¹²This part is very technical. While technical details are essential for the model, less enthusiastic readers can skip the discussion over the probabilistic voting model.

¹³The discussion here is based on Persson and Tabellini (Persson & Tabellini 2002)

¹⁴While I assume a uniform distribution here, specific form of probability distribution does not make much difference as long as it is unimodal. Persson and Tabellini states that even if the group distributions of the parameter σ are not uniform, the result does not change much as long as the distribution remains unimodal. They suggest "the properties of the equilibrium are dictated by the group density of σ in a neighborhood of the equilibrium policy. But the interpretation remains the same (Persson & Tabellini 2002, p.57).

members inherently biased toward both candidates. As I further assume that there are no group differences, these three are equal to each other, or $\phi^{\text{SIG}} = \phi^{\text{Others}} = \phi$.¹⁵

The parameter δ , which measures the average popularity of the challenger in the population as a whole, can also be positive or negative. I again assume a uniform distribution over the interval $[-\frac{1}{2\psi}, \frac{1}{2\psi}]$ for the parameter δ . Although the distribution assumptions regarding σ^{iJ} and δ are special, they have an advantage in that they facilitate a simple closed form solution.

The government announces its position toward the IMF program by deciding whether to agree to an IMF program and in case it does, with what conditions. Only the incumbent can make a policy proposal while the challenger(s) holds their position at the status quo, i.e. no IMF agreement. Then the swing voter in group J is:

$$W^J(\text{IMF Program}) = W^J(\text{No IMF Program}) + \sigma^J + \delta$$

This can be rearranged to:

$$\sigma^J = W^J(\text{IMF Program}) - W^J(\text{No IMF Program}) - \delta$$

All voters i in group J with $\sigma^{iJ} \leq \sigma^J$ prefer the incumbent and vote for the candidate of the incumbent government. In other words, in the uniform distribution, those who are more biased toward the incumbent than the swing voter vote for the incumbent given δ . Hence given the distributional assumptions, the incumbent's expected vote share is:

$$\Pi_A = \alpha^{\text{SIG}} * \phi^{\text{SIG}} (\sigma^{\text{SIG}} + \frac{1}{2\phi^{\text{SIG}}}) + \alpha^{\text{Others}} * \phi^{\text{Others}} (\sigma^{\text{Others}} + \frac{1}{2\phi^{\text{Others}}})$$

Now, let

$$P_{\text{Incumbent}} = \text{Prob}[\Pi_A \geq \frac{1}{2}] = \frac{1}{2} + \frac{\psi}{\phi} \left[\sum_{J=\text{SIG}}^{\text{Others}} \alpha^J * \sigma^J (W^J(\text{IMF Program}) - W^J(\text{No IMF Program})) \right]$$

Note that for an individual in the SIG, the difference between having the IMF program and not having it is $v - w\sqrt{P_G}$. Also note that for an individual who does not belong to the SIG, the difference between having the program and not having it is w . As I assume $\phi = \phi^{\text{SIG}} = \phi^{\text{Others}}$, Π_A , the probability of reelection for the incumbent is reduced to $\frac{1}{2} + \psi(v - \frac{w}{N} * \sqrt{P_G})$.

3.4.3 Payoffs for the SIG

Now I turn to the payoffs for the SIG. Utility for the SIG can be written as follow.

- $U_{\text{SIG}}(\text{NA}) = 0$

¹⁵No group differences substantively mean that the distribution of individual ideology of the affected interest group is same as the distribution of individual ideology of the entire population. For instance, the ideological distribution of financial sector employees should have the same ideological distribution as the rest of the population.

- $U_{SIG}(IMP) = \text{Size of the special interests} * (\text{individual benefits} - \text{individual costs})$
 $= sv - sw\sqrt{P_G}$
- $U_{SIG}(SIGR) = \text{Pr}(FR) * U_{SIG}(IMP) + \text{Pr}(SR) * U_{SIG}(NA) - \text{cost of resistance}$
 $= sv - sw\sqrt{P_G} - sc_s - \text{fracs}N * sv * \beta + \text{fracs}N * \beta * sw\sqrt{P_G}$

When there is no IMF agreement, the utility for the SIG is normalized to 0. When the program is implemented without resistance, the utility for the SIG is proportional to its size and the difference between individual benefits of the program and individual cost imposed on an individual member of the SIG. When resisted, with probability $\text{Pr}(FR) = 1 - \text{Pr}(SR)$, the resistance is failed and the program is implemented and with probability $\text{Pr}(SR)$, the resistance is successful and the program is aborted, giving the SIG the utility of no IMF agreement. When the SIG decides to resist, the individual cost of resistance, c_s is imposed on the members of the SIG.

3.5 Solutions

As the game assumes complete information, the solution concept used here is the subgame perfect Nash equilibrium. The game can be easily solved with backward induction. I briefly discuss the results. First I look at the subgame after the government makes the take-it-or-leave-it offer.

3.5.1 Solution for the Subgame

In the subgame, there are three possible scenarios. First, IMF accepts and the SIG resists. Second, IMF accepts and the SIG acquiesces. Third, IMF does not accept, hence no IMF program.

When does the IMF accept yet the SIG resists? There are two conditions for this scenario. First, $U_{SIG}(SIGR) \geq U_{SIG}(IMP)$ and second, $U_F(SIGR) \geq U_F(NA)$. From the conditions, I find:

Lemma 1 *The SIG resists when and only when $P_G \geq \frac{1}{s^2w^2\beta^2} (Nc_s + sv\beta)^2$. Let $P_{G_{SIGR}}^* \equiv \frac{1}{s^2w^2\beta^2} (Nc_s + sv\beta)^2$. Thus when $P_G \geq P_{G_{SIGR}}^*$ (this reads as the cut point of the P_G above which the SIG would resist), the SIG resists, otherwise SIG acquiesces.¹⁶*

Lemma 2 *The IMF accepts the deal from the government when and only when $P_G \geq \frac{1}{B_F^2} \frac{C_F^2}{(N-s\beta)^2} (N - s\beta + rs\beta)^2$. I let $P_{G_{IR}}^* \equiv \frac{1}{B_F^2} \frac{C_F^2}{(N-s\beta)^2} (N - s\beta + rs\beta)^2$. $P_{G_{IR}}^*$ (this reads as the cut point of the P_G above which the IMF accepts given the SIG resistance) is the cut point for the IMF to accept even knowing that the SIG is likely to resist when the program is adapted.*

When does the IMF accept and the SIG acquiesce? Again, two conditions pertain. First, $U_{SIG}(IMP) \geq U_{SIG}(SIGR)$ and second, $U_F(IMP) \geq U_F(NA)$. The first condition is the exact opposite to the condition for the SIG to resist. Thus, the solution is:

Corollary 1 *the SIG acquiesces when and only when $P_G \leq P_{G_{SIGR}}^*$.*

¹⁶Detailed proof is provided in the appendix at the end of this chapter

$P_{G_{SIGR}}^*$ is the cut point for the SIG. When the conditions are severer than the cut point, the SIG resists. If conditions are less than the cut point, then the SIG acquiesces.

Lemma 3 *The IMF accepts the deal from the government when and only when $P_G \geq \frac{1}{B_F^2} C_F^2$. I let $P_{G_{II}}^* \equiv \frac{1}{B_F^2} C_F^2$. This is the cut point for the IMF to accept when it expects that the SIG acquiesces.*

From the Lemma 3, I also generate two additional conditions for C_F and B_F . As $0 < P_G < 1$, it also should be the case that $0 < \frac{1}{B_F^2} C_F^2 < 1$. This yields $0 < C_F < B_F$ as both C_F and B_F are positive. This is the necessary condition for the conditionality to bear any meaning and the IMF program is possible. This condition is easy to see when we consider the null conditions. First, if C_F is instead equal to or smaller than 0, IMF is always willing to lend even without any conditions attached. Second, if C_F is greater than B_F , IMF never lends with even the most ideal conditionality attached. Theoretically, these are possible cases, yet for the purpose of the current project, these fall into trivial or uninteresting cases category. Thus, in the comparative statics session, I exclude any cases that do not meet $0 < C_F < B_F$.

Corollary 2 *The IMF rejects the offer from the government below $P_{G_{IR}}^*$ if the IMF expects SIG resistance and $P_{G_{II}}^*$ if the IMF expect the SIG to acquiesce.*

In sum, there are three cut points. If $P_G > P_{G_{SIGR}}^*$, then the special interest group prefers to resist while if $P_G < P_{G_{SIGR}}^*$, the special interest group prefers to acquiesce¹⁷. This cut point gets smaller as the size of interest group increases as the first derivative of $P_{G_{SIGR}}^*$ is negative. Substantively, this confirms the common sense conjecture that the special interest group is going to resist more readily when it is stronger. $P_{G_{IR}}^*$ is the cut point above which the IMF agrees even in anticipation of SIG resistance and below which the IMF does not agree in anticipation of SIG resistance. This cut point gets larger as the size of the interest group increases as the first derivative of $P_{G_{IR}}^*$ is always positive. Substantively, as the size of the special interest group increases, the IMF becomes more cautious and accepts the offer from the government only if the government promises to implement more conditions. In other words, facing stronger domestic opposition, the IMF wants the government to compensate the high risk of a loan with additional conditions. Finally, $P_{G_{II}}^*$ is the cut point above which the IMF agrees in anticipation of implementation and below which the IMF rejects the offer even expecting no SIG resistance. And this cut point does not vary as the size of the special interest group varies.

Depending on how these three cut points line up, we get different equilibria. Theoretically, there are $3! = 6$ ways to line up these cut points. Yet I prove that:

Lemma 4 $P_{G_{IR}}^* \geq P_{G_{II}}^*$ for all s .¹⁸

This should make sense as the IMF presumably wants to agree on IMF program with tougher conditions when they expect potential SIG resistance and hence implementation is more questionable than they expect implementation without any domestic resistance. Other things equal, the

¹⁷The probability of two are equal is statistically zero. Thus the equality case is trivial.

¹⁸The proof is provided in the appendix.

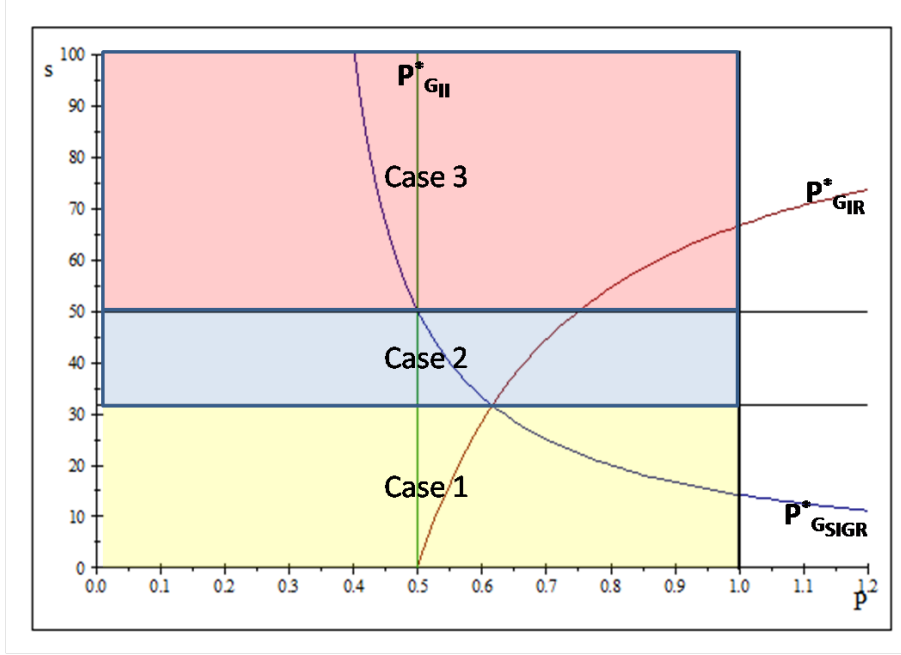


Figure 2: Cases

IMF is more willing to approve an IMF program when it expects the smooth implementation without SIG resistance than the bumpy implementation with strong SIG resistance. Thus, when there is little domestic opposition, the IMF is more willing to grant lenient conditions.

Given $P_{GIR}^* \geq P_{GII}^*$, there are now only three ways to line up these cut points. When there is relatively weak special interest, $P_{GII}^* < P_{GIR}^* < P_{GSIGR}$. This is the case 1 in the figure 1.3. When there is medium special interest in terms of group size,¹⁹ $P_{GII} < P_{GSIGR} < P_{GIR}$ obtains. This is the case 2 in the graph. Finally, when SIG is relatively strong, $P_{GSIGR} < P_{GII} < P_{GIR}$ ensues. This is the case 3 below.

The figure describes how three cut points behave when s and P_G vary while holding the other parameters at reasonable values. I discuss three cases in turn.

When there is a weak SIG, the case resembles the case 1. So, up to the cut point where the IMF accepts expecting implementation without resistance, there is no IMF program as the IMF rejects any such offer. This first cut point can be thought as the minimum reservation value for the IMF, the minimum conditions that the IMF wants anticipating full implementation. Between the first cut point where the IMF accepts expecting the SIG's acquiescence and the second cut point from the left where the SIG resists even though it is weak, any proposal is accepted by the IMF and it is implemented without any resistance. Finally, when it goes tougher over the cut point of the SIG resistance (past the rightest line), the IMF program is signed and the SIG resists.

Case 2 is an interesting one. As happens in the case 1, up to the first cut point from the left

¹⁹Specific cut points for the size of SIG as well as how cut points P^* s behave as s varies are provided in the appendix.

where the IMF accepts expecting implementation, there is no IMF program accepted by the IMF. If the proposal from the government falls right of the cut point of the IMF accepting expecting implementation but left of the cut point of the SIG resistance, an IMF program is approved and implemented without resistance. But if it goes over the cut point of the SIG resistance but falls short of the IMF accepting expecting resistance, the IMF does not accept, hence there is no IMF program. This is the P_G interval where the conditionality is strong enough that it would trigger the SIG's resistance but at the same time the conditions are still too lenient for the IMF to accept anticipating resistance from the SIG. Finally, if the proposal promises drastic conditions bigger than the rightest cut point of the IMF expecting resistance, the IMF accepts and SIG resistance ensues.

In the case 3, when there is a large SIG, as the SIG is ready to resist even given the relatively lenient policy conditions, there is no IMF program until the cut point of the IMF sign a program expecting SIG resistance. Having lenient conditions is not worthy for the IMF, given resistance ready SIG. But the IMF accepts the proposal from the government when the prize is also big. This is when the proposal from the government gets closer to the ideal point of the IMF. When P_G is large, odds of successful implementation may be small but, the prize also gets bigger for the IMF. The case 3 may not exist depending on values of exogenous parameters.

3.5.2 Solution to the Whole Game

Until now, I have considered only the subgame after the government proposes. But the real question remains as to what the government would propose given the solutions for the subgame. For this, now I turn to the government's strategic consideration. I assume the government also maximizes its own utility given different situations.

Lemma 5 *When $\gamma - \frac{1}{N}\psi\rho * B_G > 0$, then the government proposes $P_{G_{SIGR}}^*$ when s falls in the case 1 or 2 described above which is accepted by the IMF and implemented without the SIG resistance. In case of the case 3, then the government proposes P_{max} which is subsequently accepted by the IMF, yet is resisted by the SIG in the implementation stage.*

Corollary 3 *When $\gamma - \frac{1}{N}\psi\rho * B_G < 0$, then the government proposes $P_{G_{II}}^*$ when s falls in the case 1 or 2 described above. The proposed agreement is then accepted by the IMF and implemented without SIG resistance. In case 3, the government proposes $P_{G_{IR}}^*$, then the IMF accepts the proposal followed by the SIG resistance.²⁰*

There are two different subgame perfect equilibria(SPE) depending on values of parameters in the government's utility function. Specifically, when $\gamma - \frac{1}{N}\psi\rho * B_G > 0$, then the government proposes $P_{G_{SIGR}}^*$ when s falls in the case 1 or 2 described above which is accepted by the IMF and implemented without the SIG resistance. In case 3, then the government proposes P_{max} which is subsequently accepted by the IMF, yet is resisted by the SIG in the implementation stage. This is

²⁰The proof is provided in the appendix.

more likely to be obtained when γ is large, ψ is small, ρ is small. That is, when the government is more reform minded, when the election is less competitive, and when the less democratic the country is, this particular equilibrium is likely. I call this equilibrium the Reform Drive equilibrium, as the government proposes the policy conditions closest to the IMF's ideal point given the policy space to pursue policy reforms.

The second equilibrium exists when $\gamma - \frac{1}{N}\psi\rho * B_G < 0$. If this is the case, then the government proposes P_{GI}^* when s falls in the case 1 or 2 described above. The proposed agreement is then accepted by the IMF and implemented without SIG resistance. In case 3, the government proposes P_{GIR}^* , then the IMF accepts the proposal followed by the SIG resistance. This is likely to happen when the conditions are exactly opposite to the previous equilibrium. Thus, the less the government is reform minded, the more competitive the election is, and the more democratic the country is, this equilibrium is likely to be obtained. I call this equilibrium the Election Constrained equilibrium, as the government chooses the closest policy point to the ideal policy for the SIG, given the available policy space.

It is important to note that the Reform Drive Equilibrium is always equal to or greater than the Election Constrained Equilibrium.

Lemma 6 *The first set of SPE (Reform Drive Equilibrium) is always greater or equal to the second set of SPE (the Election Constrained Equilibrium).*²¹.

Proposition 1 *Reform Drive Equilibrium: As the size of the SIG increases, as the SIG is more organized, as the cost of resistance decreases, and as the individual benefit of the IMF program decreases, the number of conditions is expected to decrease*²².

Under the Reform Drive equilibrium, the government sides with the IMF. Only reform oriented governments with relatively little electoral constraints can afford this equilibrium. First of all, under this equilibrium, the optimal conditionality decreases as the size of the special interest group increases. This is because the government not only cares about the design of conditionality but also about implementation of conditions. Thus, if available, the government chooses the maximum conditions that will not trigger SIG resistance. But after the threshold where the SIG is too large to allow the space where it is both acceptable to the IMF and still does not trigger SIG resistance, the government faces the decision between no IMF agreement and IMF agreement with SIG resistance expected. In this case, the government still goes for the agreement and picks the ideal reform policy identical to the IMF's ideal point. The same dynamic is expected when there are more incentives for the SIG to resist. For instance, when the SIG is better organized, the number of conditions is expected to decrease until the threshold. The same is expected when the cost of SIG resistance is lower and the individual benefit of the IMF program is lower. Finally, note that other important variables suggested in the literature do not show up in the IMF equilibrium.

²¹Proof in the appendix

²²Proof is in the appendix.

In contrast, in the Electorally Constrained equilibrium, quite different comparative statics are generated. Recall that the SIG equilibrium features $P_{G_{II}}^* \equiv \frac{1}{B_F^2} C_F^2$ when the s falls in small to medium range, and $P_{G_{IR}}^* \equiv \frac{1}{B_F^2} \frac{C_F^2}{(N-s\beta)^2} (N-s\beta+rs\beta)^2$ when s is large (above the threshold).

Proposition 2 *Electorally Constrained Equilibrium: As the size of the SIG decreases, as the SIG is less organized, as the benefits of a program for the IMF increases, as the costs of a program for the IMF decreases, the number of conditions in expected to decrease²³.*

Under the Electorally Constrained equilibrium, the government ties its hands with the domestic political constraints and tries to minimize the reform measures. This is due to electoral pressures present in democracy as well as the tradeoff between the number of conditions and the probability of successful implementation. As for the size of the SIG, the number of conditions stays constant at its minimum which is both acceptable to the IMF and does not provide enough incentives for the SIG to resist until the threshold. When there is no more policy space acceptable to the IMF while deterring SIG to resist, then the government proposes conditionality acceptable for the IMF. This increases as the size of SIG increases. Thus, the optimal conditionality is a non continuous function of the size of the SIG. When the size is small to medium, the conditionality stays minimum then when the size is large, the conditionality increases as the size increases. As the SIG is better organized, the SIG can readily resist, and this raises the minimum conditions that the IMF would agree on. Thus, when the SIG is better organized, the number of conditions is expected to increase. In contrast to the previous IMF equilibrium, other comparative statics with regard to factors suggested in the literature are also generated in this equilibrium. For instance, as benefits of IMF program for the IMF increases, presumably the case when the borrowing country has bigger economy with good record of IMF program implementation, the number of conditions decreases. The IMF is willing to reduce the number of conditions when it is likely to benefit more by agreeing on a program. Conversely, when the program is deemed too costly by the IMF, i.e., when the borrowing country has a bad record of keeping its promises, the IMF is likely to require more conditions for the borrowing government.

4 Theoretical Implications

As analytically and graphically demonstrated above, there are three important domestic political factors that are influential deciding the equilibria. First of all, democratic governments with stronger electoral pressure should have fewer conditions than autocratic governments with weak or no electoral pressure. While both regime types prefer to have the IMF program to not having it when the size of the special interest group is small to medium, the electoral pressure forces democratic governments to extract the minimum P_G acceptable to the IMF regardless of the ideological leaning of the government ,i.e., reform minded or not.²⁴ In comparison, autocracies that are rela-

²³Proof is in the appendix.

²⁴I assume that when there is a conflict between political survival and ideological commitment of the government, political survival comes first.

tively free from the electoral pressure can enjoy some room for their own ideological preferences to enter.

Relatedly, the ideological commitment of a democratic government makes little difference in designing conditionality. This is again because of the electoral pressure that the democracy faces. In contrast, there is more room for the ideology of a government when the regime is less democratic and the election does not decide the fate of the incumbent. Specifically, a reform-minded autocratic government would choose the maximum P_G available whereas an anti-reform autocratic government would choose the minimum P_G , being similar to a democratic government. In case when there exists some range of P_G acceptable to the IMF and acquiesced by the SIG resistance given the size of the SIG, the ideological commitment of an autocratic government plays an important role in deciding the degree of conditionality.

Finally, the size of the special interest group does not change the degree of conditionality in democracy up to the medium size. After that, if the democratic government prefers to make the agreement with expected resistance over not to make the program, conditionality increases as the size of the special interest group increases. This is because the minimum demand from the IMF increases as the size of the SIG increases. In contrast, under reform oriented autocracy, as the size of the special interest group increases to the medium size range, the equilibrium policy proposal gets smaller. This is because the maximum conditionality which can be implemented without the special interest group resistance decreases as the size of the special interest group increases. Thus the size of the special interest group matters in autocracy. When the size gets too large to have a range within which the IMF accepts and the SIG does not resist, then the autocratic government proposes the IMF's ideal point.

5 Empirical Analysis

5.1 Public Sector Conditions

Public sector conditions are a major part of structural conditions in IMF programs. As IMF programs generally encourage borrowing countries to liberalize their economies, one of the major reform areas under the IMF's scrutiny has been the public sector. Most public sector conditions are set to reduce a government's role in the economy.²⁵ According to the 2001 report by the IMF's Policy Development and Review Department, 20 to 40 percent of structural conditions are on public sectors (The Policy Development and Review Department 2001). Similarly, the more recent study by the Independent Evaluation Office(IEO) of the IMF shows that about 25 to 30 percent of total structural conditions are either on civil service reforms, reforms of state owned enterprises, or privatization of state owned enterprises(Independent Evaluation Office 2007*a*).

The 1996 Kenyan IMF program is a good example. In seeking further liberalization of the

²⁵In general, the IMF faithfully follows the Neoliberal economic principles summarized as the "Washington Consensus," and with regard to the public sector, that means reducing the size of the public sector and reducing the role of the government in the economy.

Kenyan economy, the program includes a number of public sector related conditions. Specifically, the approval of the program was conditional on pre-implementing a few prior actions including “Cabinet approval of the restructuring of Kenya Railways”, “Invitations to bid on a contract to commercialize the National Cereals and Produce Board (NCPB) by end-1996”, and “Cabinet approval of a framework for the liberalization of the telecommunications sector and of the privatization plan of the Kenya Posts and Telecommunications Corporation.” In addition, the program also contained a few performance criteria conditions that have to be implemented in order for the Kenyan government to keep withdrawing the loan as scheduled. The performance criteria required the government to appoint experts for the commercialization of NCPB, to privatize 20 public enterprises, and to reduce civil service positions by 6,500. Finally, there were also a few structural benchmarks including further privatization of 40 public enterprises and reduction of civil service positions by 13,000.²⁶

While having a few public sector conditions in an IMF program is quite common, there is also variation among the number and the kind of public sector conditions included in an IMF program. Some programs have very few public sector conditions if not none, while others have more than 30 conditions. Then what determines the number of conditions included in a program? While the existing literature focus on a number of economic and international political factors to account for the variation among IMF programs’ conditions, I provide alternative, domestic political accounts for the variation in IMF program design. The model is developed in the previous chapter and the predictions from the model will be tested with other economic and political variables highlighted in the existing studies.

One of the challenges of studying IMF conditions is data limitation. Until recently, researchers outside of the IMF had not been granted access to the rich database that the IMF Policy Development and Review Department maintain, called Monitoring of Fund Arrangement Database (MONA). A part of the database became available to outside researchers through the official IMF website in 2009 but provide conditionality data only since 2002. Thus, I have constructed my own dataset of IMF Conditionality, which I describe more fully in the next section.

5.2 Dataset of IMF Conditionality

The dataset that I have assembled contains all 268 IMF programs that have been signed in between 1994 and 2006. Among those 268 programs, 5 programs do not have a publicly available Letter of Intent and/or Memorandum on Economic Policies. Thus, those 5 programs have missing entries in the conditionality dataset.²⁷ I have coded the remaining 263 IMF programs by targeted economic sectors and by conditionality types. I have counted and recorded the numbers of conditions falling in each category.

Each Letter of Intent was either downloaded from the official IMF website where most of

²⁶Prior actions, structural performance criteria, and structural benchmarks are all different types of structural conditions.

²⁷All programs included in the data set are listed in the Appendix. The 5 missing programs are with Mexico (1995), Guyana (2002), Guatemala (2003), Kenya (2003), and Cameroon (2005).

letters signed after 2000 are available or gathered through archival research at the IMF Archives in Washington D.C. A letter of Intent often lays out a broad scheme of intended economic reforms with supplementary tables and is often supplemented by a Memorandum of Economic Policies. IMF conditions are often listed explicitly with their types at the end of Letter of Intent or sometimes embedded in the main text of the Letter of Intent.

Only initial Letters of Intent are coded as they are the most important ones. There are scheduled reviews and revised Letters of Intent are often published after each review, but those tend to be slight modifications of what the IMF and the country initially agreed on. Coplovitch (2008) employs a similar strategy. He relies on the conditions specified in the Letter initially approved by the Executive Board on the ground that “the IMF staff and Executive Board almost never alter the number of conditions from stage to stage” and as the number of Letters of Intent signed in the lifespan of an IMF program varies significantly, “counting each stage(Letter signed after each review) as a separate case would over-weight the influence of longer loans in the IMF lending dataset without actually multiplying the number of relevant observations (Copelovitch 2008, p. 79).”

Departing from the common practice of the IMF literature, I disaggregate and classify IMF conditions by targeted economic sectors and condition types. In the dataset of IMF Conditionality, the targeted economic sectors are divided into four economic sectors. These 4 economic sectors are public sector, financial sector, fiscal sector, and the rest. Once the conditions are classified by economic sector classification, then they are further classified by the types - prior action, performance criteria, and structural benchmarks. Prior action and performance criteria are “hard” conditions, in a sense that they are binding and not implementing these conditions in principle triggers program suspension. Structural benchmarks are “soft” and violating one or a few structural benchmarks does not automatically suspend a program. The dataset only contains structural conditions as the quantitative performance criteria and indicative targets are constantly present in all IMF programs.

The Independent Evaluation Office of the IMF uses 9 categories to classify reform conditions in IMF programs. Among the 9 categories, three categories are closely related to public sectors.²⁸ Public sector conditions in the dataset include sectors 4,5, and 6 of the IEO’s classification, which are SOE (state owned enterprises) reform, privatization, and civil service reform respectively. Thus public sector conditions cover restructuring of public enterprises, pricing policies, regulatory reforms in utilities, all activities related to the privatization of non-financial SOEs, civil service reform wage and employment limits, and other measures affecting employment in the public sector (Independent Evaluation Office 2007b).²⁹

Disaggregating conditions by sectors gives an advantage over aggregating all IMF conditions. For one, there is a possibility that determinants highlighted in the literature have disproportion-

²⁸Reform categories include 1. tax policy and tax administration, 2. PEM (Public expenditure measures), 3. financial sector reforms and development, 4. state owned enterprises reform, 5. privatization, 6. civil service reform, 7. social policies, 8. other Fund core, 9. other World Bank core (Independent Evaluation Office 2007b). These 9 categories are combined into 4 different categories in the dataset I have created. Those are financial sector conditions, public sector conditions, fiscal sector conditions including tax, customs and budgetary reforms, and all other sectors (Independent Evaluation Office 2007b).

²⁹Privatization of financial SOEs are classified and coded as financial conditions.

ate effects over IMF conditions across targeted economic sectors. For instance, it is possible that influence of private creditors are focused on financial sector conditions and have little influence over social spending reform measures. Similarly, it is plausible that the swing of dominant macroeconomic perspective of IMF staff from Keynesian to Neoclassical has some bearings in designing fiscal or monetary conditions but it might not direct influence over the design of agricultural sector conditions. Secondly, it is very important to disaggregate IMF conditions by sectors if one considers its domestic consequences and the role of domestic politics in implementing those conditions. Each economic sector has a particular interest over the set of conditions targeting the economic sector, but will not have such strong preference over other sets of conditions targeting other economic sectors. It is also critical to examine the domestic politics hypotheses developed in the previous chapter.

5.3 Hypotheses

There are a few domestic political factors that are highlighted by the model in the previous chapter. Specifically, how sensitive a government is to vote losses, how reform-oriented a government is, and how strong a special interest group is are hypothesized to shape the design of an IMF program.³⁰

The model produces the conjecture that the more a government is sensitive to the electoral costs, i.e., losing votes, the fewer conditions an IMF program would contain. This is because each additional reform measure brings vote losses holding the amount of the loan constant. From the sensitivity to electoral costs parameter, I derive three different hypotheses that are empirically testable.

As election outcomes are uncertain in democratic countries and each reform measure is electorally costly, holding the benefits from the IMF program, such as stabilization of the country's economy due to the IMF loan constant, democratic countries should have less severe conditions than their autocratic counterparts. Assuming the government wants to stay in power, the government in the democratic country has little room to afford additional reform measures. Hence, the electoral sensitivity of the government in the democracy forces the government to stay with no more than the minimum conditions acceptable to the IMF.

The similar logic applies to explain the variation of the severity of IMF conditionality within democracies. Within democracies, the sensitivity to electoral costs can vary as some governments can afford to lose a certain number of votes. For instance, the government with a huge win in the previous election may feel more confident to pursue electorally costly policy reforms than the government who won the previous election by a slim margin. For instance, the government who won the previous election with 30% margin can afford to lose up to 30% of vote share and can still remain in power in the next election. In contrast, the government who won the previous election with 2% margin cannot enjoy such flexibility in potentially costly policy making. Pursuing similar policy reforms to the government winning the previous election with 30% margin would bring the

³⁰The hypotheses assume that there is mutually acceptable policy space where the IMF approves and the special interest group acquiesces. Formally, this would mean that $s < H$.

loss of election in the next election. Similarly, the government who just won an election might be better positioned to pursue policies that it wants than the government who expects an election scheduled soon. The government who faces a sooner election will discount the next election less than the government who do not face an election in the next few years. The government with a sooner election is less likely to pursue electorally costly reform measures and more likely to bargain hard to reduce the severity of IMF conditionality than the government with a later election.

The sensitivity to the electoral costs parameter thus yields the following testable hypotheses;

- Democracy Hypothesis: The more democratic a country is, the more lenient conditions an IMF program will contain.
- Election Discount Hypothesis: (Within democracy) The more proximate the next election is, the more lenient conditions an IMF program will contain.
- Margin of Victory Hypothesis: (Within democracy) The more competitive an election is in a country, the lenient conditions an IMF program will contain.

Also the model conjectures that the size of the loan has an effect on the severity of IMF conditionality. In both the Electorally Constrained equilibrium and the Reform Drive equilibrium, the model predicts that the more economic benefit is brought by signing an IMF program, the government can afford more policy conditions. Under the Electorally Constrained equilibrium, the minimum acceptable conditions to the IMF increases as the IMF lends a bigger loan. As the Electorally Constrained equilibrium follows the minimum possible conditions, the increase of the minimum acceptable conditions caused by the larger amount of the IMF loan should also increase the severity of conditions. Under the Reform Drive equilibrium, the same conjecture is derived with a different reason. Under the Reform Drive equilibrium, the optimal conditionality is the maximum conditions that do not trigger resistance of the Special Interest Group in the implementation stage. As the government can reduce the incentives for the Special Interest Group to resist by increasing the benefit from the loan, the maximum possible conditions will increase as the size of the loan gets larger. Thus, both the governments under or free from electoral pressure will have more stringent conditions when the size of the loan is larger. One is because the IMF demands more conditions and the other is because the domestic interest becomes more tolerant and less likely to resist when the size of the loan is larger.

The size of the loan parameter then yields the following hypothesis;

- Loan Size Hypothesis: As the size of the loan increases, the more severe conditions an IMF program will contain.

Lastly, the hypothesis related to a special interest group is conditional to a boundary condition. As governments sensitive to vote losses are likely to stay with the minimum possible conditions even without taking the special interest group's ability to hinder policy implementation into consideration, the strength of the special interest, or the size of the public sector in the public sector

conditions context, should have little bearing on the severity or leniency of public sector conditions. In comparison, those governments who are relatively immune to electoral pressure are likely to side with the IMF and have more conditions than countries under electoral pressure, but the number of conditions should decrease as the special interest group, the public sector, gets stronger. This is because given a level of severity in conditions, stronger special interest group is more likely to resist than weaker special interest group.

In order to capture the boundary condition, I use democracy and nondemocracy division. I assume that democracies are governments with higher sensitivity to vote losses while nondemocracies, or autocracies, are government freer from such electoral pressure. Hence the following hypothesis;

- **Public Sector Hypothesis:** As the size of the public sector increases, the severity of conditions decreases in nondemocracies. In comparison, as the size of the special interest group increases, the number of conditions stays constant in democracies.

5.4 Dependent Variable

The number of public sector conditions in a program is used to capture the severity or leniency of IMF conditionality. While the number of conditions do not perfectly coincide with the severity or leniency of IMF conditionality, the number of conditions are the most objective measure of IMF conditionality given information and resources limitations. It is extremely difficult to measure objectively the relative severity of conditions across different countries as macroeconomic and economic policy contexts vary widely. It is also widely accepted in the literature as the measure of the stringency of IMF conditions (Copelovitch 2008, Gould 2003, Dreher & Jensen 2007). The raw number of binding public sector conditions is used for the count model analysis while the log of the number of public sector conditions is used for a OLS regression. I take natural log to transform the number of public sector conditions as the distribution of the number of public sector conditions is very skewed and there is no reasonable way to eliminate a few outliers. In order to log transform the number of public sector conditions, I add 1 to the number of public sector conditions as a few observations have 0 public sector conditions.

The figure shows the distribution of the number of public sector conditions. The distribution of the number of public sector conditions is right skewed with many observations falling below 10 while just a few fall in between 10 and 20. There are two outliers with 26 and 29 public sector conditions.³¹ About 35% of all programs have fewer than 2 public sector conditions and another 24% of all observations have 3 to 4 public sector conditions. In comparison, about 10% of IMF programs signed between 1994 and 2006 have more than 10 public sector conditions. The average number of conditions is 3.9 with standard deviation 4.26.

The next figure shows the distribution of the natural log of the number of public sector conditions with 1 added to each observation to be able to take a log when the number of public sector conditions is 0. Except for the inflation in between zero and 0.2 in the far left, the distribution approximates

³¹The outlier programs are with Romania (2004) and Gabon (2000).

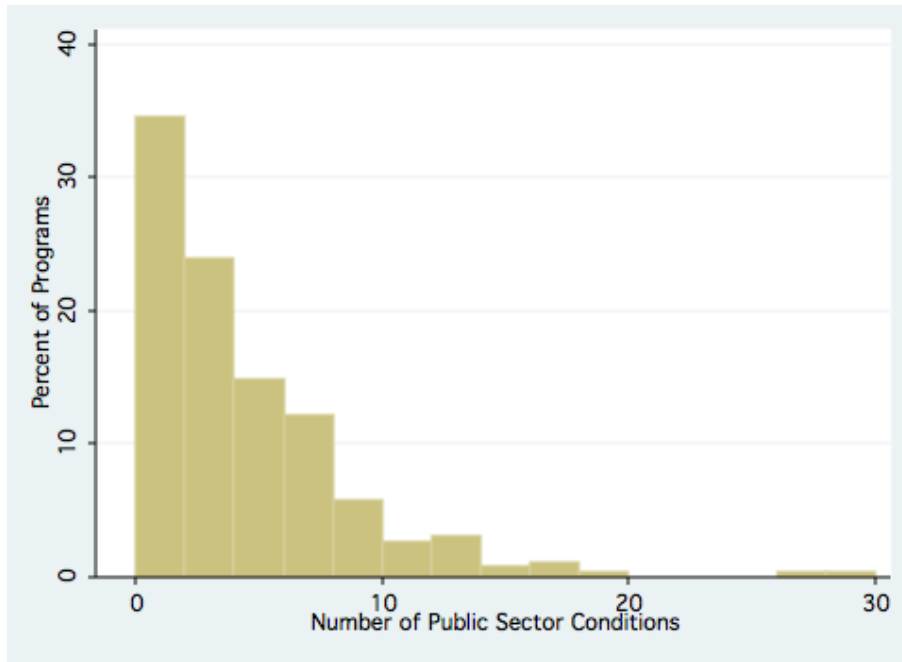


Figure 3: Distribution of the Number of Public Sector Conditions

a normal distribution. About 20% of the observations fall between zero and 0.2 and the average is 1.25. The median falls in between 1.4 and 1.6. The maximum is 3.4.

5.5 Independent Variables

There are three main independent variables identified by the model of which two are included in the estimation. There are also a number of control variables highlighted in the literature.

The Polity IV score is used to measure democracy (Jaggers & Gurr 1995). The Polity score is a 20 point scale measure of democracy and made by subtracting Autocracy score from Democracy score both of which are in 10 point scale. Thus, theoretical minimum of the Polity score is -10 while theoretical maximum of the Polity score is 10. The average of the Policy score is between 3 and 4 thus the average country is not democratic judging the conventional cut point of 6 or above for democracy. The expected sign is negative as the model predicts that democracies should have fewer conditions than nondemocracies. When I divide the observations into democracy and nondemocracy groups, I use the polity score of 6 as the cut point following the convention following the suggestion of the authors of the Polity score (Jaggers & Gurr 1995).

The election data come from the World Bank Database of Political Institutions (Thorsten Beck & Walsh 2001). The percentage of votes in the 1st or only round of presidential election is used to proxy the competitiveness of an election. Unfortunately, this variable is available only for presidential democracies so when these two variables are included, the number of observation drops. Among all countries included in the dataset, the average of first round votes is 53% with standard

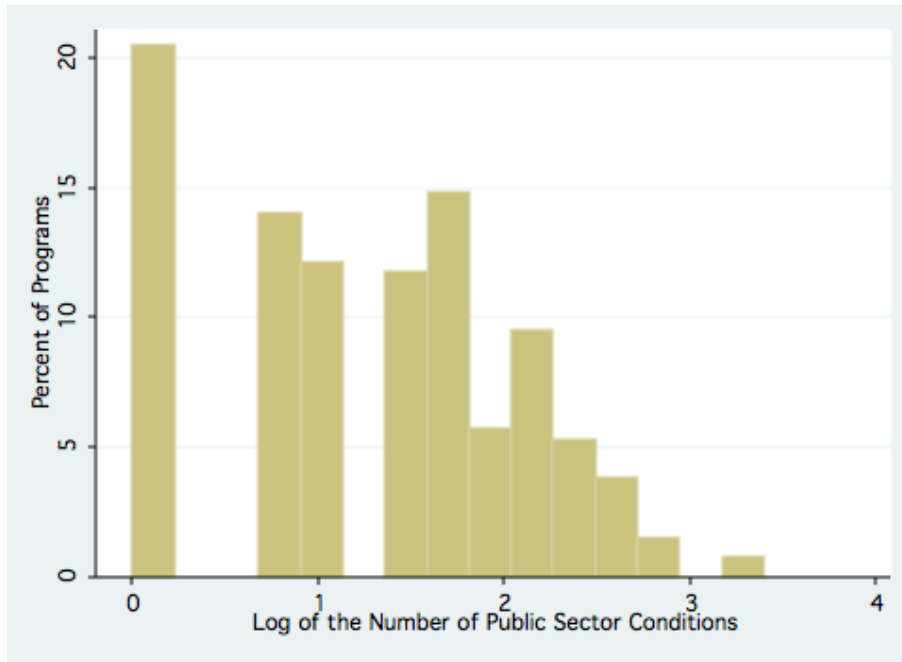


Figure 4: Distribution of the Log(the Number of Public Sector Conditions)

deviation about 20%. Among all democracies where this should be more meaningful, the average of the first round vote share of the incumbent government is about 44% with standard deviation about 16%. I expect that the increase of the share of votes in the previous election should increase the number of public conditions as the government can afford to lose a few votes without losing the presidential seat.

I use “years left in current term” variable to capture how proximate the next scheduled election is. The variable records how many remaining years a chief executive has in current term. As the value increases, the later the next scheduled election is and the more the government will discount electoral consequences of economic reform measures. On the contrary, as the value gets smaller, the sooner the next scheduled election is and the more the government will Among all countries, the variable varies between 0 and 6 with mean of 2.19 years. Among all democracies, the variable varies between 0 and 5 with mean of 2.05 years. I expect the increase in “years left in current term” should increase the number of public sector conditions.

In order to proxy the strength and the size of the public sector in a country, I use the public sector salary and compensation as a share of GDP variable. The public sector salary and compensation as a percentage of GDP is calculated by multiplying the percentage of government spending on the public sector salary and compensation to the government expenditures as a percentage of GDP. This is reasonable measure to proxy the strength or size of the public sector as stronger and larger public sector would increase the share of government spending for the public sector employees salary and benefits. On average, a country spends about 5% of its GDP for public sector employees compensation and salary. The hypothesis suggests that the size of the public sector, measuring

Table 2: Summary Statistics

Variable	# of obs	Mean	Std. Dev.	Min	Max
Polity Score	262	3.351	5.436	-9	10
Years Left in Current Term	227	2.185	1.485	0	6
First Round Votes	186	53.554	20.864	20.3	98.8
Public Sector Compensation	213	5.532	3.472	0.678	18.992
Government Expenditure	262	28.340	10.394	6.055	57.735
Loan to Quota Ratio	263	0.896	1.418	0.05	12.62
Loan Size (SDR Millions)	829	2881	4	27375	
Quota (SDR Millions)	486	836	14	5945	
GDP per Capita (US\$ Thousands)	260	1.470	1.675	0.09	12.19
Trade Volume (US\$ Billions)	257	15.627	35.739	0	292.563
UN Voting with U.S.	262	0.135	0.328	-0.425	1
Transition Country	263	0.293	0.460	0	1
Years Count	263	4.840	3.617	0	12
PRGF	256	0.555	0.498	0	1

the size of the affected special interest groups, should decrease the number of conditions only in nondemocracies.

The government expenditure is recovered from 2008 Index of Economic Freedom. According to the Index, “the scoring of the government size factor” is based on government expenditures as a percentage of GDP and the following non-linear quadratic cost function is used to calculate the expenditures score $GE_i = 100 - \alpha * (\text{Expenditures}_i)^2$ where GE_i represents the government expenditure in country i ; Expenditures_i represents the total amount of government spending at all levels as a portion of GDP; and α is a coefficient to control for variation among scores. The minimum component score is zero. The authors of the index used the following sources for information on government intervention in the economy, in order of priority: World Bank, World Development Indicators and Country at a Glance, official government publications of each country; Economist Intelligence Unit, Country Report and Country Profile, OECD data, African Development Bank, International Monetary Fund, Staff Country Report, selected issues and statistical appendix, Asian Development Bank, key indicators, and US department of commerce. To recover the size of government expenditures as a percentage of GDP, I rearranged the Economic Freedom score. The average Government Expenditure is about 28% with the standard deviation of 10%. The government expenditure is expected to be positively associated with the number of public sector conditions. Assuming the government expenditure is a reasonable proxy for government interventionism in the economy, IMF conditions seeking to reduce government interventionism should increase as there is more significant government intervention. Indeed, using the composite measure of government consumption and government production, an IMF report finds that there is a positive relation between government intervention in the economy and the number of privatization conditions, a part of public sector conditions (Independent Evaluation Office 2007*b*). As the WDI by the World Bank have a few missing cells in the dataset and the Index prioritizes the WDI,

utilizing the Index of Economic Freedom provides a nice short cut to complement the WDI with other available sources.

The similarity of United Nations General Assembly(UNGA) voting record a borrowing country to the U.S. is used to control for the influence of the U.S. in determining the number of public sector conditions (Voeten & Merdzanovic N.d.). Dreher and Jensen (Dreher & Jensen 2007) find that the closer a country votes with the U.S. in the UNGA, the fewer conditions the IMF program contain. They reason that the U.S. who maintains significant influence over the decision making of the IMF rewards those countries closer to it. Thus, if their argument holds, the increase of the similarity of UNGA voting should decrease the number of public sector conditions.

I include a number of control variables suggested in the literature. Economic development is captured by GDP per capita. The data are obtained from the World Bank World Development Indicator. I expect that the richer a country is, the fewer conditions are in a program. This is because when a country is economically more developed, current economic policies of the country should be more sound, all other things being equal. For those more developed countries, then there should be fewer conditions that are created to fix problems in current economic policies.

A country may have more bargaining leverage if the country's influence toward the world economy is larger. There are anecdotal evidences that the IMF have been softer toward Russia, Brazil, and Argentina because collapses of those economies have greater consequences toward the world economy than smaller countries. In this regard, I control for the volume of trade of a country and the IMF quota of a country. As the size of trade or quota increases, the number of public sector conditions should decrease.

The cost benefit calculation for the IMF is captured with the ratio of loan to quota. As the ratio increases with larger loans, the potential cost outweighs the benefits for the IMF, thus more conditions are expected. Conversely, as the ratio decreases with smaller loans, the potential benefit outweighs the potential cost, the fewer conditions are expected.

A dummy variable for the Poverty Reduction and Growth Facility(PRGF) lending is included. In the broadest level, there are two types of loan facilities in the IMF. The first one is traditional stand-by agreement for a country with temporary balance of payment problems. The second one is more recently developed to cope with development issues of the least developed countries in the world. These loans are provided under the Poverty Reduction and Growth Facility or other development oriented facilities. Loans under these facilities tend to have longer life span and lower interest rate than traditional stand-by agreements. About 55% of all programs are arranged under the PRGF or other development oriented facilities.

A dummy variable for transition economies since 1990 is included to account for the transition from statist economy to market economy. The expectation is that transitional economies, whose economies had been run by the centralized authorities, should have more public sector conditions than non transitional economies.

Finally, in order to control for the time trend, I include Years and Years Squared variables. It has been reported that there had been steady increase of the number of structural conditions since

the early 1990s then the trend has been reversed after the 2002 Fund's conditionality streamlining initiative (Independent Evaluation Office 2007b). Years variable is a count since 1994 with 1994 = 0 and years squared are used to capture the decline of number of structural conditions in more recent years.

5.6 Statistical Analysis

I first estimate models to test the predictions without boundary conditions. The hypotheses are that democracies, and democratic countries with more competitive previous election and sooner next election, are more likely to have fewer conditions. And the size of the loan should increase the number of public sector conditions. I control for other standard control variables. I estimate OLS regressions with the log of the number of public sector conditions as the dependent variable and Negative Binomial models with the number of public sector conditions as the dependent variable.

The first column of the tables list the independent variables. The second column shows the coefficients of all independent variables with clustered standard errors by country in parentheses. The third column reports the coefficients and standard errors from the selection model. The fourth column limits observations to the programs with only democratic countries.

The results strongly support all the main hypotheses and are consistent across different specifications. Even after controlling potential selection effect, the coefficients in the second and third columns are remarkably similar.³² The overall model fit is fine given there are a few outliers driving R² lower.

Most importantly, the model strongly supports the democracy hypothesis that democracies are likely to have fewer conditions than autocracies. The coefficient for the Polity score variable is negative and statistically significant. The 10 point increase in the Polity score variable from 0 (somewhat autocratic) to 10 (democratic) reduces the log of the number of public sector conditions by 0.28. Substantively, this will translate into almost 1.2 less conditions around the mean value of the number of raw public sector conditions. This is equivalent to the effect of more than U.S.\$2000 increase of GDP per capita of a country or 17% decrease of government expenditure as a percentage of GDP.

Consistent with the finding by the Independent Evaluation Office of the IMF, the more the government expenditure is, the more public sector conditions there are (Independent Evaluation Office 2007b). Thus, the number of public sector conditions is partly driven by what the IMF considers desirable and what is considered as a essential part of "Washington Consensus." When the government accounts for too much of the country's economic activities, the IMF program would have more conditions on the public sector to reduce the role of the government in the economy. Holding other variables constant, 20% increase of government spending would increase the number of public sector conditions by 1.5 conditions.

As the ratio of the size of the loan to the quota increases, the more conditions are included. With

³²The Heckman selection model result is reported in detail at the end of this chapter. There is little evidence that the selection model and the number of conditions model are dependent.

Table 3: OLS Regression Results for the Log of the Number of Public Sector Conditions

Variable	All Countries	All (Selection)	Democracies	Presidential Dem.
Polity Score	-0.028 (0.010)**	-0.029 (0.013)**		
Years Left in Current Term (Chief Executive)			0.094 (0.045)**	0.110 (0.048)**
Percentage of Votes				0.008 (0.004)*
Government Expenditure (% of GDP)	0.018 (0.005)**	0.024 (0.006)**	0.023 (0.009)**	0.020 (0.011)*
Loan to Quota Ratio	0.449 (0.123)**	0.443 (0.121)**	0.402 (0.187)**	0.329 (0.383)
Loan Size (SDR Millions)	-0.0002 (0.0001)**	-0.0002 (0.0001)**	-0.0002 (0.0001)	-0.0006 (0.0006)
Country's Quota (SDR Millions)	0.0001 (0.0001)	0.0001 (0.0001)	0.0003 (0.0002)	0.0007 (0.0003)**
GDP per Capita (US\$ Thousands)	-0.129 (0.030)**	-0.117 (0.027)**	-0.133 (0.039)**	-0.142 (0.052)**
Trade Volume (US\$ Billions)	-0.003 (0.002)	-0.003 (0.002)	-0.003 (0.002)	-0.003 (0.004)
Similarity in UN Voting to the U.S	-0.136 (0.200)	-0.113 (0.229)	-0.416 (0.376)	-0.422 (0.481)
Transition Country	0.284 (0.138)**	0.248 (0.143)**	0.525 (0.251)**	0.536 (0.329)
Poverty & Growth	-0.032 (0.130)	-0.057 (0.149)	0.260 (0.153)*	0.282 (0.209)
Years	0.150 (0.046)**	0.203 (0.053)**	0.162 (0.068)**	0.181 (0.083)**
Years Squared	-0.013 (0.004)**	-0.020 (0.005)**	-0.012 (0.006)**	-0.014 (0.007)*
Constant	0.506 (0.221)**	0.194 (0.508)	-0.356 (0.297)	-0.657 (0.430)
No. of obs.	247	200	123	90
No. of Clusters	89	78	49	37
R ²	0.23		0.32	0.35

Notes: **p < .05, *p < 0.1 Clustered standard errors by country are reported in parentheses.

the ratio variable in the model, now the size of the loan variable turns negative and statistically significant. Yet the substantive effect of the size of the loan variable is fairly small compared to the ratio variable. And being interpreted together, the increase of the size of loan certainly increases the number of public sector conditions as implied by the model. As an example, suppose that there is a country with a quota size of SDR³³ 500 million. 500 million SDR is about the average quota size among the countries in the dataset. If the country's loan size increases from 500 million SDR to a billion SDR, the net effect of the increase of the size of the loan will be the increase of 0.35 in log of the number of public sector conditions. This would translate into 1.5 more number of public sector conditions over the mean.

Transition countries have more public sector conditions in their IMF programs and the effect is statistically and substantively significant. If a country is a transition country, the country is likely to have 1.1 more public sector conditions than non transition countries, holding other variables constant and around the mean of the dependent variable.

Contrary to the previous study by Dreher and Jensen (2007), after controlling domestic political variables and the economic policy circumstances, the similarity of UNGA voting to the U.S. does not reduce the number of public sector conditions. If anything, the sign of the coefficient is positive, suggesting the closer a country's foreign policy position is to the U.S., the more conditions it is likely to have. But this is not statistically significant. There is possibility that while the U.S.'s interest has some influence over the overall number of IMF conditions, but not particularly over the number of public sector conditions. It is advantageous to investigate the number of conditions by targeted economic sectors for exactly this reason. One would not have known that different economic and political factors have non constant effects over different targeted sectors without disaggregating the number of conditions by targeted sectors. To see exactly how economic and political factors influence the number of conditions across different targeted sectors, one needs to look at different sets of IMF conditions by their targeted sectors.³⁴

There is a very strong time trend. Both the Years and the Years Squared variables turn statistically significant at the conventional level. Substantively, an average program signed in 1994 would have 3.5 public sector conditions which is approximately 2 conditions less than an average program signed in 1999, which would have 5.4 public sector conditions. Yet the trend is non linear as an average program signed in 2004 would have 4.3 public sector conditions.

In order to examine the effects of the timing of the next election and the margin of the previous election, I estimate models with two different specification. The first one includes only the "Years Left in Current Term" variable and the second one includes I both the "Years Left in Current Term" and "Percentage of Votes" variables. The first model has considerably more observations as inclusion of "Percentage of Votes" variable" drops all parliamentary democracies.

The election discount hypothesis is strongly supported. The "Years Left in Current Term" variable is statistically significant in both models reported in the right side of the table. Substantively,

³³SDR stands Special Drawing Rights and works as if it is a currency of the IMF. See more at <http://www.imf.org/external/np/exr/facts/sdr.htm>

³⁴The next chapter investigates the number of financial sector conditions.

a country with one more year left in current term receives approximately 0.2 less log of the number of conditions than a country with three more years left in current term. The substantial effect of two years difference in years left is comparable to about 10% change of the government expenditure as a percentage of GDP. This is because governments expecting more proximate elections discount vote losses less, thus are forced to extract more lenient deals from the IMF. In comparison, governments expecting more distant elections can discount vote losses due to extensive reform measures, thus can have more room for their own reform-mindedness to influence.

The margin of victory in the previous election is statistically significant and bears significant substantive effect. Thus, the margin of victory hypothesis is also supported. If the government is elected with 60% of votes, either in the only round or in the final round, the IMF program with the country will have approximately one more condition than a government elected with 40% of votes. This is again because those who are elected by slimmer margins are likely to be more akin to vote losses caused by additional reform measures than the ones elected by wider margin in the previous election.

These results are very robust to inclusion and exclusion of control variables. And the results are very consistent with respect to different estimation techniques. The next table reports the results with negative binomial estimations.

I report the results from the negative binomial models with the same variables in the right hand side. The results are very consistent with the results from OLS regression models. Among different count variable estimation techniques, the data analysis indicates that the dependent variable is overdispersed with $\alpha > 0$. Thus, I use the negative binomial model (Long 1997).

The Polity score variable is statistically significant. Substantively, it is more difficult to interpret the results from the negative binomial models. Yet, one can compare the magnitude of each coefficient. Compared to the GDP per capital variable, 10 point increase in the Polity score is equivalent to about US\$2000 increase in the GDP per capita.

Other variables that are statistically significant in the OLS results are all statistically significant in the negative binomial results as well. Government expenditure increases the number of public sector conditions and so does the size of a loan. More developed countries have fewer public sector conditions in their IMF programs. There is a statistically significant and substantively strong non linear time trend. The similarity of UNGA to the U.S again do not have any statistically significant effect over the number of public sector conditions. The only difference between the OLS and the negative binomial models is that transition country dummy variable is not statistically significant in the negative binomial model.

In the democracy only model, again the percentage of votes in the previous election for the incumbent has the expected sign and is statistically significant.

In order to test the special interest group hypothesis and compare with or without the boundary condition, I run an OLS regression and a negative binomial models with split samples by regime type. The public sector hypothesis states that the strength of the public sector should decrease the number of public sector conditions in autocracies but should have little effect in democracies.

Table 4: Negative Binomial Results for the Number of Public Sector Conditions

Variable	All Countries	Democracies	Presidential Dem.
Polity Score	-0.036 (0.015)**		
Years Left in Current Term (Chief Executive)		0.087 (0.067)	0.083 (0.064)
Percentage of Votes			0.008 (0.005)*
Government Expenditure (% of GDP)	0.026 (0.008)**	0.035 (0.013)**	0.029 (0.013)**
Loan to Quota Ratio	0.525 (0.183)**	0.615 (0.303)**	0.483 (0.500)
Loan Size (SDR Millions)	-0.0003 (0.0001)**	-0.0004 (0.0002)*	-0.0011 (0.0008)
Country's Quota (SDR Millions)	0.0002 (0.0002)	0.0005 (0.0003)*	0.0012 (0.0004)**
GDP per Capita (US\$ Thousands)	-0.173 (0.059)**	-0.240 (0.074)**	-0.224 (0.081)**
Trade Volume (US\$ Billions)	-0.001 (0.006)	-0.002 (0.005)	-0.002 (0.009)
Similarity in UN Voting to the U.S	-0.144 (0.287)	-0.312 (0.641)	-0.232 (0.727)
Transition Country	0.254 (0.207)	0.563 (0.402)	0.561 (0.444)
Poverty & Growth	-0.127 (0.186)	0.250 (0.225)	0.349 (0.314)
Years	0.213 (0.063)**	0.210 (0.094)**	0.194 (0.110)*
Years Squared	-0.017 (0.005)**	-0.013 (0.008)*	-0.012 (0.009)
Constant	0.236 (0.301)	-0.954 (0.540)*	-1.146 (0.718)
No. of obs.	247	123	90
No. of Clusters	89	49	37
Prob.> χ^2	0.00	0.00	0.00
α	0.679 (0.113)	0.793 (0.184)	0.688 (0.164)

Notes: **p < .05, *p < 0.1 Clustered standard errors by country are reported in parentheses.

Table 5: Public Sector Conditions in Democracy and Autocracy

Variable	Democracy		Autocracy	
	OLS	Neg. Binomial	OLS	Neg. Binomial
Pub. Sec. Strength	0.029 (0.022)	0.039 (0.033)	-0.028 (0.015)*	-0.032 (0.020)*
Government Expenditure (% of GDP)	0.023 (0.009)**	0.035 (0.015)**	0.011 (0.008)	0.017 (0.009)*
Loan to Quota Ratio	0.283 (0.144)*	0.365 (0.214)*	0.310 (0.415)	0.431 (0.548)
Loan Size (SDR Millions)	-0.0001 (0.0001)	-0.0002 (0.0002)	-0.0003 (0.0002)	-0.0004 (0.0003)
Country's Quota (SDR Millions)	0.0003 (0.0003)	0.0005 (0.0003)*	-0.0002 (0.0005)	-0.0002 (0.0006)
GDP per Capita (US\$ Thousands)	-0.154 (0.038)**	-0.285 (0.074)**	-0.128 (0.131)	-0.103 (0.130)
Trade Volume (US\$ Billions)	-0.003 (0.002)	-0.003 (0.005)	0.010 (0.033)	0.015 (0.036)
Similarity in UN Voting to the U.S	-0.238 (0.350)	0.114 (0.554)	-0.158 (0.234)	-0.519 (0.290)*
Transition Country	0.473 (0.244)*	0.455 (0.360)	0.061 (0.136)	0.006 (0.157)
Poverty & Growth	0.185 (0.164)	0.122 (0.229)	-0.061 (0.238)	-0.007 (0.287)
Years	0.181 (0.075)**	0.259 (0.110)**	0.172 (0.073)**	0.196 (0.089)**
Years Squared	-0.013 (0.006)**	-0.015 (0.008)*	-0.022 (0.007)**	-0.027 (0.010)**
Constant	-0.305 (0.337)	-0.955 (0.633)	1.239 (0.386)**	1.005 (0.403)**
No. of obs.	114	114	88	88
No. of Clusters	46	46	38	38
R ²	0.30		0.28	

Notes: **p < .05, *p < 0.1 Clustered standard errors by country are reported in parentheses.

The results are reported in the table. The hypothesis is statistically supported in the models. And the performance of the models are generally solid given a few outliers in the data.

In democracies, the strength of the public sector, measured by the share of GDP for compensation and salary for public sector employees, do not have statistically significant effect. The coefficients are positive in both estimations. The coefficients for other variables are very similar to the results discussed above. The government expenditure generally increases the number of public sector conditions. And increase of the size of a loan also increases the number of public sector conditions. More developed countries have fewer public sector conditions and there is very strong time trend.

In autocracies, the strength of the public sector indeed reduces the number of public sector conditions. In both OLS and negative binomial models, the stronger the public sector is, the fewer public sector conditions a program contains. About 5% increase in the share of GDP for public sector compensation is approximately equivalent to the increase of US\$ 1000 in GDP per capita.

Overall, the results from the split samples strongly supports the public sector hypothesis. The stronger the public sector is, the fewer conditions programs will have in autocratic countries. In democracies, the strength of the public sector has no statistically significant effect on the number of public sector conditions as electoral pressure forces democratic governments to agree on the minimum number of conditions that the IMF will accept.

6 Conclusion

This chapter asks why some IMF programs contain more conditions than others. It presents the hypothesis from the model of IMF program design and implementation in the previous chapter and tests the hypotheses with the original dataset of IMF conditionality.

The findings from the statistically analyses suggests that domestic politics in the borrowing country do matter in IMF program design. All the hypotheses generated from the model are very well supported. Most importantly, democratic countries are likely to have fewer conditions than autocratic countries. This is because there exists electoral constraint in democracies. The electoral pressure often forces democratic governments to stay with the minimum number of conditions that the IMF would accept. This finding is further bolstered by the other findings. Among democracies, when governments are elected with slimmer margins in previous elections or when they are facing more imminent elections, they receive fewer public sector conditions than those that are elected with wider vote margins or that are just elected, hence face later elections. In the absence of electoral pressure, governments in autocracies cannot reduce the number of conditions the same way as the governments in democracies do. Only strong domestic interests groups that can resist policy reform measures in the implementation stage, can reduce the number of conditions in non-democracies. The hypothesis is empirically supported in the analyses. In comparison, strong domestic interests do not have any effect in democracies as they are essentially redundant: a democratic government is already forced to agree on the minimum acceptable conditions to the IMF.

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