

DISAGGREGATING IMF CONDITIONALITY: COMPARING DETERMINANTS OF FISCAL CONDITIONS AND FINANCIAL SECTOR CONDITIONS

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Abstract

This paper presents an alternative way to analyze IMF conditionality by disaggregating conditionality. Thinking within the theoretical linkage between IMF program design and implementation, the paper advances the argument that determinants of sectorwise-disaggregated IMF conditionality are conditioned by domestic politics of implementation. Specifically, conditions on certain economic sectors — public or fiscal sectors — bring significant consequences to larger population or strong interest groups and more politically controversial, thus, reasoning backwards, design of such conditions are more influenced by domestic political factors. In comparison, conditions on other economic sectors where few or weak opposing interests exist domestically, such as financial sectors, design of conditions is mainly driven by existing policy environment, internal organizational and international political factors. Empirically, the paper shows that democracy tends to reduce the number of fiscal sector conditions, but not financial sector conditions. Financial sector conditions are largely determined by existing policies and other international political factors. The finding helps reconciling the gap between earlier qualitative studies of IMF conditions highlighting domestic politics and more recent quantitative studies of IMF conditions showing little influence of domestic political factors on conditionality design.

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Introduction

In May 2010, the Greek government entered into an IMF program after a long negotiation with the International Monetary Fund and the European Union. The deal, which secured three-year €30 billion financial assistance from the IMF as a part of €110 billion financing package with the IMF/EU, was touted as “a historic course of action that will give this proud nation (Greece) a chance of rising above its current troubles and securing a better future for the Greek people” by then IMF Managing Director Dominique Strauss-Kahn (IMF 2010*b*). To meet such a goal, the program contained a wide range of policy reform measures, commonly known as conditionality, aimed at tackling massive fiscal imbalance and restoring long run economic viability. At the time of press release, Mr. Strauss-Kahn emphasized the importance of Greek government’s following up with the polity conditions by empathetically stating “implementation in now the key (IMF 2010*b*).”

It turned out, as many anticipated, that implementation of the policy conditions of the IMF program was anything but smooth-sailing for the Greek government. Within hours of signing the agreement, the program was met with anger by the Greek public. Union members, teachers, pensioners, and students took streets and squares together and in turn to protest the belt-tightening austerity measures included in the IMF program. In the following months, massive general strikes and intense riots continued and the politics in the Greek parliament became increasingly contentious over implementation of the program. The turbulent politics of program implementation culminated with two votes of confidence in 2011 that the incumbent government narrowly edged to win, but the second vote of confidence in November 2011 eventually led to the resignation of Prime Minister Papandreou. After some of the conditions included in the program were not met, the 2010 Stand-by agreement was scrapped and was replaced by a new four-year program under the Extended Fund Facility.

In December 2010, the Irish government entered into a three-year €22.5 billion arrangement with the IMF, as a part of a €85 billion financing package from the IMF and other European partners (IMF 2010*a*). As it was the case of the Greek program reached a few

months earlier, then IMF Managing Director Dominique Strauss-Kahn was assiduous to laud the Irish government for having “designed an ambitious policy package to address the economic crisis facing the nation (Ireland)” that “steps up the pace and range of measures to address financial and fiscal stability concerns ... (in order to) restore Ireland’s banking system to health, place its public finances on a sound footing, and reclaim growth (IMF 2010*a*).”

The Irish public received the IMF program on average more favorably than the Greek public. For instance, in a poll conducted a few days after the IMF/EU package announcement, 51% of respondents said they welcomed the IMF/EU bailout while 37% said they opposed it, even though 56% acknowledged that the Irish had given up its sovereignty by accepting the deal (Collins 2010). And while some angry students staged occasional protests against austerity measures implemented by the government per IMF program, public anger toward the program did not run as deep as in Greece. In sharp contrast to the Greek case, all the quantitative conditions were met by the 6th review of the program.

Why have the Greek and the Irish cases walked a diverging path when it comes to program implementation? Those who are familiar with the programs would agree that that is in part because they are different in fundamental causes: the Greek program was designed in response to the economic crisis mainly caused by massive fiscal imbalance, thus included many austerity measures; the Irish program was designed in response to the economic crisis mainly caused by unstable financial sector, thus included many reform measures geared toward strengthening financial regulations. And austerity measures compromising general welfare of large segment of population tend to grab more public’s attention than other more technical reforms with less significant consequences on large segment of population. That is, fiscal conditions are more political contested within a participating country while financial conditions are done so not as much.

Working backwardly, how does anticipated domestic opposition to program implementation affect program design? It is well-established in international relations literature that program design and implementation is intimately linked. In this paper, I explore the dy-

namics of program design and implementation in the context of IMF lending and argue that conditions that have large domestic consequences are affected more by domestic political factors than conditions that have limited domestic consequences. Specifically, I argue that when there exists sufficiently large domestic group whose interests are to be significantly compromised by negotiated program, domestic political factors should have greater influence in determining conditions. When there exists compromised domestic groups are smaller in number or when their interests are not significantly compromised, domestic political factors have little bearing on negotiated program. Empirically, the paper departs from the conventional empirical inquiries in the IMF literature looking at aggregate number of conditions, and instead disaggregates conditions by affected sectors and demonstrates that fiscal conditions are affected by domestic political factors while financial conditions are mainly affected by international factors. By presenting a noble way to look at IMF program design, the current research contributes empirical literature on the determinant of IMF conditions. Theoretically, the paper presents yet another case of the linkage between institutional design and compliance, especially when compliance is domestically contested.

The paper is organized as follows. The next section briefly reviews existing studies on determinants of IMF program design, especially focusing on conditionality design. The following section develops the theoretical argument and presents hypotheses. In the ensuing empirical section, dataset of IMF conditionality and analytic methods are presented and statistical results are discussed. In the concluding section, implications of the current research and future research directions are briefed.

Literature Review

Studies of IMF conditionality have taken off rapidly in recent decades as more and more IMF documents and data have become available to researchers outside of the IMF. Contrary to the rhetoric about the uniformity of IMF conditionality, one size fits all, in “Washington

Consensus” Researchers report that there are large variations along multiple dimensions and started to theorize and empirically analyze why those variations exist.

Exiting policies environments serve the baseline as a primary purpose of IMF conditionality is to fix the fundamental problems so that the participating country will be once again stand on its own foot. Unable to directly measure policy environment, economic conditions often serve as a proxy for existing policy environment, assuming that the more troubled a country’s economy is, the more radical policy adjustment is required. Dreher and Jensen (2007) hypothesize that “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).” yet find that none of these variables are statistically significant. The Independent Evaluation Office of the IMF, the independent body that oversights various functions of the IMF, 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*).

Political analysis looks at political dynamics within and behind the IMF, tracing the chain of command of the IMF. At the immediate level, IMF staff and bureaucracy have been emphasized as they have their own preferences. Sociological and public choice studies of IMF conditionality argue that IMF staff’s ideological preference and its trend, bureaucratic incentives have influenced the overall trend of IMF conditionality (Vaubel 1986, Vaubel 1996, Babb 2003). Up one on the chain of command, many studies emphasize the influence of major sovereign shareholders of the IMF who dominate decision making process of IMF’s executive board (2004*a*, 2004*b*, 1999, 2007, 2008). Dreher and Jensen (2007), for instance, report that closer allies of the U.S. receive IMF loans with fewer conditions. With different measurement, Stone (2008) 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. Erica Gould (2003, 2006) examines the influence of other suppliers of international financial resources — the supplementary financiers, and demonstrate the influence of private financiers in conditionality design.

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. Copelovitch (2010*a*, 2010*b*) provides a more comprehensive theoretical framework that clarify conditions under which bureaucratic interests prevail over sovereign control of the IMF by major shareholders.

Domestic politics of a borrowing country, in comparison, has been largely unexplored with the perceived view of the IMF imposition of economic reforms program. And many quantitative studies of IMF conditionality, even when domestic political variables are included in

an analysis, do not find much support for them. Among eight studies of IMF conditionality design surveyed in Steinwand and Stone (2008) only four studies include some variables of domestic politics of a borrowing country and only one study finds some statistical support for those variables. This is at odd with earlier qualitative studies of IMF program which provide abundant cases of how domestic politics of a borrowing country matters in program design.

Studies often recognize that a borrowing country, even if it might have under hand in a bargaining table with the IMF, still maintains some influence in program negotiations. 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).

Given that a borrowing country's some leverage in IMF program negotiation, scholars contend that governments can utilize domestic opposition to extract better deals in international bargaining. 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 his original contribution of the two-level games framework, 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).

In sum, many economic and international political factors have been theoretically identified and empirically garnered support for them in the existing studies of IMF conditionality design. In comparison, domestic political factors that were very much highlighted in earlier qualitative studies of the IMF program have garnered little empirical support. The only exception is Caraway et al.’s recent study of labor conditions in IMF program. They demonstrate that democratic countries with stronger union power tend to have fewer labor conditions than countries without such strong domestic opposition.

This paper diagnose that one possible reason for the discrepancy between earlier qualitative studies and more recent quantitative studies of IMF conditionality design is the way we look at IMF conditionality. As argued below, IMF conditionality can be better understood as a sum of sectoral conditions of which some are more domestic politically sensitive, thus influenced by domestic politics more heavily than others. Thus, it is important to disaggregate IMF conditionality by affected economic sectors and examine determinants of conditions separately.

IMF Conditionality and Domestic Politics

Multidimensional IMF 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 2010*b*). 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.

Among many different sectoral dimensions of IMF conditionality, the most common and well-known ones are fiscal conditions, often referred as austerity measures, and financial sector conditions that have been more commonly included in programs in recent years.

Fiscal sector conditions make up a large portion of the conditions included in a program. Among all programs signed between 1995 and 2000, about 25 percent of the total number of conditions were on tax policy and public expenditure management. From 2001 to 2004, the percentage increased to 37 percent, a substantial jump. Poverty Reduction and Growth Facility (PRGF) programs, only available to the poorest countries in the world, have slightly more fiscal conditions. From 1995 to 2000, the proportion of fiscal sector conditions was PRGF programs is 29 percent, four percent more than the average in all programs. Between 2001 and 2004, the percentage increased to 40 percent (Independent Evaluation Office 2007*b*). Although their presence is close to universal across all IMF programs, fiscal sector conditions show a large variation. The average number of fiscal sector conditions is approximately 3.5, with a standard deviation of 3.4. There are few programs with zero fiscal sector conditions, while there are some program with more than 15 fiscal sector conditions.

Similarly, financial sector conditions are very common. According to an IMF report produced by the Independent Evaluation Office, more than 20 percent of all structural conditions target financial sector reforms (Independent Evaluation Office 2007*a*). Breaking down the

data temporally, the report shows that there is a generally increasing trend in the number of financial sector conditions. Among all programs in their analysis, about 18 percent of all structural conditions in IMF programs signed between 1995 and 2000 target the financial sector. The percentage of financial sector conditions increases to over 25 percent of all conditions in IMF programs signed between 2001 and 2004 (Independent Evaluation Office 2007*a*). Among 263 IMF programs included in the dataset that I constructed, the average number of financial sector conditions is about 2.6 conditions per program and varies from zero to 47. Financial sector conditions are also emphasized in World Bank structural lending, where about 25 percent of all structural adjustment loans disbursed between 1992 and 2003 have conditions promoting financial sector reforms.

Domestic Politics and Fiscal Conditions

Negotiation over fiscal sector conditions presents the case of bargaining with a significant domestic opposition. Fiscal conditions often have significant influence over a larger segment of population. The recent Greek case very well illustrates the point. Upon agreeing on the first IMF package in May 2010, Greek streets were flooded by angry demonstrators whose economic well-beings are surely to be compromised by implementation of conditions included in the agreed program.

More generally, IMF conditions targeting an economic sector whose interests are to be gravely compromised and whose influence in the domestic political system is relatively significant, domestic politics should exert large influence over IMF program design. Most importantly, a country's regime type should be an important factor in determining the negotiation outcome.

As election outcomes are uncertain in democratic countries and assuming that each austerity measure is electorally costly, governments in democratic countries should try to have conditions that are less severe than those of their autocratic counterparts.¹ Assuming the

¹Note that the assumption of electoral costliness of an additional reform measure does not mean that

government wants to stay in power, the government in a democratic country can little 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 number of conditions acceptable to the IMF. From the IMF's standpoint, the IMF has incentives to give some slack to electorally constrained countries. This is because the IMF should prefer successfully implemented programs over attempted-but-failed programs. The IMF should thus weigh the influence of domestic opposition and be more sensible to domestic political environment when it negotiates with electorally constrained governments. In comparison, such consideration might not be needed when governments do not face significant opposition or when they reserve other means to repress such opposition, such as physical violence in autocratic countries.

Thus, at the most basic level in domestic politics, the more a government is sensitive to electoral costs, that is, losing votes, the fewer conditions its IMF program will contain. There are reasons for both a borrowing government and the IMF be more reluctant to push too far with additional fiscal conditions.

- Fiscal Conditions Hypothesis: The more democratic a country is, the more lenient fiscal sector conditions will be in an IMF program.

Financial Sectors in Borrowing Countries

Financial Sectors in most developing countries that are the vast majority of all IMF borrowers, and especially those belonging to the least developed countries category, are very weak and often exclusively controlled by the government. Even when a developing country has a relatively well-developed financial sector, the financial sector interests tend to support financial sector liberalization. Given the level of development of the financial sectors in the countries participating in IMF programs and the types of typical financial sector conditions

there is no one who would support the additional reform measure. There could very well be those who want more policy reforms, as long as the number of those who oppose the measure is greater than the number of those who support the measure.

in those programs, it is safe to assume that there exist few opposing domestic economic interests involved in designing financial sector conditions.

First of all, almost all of IMF program participating countries are developing countries, and a majority of them belong to the least developed countries category of the United Nations classification. In the dataset that I assembled, 70 percent of IMF programs arranged between 1994 and 2006 were signed by countries with a per capita income of \$2,000 or below. Among all IMF programs in the dataset, over 55 percent of the programs were disbursed under the Poverty Reduction and Growth Facility or other growth-related facilities, lending facilities particularly developed to provide financial assistance with the nominal interest rate to heavily indebted poor countries.

Financial sectors in these developing countries are far smaller than those in the middle or high income countries. Comparing the ratio of liquid liabilities to the GDP, the broadest available indicator of financial sector development, the relative size of financial intermediaries to the size of economy of the least developed countries is approximately $\frac{1}{5}$ of that of the developed economies.² In 1994, the average ratio of liquid liabilities to the GDP among the least developed countries was about 24 percent and the average ratio among low income countries was about 28 percent. In comparison, the average ratio of liquid liabilities to GDP among high income countries in 1994 was 106 percent. The financial sector data are from the World Bank World Development Indicators and the New Database on the Structure and Development of the Financial Sector (World Bank World Development Indicators, Beck, Demirguc-Kunt & Levine 2000).

In addition, banking sectors in developing countries had usually been under tight control

²“Liquid liabilities are a general indicator of the size of financial intermediaries relative to the size of the economy or an overall measure of financial sector development (World Bank World Development Indicators, p.277).” “Liquid liabilities are the sum of currency and deposits in the central bank, plus transferable deposits and electronic currency, plus time and savings deposits, foreign currency transferable deposits, certificates of deposit, and securities repurchase agreements, plus traveller’ checks, foreign currency time deposits, commercial paper, and shares of mutual funds or market funds held by residents. The ratio of liquid liabilities to GDP indicates the relative size of these readily available forms of money , money that the owners can use to buy goods and services without incurring any cost (World Bank World Development Indicators, p.277).”

by their governments until those governments decided to participate in IMF programs in the 1990s and 2000s. In most of the developing countries, the government often established and owned a major share of domestic banks, as there existed very few domestic capital owners. A majority of the financial sector conditions in IMF programs are targeted at reducing the control of governments over their banking institutions.

Existing studies of the financial liberalization of developing countries report that domestic financial interests often espouse rather than oppose capital account liberalization. Working against the standard the Heckscher-Ohlin model, where relatively capital scarce developing countries' capital factor should oppose rather than support capital account liberalization, these studies report that financial sector interests actually favor financial liberalization. While the reason for this provides an interesting question, in the context of this dissertation, it is sufficient to note that financial sector interests in developing countries at least do not oppose the reform measures included in IMF programs. "In developing countries and emerging markets from Argentina to Turkey and from Egypt to the Philippines, analysts have found that owners of financial capital resist capital control, both in the form of laws that prevent them from moving funds overseas and in the form of restrictions on the inflow of foreign capital (Pepinski 2009, 1)." This observation challenges conventional theories of economic interest formation based on factors of production. Financial sectors in emerging market economies, since they are relatively capital poor by global standards, should be swamped by foreign capital under conditions of full openness, and thus are destined to lose in the competition for domestic lending opportunities. Yet, domestic financial interests do not oppose financial liberalization.

There is abundant microeconomic evidence that foreign banks in developing economies outcompete their domestic counterparts, offering lower interest rates, mobilizing more funds from large depositors, and earning greater profits than domestic banks. Yet still, in many parts of the developing world domestic lenders lobby for cross-border financial openness, the very policy that standard theories

predict would harm their interests. Scholarship on Indonesia, for example, has long identified the interests of financiers who for decades pressured the regime to maintain an open capital account — one open both to outflows and inflows (MacIntyre 1993, Winters 1996). ... Brooks (2004) finds in a sample of Latin American countries — all emerging markets or lesser developed countries — that large financial sectors lead to more capital account liberalization (Pepinski 2009).

Domestic financial intermediaries in emerging markets are often uncertain as to whether they stand to benefit from the increased opportunities for intermediation that can accompany liberalization or whether they stand to be harmed from the possibility that liberalization will precipitate a banking crisis due to the legacies of financial repression and poor prudential supervision that typically characterize emerging markets. This uncertainty often leads interest groups to fall silent when one might expect them to be critical players (Chwieroth 2007).

Given the circumstances in financial sectors in developing countries, it is hard to justify that there are comparable domestic interests playing an important role in designing financial sector conditions in the same way that the general public influence the design of fiscal sector conditions. Financial sectors in IMF participating countries are usually underdeveloped and commonly dominated by state-owned banking institutions. Few existing private financial interests would be strong enough to put electoral pressure on the government or to threaten to hinder proper implementation of agreed upon financial sector conditions. Moreover, there are studies that report financial sector interests in developing countries often welcome more financial liberalization, and thus favor policy conditions seeking it. In sum, financial interests in developing countries may actually favor some of the financial sector conditions included in the proposed IMF programs or are at least too weak to exert significant pressure to reduce them. Under these circumstances, we should not expect that domestic political variables, in particular, a country regime type, influences financial sector conditionality.

- Financial Conditions Hypothesis: A country’s regime type will not significantly influence financial sector conditions.

Empirical Analysis

Data and Analytic Method

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.³ 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 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 (2010*b*) 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,

³All 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).

“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 2010*b*, p. 79).”

The number of fiscal and financial sector conditions in a program are 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 2010*b*, Gould 2003, Dreher & Jensen 2007). The raw number of all and binding fiscal and financial sector conditions are used for the count model analysis.

The Polity IV score is used to measure democracy (Jagers & 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 Polity 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 (Jagers & Gurr 1995).

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 2007*b*). 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.

In the following subsections, I present results of statistical analysis of fiscal sector conditions and those of financial sector conditions.

Results and Discussions: Fiscal Sector Conditions

The first column of Table 1 lists the independent variables. The second column shows the coefficients of all independent variables, with clustered standard errors by country in parentheses and the number of fiscal sector conditions as the dependent variable. The third column reports the coefficients and standard errors of the estimation, with the number of binding fiscal sector conditions as the dependent variable.

The results strongly support the main hypothesis and are consistent across different specifications.⁴ Controlling for other variables highlighted in the literature, I find strong support for the democracy hypothesis. The coefficient for the Polity score variable is negative and statistically significant. Overall, the effect of democracy is substantial. Moving from a perfect democracy (Polity score 10) to a typical autocracy (zero) increases the number of fiscal

⁴These results are very robust to the inclusion and exclusion of various other control variables not reported here. The results are also very consistent with respect to different estimation techniques not reported here.

Table 1: Negative Binomial Model: Number of (Binding) Fiscal Sector Conditions

Variable	Fiscal Conditions	Binding Fiscal Conditions
Polity	-0.034*** (0.011)	-0.036*** (0.014)
Fiscal Freedom	0.002 (0.005)	-0.012** (0.006)
Gov Expenditure	-0.013*** (0.003)	-0.005 (0.004)
Loan to Quota Ratio	0.488*** (0.133)	0.638*** (0.215)
Quota	0.001*** (0.000)	0.001*** (0.000)
Loan Size	-0.000** (0.000)	-0.000** (0.000)
Similarity of UN Voting to the United States	0.005 (0.216)	-0.435 (0.289)
Years	0.145** (0.066)	0.131* (0.072)
Years Squared	-0.001 (0.005)	0.002 (0.006)
PRGF	0.102 (0.145)	0.016 (0.190)
GNP per Capita (\$1,000)	-0.161** (0.068)	-0.212** (0.088)
Transition	0.243* (0.142)	0.550*** (0.191)
Trade	-0.000** (0.000)	-0.000 (0.000)
Constant	1.196*** (0.406)	0.770 (0.554)
N	247	247

Notes: ***p < .01, **p < .05, *p < 0.1 Clustered standard errors in parentheses.

sector conditions from fewer than 2.5 conditions to more than three. Moving from a typical autocracy to a complete autocracy (-10) increases the number of fiscal sector conditions even more dramatically by raising the number to 4.5. Thus, holding other variables constant at their medians, changing the regime type from a perfect democracy to a complete autocracy increases the number of fiscal sector conditions twofold. Given that the mean number of fiscal sector conditions is 3.5, the substantive effect of the polity score is quite substantial.

Consistent with the finding by the Independent Evaluation Office of the IMF, the greater the government expenditure is, the more fiscal sector conditions there are (Independent Evaluation Office 2007*b*). However, the quality of the taxation system measured by the Fiscal Freedom score does not seem to affect the number of fiscal sector conditions. If existing fiscal policy matters, the number of fiscal sector conditions is mostly driven by existing government expenditure policies. That is, when the government accounts for too much of the country's economic activities, the IMF program would have more fiscal conditions to reduce the role of the government in the economy.

As the Ratio of the Size of a Loan to the Quota increases, the greater the number of conditions included as hypothesized. The relationship is statistically significant. With the ratio variable in the model, the size of a 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.

Transition countries have more fiscal sector conditions in their IMF programs, and the effect is statistically and substantively significant. The result is fairly intuitive, given that all transition countries had centrally planned economies before making transitions.

More advanced economies have fewer conditions than poorer countries. Likely, this is because more advanced economies have better overall existing economic policies. Alternatively, it could be because more advanced economies have better resources and bargaining leverage against the IMF in negotiations.

Contrary to the previous study by Dreher and Jensen (2007), after controlling for domes-

tic political variables and economic policy circumstances, “the similarity of United Nations General Assembly voting to the U.S.” does not reduce the number of fiscal sector conditions. There is the possibility that while the U.S.’s strategic interest has some influence on the overall number of IMF conditions as suggested in Dreher and Jensen (2007), but not over the number of fiscal sector conditions specifically.

The result again highlights the advantage of investigating the number of conditions by targeted economic sectors. One cannot find that different economic and political factors have heterogeneous 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.

There is a very strong time trend. Both the Years and Years Squared variables turn statistically significant at the conventional level. The finding suggests that there is an increasing trend in the number of fiscal sector conditions. Compared to the public sector findings, the finding here suggests that the number of fiscal sector conditions does not trail off and decrease.

Results and Discussions: Financial Sector Conditions

I report the results from the negative binomial models in 2. The first column of the tables lists the independent variables. The second column shows the coefficients of all independent variables with clustered standard errors by country in parentheses, with the number of financial sector conditions as the dependent variable. The third column shows the coefficients of all independent variables, with the number of binding financial sector conditions as the dependent variable. The results are very consistent with the results from OLS regression models, which are not reported here. 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).

Table 2: Negative Binomial Model: Number of (Binding) Financial Sector Conditions

Variable	Financial Conditions	Binding Financial Conditions
Polity	0.010 (0.016)	0.026 (0.031)
Financial Freedom	-0.010 (0.005)**	-0.020 (0.008)**
Previous IMF Program	-0.708 (0.232)**	-0.074 0.300
Domestic Financial Sector	0.007 (0.002)**	0.009 (0.004)**
Loan to Quota Ratio	0.764 (0.224)**	1.053 (0.263)**
Loan Size (SDR Millions)	-0.0003 (0.0001)**	-0.0005 (0.0001)**
Country's Quota (SDR Millions)	0.0002 (0.0002)	0.0005 (0.0002)**
GDP per Capita (US\$ Thousands)	-0.104 (0.076)	-0.359 (0.121)**
Similarity in UN Voting to the U.S	-0.640 (0.198)**	-0.697 (0.280)**
Transition	0.567 (0.184)**	0.775 (0.302)**
PRGF	-0.438 (0.270)*	-0.633 (0.326)*
Years	0.295 (0.102)**	0.326 (0.116)**
Years Squared	-0.021 (0.008)**	-0.021 (0.010)**
Constant	0.874 (0.313)**	-0.397 (0.517)
No. of obs.	242	242
No. of Clusters	88	88
Prob.> χ^2	0.00	0.00
α	0.725 (0.185)	1.351 (0.340)

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

The analysis reports very interesting results. Compared to the previous results of fiscal sector analysis, in which domestic political variable showed significant effects on the number of conditions, the analysis of financial sector conditions shows that domestic political variables do not affect the design of the conditions. Instead, the existing policy environment and the influence of the U.S. become significant. As predicted from the modified model, the size of a loan exerts much influence that is statistically significant on the number of financial sector conditions.

The more Financial Freedom a country enjoys, the fewer the financial sector conditions. Previous IMF program experience reduces the number of financial sector conditions. The larger the domestic financial sector is, the more financial sector conditions a program contains. Larger loans increase the number of financial sector conditions. The more developed a country is, the fewer conditions the program contains. The closer a country votes with the U.S. in the United Nations, the fewer conditions the country's IMF program contains. Transition economies tend to have more conditions. Programs arranged under the Poverty Reduction and Growth Facility tend to have fewer conditions. And there is strong time trend.

Highlighting the differences between fiscal sector interests and financial sector interests, the model also shows that regime type does not influence the number of financial sector conditions. If at all, the coefficient is positive, suggesting that the more democratic a country is, the more financial sector conditions a program would contain. But the relationship is not statistically significant. Moreover, the larger the existing banking sector is, the more financial sector conditions are included in a program. This confirms the consensus in the literature on the financial liberalization of developing countries that states existing financial interests tend to prefer more financial liberalization.

Substantively, the effect of the size of a loan is substantial. Moving from a usual loan size at .9 times the quota to 1.5 times the quota, the number of financial sector conditions increases from around two to four. If the size gets to double that of the quota, the number

of financial sector conditions further increases to 5.5. When a country gets a smaller loan from the IMF, at 25 percent of its quota, the number of financial sector conditions decreases to 1.5, holding other variables constant at their medians. Thus, the effect of the size of a loan is substantial. This is because the IMF wants more conditions as the potential cost of the program, that is, the cost of default, increases with the size of a loan.

The current Financial Freedom score is a strong predictor of the number of financial sector conditions. When a country's Financial Freedom is low, the country is more likely to have more financial sector conditions. Conversely, if a country has already liberalized its financial sector, the country has fewer financial sector conditions. Additionally, previous IMF program participation decreases the number of financial sector conditions. This may be because of the improved financial sector liberalization due to the previous IMF programs. Moving from a financial sector tightly regulated by a government (Financial Freedom score of 20) to a relatively free financial sector (financial freedom score of 80) halves the predicted number of financial sector conditions from 2.6 to 1.3.

The effect of the size of the domestic banking sector is substantial and highlights the differences between the design of financial sector conditions and the design of conditionality over other sectors of economy. Basically, the larger the domestic banking sector is, the more financial conditions are included in an IMF program. Substantively, when a country's domestic credit provided by the domestic banking sector increases from 20 percent of the GDP to 90 percent, the number of financial sector conditions increases from less than two to close to three conditions.

Consistent with the previous study by Dreher and Jensen (2007), after controlling for domestic political variables and the economic policy circumstances, "the similarity of United Nations General Assembly voting to the U.S." reduces the number of financial sector conditions. When a country votes with the U.S. more often, the country is likely to have fewer financial sector conditions in its IMF program. Conversely, when a country votes against the U.S.'s positions more often, the country is likely to have more financial conditions in its IMF

program. Specifically, when a country votes along with the U.S. half of the time (score of zero), the country would have little less than two conditions. In comparison, when it votes with the U.S. all the time, the number of financial sector conditions further decreases to one. When a country votes against the U.S. most of the time and earns -0.5 for its voting score (close to the minimum in the dataset), the number of financial sector conditions increases to 2.5, holding other variables at their medians.

Conclusion

This paper presents an alternative way to analyze IMF conditionality. It contends that conditions on some economic sectors bring more significant domestic consequences to larger segment of population, thus design of such conditions are more influenced by domestic political factors. In comparison, conditions on other economic sectors where few or weak opposing interests exist, design of such conditions are mainly driven by existing policy environments and IMF and international political factors. Empirically, the paper shows that indeed democracy tends to reduce the number of fiscal sector conditions, but not financial sector conditions.

The study provides a number of interesting implications on current scholarship on IMF conditionality. First of all, it shows that it might be useful to disaggregate conditionality by sectors and analyze them separately. Second, as the literature recognizes, this has broader implications on compliance of conditionality. Domestically contested conditions, such as fiscal ones, may be harder to implement due to domestic opposition while less politically contested conditions, such as financial sector ones, might be rather easier to implement for a government. Thus, when non-compliance occurs, it can be attributed to domestic political circumstances in a participating government, while such hand-tying cannot work as an excuse in case of non-compliance of financial sector conditions. Third, relatedly, this has broader implications on the way researchers examine the effect of IMF program and suggests to look

at pertinent sectorally disaggregated conditions.

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