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CARLOS EDUARDO LADEIRA

FISCAL ADJUSTMENT, CONDITIONALITY AND POLITICS IN IMF PROGRAMS

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Dissertação apresentada à Escola de Economia de São Paulo da Fundação Getulio Vargas, como requisito para obtenção do título de Mestre em Economia

Campo de Conhecimento:
Economia Internacional

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RESUMO

Uma característica comum nos programas do Fundo Monetário Internacional (FMI) é a utilização de condicionalidades, medidas macroeconômicas e estruturais que o país demandante deve adotar para obter um pacote de assistência. Neste trabalho, o objetivo é conduzir uma análise empírica dos determinantes econômicos e políticos das condicionalidades. Em particular, nossa principal contribuição consiste na construção de uma nova medida de condicionalidade, o ajuste fiscal, e a comparação desta com a mais utilizada na literatura, qual seja, o número de condicionalidades. Escolhemos o ajuste fiscal pois trata-se de uma medida adequada da austeridade de um programa, já que sua implementação acarreta custos econômicos e políticos para o país. No exercício empírico, utilizamos dados de 184 programas no período de 1999 a 2012, e estimamos como as nossas duas medidas de condicionalidades respondem aos fatores econômicos e políticos. Nossos resultados indicam que elas são de fato diferentes. Por um lado, o principal determinante do número de condicionalidades é a proximidade política do país tomador do empréstimo com os principais membros do Fundo, os países do G5. Por outro, a principal motivação do ajuste fiscal é o tamanho do déficit do governo. Por fim, não encontramos correlação entre o tamanho do ajuste fiscal e o número de condicionalidades. Tais resultados sugerem que a análise dos termos dos programas do FMI deve levar em conta os diferentes tipos de condicionalidades que são acordadas.

Palavras-Chave: FMI ; Ajuste fiscal; Condicionalidades; Proximidade política.

ABSTRACT

A common feature in programs of the International Monetary Fund (IMF) is the use of conditionalities, macroeconomic and structural measures that a requesting country should adopt to obtain an assistance package. The objective of this work is to conduct an empirical analysis of the economic and political determinants of such conditionalities. In particular, our main contribution consists in the development of a new measure of conditionality, fiscal adjustment, and its comparison with the most used in the literature, the number of conditions. We choose fiscal adjustment because it is an adequate proxy for program austerity, since its implementation carries economic and political costs. In the empirical exercise, we use data from 184 programs in the period of 1999 and 2012, and estimate how our two measures of conditionalities respond to the economic and political factors. Our results suggest that they are quite different. The main determinant of the number of conditions is the political proximity of the borrowing country to the Fund's major shareholders, the members of G5. On the other hand, the main determinant of fiscal adjustment is the size of the government fiscal deficit. Finally, we did not find correlation between the size of fiscal adjustment and the number of conditions. These results suggest that the analysis of the content of IMF programs should take into account the different measures of agreed conditionality.

Keywords: IMF; Fiscal adjustment; Conditionalities; Political proximity.

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Introduction

The International Monetary Fund (IMF) plays the role of an international lender of last resort, providing financial assistance to member countries under economic difficulties. Usually, an IMF program combines a loan and conditionality, a set of policy measures that the participating country agrees to uphold. These policy measures usually include a reduction in the government budget deficit, the stabilization of inflation, and the privatization of state-owned enterprises. According to the IMF, this assistance package would help the borrowing country to circumvent macroeconomic and structural imbalances, reducing the risks of future crisis and contributing to safeguard Fund's resources.

The function of the IMF as a lender of last resort and the use of conditionality are both subjected to an intense and controversial debate. The IMF has been criticized for applying one-size fits-all economic policy prescriptions, without considering country's particularities and domestic political constraints. Conditionalities and macroeconomic adjustments are said to envisage draconian austerity measures. In addition, a supposed political influence of Fund's major shareholders in lending decisions is often a target of criticism.

In this dissertation, we perform an empirical analysis to evaluate the economic and political determinants of IMF conditionalities. Our main contribution consists in the development of a new measure of conditionality, the fiscal adjustment, and comparing it to the most used measure of conditionality in the literature, the number of conditions. Fiscal adjustment is the difference between the envisaged overall government fiscal balance (in percent of GDP) for the second year of the program and the pre-program level[1]. In our view, this new measure of conditionality represents an improvement in the evaluation of the factors that influence the content of a program.

Indeed, the number of conditionalities, used by several works[2], appears inadequate to assess program's austerity and to perform program or country comparisons. One reason for this is the fact that conditions are very different in scope. Some of them do not require any economic or political effort by the borrowing country, while others involve domestic political battles and produce significant institutional and economic changes once implemented (Independent Evaluation Office (2007)). Then, the aggregation of different conditions masks the real content of a program. Moreover, even if the number of conditions of a program does not change over time, the scope of conditionality may change. For instance, if the Executive

[1] In Chapter 3, we explain why we calculate fiscal adjustment in this way.

[2] We discuss the papers of Dreher and Jensen (2007);Copelovitch (2010);Woo (2013) in the literature review.

Board evaluates that a program requires more efforts to succeed, it can maintain (for example) a ceiling on the overall stock of central government debt, but requiring a reduction in that ceiling. In this case, the level of stringency of the program has increased, while the number of conditionalities has remained the same[3].

We employ fiscal adjustment for three reasons. First, fiscal consolidation is a very common feature of IMF programs. Secondly, its is an objective measure of conditionality, allowing program or country comparisons. Thirdly, fiscal adjustment is an adequate measure of program austerity. Indeed, one of the leading critics of IMF programs is that the prescription of fiscal consolidation contributes to produce or aggravate economic downturns, at least in the short run. In addition, the implementation of fiscal discipline is politically costly. The recent events in Greece, where the Syriza party was elected with a anti-austerity discourse, provides a clear example of how fiscal consolidation is sensitive and hard to implement[4].

In our work, we employ the standard variables used in the literature of the determinants of the number of conditionalities. Many of these variables are also linked to the requirement and the possible size of fiscal adjustment. For example, fiscal adjustment may be demanded to prevent an unsustainable path of debt to GDP ratio. All else equal, we should also expect a conditionality targeting a reduction in the government debt. On the other hand, fiscal adjustment may be facilitated when the size of government consumption (in proportion of GDP) is too large. The reduction of public employment, cut in public sector wages, and the rationalization of social benefits may occur when they represent significant expenses to the government.

Regarding the political influence on Fund's lending decisions, the argument is that the major shareholders of the IMF, the G5 countries (United States, United Kingdom, Germany, Japan, and France), would use their power in the Executive Board to benefit their political allies when they request for Fund's assistance[5]. These political "friends" would get programs with fewer conditions, more money, or both. The most used political variable describing proximity with G5 countries is the percentage of United Nations General Assembly (UNGA) votes in which the requesting country and the G5 countries vote in the same way. In this work, we also adopt this measure of political proximity.

Our interest in the supposed political influence on Fund's decisions has an economic

[3] In this context, the IMF's Review of Conditionality (2011) indicates the potential presence of a trade-off between the number of conditions and the size of macroeconomic adjustments. The combination of an excessive number of conditionalities and deep macroeconomic adjustment would demand too much from the country, probably reducing its incentives to implement the program.

[4] One of the arguments is that fiscal retrenchment is often avoided because it causes social unrest. The Passarelli and Tabellini (2013) empirical analysis for 19 OECD countries from 1975 to 2008 indicates that a fiscal adjustment of 1% of GDP is associated with an increase of 20% in the number of riots.

[5] G5 countries hold a combined 39% voting power in the Executive Board, which is responsible for lending decisions.

motivation. If a proper design of a program is crucial for its success, then a political driven reduction in conditionalities or, more generally, an excessively soft program, would result in a loss of Fund's credibility. The IMF itself argues that "...the IMF's ability to perform this catalytic role is based on the confidence that other lenders have in its operations and especially in the credibility of the policy conditionality attached to its lending"[6]. The catalytic effect of the IMF corresponds to the incentives that private creditors have to provide liquidity to counties with an IMF package. Without the program, the argument goes, those incentives would be reduced.

In the empirical estimation, we use a panel data with 184 programs for 79 countries between 1999 and 2012. We compare the results when the number of conditions (total and fiscal conditions) is the dependent variable to those when the size of fiscal adjustment is the response variable. This exercise is a mechanism that allows one to assess the qualitative differences (if any) between the two measures of conditionalities.

Our results suggest that the they are significantly different, and this heterogeneity should be taken into account when evaluating the content of a program. First, we found no correlation between the number of conditions and fiscal adjustment. Even when we consider the association between fiscal conditions and the size of the fiscal adjustment, the correlation is minimal (4.4%). This result indicates that a large fiscal adjustment may be possible even with a relatively low number of conditions. In the empirical estimations, the main conclusion is that the fiscal adjustment envisaged by an IMF program is primarily guided by economic factors. When the government consumption increases or the tax revenue reduces, the size of fiscal adjustment is bigger. In our view, this result is quite consistent, since an IMF program should pursue fiscal adjustment in the case of an imbalance in the government budget account. On the other hand, the main determinant of the number of conditions is the political proximity of the borrowing country to G5 members. We found, as the literature suggests, that countries which are closer allies to G5 members receive a reduction in the number of conditions, specially fiscal conditions.

The remainder of this thesis is structured as follows. Chapter 1 provides a brief explanation of IMF lending features. Chapter 2 presents a literature review of conditionality and IMF programs. In Chapter 3 we present our data and in Chapter 4 the econometric model. We discuss our main empirical findings in Chapter 5 and, at the end, a brief conclusion.

[6] For a description of the official view of IMF's role, see www.imf.org.br.

1 IMF Lending Features

IMF resources are made available under a lending package, which specifies the amount of money available to the country, the economic policies to be adopted, and how the implementation will be evaluated.

IMF programs define some goals: macroeconomic stability (fiscal, monetary, and external), poverty reduction, and economic growth. The Fund offers several lending instruments, which are designed and made available according to the particularities of the requesting country, the sources of economic crisis, and the agreed goals[1]. For instance, the Extended Credit Facility is the main loan directed to low-income countries with a permanent balance of payments problems. The Precautionary and Liquid Line is designed to assist only countries with sound fundamentals and policies, which are facing a temporary liquidity crisis.

The IMF emphasis that the member country has primary responsibility for selecting, designing, and implementing the policies that will make the IMF-supported program successful. This is because the Fund considers country's ownership of the program essential for its success. A country owns the program when there is a genuine belief that the policy prescriptions, once adopted, will benefit the country[2].

After the country requests for Fund's assistance, it negotiates with the IMF staff the terms of the loan. This process culminates in a Letter of Intent and a Memorandum of Economic and Financial Policies, which describes the targets and goals of the program. The Letter of Intent is then submitted to the Executive Board, which decides whether the program is approved or not. Once approved, the IMF starts to monitor program implementation, usually in a quarterly or semiannual basis. If the Executive Board evaluation concludes that the program is off track, it can be suspended temporarily or permanently.

Conditionalities defined in a program can take different forms, as summarized bellow. Of course, classification is not rigid, and may change from one country (program) to another.

- Prior actions: measures that a country has to adopt before the Executive Board approves the loan or completes a review. According to the Fund, these conditions are necessary to be adopted right away in order to increase the chances of program's success. Elimination of price controls and the passage of an agreed budget are examples of prior actions.

[1] A detailed description of all types of credit lines offered by the IMF can be found at www.imf.org.
[2] For a discussion of the role of ownership in IMF programs, see Khan and Sharma (2001).

- Quantitative performance criteria: these conditions include quantitative targets for macroeconomic variables under the control of national authorities, such as fiscal balances, international reserves and credit growth. A maximum level of government borrowing is an example of a macroeconomic performance conditionality.

- Structural benchmarks: reform policies which are important for an effective program implementation. Privatization of banking sector is an example of this type of conditionality.

Conditionalities also differ when it comes to classifying them as binding for program approval and interruption. Clearly, prior conditions are binding by definition, since a program is approved or a review is completed only under compliance with them. The Executive Board may approve a formal waiver to allow the completion of a review if a quantitative target condition is not met. This situation occurs when the Board evaluates that deviations from the goals are only temporary, minor, or due to external shocks. Structural benchmarks are not binding, since a lack of compliance does not cause the suspension of the program. However, the degree of structural conditionality implementation influence the reviews of program performance and the approval of future packages. In the Appendix A we use the Letter of Intent of a Stand By Arrangement approved for Greece in 2014 as an example.

2 Related Literature

The literature of IMF, both theoretical and empirical, discusses a broad range of issues. Theoretical models aim to explain the functionality and potential drawbacks of the IMF as a lender of last resort and the use of conditionalities in its assistance packages.

The main concern of empirical works is to raise evidence if and under which circumstances IMF programs and conditionalities work in reducing macroeconomic vulnerabilities and restoring economic growth. Assessing economic outcomes of IMF programs is not an easy task due to the problem of self-selection. In order to correctly evaluate program's outcomes, one should be able to disentangle the effects of the underlying crisis, that lead the country to the IMF in the first place, to the "independent" effects of the Fund. In resume, the results pointed out in the literature depend on the econometric method employed and the particular sample of programs and years.

In addition, there has been a surge of empirical works, mainly in political science, whose main interest is to raise evidence whether IMF lending decisions are influenced by politics. In particular, the empirical analysis are conducted to investigate if participation is more likely for countries which are closer allies of the Fund's major shareholders, and if they receive a lower number of conditions or higher loans once a program has been approved.

2.1 Theoretical Literature

Several rationals are used to justify conditionality in IMF lending. Theoretical models usually employ conditionality as: (i) a commitment device; (ii) a screening mechanism; (iii) a mechanism to reduce debtor moral hazard; and (iv) as a scapegoat[1]. For our purposes, we focus on the commitment and screening device arguments of conditionality. The commitment device argument represents a link with the incentives that a borrowing country has to default on its debt. The signaling mechanism is a way that countries can indicate their efforts and intentions to reform.

Conditionalities work as a commitment device by solving a time-consistency problem. Countries that agree to follow IMF policy conditions make reform intentions more credible. When conditions are stipulated in a loan package, it is more difficult to the renege on promises

[1] Dreher (2009) offers a review of reasons (and models) for the use of conditionality. Conditionality mitigate moral hazard because the disbursement of money occurs only after compliance. The scapegoat story argues that governments willing to reform demand Fund's conditionality to gain leverage over domestic opposition.

(of reforms). Sachs (1989) proposed the use of conditonality, combined to debt relief, to solve a problem of debt overhang. In the model, conditionality work as commitment device for investing the resources obtained from debt relief rather than consuming[2]. In Fafchamps (1996) conditionalities also work as a commitment device, offering a partial solution to a commitment failure caused by the lack of enforceability of sovereign debt contracts. In the framework, trade conditionality, by increasing the country's trade linkages, raises the costs of default, and as a consequence improves the incentives of the government for repaying its debt. In a model of sovereign debt and default, Gonçalves and Guimarães (2014) study a time-consistency problem in fiscal policy and how an IMF program can solve it[3]. The combination of lending at bellow market rates, fiscal conditionality and IMF seniority produce a commitment device for fiscal adjustment.

In terms of the informational role of conditionality, Marchesi and Thomas (1999) argue that IMF conditionality may act as screening device by allowing countries to "signal their types" to private creditors. Countries that agree to follow conditionality indicate their intentions to use the resources coming from debt relief to invest, separating themselves from bad borrowers: private creditors will consider them as creditworthiness. As a result, the adoption of an IMF program with conditionality can solve debt overhang problems.

2.2 Empirical Literature

2.2.1 Program Outcomes

Since one of the main economic prescriptions in IMF programs is fiscal adjustment, and our interest in this dissertation, an important question is whether fiscal performance improves with the adoption of a program.

Bulir and Moon (2003) investigates fiscal developments in 112 countries during the 1990s using the Generalized Evaluation Estimator (GEE)[4]. The empirical exercise attempts to separate the impact of structural conditionality, the country's performance under the program and "too many" structural conditions. The adoption of structural conditions should have a positive impact on fiscal performance since they target fiscal vulnerabilities: for example, if tax collection is low due to evasion, a structural condition to reduce evasion would have

[2] The commitment problem occurs because the government has a high consumption discount rate. Also, it is assumed that without directing resources to investments the country will not have the resources to pay off a loan.

[3] In their setup, the commitment failure is due to the fact that when government chooses fiscal policy (a tax rate), a stock of outstanding debt already issued in the past at a given price is not affected by the decision.

[4] GEE constructs the counterfactual of economic policies and then tests the importance of IMF programs.

a positive impact on tax revenues. On the other hand, a large number of structural conditions reduces country ownership, jeopardizing program success. The main conclusion is that IMF programs does not improve overall fiscal balance[5]. Also, the results give evidence that programs with excessive structural conditions perform worse, reinforcing the ownership argument.

Cho (2009) also investigates the effects of IMF programs on fiscal performance, for 93 developing countries from 1951 to 2000, correcting for selection[6]. The dependent variables are the proportional changes of budget balance, government expenditure and revenue[7]. The results show that IMF programs successfully reduce government expenditures but fail to improve tax revenue. Therefore, the impact on overall budget balance is not evident. With a different conclusion, Crivelli and Gupta (2014) results indicate that revenue conditionality in IMF program does improve tax collection, specially for low-income countries where revenue ratios are bellow the group average.

Dreher (2005) studies if compliance with conditionality influences fiscal policy. If conditions are not implemented, then a bad fiscal performance might be due to non-compliance[8]. The results suggest that participation in non-concessional arrangements (Stand-By and Flexible Credit Line) improves fiscal policy, but the degree to which programs are completed does not influence the improvement.

Domestic politics and the quality of institutions may also influence the size of possible fiscal adjustment. Stefani (2014) analyzes 178 arrangements over 2002 and 2012 to evaluate whether IMF considers the threat of domestic social unrest when defining fiscal adjustment in its programs. The fiscal adjustment is calculated by comparing the fiscal balance target at the end of the first year of the program to the pre-program level. Using a panel model, the results indicate that domestic political conditions indeed shape the magnitude of fiscal adjustment: one standard deviation increase in social conflict measures implies a reduction of $1 - 1.5\%$ of the envisaged fiscal adjustment.

Some works also aim to raise evidence about specific roles of IMF programs and conditionalities. Mody and Saravia (2006) performs an empirical analysis of the IMF catalytic role. Specifically, the argument is that if IMF programs work as commitment devices, one should observe a positive effect of programs on spreads paid on the bonds issued by the

[5] The performance is evaluated comparing the overall fiscal balance (in percentage of GDP) one year, two years and three years after the program had ended to the pre-program value.

[6] The econometric strategy follows the Heckman two-stage procedure.

[7] The comparison is between the value of the dependent variables in the end year of the program and one year before the program.

[8] Three measures of compliance are employed: the share money agreed upon that is actually disbursed; a dummy for program suspension and a dummy for program interruptions.

participating countries[9]. They do find evidence that spreads are reduced once a program is on course, but only when country fundamentals are in an intermediary range, i.e, they have not deteriorated in a way that program and country efforts are hopeless. Therefore, a Fund program may act as "good housekeeping" seal of approval only when the program is viewed as likely to lead to policy reform, and when fundamentals have not deteriorated significantly [10].

In the same vein, Marchesi (2003) develops an empirical analysis to evaluate whether IMF programs and conditionality work as a screening device. In particular, the objective is to verify if there is a robust empirical relationship between the adoption of a Fund program and the concession of a debt rescheduling by private (commercial) creditors. The estimation is performed using a bivariate probit model to control for endogeneity due to self-selection. The results suggest that IMF programs can work as a "seal of approval", since countries with a program are more likely to obtain a rescheduling of their external debt.

2.2.2 Determinants of Participation and Conditionality

A significant side of the empirical literature of IMF, mainly in political science, focus on the determinants of program participation and conditionalities, which is also of our interest in this dissertation. In particular, the objective is to raise evidence of a supposed political influence over IMF lending decisions by its major shareholders. Basically, these works do provide evidence of a political influence over Fund's decisions.

Thacker (1999) is one of the first works to test empirically the influence of the US over the IMF. The motivation for suspecting that politics matters is the fact that empirical studies have found that borrowers with low rates of compliance with conditionality still obtain future loans, i.e, the Fund does not punish bad borrowers. The empirical estimation uses a political proximity variable, which measures the change in the voting compliance index of the country with the US in UNGA. The results strongly support the argument that countries moving towards US political preferences have greater probabilities of getting a loan, controlling for economic determinants of participation.

Using the data of Thacker (1999), Andersen, Harr and Tarp (2006) test the importance of political proximity with the US as a determinant of IMF lending decisions. The IMF allocation problem is posed as a mechanism design approach and the US allocates IMF loans trough an all-pay auction-type mechanism. In this case loan allocation probabilities are

[9] They argue that problem of endogeneity is less severe since individual bonds are unlikely to trigger an IMF program.

[10] According to the authors, the empirical evidence follows theoretical predictions of the catalytic effect, as Corsetti, Guimaraes and Roubini (2006).

increasing in the size of political concessions[11]. The empirical model tests the hypothesis that countries that make the highest political payment also gets the greater probability of receiving a loan. The results support the argument that the US influences how the Fund allocates its loans.

In a common agency framework of the IMF, Copelovitch (2010) aims to explain the substantial variations observed in lending policies. In this approach, the Fund's largest shareholders (G5 countries) act collectively as the Fund's political "principal", while the staff represents the "agent". The main conclusion is that if one wants to understand Fund's decisions, both staff and G5 preferences (intensity and heterogeneity) should be taken into account [12]. The econometric model uses a propensity score matching technique to estimate two regressions: one for the loan size (in percentage of the quota) and the other for the number of conditions. When the requesting country is of greater political importance to G5 governments, preference heterogeneity in the Executive Board leads to larger loans [13]. In terms of conditionality, IMF staff has a greater power in defining the number of conditions in a particular loan, reflecting economic considerations.

Dreher and Jensen (2007) is of particular interest to our work. The empirical analysis is conducted to evaluate two concurrent hypothesis. The first one stress that IMF conditionality (its number) depends mainly on domestic economic factors (real GDP growth, inflation rate, government budget deficit, among others.). The other possibility is that the IMF sets fewer conditions for countries with greater political proximity to US, measured by the voting compliance variable. The data consists on 206 initial Letters of Intent from 38 countries between 1997 and 2003. Using a panel regression (with fixed time and country effects) the main result suggests that political proximity is by far the most important determinant of conditionality: countries closer aligned with US (and G7 countries) receive a substantial reduction in the number of conditions. In a similar work and with the same implications, Dreher, Sturm and Vreeland (2010) investigate the political influence over IMF conditionality, estimating whether elected members of the United Nations Security Council receive favorable treatment from the Fund. The results indicate that members of the council indeed receive a significant reduction (30%) in the number of conditions.

Woo (2013) also investigates the political and economic determinants of the number of

[11] Political concession is defined as the difference between a country's actual policy position and its true political preferences,measured relative to US position. They construct a proxy variable to capture country's actual political position.

[12] Preference intensity is measured by geopolitical (UNGA voting affinity)and financial linkages (G5 commercial bank exposure) of the country with G5. Preference heterogeneity is the coefficient of variation of the voting affinity and bank exposure.

[13] The argument is that there is a "logrolling" behavior: G5 countries may disagree over the size and terms of a specific program but still support the demands of their most interest counterparts in the hopes of receiving similar treatment in the future for their own preferred borrowers.

conditions, analyzing 268 initial Letters of Intent[14]. Contrary to Dreher and Jensen (2007), after controlling for domestic political variables (and economic factors) the proximity (measured by the voting compliance variable in the UNGA) of the country to the US does not reduce the number of fiscal conditions. The explanation for this is that since fiscal conditionality is the most difficult to implement, one should expect that domestic political constraints will have a greater influence over Fund's decisions[15]. On the other hand, the results suggest a reduction in financial sector conditions for countries more aligned with the US.

[14] The argument for using only initial Letters of Intent is that its revisions produce only minor modifications to the initial program design.

[15] The argument is that the Fund is interested in the success of the program. Then it may prefer to impose fewer conditions if domestic political conditions are adverse.

3 Data Base

Our data comes mainly from the Monitoring of Fund Arrangements (MONA) of the IMF, which contains information about conditionalities, program goals and monitoring. In MONA, conditionalities are classified according to their type (prior actions, quantitative performance and structural benchmarks) and the targeted sector (fiscal, monetary, financial reform, among others). We will consider the total number of conditions and the number of fiscal conditions only. In the first case, we follow many empirical works, which aim to evaluate the determinants of the total number of conditions. In the last case, we restrict our analysis to fiscal conditions because we are particularly interested in fiscal adjustments. Since we do not intend analyzing a specif type of condition, we aggregate prior actions, quantitative, and structural conditions.

We also use MONA data to construct our fiscal adjustment variable, since it makes available the envisaged overall government balance for each year of the program. Then we can compare the target for the second year of the program to the pre-program balance, obtaining our measure of fiscal conditionality[1]. Other economic explanatory variables come from the World Economic Outlook (WEO/IMF), World Bank and Unctad. The political proximity variable, which describes the percentage of votes in which the borrowing country votes in the same way as G5 countries in a given year at United Nations General Assembly (UNGA) comes from Strezhnev and Voeten (2013). A complete description of our data is available in the Appendix A.

Our sample consists on 184 programs approved between 1999 and 2012 for 79 countries. The analysis of program adjustments and conditionalities focus on initial program design because this is when its broad outlines are set[2].

3.1 Data Treatment and Some Facts

In this section, we present some general facts about our data and explain how we treat our main variables. Figure 1 shows the distribution of conditionalities in structural benchmarks (which includes prior actions) and quantitative performance criteria. For the period, a program contained an average of 19 conditions, with 11 structural benchmarks and 8 quantitative performance. We also note that from 2002 structural benchmarks started to represent the

[1] Stefani (2014)defines fiscal adjustment in a similar way, but the target is the value at the end of the first year of the program.

[2] We follow the same method as Woo (2013), which investigates only initial Letters of Intent.

bulk of the conditions attached to a program. This fact reflects a greater presence of the Fund in the design of institutional and economic reforms.

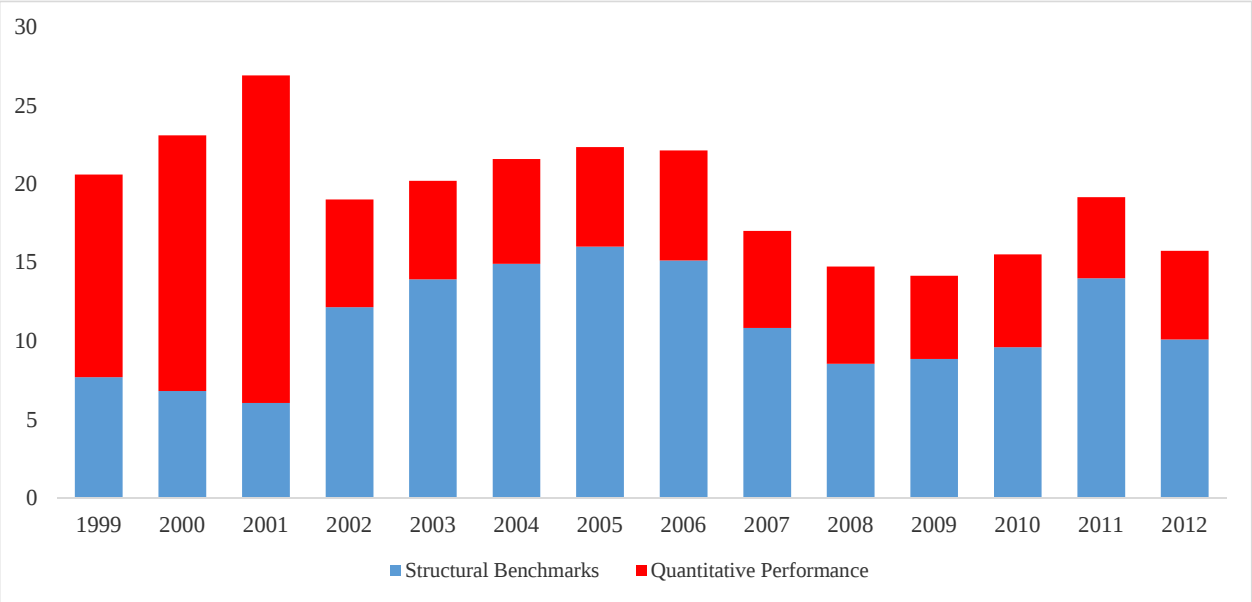

Figure 1 – Distribution of Conditions

Fiscal conditions are a common feature in IMF programs. Table 1 indicates that for our sample 42% of all conditions are fiscal, an average of 8 per program. Fiscal structural conditionalities represent 62% of all fiscal conditions, indicating that structural fiscal reforms, medium and long-term oriented, are a common objective of these policy measures. A "ceiling on the overall stock of central government debt" is an example of fiscal quantitative conditionality, while the preparation of a "privatization plan for the divestment of state assets and enterprises with the aim to raise at least 1 billion euro a year during the period 2011-2013" is a fiscal structural condition[3].

Table 1 – Distribution of Conditions by Type and Sector

Type / Sector	All Sectors	Fiscal Sector	Other Sectors
Total Average	19	8	11
QPC Conditions	8	3	5
Structural Conditions	11	5	6

Fiscal conditions are distributed in MONA in the following categories: (i) revenue measures, excluding trade; (ii) revenue administration, including customs; (iii) expenditure mea-

[3] These examples were taken from the Greek Letter of Intent, Memorandum of Economic and Financial Policies, and Technical Memorandum of Understanding (December 8, 2010). Such Letter is avaliable in www.imf.org.

sures; (iv) combined expenditure and revenue measures; (v) debt management; (vi) expenditure auditing, accounting, and financial controls; (vii) fiscal transparency (publication, parliamentary oversight); (viii) budget preparation (e.g., submission or approval); and (ix) inter-governmental relations. Following the classification of the Independent Evaluation Office (2003), we also consider as fiscal conditions what is called quasi-fiscal conditionalities, which have an indirect impact on fiscal performance: (i) public enterprise reform, privatization and private sector developments; (ii) social security and pensions; (iii) pricing policy.

Our new measure of conditionality, fiscal adjustment, is the difference between the envisaged overall government balance (in percentage of GDP) by the end of the second year $(t+1)$ of the program and the pre-program level $(t-1)$. Precisely, for a country i with a program approved in year t, the fiscal adjustment is defined as follows:

$$FiscalAdjustment_{i,t} = FiscalBalance_{i,t+1} - FiscalBalance_{i,t-1} \tag{3.1}$$

We adopt the target for the second year in our calculations because it is a better way to compare fiscal adjustment in programs with different time periods. Also, from an economic and political point of view, it seems that an immediate fiscal adjustment costs more than the same consolidation envisaged for a longer period. Therefore, even though some programs last three and four years, we consider a shorter time period. IMF programs defined an average fiscal adjustment of 0.90% of GDP. Table 2 shows the fiscal adjustment by year of program approval. Although in most of the years programs targeted fiscal consolidation, the magnitude of the adjustment differed significantly among the years.

Ideally, we would like to compare the fiscal balance targeted by the program to the fiscal balance the country would pursue without the program. However, in this dissertation we take a simple route and use the pre-program fiscal balance as the basis for comparisons. The drawback of not having a counterfactual is that our measure of fiscal adjustment is noisy, capturing not only the fiscal effort required by a program but also the fiscal effort coming from other reasons. Therefore, it can overestimate or underestimate the independent effect of an IMF program. For example, in the wake of the 2007-2008 financial crisis, programs approved in 2007 defined a target for fiscal balance of -4.04% of GDP for the next year, and our measure of fiscal effort indicates an "adjustment" of -7.02% of GDP. However, with a struggling economy, an even worse fiscal performance could be expected for 2008 in the absence of a program. In this case, our measure of fiscal adjustment is probably underestimating the real fiscal effort required by the IMF. As we will detail in the econometric model, we partially mitigate such problem by using time dummy variables, which allows to control for common shocks affecting different countries in a given year.

Table 2 – Fiscal Adjustment by Year of Program Approval

Year	T-1	T	T+1	Adjustment
1999	-3.02	-3.24	-2.69	0.32
2000	-4.60	-2.25	-1.81	2.79
2001	-5.56	-4.01	-2.92	2.64
2002	-3.60	-3.31	-2.96	0.65
2003	-3.50	-3.12	-2.94	0.55
2004	-3.18	-2.52	-1.80	1.38
2005	-2.39	-2.54	-0.83	1.56
2006	-0.38	-0.91	-0.49	-0.11
2007	2.98	-2.78	-4.04	-7.02
2008	-1.52	-2.46	3.67	5.18
2009	-2.79	-2.82	-2.27	0.53
2010	-6.07	-4.45	-4.24	1.83
2011	-5.29	-5.46	-4.30	0.99
2012	-4.72	-4.73	-3.42	1.30

In our sample, IMF programs can last from one to four years, the majority lasting three years. These three years programs envisaged a fiscal adjustment of 0.90% of GDP on average, while two years programs defined a significantly lower level of adjustment, being the softest among the groups. Table 3 indicates the average number of programs, the average number of fiscal conditions and the average size of fiscal adjustment for each group of program.

Table 3 – Conditions and Adjustment by Programs

Years	N.Programs	Fiscal Adjustment	N.Conditions	N.Fiscal Conditions
One Year	35	1.4	20	7
Two Years	35	0.2	20	8
Three Years	112	0.9	19	8
Four Years	2	3.0	18	8
All Programs	184	0.9	19	8

Finally, as we have argued, the number of conditions, even fiscal conditions, is not a good proxy for program austerity (in this case, fiscal austerity). Figure 2 shows that there is no significant correlation between our two measures of conditionalities. For a given number of fiscal conditions, either a high, moderate or soft fiscal adjustment is possible. This is our first result, which suggests that the two measures of conditionalities are quite different.

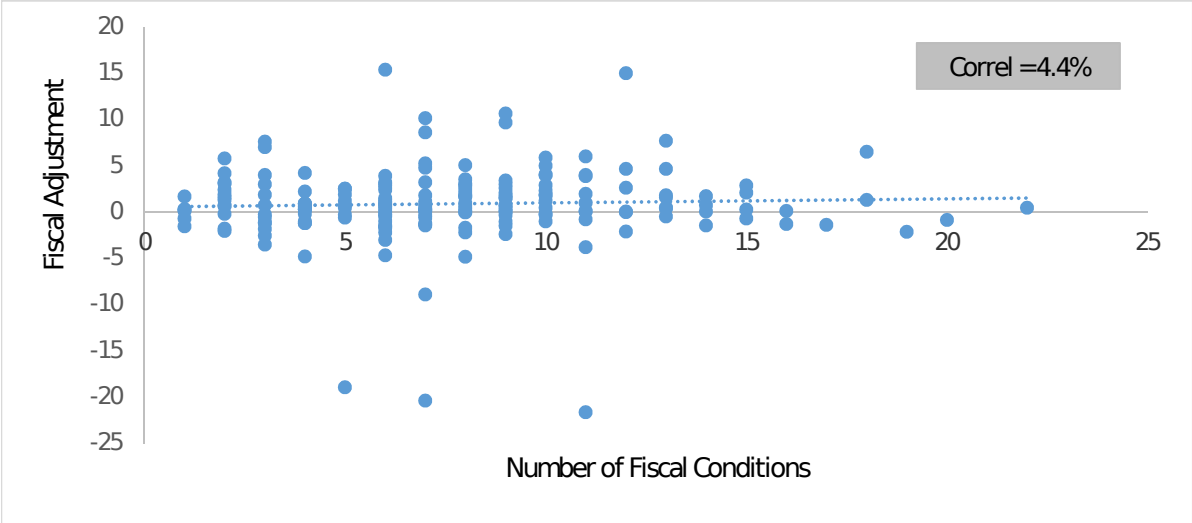

Figure 2 – Correlation: Number of Fiscal Conditions and Fiscal Adjustment

4 Econometric Specification

The econometric model we will use in this paper to study the determinants of conditionalities is similar to the used by Dreher and Jensen (2007) and Stefani (2014). The former uses a panel regression to analyze the economic and political determinants of the number of conditions, while the last focus on the economic and political factors influencing the size of fiscal adjustment in IMF programs.

The specific model we use is the following panel regression:

$$Y_{i,t} = \beta X_{i,t-1} + \delta Votes_{i,t-1} + \gamma Z_{i,t-1} + \alpha_i + \alpha_t + \epsilon_{i,t} \tag{4.1}$$

The dependent variable in 4.1 assumes three possibilities: the total number of conditions, the number of fiscal conditions and the size of fiscal adjustment, defined for country i in a program approved in year t. When $Y_{i,t}$ is the number of conditions, we apply a Poisson specification. This is usually the case when we have a dependent count variable. When the fiscal adjustment is the response variable, we apply a linear panel regression model.

The vector $X_{i,t-1}$ contains the standard economic variables used in the literature of IMF conditionality and fiscal consolidation. These are: (i) GDP growth; (ii) current account balance; (iii) public debt; (iv) government consumption; (v) tax revenue; and (vi) monetary expansion[1]. These variables are lagged by one year to reduce the problem of reverse causality. They also determine program participation. For example, countries with high deficits in the current account may face liquidity crisis. The probability of recurring to the Fund for an assistance package is higher. We could then expect a program with conditionalities aiming the reduction of such external imbalance. Fiscal consolidation is required for several reasons. It may be necessary to achieve medium and long-term debt sustainability. Another goal of fiscal adjustment is to produce efficiency gains. In this case, a reduction in public expenditure (for example) is pursued to reduce the size of the government in the economy, using privatization measures for example[2].

The variable $Votes_{i,t-1}$ represents the political proximity of country i to G5 countries in a given year $t-1$. In particular, it measures the percentage of votes in UNGA in which these countries voted in the same way. As we use a within estimator in the empirical model, what matters is not the absolute political proximity, but the change in the absolute alignment.

[1] Current account balance, public debt, government consumption and tax revenue are measured in percentage of GDP.

[2] See Independent Evaluation Office (2003) for a discussion about the economic determinants of fiscal adjustment in IMF programs.

As we have discussed in the literature of IMF conditionality, a closer political proximity between the requesting country to Fund's major shareholders is usually associated with a reduced number of conditions. In our work, we will test this hypothesis. In addition, we empirically test if this result maintains when the dependent variable in equation 4.1 is the fiscal adjustment. Given our argument that the number of conditions is not a good proxy for program austerity, if political proximity does not affect the size of fiscal adjustment (or in an unexpected direction) we may question the common argument that IMF lending decisions are influenced by the political interests of its major shareholders.

Moreover, we will test the impact of variables measuring the incentives that a borrowing country has to default on its debt. The vector $Z_{i,t-1}$ contains the economic variables used in empirical literature of sovereign default[3]. These are: (i) trade openness, given by the sum of exports and imports normalized to GDP; (ii) FDI (net flows and stock) in percentage of GDP; (iii) size of financial sector, measured by bank assets (in percentage of GDP) and private credit offered by banks (also in percentage of GDP). Importantly, bank assets is an adequate measure of bank's exposure to public debt since it includes claims on central government. Variables in $Z_{i,t-1}$ are also lagged by one year to reduce problems of reverse causality. We expect that for countries in which the cost of default is higher, the number of conditions is reduced since the problem of commitment is less severe. In terms of fiscal adjustment, we could expect that countries with higher cost of default are willing to pursue a tighter fiscal policy to avoid a greater output loss that would occur in the event of default.

The terms α_t and α_i in equation 4.1 correspond to time fixed effects and time-invariant unobserved heterogeneity, respectively. The last term is the random error. Since we employ a panel data model, our identification strategy relies in within country variation in the variables defined in right hand side of equation 4.1. Therefore, the effects on the number of conditions and size of fiscal adjustment come from changes in the economic and political variables for a country between programs approved in different years. In this sense, each country serves as its own "control group". The use of time fixed effects partially mitigates the noisy of our fiscal adjustment variable. This is because the inclusion of time dummy variables helps to control for fluctuations over time in the economic variables that affect the size of fiscal adjustment. In years of economic crisis, for example, it is possible that IMF programs define softer fiscal adjustments for the requesting country, even with a deterioration in fiscal balance. In the case of lack of private demand to foster economic recovery, running fiscal deficits may be a

[3] Rose (2005) mentions the losses from declining trade after the episode of default to explain why countries repay their debt. Fuentes and Saravia (2010) empirical work provides evidence that countries defaulting in their debt are excluded from international capital markets (in this case, FDI flows). A domestic financial disruption after the government defaulting is also pointed out as an incentive for countries to repay their debt (Gennaioli, Martin and Rossi (2014)).

source of growth. If we do not include this time effect, we will incorrectly conclude that a deterioration in fiscal balance is associated with softer fiscal adjustments, when this lower fiscal consolidation is due to external shocks hitting the economy.

An advantage of using a panel model, and the fixed effect approach in particular, is that we reduce the problem of endogeneity caused by omitted variables. In our view this method is adequate because it captures the country's "natural" propensity to default on its debt or, similarly, to adopt a particular fiscal policy. In this context, the empirical work of Norambuena (2014) aims to understand why emerging market economies default even with low levels of external debt. The main result shows that countries with similar economic fundamentals and default history show different propensities to default. In fact, the results indicate that default risk variation across those economies can be mainly attributed to persistent specific country characteristics. In other words, different political, ideological, and historical features that shaped country's institutions explain a lot of default risk and default episodes. Therefore, countries with relatively high levels of external debt can still have low risk of default because of its institutional backgrounds.

We include this unobserved heterogeneity in our model to reduce this risk of endogeneity bias. It could be the case that countries with "better institutions" are more likely to adopt a program (once a crisis occur) and less prone to default on their debt. If fiscal adjustment is a way for countries to signal their commitment to avoid a default, then we could expect a softer fiscal adjustment for these countries. For example, as Norambuena (2014) empirical results indicate, if countries with better institutions can sustain higher levels of debt, we would then incorrectly obtain a negative impact of public debt over the size of fiscal adjustment. In other words, we would conclude that countries with higher levels of public debt adjust less when in reality they adjust less because their sound institutions make them less prone to default.

Another methodological issue is the fact that our "treatment" is uniform, i.e, we are considering that countries and programs are subjected to the same policy prescriptions defined in an IMF program. Formally, this is equivalent to say that the parameters in equation 4.1 are homogeneous, across time and between countries. However, countries and programs are very different. Low-incomes countries usually have worse economic fundamentals and deeper structural imbalances at the time of the program. Accordingly, the objectives defined in a program for such countries envisage different policy instruments and targets. In particular, concessional loan facilities, available for poor countries, usually define larger and deeper economic reforms, aiming to restore growth and poverty reduction. In this dissertation, we choose to follow a simpler approach, considering the "treatment" uniform. The main reason for this is that we have a relatively low number of programs and countries observations to make robust inferences.

The summary statistics of all the variables included in our panel regression are presented in Table 4. The sources used to obtain all the data are described in the Appendix A.

Table 4 – Summary Statistics

Variable Name	Mean	Standard Deviation	Max	Min
Number of Conditions	19.87	10.78	74	2
Number of Fiscal Conditions	7.62	4.12	22	1
Votes (%)	47.43	17.36	82.93	0
FDI Net Flow (%GDP)	4.05	4.74	37.16	-4.36
FDI Stock (%GDP)	31.44	43.1	492.9	0.08
Bank Assets (%GDP)	30.36	31.98	275.38	0
Private Credit (%GDP)	35.86	31.61	198	-11.22
Trade Openness (%GDP)	74.98	36.05	280.22	21.25
Current Account Balance (%GDP)	-5.98	6.82	13.7	-47.2
Money Growth (%)	18.32	40.70	514.12	-50.81
GDP Growth (%)	3.51	4.87	33.6	-14.8
Public Debt (%GDP)	68.06	56.98	494.93	5.98
Government Consumption (%GDP)	29.16	10.11	55.39	13.41
Tax Revenue (%GDP)	25.72	9.99	61.04	8.04

5 Empirical Results

In this chapter, we present and discuss our main empirical results. Our objective is to test how our two measures of conditionalities respond to the economic and political factors detailed in the econometric model.

5.1 Results for Number of Conditions

In this section we discuss the results considering the number of conditions, both total and fiscal, as the dependent variables in equation 4.1. First, we present the results for the total number of conditions. In the first column of Table 5, we include only the economic variables usually employed in empirical works, as in Dreher and Jensen (2007). In this case, only the monetary expansion is statistically significant, and with an unexpected impact. As Dreher and Jensen (2007) argues, high rates of monetary growth are usually associated with bad macroeconomic policies, and one should then expect the inclusion of conditions to reduce such excessive growth.

We include our political proximity variable in the next specifications. In column 2, we observe that an increase in political proximity of a given country to G5 members is associated with a reduction in the number of conditions. In terms of magnitude, one standard deviation increase in vote compliance reduces the number of conditions by 12%. With the exception of money growth, no other economic variable has an impact over the number of conditions.

We add the variables measuring the incentives that the borrowing country has to default on its debt in the next specifications. The variables bank assets and trade openness are statistically significant at conventional levels. In terms of other economic variables, no significant impact was found, with the exception of monetary expansion. The impact of the political variable, in column 5, is similar to the obtained before: one standard deviation increase in political proximity reduces the number of conditions by 13%.

The estimation results in column 3 indicate that an increase in the size of bank assets of a given country reduces the number of conditions attached to a package. One standard deviation increase in this variable reduces the number of conditions by 23%. In this case, the commitment argument seems to play a role. Countries have greater incentives to avoid a sovereign default episode when the financial disruption channel is more severe. In other words, the policy measures that the IMF would like to prescript would be adopted even without the program.

Table 5 – Regression Results - Number of Total Conditions

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Votes		-0.007*	-0.002	-0.004	-0.008**	-0.006	-0.006
		[0.004]	[0.004]	[0.004]	[0.004]	[0.004]	[0.004]
Current Acc. Balance	-0.008	-0.008	-0.007	-0.01	-0.01	-0.004	-0.006
	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]
Money growth	-0.003***	-0.003***	-0.003***	-0.002***	-0.003***	-0.003***	-0.003***
	[0.0005]	[0.0005]	[0.0005]	[0.0005]	[0.0008]	[0.0005]	[0.0004]
GDP growth	0.003	0.003	0.0006	0.001	0.004	0.005	-0.004
	[0.008]	[0.008]	[0.009]	[0.008]	[0.008]	[0.007]	[0.008]
Public Debt	0.001	0.001	0.002	0.002	0.001	0.001	0.001
	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Tax Revenue	0.007	0.01	0.01	0.006	0.01	0.01	0.01
	[0.01]	[0.01]	[0.01]	[0.009]	[0.01]	[0.01]	[0.01]
Gov. Consumption	0.001	-0.005	-0.01	-0.003	-0.007	-0.005	-0.01
	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]
Bank Assets			-0.008*				
			[0.004]				
Domestic Credit				-0.006			
				[0.004]			
FDI Net Flow					-0.01		
					[0.02]		
FDI Stock						0.006	
						[0.005]	
Trade Openness							0.008**
							[0.003]
Time Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N Obs	101	101	101	101	101	101	101
Pseudo R-squared	0.06	0.06	0.07	0.07	0.06	0.06	0.07

*** p<0.01, ** p<0.05, * p<0.1. Robust standard errors in brackets

The impact of trade openness is unexpected. Countries more opened to trade should get fewer conditions because the problem of commitment is also less severe for them . A possible explanation for this unexpected result can be found in Martinez and Sandleris (2011). Their empirical findings suggest that the decline in trade observed after the event of default can not be attributed to sanction mechanisms[1]. In this case, trade linkages do not provide strong incentives to the borrowing country to adopt measures to avoid default. The IMF should then impose conditionalities[2].

In Table 6 we analyze the determinants of the number of fiscal conditions. First of all, the impact of the political proximity variable is reinforced, since Votes is significant in all specifications. The magnitude of the impact is also higher, since one standard deviation increase in voting compliance of a given country reduces the number of fiscal conditions by 29% (the average in specifications). This result is qualitatively similar to the obtained by Dreher and Jensen (2007). In fact, their results indicate that the reduction of conditions occurs only in the fiscal sector.

The results for fiscal conditions reinforce the lack of evidence of economic determinants of the number of conditions. We should expect an increase in the number of fiscal conditions when the size of public debt is larger or when the tax revenue ratio is too low. However, only monetary expansion remains consistently significant across the specifications, and with an unexpected sign.

As before, the coefficient of bank assets and trade openness are statistically significant. In addition, the other variable measuring the size of financial sector, private credit, has a significant impact on the number of fiscal conditions. One standard deviation increase in bank assets and private credit is associated with reductions of 38% and 36% in the number of fiscal conditions, respectively.

In sum, the number of conditions seems to be mainly influenced by the political proximity variable. Therefore, our results are closely related to those obtained in other empirical works, as in Dreher and Jensen (2007) and Woo (2013). Importantly, we do not find evidence that economic factors systematically influence the number of conditionalities included in an IMF program. In addition, the argument of commitment device for the use of conditionality seems to play a role when we consider the size of the domestic financial sector.

[1] Their empirical results does not evidence for bilateral or multilateral punishment mechanisms.

[2] Note that this empirical result is the opposite to the theoretical results obtained in Fafchamps (1996)

Table 6 – Regression Results - Number of Fiscal Conditions

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Votes		-0.02***	-0.0009*	-0.01**	-0.02***	-0.02***	-0.02***
		[0.006]	[0.005]	[0.005]	[0.006]	[0.006]	[0.006]
Current Acc. Balance	-0.0003	0.0006	0.004	-0.005	-0.003	-0.001	0.002
	[0.01]	[0.01]	[0.009]	[0.01]	[0.01]	[0.01]	[0.01]
Money growth	-0.002***	-0.003***	-0.003***	-0.002***	-0.003***	-0.003***	-0.003***
	[0.0009]	[0.0006]	[0.0009]	[0.0007]	[0.001]	[0.0007]	[0.0007]
GDP growth	0.01	-0.002	-0.005	-0.006	0.0001	-0.003	-0.008
	[0.007]	[0.008]	[0.009]	[0.008]	[0.008]	[0.009]	[0.009]
Public Debt	0.0002	0.0005	0.002	0.001	0.0003	0.0007	0.0005
	[0.002]	[0.001]	[0.001]	[0.001]	[0.002]	[0.002]	[0.002]
Tax Revenue	0.01	0.02	0.03*	0.01	0.02*	0.02	0.02
	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]
Gov. Consumption	-0.003	-0.02	-0.03*	-0.01	-0.02	-0.02	-0.02
	[0.02]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.02]
Bank Assets			-0.02***				
			[0.004]				
Domestic Credit				-0.01***			
				[0.003]			
FDI Net Flow					-0.02		
					[0.02]		
FDI Stock						-0.003	
						[0.006]	
Trade Openness							0.006**
							[0.003]
Time Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N Obs	101	101	101	101	101	101	101
Pseudo R-squared	0.10	0.11	0.11	0.11	0.12	0.12	0.12

*** p<0.01, ** p<0.05, * p<0.1. Robust standard errors in brackets

5.2 Results for Fiscal Adjustment

We now present the results of equation 4.1 considering the fiscal adjustment. Since we employ the same econometric model when the number of conditions was the dependent variable, we only highlight the main conclusions.

Our main empirical result indicates that fiscal adjustment in IMF programs is primarily based on economic factors. As the coefficients of government consumption and tax revenue ratios indicate, the size of fiscal adjustment increases when the deterioration of fiscal balance is larger. As one should expect, the rationale behind fiscal consolidations in IMF programs seems to be the restoration of budget discipline.

On average, the size of fiscal adjustment increases by 0.62% of GDP when the government consumption ratio increases by 1%, and reduces by 0.67% of GDP when the tax revenue ratio increases by 1%. One should expect deeper fiscal consolidation when the size of public consumption increases. First, a larger government expenditure ratio will be associated with a deterioration in fiscal balance (all else constant), which will require a larger fiscal adjustment to restore budget discipline. In addition, with a higher government consumption ratio, there is more room to adopt expenditure cut measures that will contribute to reduce the size of fiscal imbalance. Wage bill controls, limits or cuts in public employment, and the streamline of social benefits are examples of such restrictive fiscal measures. When the tax revenue ratio increases, the requirement of large fiscal adjustment reduces. If the government expands its tax revenue and maintains the level of expenditures, there is an improvement in the fiscal balance, which will reduce the argument of fiscal adjustment. Also, there is less space to increase tax collection when government revenues are already large in proportion to GDP. In this case, other sources should be used to achieve fiscal austerity. The introduction of property tax and the elimination of tax exemptions to special sectors are examples of revenue measures with the objective of increasing tax collection and improving fiscal performance.

We also observe that the political proximity variable is not significant in any case. This finding is similar to the obtained by Stefani (2014). In terms of the variables measuring the incentives that a country has to repay its debt, only bank assets has a significant impact, statistically and economically. One standard deviation expansion in bank assets is associated with an increase of fiscal adjustment by 0.44% of GDP. A possible explanation for this results is that countries may pursue (or agree with) tighter fiscal policies when the potential event of post-default credit crunch is more severe.

Table 7 – Regression Results - Fiscal Adjustment

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Votes		0.07	0.03	0.07	0.05	0.07	0.06
		[0.04]	[0.04]	[0.05]	[0.04]	[0.04]	[0.04]
Current Acc. Balance	0.04	0.04	0.03	0.04	0.007	0.04	0.03
	[0.08]	[0.08]	[0.08]	[0.08]	[0.09]	[0.09]	[0.08]
Money growth	-0.007	-0.006	-0.005	-0.006	-0.01	-0.006	-0.006
	[0.007]	[0.006]	[0.005]	[0.006]	[0.008]	[0.007]	[0.006]
GDP growth	0.008	0.06	0.07	0.06	0.08	0.06	0.09
	[0.07]	[0.07]	[0.07]	[0.07]	[0.08]	[0.07]	[0.08]
Public Debt	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
	[0.02]	[0.02]	[0.02]	[0.02]	[0.02]	[0.02]	[0.02]
Tax Revenue	-0.64**	-0.67***	-0.68***	-0.67**	-0.65**	-0.67**	-0.68***
	[0.26]	[0.26]	[0.26]	[0.26]	[0.27]	[0.26]	[0.26]
Gov. Consumption	0.56**	0.62**	0.66***	0.63**	0.59***	0.63**	0.65**
	[0.25]	[0.25]	[0.25]	[0.26]	[0.26]	[0.28]	[0.25]
Bank Assets			0.06*				
			[0.03]				
Domestic Credit				-0.005			
				[0.03]			
FDI Net Flow					-0.23		
					[0.23]		
FDI Stock						0.007	
						[0.05]	
Trade Openness							-0.04
							[0.03]
Time Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N Obs	140	143	143	143	142	141	140
R-squared	0.48	0.49	0.51	0.49	0.50	0.49	0.50

*** p<0.01, ** p<0.05, * p<0.1. Robust standard errors in brackets

Concluding Remarks

In this work, we perform an empirical analysis of the economic and political determinants of IMF conditionality. Our main contribution consists on the construction of a new measure of conditionality, fiscal adjustment. We choose fiscal adjustment because it is a common feature in IMF programs and describe in a suitable way the economic and political costs of a program. We then compare this new measure of conditionality to the most used in the literature, the number of conditions. We proceed in this way because we consider the number of conditions an inadequate proxy for program austerity and to perform program comparisons.

Our empirical results indicate that these two measures of conditionalities are quite different, and such heterogeneity should be consider when evaluationg the content of an IMF program. We do not find any significant correlation between the number of conditions and the size of fiscal adjustment. This result indicates that a large fiscal adjustment is possible even with a relatively low number of conditions, and vice-versa. Our regression results corroborate our argument that these two measures differ significantly. We found that the political proximity of the borrowing country to the G5 countries is the main determinant of the number of conditions, specially fiscal conditions. Therefore, we obtain the same result as the literature, with countries closely aligned with G5 members receiving less conditions. However, when the fiscal adjustment is the dependent variable, the main conclusion is that economic factors guide the size of the adjustment, as one should expect. In particular, fiscal consolidation in IMF programs aims to reduce fiscal deficits.

Despite these interesting results, this work is preliminary and several improvements should be pursued for future research. Importantly, our measure of fiscal adjustment captures only partially the independent effect of an IMF program. A method for constructing the counterfactual of fiscal policy would provide better insights.

A Appendix

A.1 Data Base Sources

Table 8 – Data Source

Variable Name	Measure	Source
Number of Conditions	Number	MONA
Number of Fiscal Conditions	Number	MONA
Votes	%	UNGA Voting Data 2013
Overall Government Balance	% GDP	MONA
Goverment Consumption	% GDP	WEO/IMF
Tax Revenue	% GDP	WEO/IMF
Public Debt	% GDP	WEO/IMF
Monetary Expansion	%	WEO/IMF
Current Account Balance	% GDP	WEO/IMF
GDP Growth	%	WEO/IMF
Bank Assets	% GDP	World Bank Financial Database
Private Credit	% GDP	World Bank Financial Database
FDI Net Flows	% GDP	Unctad
FDI Stock	% GDP	Unctad
Trade Opennes	% GDP	Unctad

A.2 Greece - Letter of Intent (May,2014)

Quantitative Performance Criteria

- Floor on the modified general government primary cash balance.
- Ceiling on state budget primary spending.
- Ceiling on the overall stock of central government debt.
- Ceiling on the accumulation of new external payments arrears on external debt contracted or guaranteed by general government.
- Ceiling on the stock of domestic arrears.
- Floor on privatization receipts.

Structural Benchmarks

- Ministry of Finance to produce a comprehensive list of nuisance taxes and levies, and eliminate them or transfer them (and the associated spending) to the central government budget.
- Adopt VAT reform to streamline rates and simplify administration.
- Adopt legislation on a new property tax regime.
- Government to meet quarterly performance indicators (KPIs) for revenue administration.
- Government to meet quarterly performance indicators for public financial management.
- Adopt legislation to reform the system of social security contributions to: (i) broaden the contribution base; (ii) simplify the contribution schedule across the various funds; and (iii) reduce contribution rates by 3.9 percentage points. The reforms will be fully phased in by January 1, 2016 and will be revenue neutral and preserve the actuarial balance of the various funds.

Prior Actions

- Government to lock in lower spending of 320 million euros from permanent savings in 2013 by revising binding expenditure ceilings in the 2015-18.
- Implement several measures to eliminate RES debt by end-2014.
- Government to place additional public sector employees in the mobility scheme to reach 25,000 employees, and to achieve 5,000 exits in the public sector .
- Adopt secondary legislation to the Income Tax Code and the Tax Procedure Code.
- Abolish 40 charges with an annualized cost of 245 million euros.
- Adopt 237 of the OECD recommendations to remove barriers to competition in four sectors (tourism, retail, building materials, and food processing).
- Adopt legislation to reduce minimum wage for long-term unemployed.

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