

The determinants of IMF fiscal conditionalities: economics or politics?*

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Abstract

Conditionalities, measures that a borrowing country should adopt to obtain loans from the International Monetary Fund (IMF), are pervasive in IMF programs. This paper estimates the effects of political and economic factors on the number of conditions and on the size of fiscal adjustment requested in an agreement. As found in the literature, political proximity of the borrowing country to the Fund's major shareholders has an important effect on the number of conditions. However, the magnitude of fiscal adjustment requested by the IMF is strongly affected by the size of a country's fiscal deficit but not by political proximity. We also find a very small correlation between the number of conditions and the requested fiscal adjustment.

KEYWORDS: IMF; conditionalities; fiscal adjustment; political proximity; fiscal deficit

JEL CLASSIFICATION: F33; F53; H62; H63

1 Introduction

The IMF is often criticized for its allegedly politically oriented behavior. In particular, politics are said to play a key role in determining IMF conditionalities, the set of policies that borrowing countries agrees to uphold. The implication would be that a country's connections in the international political arena impact the level of austerity in IMF programs.¹

Corroborating this view, one important finding in the literature is that the number of conditions in an agreement between the IMF and a country is affected by its political proximity to the Fund's main shareholders. Since a fundamental component of IMF conditionalities is a target for the government budget balance, [Dreher and Jensen \(2007\)](#) conclude that “for

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¹A similar argument is made for World Bank aid conditionalities. See [Kilby \(2009\)](#).

countries that are not strongly allied with the United States, the IMF would restrain fiscal and monetary policy expansion by setting tight conditions on loans.”

However, the number of conditions in an IMF program is not an accurate measure of its level of austerity. This paper estimates the effects of political and economic factors on a different measure of stringency of IMF programs: the size of fiscal adjustment requested in an agreement between the IMF and a country’s authorities (henceforth the requested fiscal adjustment). This is defined as the difference between the requested target for the government budget balance (as proportion of GDP) and its pre-program value. We see the requested fiscal adjustment as a better proxy for program austerity. The implementation of fiscal discipline can be politically costly and often leads to social unrest.² One of the most common criticisms of IMF programs is indeed the prescription of fiscal consolidation, which could aggravate economic downturns.³

In order to measure the political proximity of a country to the IMF’s major shareholders, we turn to the records on the United National General Assembly (UNGA) voting patterns. The political proximity variable consists of the proportion of occasions in which a country votes in the same way as G5 members in UNGA.⁴ G5 countries (United States, United Kingdom, Germany, Japan, and France) hold 36.19% of voting power in the IMF Executive Board, exercising *de facto* control over lending decisions.⁵

We build a data set comprising information from 143 programs and 52 countries in the period between 1999 and 2012. Our empirical analysis employs country fixed effects and time fixed effects, so identification comes from variations in economic and political factors in a given country. This is important because cross-country variation of default risk is strongly affected by persistent country specific characteristics. While a five percent fiscal deficit might be too large for a country but quite manageable for another, an increase in the fiscal deficit by a couple of percentage points for a given country in a few years is more likely to correspond to a larger need for fiscal adjustment. Nevertheless, random-effect estimations yield qualitatively similar results.

²Passarelli and Tabellini (2013) analyze 19 OECD countries from 1975 to 2008 and show that a fiscal adjustment of 1% of GDP is associated with an increase in the number of riots by 20%. Based on episodes of fiscal retrenchments in Europe during the period 1919-2008, Ponticelli and Voth (2011) provide strong evidence of a causal relationship between spending cuts and the occurrence of social unrest.

³The jury is still out on the short-term effects of fiscal adjustment. Based on a narrative approach, Guajardo et al. (2014) find that discretionary fiscal consolidations have contractionary effects on GDP. In contrast, Alesina et al. (2015) construct multi-year exogenous fiscal plans and provide evidence that spending-based adjustments have little or no negative effects and Diniz (2016) finds short-lived contractionary effects for tax increases only. In addition, the fiscal multiplier seems to greatly depend on country characteristics (Ilzetzki et al. (2013) find negative multipliers when debt levels are high) and on expectations about future policy adjustment (Corsetti et al. (2012) find that expected spending reversals alter the short run effects of fiscal policy).

⁴Voting patterns in UNGA have been found to matter for a variety of issues, including: the allocation of foreign aid (Alesina and Dollar (2000)); patterns on international trade (Umana Dajud (2013)); and connections between domestic and international politics (Dreher and Jensen (2013)).

⁵Data on country’s voting shares are available at <https://www.imf.org/external/np/sec/memdir/eds.aspx>.

As found in the literature, political proximity of the borrowing country to the Fund’s major shareholders (the G5 countries) has an important effect on the number of fiscal conditions in an IMF agreement: countries closely aligned with the key members of the Fund receive a significant reduction in the number of conditions. However, the fiscal adjustment requested by the IMF is strongly affected by the size of a country’s fiscal deficit, whilst political proximity to G5 countries has no significant effect on this measure. The results for both measures of stringency of conditionalities are thus very different, but that is because they are completely different indicators: the correlation between the number of fiscal conditions and the requested fiscal adjustment is only 0.06 in our sample.

The effect of fiscal variables on our measure of stringency of IMF programs is large. An increase in the fiscal deficit by one percentage point increases the required fiscal adjustment by around 0.5%. The required fiscal adjustment is thus mainly determined by a country’s fiscal outlook. According to our results, the stringency of IMF conditionalities is mostly driven by economic factors, not by politics.

The remainder of the introduction discusses the related literature. Section 2 then describes the data, Section 3 presents the econometric methodology and Section 4 shows the results. Finally, Section 5 draws some conclusions.

1.1 Related Literature

A branch of the empirical literature about the IMF focuses on the determinants of program participation and the design of conditionalities.⁶ Much of this work studies whether foreign policy interests of the major members of the Fund affect its lending decisions. The widely used indicator for the degree of political affinity between a country and the Fund’s main shareholders is a compliance index in the voting pattern at the UNGA.

Thacker (1999) provides one of the first empirical analysis of the political influence of the United States (US) over IMF lending decisions. Considering similarity on key votes, the results strongly support the argument that moving towards US political preferences raises the probability of a country getting a loan.⁷ Andersen et al. (2006) study the allocation of loans by the IMF as a mechanism design problem and obtain that loan allocation probabilities are increasing in the size of political concessions.⁸ This theoretical prediction is corroborated by their empirical analysis. The results in Barro and Lee (2005) and Presbitero and Zazzaro

⁶The theoretical literature on the reasons for IMF conditionalities is surveyed in Dreher (2009). In Marchesi and Thomas (1999), IMF conditionalities act as screening device. In Fafchamps (1996), Gonçalves and Guimaraes (2015) and Guimaraes and Iazdi (2015), conditionalities help to deal with time inconsistency problems.

⁷According to the US State of Department, key votes are “votes on issues which directly affected United States interests and on which the United States lobbied extensively.”

⁸They measure political concessions by the difference between the overall voting record of a country and the votes on issues considered important by the US Department of State.

(2012) also suggest that political proximity affects Fund’s decisions. Both papers find that countries voting more frequently with the US at UNGA have a greater likelihood of getting a package approved, with larger loans.⁹

Many empirical papers find that IMF loans and conditionalities are responsive to the economic interests of the Fund’s major shareholders and to the domestic political environment of borrowing countries. Previous research has found evidence that private financial institutions of major member countries pressure the IMF for more “bank-friendly” conditions when their financial interests are at stake (Gould (2003)), and that IMF loans are larger for countries highly indebted to American commercial banks (Oatley and Yackee (2004)) and with intense trade linkages to the US (Barro and Lee (2005)). Regarding the role of domestic politics, Caraway et al. (2012) develop a measure for the stringency of labor market conditionalities, and find that countries with stronger domestic labor power receive softer conditions, while Beazer and Woo (2015) presents evidence that a higher number of structural conditionalities jeopardizes reform implementation by reducing government’s policy space for building pro-reform coalitions.¹⁰

Closer to our paper is the work of Dreher and Jensen (2007). Their empirical analysis evaluates whether the number of conditionalities in an IMF agreement depends mainly on domestic economic factors (real GDP growth, inflation rate, government budget deficit, among others) or on political proximity to the US (and G7 countries). The results indicate that political proximity is the most important determinant of conditionalities: countries closely aligned with the United States sign deals with a significantly smaller number of conditions. Similarly, Dreher et al. (2009) estimate whether temporary elected members of the United Nations Security Council (UNSC) receive favorable treatment from the Fund. They find that those members indeed receive a significant reduction in the number of conditionalities. Building on Dreher and Jensen (2007), Woo (2013) finds that political proximity to the US, also proxied by the voting compliance variable, leads to less financial-sector conditions, though the effect on the number of fiscal conditions is not statistically significant.

In a related contribution, Stefani (2014) also uses a measure of the requested fiscal adjustment as a proxy for the stringency of IMF conditionalities, but her objective is different from ours: she studies how domestic politics and the quality of institutions influence the fiscal adjustment requested by the IMF. Since her variables of interest move slowly, she employs a random effects estimation, so identification is given by cross-country variation. She finds that

⁹Reynaud and Vauday (2009) employ a different methodology (common factor analysis) and also find support for the argument that geopolitical considerations help to explain the observed variability in IMF loan sizes. To proxy the geopolitical importance of countries, they use variables related to military power, nuclear energy endowment, and energetic resources.

¹⁰The stringency of conditionalities in Caraway et al. (2012) consists of a weighted sum of the number of conditions, with higher weights given to prior action and performance criteria conditions. In this paper, political proximity to the US has an unexpected positive correlation with stringency of conditionalities.

domestic political conditions indeed shape the magnitude of the requested fiscal adjustment, which is softer for countries where the risks of social unrest are more pronounced.

2 IMF lending and the data

IMF resources are made available under a package that specifies the amount of resources lent to a country and the economic policies to be adopted. The Fund offers several lending instruments, which are designed and made available according to the particularities of the borrowing country and the sources of economic instability. Concessional facilities carry zero interest rates, and are tailored to assist low-income countries, while non-concessional loans are subject to IMF's market-based interest rates and are available for countries in proportion to their quota values. Packages for low-income countries often emphasize other goals rather than macroeconomic adjustment, such as measures for poverty reduction and long-term growth reforms.¹¹

The terms of a loan are negotiated between a country's authorities and the Fund's staff. This process culminates in a Letter of Intent and a Memorandum of Economic and Financial Policies, where the targets and goals of the program are described. These documents are then submitted to the Executive Board, which decides whether the program is approved or not. Once approved, the resources are released (usually in phased installments), and the Fund starts to monitor program implementation. If the evaluation of the Executive Board concludes that the program is off track, it can be suspended temporarily or permanently.

Conditionalities can take different forms:

- **Prior actions:** measures that a country is expected to adopt before the approval of an arrangement. According to the Fund, these conditions are necessary to be adopted right away in order to increase the chances of program success. Elimination of price controls and the passage of an agreed fiscal budget are examples of prior actions.
- **Performance criteria:** these conditions include quantitative targets for macroeconomic variables under the control of national authorities. In case of non-compliance with performance criteria, the Executive Board needs to grant a waiver before a new disbursement is released. A maximum level of government borrowing is an example of a quantitative conditionality.
- **Structural benchmarks:** usually non-quantifiable reform measures which are essential to achieve program goals. Structural conditionalities do not require a waiver in case of

¹¹A detailed description of all types of credit lines offered by the IMF can be found at <https://www.imf.org/external/np/exr/facts/howlend.htm>.

non-compliance. Congressional approval of a fiscal responsibility law is an example of a structural benchmark conditionality.

2.1 The data

Our data comes mainly from the Monitoring of Fund Arrangements (MONA) of the IMF, which contains information about conditionalities, program goals and monitoring. The sample consists of 143 programs approved between 1999 and 2012 for 52 countries with at least 2 programs in the period.¹² Our analysis focuses on the initial program design, mainly because this is when the broad outlines are defined. As an example, the Appendix shows the Letter of Intent of a Stand By Arrangement approved for Greece in 2014.

Ideally, we would like to compare the fiscal balance targeted by the program and the counterfactual fiscal balance. However, the lack of data on historical budget plans limits the scope for computing the fiscal balances we would observe in the absence of IMF programs. One alternative would be to rely on forecasts for the fiscal balance prepared by the IMF's World Economic Outlook (WEO) reports, selecting projections for a particular country before a program was signed. However, for our sample of countries, such data is very limited.¹³

Owing to these difficulties, our proxy for the requested fiscal adjustment is simply the difference between the requested fiscal balance and the observed one before the agreement is signed. We take from MONA the envisaged overall government balance for each year of the program. For country i with a program approved in year t , our measure of the requested fiscal adjustment is the difference between the envisaged overall government balance (as a percentage of GDP) by the end of the second year ($t+1$) of the program and the pre-program level ($t-1$):

$$\text{Fiscal Adjustment}_{i,t} = \text{Requested Fiscal Balance}_{i,t+1} - \text{Actual Fiscal Balance}_{i,t-1}$$

We adopt the target for the second year in our baseline calculations as it allows us to compare fiscal adjustment in programs with different time periods. For instance, a fiscal adjustment of 5% of GDP along the 3 years of a program is arguably easier to be implemented (economically and politically) than the same 5% adjustment for just 1 year.

MONA classifies conditionalities according to their type (prior actions, quantitative performance and structural benchmarks) and the targeted sector (fiscal, monetary, financial reform, among others). We use the total number of conditions and the number of fiscal conditions as

¹²Since we use country fixed effects in our baseline estimation, countries with only one program provide no useful information.

¹³Moreover, there is some evidence suggesting that WEO's forecasts are also influenced by the political proximity of a country to the US (Dreher et al.; 2008).

dependent variables in some of our regressions.

Other economic explanatory variables come from WEO, World Bank and Unctad. The political proximity variable describing the percentage of votes in which the borrowing country votes in the same way as G5 countries in a given year at the UNGA comes from [Strezhnev and Voeten \(2013\)](#). A complete description of our data is available in the Appendix.

2.2 Data description

Our sample consists on an unbalanced panel of 143 IMF Programs and 52 countries. As Table 1 indicates, countries have repeated participation along the sample period. On average, each country in the sample takes part in almost 3 programs with the Fund.

Table 1: Number of Programs and Countries

Number of Countries	Number of Programs	Total Number of Programs
25	2	50
17	3	51
8	4	32
2	5	10

Programs can last from one to four years, with the majority lasting three years, as shown in Table 2.¹⁴ On average, IMF programs define a fiscal adjustment of 0.78% of GDP and 20 conditionalities. Fiscal conditions are a common feature in programs, representing (on average) 39% of all conditions included in a package. 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.¹⁵ Table 2 also indicates a significant variability in the size of fiscal adjustment between programs. The magnitude of fiscal adjustment significantly fluctuates in time, as Table 3 shows. In the wake of the 2007-2008 financial crisis, programs approved in 2007 defined an average target for fiscal balance of -3.17% of GDP for the next year, and our measure of fiscal effort indicates an “adjustment” of -5.31% of GDP. However, with a struggling world 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 surely underestimating the real fiscal effort requested by the IMF. However, this problem is at least partially mitigated by the use of time dummy variables, which control for common shocks affecting different countries in a given year.

¹⁴There is one exception, one 8-year program in our sample.

¹⁵These examples were taken from the Greek Letter of Intent (December 8, 2010), available at https://www.imf.org/external/np/loi/mempub_new.asp.

Table 2: Fiscal Adjustment and Conditionalities by Programs

Years of Program	Number of Programs	Fiscal Adjustment		N. of Conditions		N. of Fiscal Conditions	
		Mean	SD	Mean	SD	Mean	SD
1	27	1.52	2.48	20.67	14.98	6.33	4.64
2	25	1.05	2.51	21.24	10.42	7.24	3.87
3	88	0.43	3.55	19.56	9.17	8.35	3.89
4+	3	2.11	2.27	16.67	13.20	7.33	5.51
All Programs	143	0.78	3.20	20.00	10.68	7.75	4.11

Table 3: Average Fiscal Adjustment by Year of Program Approval

Year of Approval	Actual Fiscal Balance (T-1)	Fiscal Balance (T+1)	Requested Fiscal Adjustment
1999	-2.32	-2.96	-0.64
2000	-2.74	-3.13	-0.39
2001	-4.62	-2.98	1.64
2002	-3.53	-3.16	0.37
2003	-3.91	-2.78	1.13
2004	-3.17	-2.96	0.21
2005	-2.05	-0.82	1.23
2006	-2.42	-0.29	2.13
2007	2.14	-3.17	-5.31
2008	-2.92	8.28	11.20
2009	-3.55	-3.34	0.21
2010	-4.94	-4.54	0.40
2011	-4.25	-4.35	-0.10
2012	-4.26	-3.23	1.03

2.3 Number of conditionalities and fiscal adjustment

Figure 1 plots the number of fiscal conditions and the requested fiscal adjustment for each IMF program. There is no significant correlation between the two measures of stringency of conditionalities. A given number of fiscal conditions can correspond to high, moderate or soft requirements for fiscal adjustment.

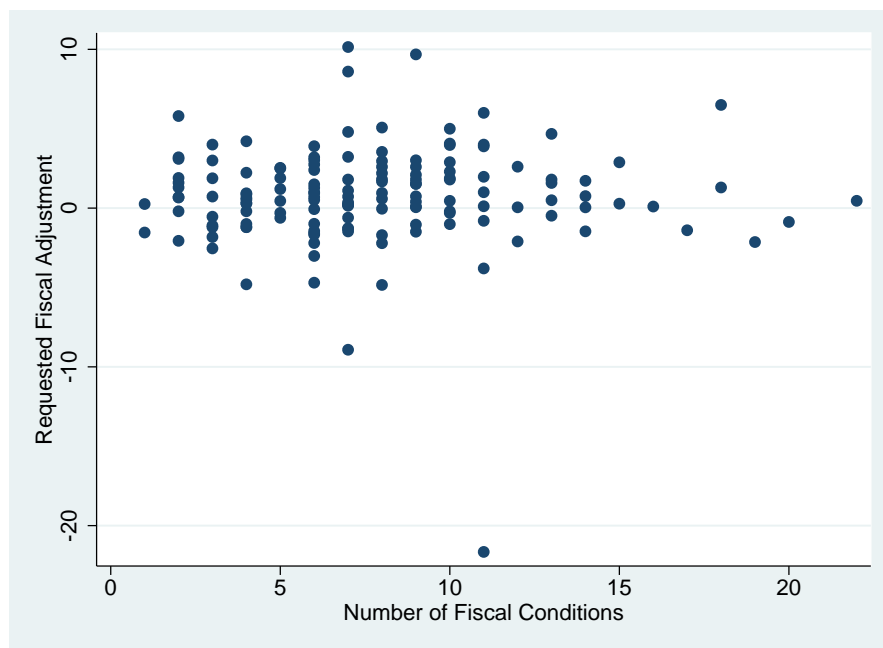


Figure 1: Correlation between the number of fiscal conditions and fiscal adjustment

The absence of a significant correlation between the two measures of fiscal conditionalities remains when we eliminate the noisy effects of time. When we regress each measure of fiscal conditionality against time dummy variables and focus on the residuals, we actually observe a (very small) negative correlation between them. That is plotted in Figure 2 in the Appendix.

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 (Lamdany and Hamann (2008)). In a program approved in 2002, Peru’s authorities agreed on the privatization of its electricity generation company, a measure which clearly involves difficult domestic negotiations. On the other hand, when Lesotho obtained an assistance package in 2001, it agreed to release its monthly budget execution report (a particularly simple condition to fulfill). These examples indicate the potential problems of considering all conditions alike, and shed some light on the absence of a significant correlation between the two measures of conditionalities.

3 Empirical methodology

In order to investigate the determinants of the requested fiscal adjustment, we run the following linear regression:

$$FiscalAdjustment_{i,t} = \beta X_{i,t-1} + \delta Votes_{i,t-1} + \gamma Z_{i,t-1} + \alpha_i + \nu_t + \epsilon_{i,t}, \quad (1)$$

where $FiscalAdjustment_{i,t}$ is the size of the requested fiscal adjustment for country i with a program approved in year t .

In the regressions with the number of conditions (either total or fiscal) as the dependent variable, the estimation employs a Poisson specification for the conditional mean:

$$E[Number_{i,t} | \alpha_i, W_i] = \exp(\beta X_{i,t-1} + \delta Votes_{i,t-1} + \gamma Z_{i,t-1} + \alpha_i + \nu_t), \quad (2)$$

where E is the expectations operator and W_i is the vector of all explanatory variables on the right-hand side of the equation.¹⁶ The dependent variable $Number_{i,t}$ counts either the total or the fiscal number of conditionalities for country i with a program approved in year t .

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) government consumption; (iv) tax revenue; (v) monetary expansion; and (vi) gross public debt.¹⁷ These variables are lagged by one year in order to reduce the problem of reverse causality.

The variable $Votes_{i,t-1}$ measures how frequently country i and G5 countries voted in the same way at the United Nations General Assembly. Hence $Votes_{i,t-1}$ represents the political proximity of country i to G5 countries in a given year $t - 1$. As we use a within country estimator in our baseline regressions, what matters is not the absolute political proximity, but the change in political alignment.

The vector $Z_{i,t-1}$ includes variables measuring the economic connections of a country to G5 members: the ratio of the country's bilateral trade with G5 members to the country's GDP

¹⁶To estimate the model, the statistical software Stata transforms equation (2) to remove the individual fixed effects. Thus, we obtain a multinomial distribution for $Number_{i,t}$, as follows:

$$E[Number_{i,t} | \alpha_i, W_i, \overline{Number}_i] = \frac{\exp(\beta X_{i,t-1} + \delta Votes_{i,t-1} + \gamma Z_{i,t-1} + \nu_t)}{\sum_{r=1}^T \exp(\beta X_{i,r-1} + \delta Votes_{i,r-1} + \gamma Z_{i,r-1} + \nu_r)} \overline{Number}_i, \quad (3)$$

where $\overline{Number}_i = \sum_{r=1}^T Number_{i,t}$ is the number of conditionalities in a program for country i over the entire sample. Estimation of equation (3) is then carried using conditional quasi-maximum likelihood (QML).

¹⁷All variables are measured as fractions of GDP, except GDP growth and monetary expansion.

(following Barro and Lee (2005)) and G5 bank’s claims over the borrowing country’s GDP (following Presbitero and Zazzaro (2012)). These papers have found that economic linkages of a country to major members of the Fund influence lending decisions. We empirically investigate whether they matter for our measures of conditionalities.

The term α_i captures any time-invariant unobserved heterogeneity. Our identification strategy thus relies in within-country variation in variables defined in the right-hand side of (2) and (1). In particular, the effects on the number of conditionalities and size of fiscal adjustment are estimated 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”.

A fixed-effect regression is particularly suitable for this problem because countries with similar levels of public debt and deficit may have very different propensities to default. Woo (2003) provides evidence that institutional and political variables largely account for cross-country differences in the size of public deficits. The empirical results in Fatás and Mihov (2003) relate the discretionary use of fiscal policy to the political and institutional environment. Norambuena (2014) shows that default risk variation across countries can be mainly attributed to persistent specific country characteristics. Fixed effects capture each country’s “natural” propensity to default on its debt and to adopt a particular type of fiscal policy.

Indeed, some countries can sustain higher levels of debt and are less prone to default on their obligations owing to unobserved characteristics. Assuming these countries find it easier to smooth the burden of taxation over time, we could expect a softer requirement of fiscal adjustment for these countries. However, in this case, a regression without fixed effects could yield a spurious negative impact of public debt over the size of fiscal adjustment and incorrectly lead us to conclude that countries with higher levels of sovereign debt are required to adjust less when in reality a smaller adjustment is requested from them because their sound institutions make them less prone to default.¹⁸

The term ν_t corresponds to time fixed effects. The inclusion of time dummy variables helps to control for fluctuations over time in the economic variables that affect fiscal balances of all countries. For example, in the years surrounding the global financial crisis, IMF programs required smaller fiscal balances from requesting countries. Time fixed effects reduce the noise in our fiscal adjustment variable, partially eliminating the cyclical component of fiscal balances. The term $\epsilon_{i,t}$ is a random error.

We also include standard controls likely to correlate with fiscal variables: trade openness, defined as the sum of exports and imports over GDP, and two demographic variables, namely

¹⁸Corroborating this argument, Reinhart and Rogoff (2010) show that thresholds for external debt sustainability are much lower for emerging market economies than for industrialized countries.

the share of the population aged between 15 and 64 years and the share of people above 65 years old.¹⁹

Summary statistics for all the variables in our regressions are presented in Table 4.

Table 4: Summary Statistics

Variable	Mean	Standard Deviation	Max	Min	Observations
Number of Conditions	20.0	10.7	74	5	143
Number of Fiscal Conditions	7.8	4.1	22	1	143
Fiscal Adjustment	0.78	3.2	10.1	-21.6	143
Votes (%)	48.7	16.4	82.9	0.0	143
Current Account Balance (%GDP)	-6.3	6.6	13.7	-47.2	143
Monetary Expansion (%)	18.9	44.6	514.1	-50.8	143
GDP Growth (%)	3.6	4.8	33.6	-14.8	143
Public Debt (%GDP)	66.6	51.6	381.1	12.3	136
Government Consumption (%GDP)	28.2	9.2	53.8	13.6	135
Tax Revenue (%GDP)	24.7	8.7	46.9	11.7	139
Trade with G5 (%GDP)	14.0	11.9	67.3	0.0	126
G5 Bank Exposure (%GDP)	28.2	68.09	516.9	0.06	131

4 Results

We now show how the different measures of conditionalities respond to the economic and political factors detailed in the previous section.

4.1 The determinants of number of conditions

Table 5 presents the results for the total number of conditions (left columns in each case) and number of fiscal conditions (right columns). In the first model, only economic variables are considered. In this case, monetary expansion and government consumption are statistically significant, but with an unexpected sign. We then include *Votes* in all other specifications. Model 2 shows that an increase in political proximity of a given country to G5 members is associated with a reduction in the number of conditions, with the partial effect being larger for fiscal conditions. In terms of magnitude, increasing vote compliance by one standard deviation reduces the total number of conditions by 11.2% and the number of fiscal conditions by 24.4%.

In Model 3 and Model 4, we separately add the variables measuring the economic linkages of a country to G5 members: Trade with G5 countries and G5 Bank Exposure. Results do not provide suggestive evidence that the number of conditions is affected by the extent to which a country is economically important for the major IMF's shareholders. *Votes* remains

¹⁹These variables have been included in previous studies (e.g., Persson and Tabellini (2004)).

Table 5: The determinants of the number of conditions

	Model 1		Model 2		Model 3		Model 4		Model 5	
	Total	Fiscal	Total	Fiscal	Total	Fiscal	Total	Fiscal	Total	Fiscal
Votes			-0.007* (0.004)	-0.017*** (0.006)	-0.009 (0.006)	-0.010 (0.006)	-0.009*** (0.003)	-0.018*** (0.006)	-0.012** (0.006)	-0.015* (0.008)
Current Account	0.002 (0.01)	0.009 (0.01)	0.002 (0.01)	0.008 (0.01)	-0.006 (0.01)	0.005 (0.01)	0.010 (0.01)	0.007 (0.01)	0.001 (0.01)	0.002 (0.01)
Monetary Expansion	-0.003*** (0.0008)	-0.003** (0.001)	-0.0003*** (0.0008)	-0.003*** (0.0009)	0.002 (0.002)	-0.0003 (0.004)	-0.003*** (0.0008)	-0.003*** (0.001)	0.003 (0.002)	0.003 (0.005)
GDP Growth	-0.003 (0.009)	0.009 (0.009)	-0.007 (0.01)	-0.002 (0.01)	-0.029** (0.01)	-0.002 (0.01)	-0.008 (0.009)	0.005 (0.009)	-0.029** (0.01)	0.002 (0.02)
Gov. Consumption	-0.035* (0.02)	-0.025 (0.02)	-0.039* (0.02)	-0.039** (0.02)	-0.052** (0.02)	-0.032 (0.03)	-0.068*** (0.02)	-0.061*** (0.02)	-0.089*** (0.02)	-0.064** (0.03)
Tax Revenue	0.012 (0.01)	0.017 (0.01)	0.014 (0.01)	0.022* (0.01)	0.024 (0.02)	0.006 (0.02)	0.023** (0.01)	0.025* (0.01)	0.050*** (0.1)	0.038 (0.03)
Public Debt	0.001 (0.001)	0.0006 (0.001)	0.001 (0.001)	0.0004 (0.002)	0.001 (0.002)	-0.0003 (0.001)	0.001 (0.001)	0.0009 (0.001)	0.002 (0.001)	0.0009 (0.002)
Trade with G5					0.0002 (0.01)	0.006 (0.01)			-0.018 (0.01)	-0.013 (0.01)
G5 Bank Exposure							-0.003 (0.006)	-0.004 (0.006)	-0.005 (0.005)	-0.005 (0.007)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	124	124	124	124	107	107	112	112	95	95
Countries	46	46	46	46	39	39	42	42	35	35
Pseudo R-squared	0.19	0.12	0.20	0.14	0.14	0.11	0.25	0.17	0.21	0.13

Number Total and Fiscal count the total and the fiscal number of conditions in a program with the IMF. The Poisson model is estimated by quasi-maximum likelihood. Huber-White robust standard errors are reported in parenthesis. Significance levels: * p<0.1, ** p<0.05, *** p<0.01.

statistically and economically significant in Model 4. Finally, we include all economic and political variables in Model 5. We lose some observations, but we still observe that a greater political proximity to G5 countries is correlated with fewer conditions. The impact is large, since one standard deviation increase in voting compliance is associated with 18% and 21% fewer total and fiscal conditions, respectively.

In sum, the number of conditions seems to be systematically influenced by politics. On the other hand, among the economic variables, only monetary expansion and government consumption are statistically significant in our specifications, and with unexpected signs. Therefore, our results are closely related to those obtained by previous empirical work such as Dreher and Jensen (2007), Dreher (2009) and Woo (2013). As a concrete example, consider the case of Chad, whose program in 2005 included 11 fiscal conditions. In that year, Chad voted identically to G5 countries in UNGA in only 8.6% of the occasions. According to our results, an increase in voting compliance to match the sample average (around 48%) would reduce the number of fiscal conditions to around 6, all else constant.²⁰ This result is similar to the obtained by Dreher and Jensen (2007) – they also find a particularly large reduction in the number of fiscal conditions.

4.2 The determinants of required fiscal adjustments

We now estimate (1) with the fiscal adjustment requested by the IMF as the dependent variable. Table 6 brings the main result of the paper. The fiscal adjustment required by the IMF is primarily driven by economic factors. As the coefficients on government consumption and tax revenue ratios indicate, the size of fiscal adjustment is increasing in the deterioration of the fiscal balance.

The results are consistent with an IMF policy that aims at bringing a country’s fiscal balance closer to its historical average. An increase in fiscal deficit by one percentage point increases the required fiscal adjustment by around 0.6% in the baseline regression. The result remains strong in all other specifications. We lose a number of observations when all variables are included in Model 5, but the coefficients are still large and significant.

The results support the view that the rationale behind fiscal consolidations in IMF programs is the restoration of budget discipline. One should expect deeper fiscal consolidation when public spending is larger than usual or when tax revenues are at a particularly low level. There is no reason to expect that the optimal fiscal deficit should be constant over time, so we should indeed expect a coefficient smaller than one, but substantially larger than zero. That is exactly what we obtain.

²⁰The average partial effect of *Votes* on the number of fiscal conditions is 23%.

Table 6: The determinants of the requested fiscal adjustment

	Model 1	Model 2	Model 3	Model 4	Model 5
Votes		0.061 (0.04)	0.079** (0.04)	0.061 (0.05)	0.083* (0.04)
Current Account	-0.004 (0.08)	-0.0004 (0.08)	-0.110* (0.06)	0.069 (0.08)	-0.121 (0.09)
Monetary Expansion	-0.009 (0.007)	-0.008 (0.006)	-0.047* (0.02)	-0.007 (0.005)	-0.050* (0.03)
GDP Growth	-0.027 (0.06)	0.016 (0.07)	-0.042 (0.08)	0.003 (0.08)	-0.030 (0.09)
Gov.Consumption	0.542** (0.24)	0.587** (0.24)	0.309* (0.18)	0.575** (0.27)	0.396* (0.21)
Tax Revenue	-0.710*** (0.21)	-0.732*** (0.21)	-0.390** (0.16)	-0.697*** (0.19)	-0.428** (0.17)
Public Debt	-0.038** (0.02)	-0.037** (0.02)	-0.015 (0.01)	-0.042*** (0.01)	-0.016 (0.01)
Trade with G5			0.124* (0.07)		0.139 (0.09)
G5 Bank Exposure				0.014 (0.04)	0.025 (0.05)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	129	129	115	117	103
Countries	51	51	47	47	43
R-squared	0.53	0.54	0.50	0.60	0.51

Dependent variable is the requested fiscal adjustment by the IMF.
Huber-White robust standard errors are reported in parenthesis. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

The partial effect of *Public Debt* is statistically significant and negative in most cases (though not in the regression with the full set of controls). This is surprising since one should expect larger requirements of fiscal adjustment when debt levels increase over time. Indeed, as found in Ilzetzki et al. (2013), fiscal stimulus can actually be counterproductive when debt-to-GDP ratio is too high.

Last but not least, we also observe that the political proximity variable is in most cases insignificant, as well as the variables measuring economic linkages between a country and G5 members.

4.3 Robustness

As a first robustness test, we estimate the relation in (1) using the final year of each program and not year $t + 1$ to compute the fiscal adjustment variable. The results, shown in Table 7 in the Appendix, are actually stronger. The effect of an increase in tax revenues of a percentage point varies between -0.498% and -0.792% . The effect of a one-percent increase in government spending varies between 0.392% and 0.628% . We find it reassuring that our results also hold with a different specification.

We also run the same regression using a random effects approach. The results, presented in Table 8 in the Appendix, are qualitatively similar but smaller in magnitude. That might reflect the issues discussed in Section 3: the IMF might require a smaller fiscal adjustment from countries that find it easier to smooth the burden of taxation over time. Nevertheless, the results are consistent with the view that the IMF prescribes fiscal adjustment aiming at restoring budget discipline.

We also estimate the determinants of the number of conditionalities using a OLS model instead of the Poisson specification. The latter is more appropriated when the dependent variable is skewed (as ours), but the main result does not rely on the Poisson specification. In particular, the variable *Votes* has a strong effect on the number of fiscal conditions, reinforcing the evidence that political proximity of a country to G5 members is an important determinant of the number of conditions. The results are available upon request.

Estimating the determinants of requested fiscal adjustments in a panel of heterogeneous countries, as we have done so far, constraints slope coefficients to be the same in all countries. However, IMF lending facilities differ substantially. In particular, programs designed to assist low-income countries also give high weights to other issues rather than macroeconomic adjustments - mitigation of social inequality, poverty reduction, and pro-growth oriented reforms. To cope with this problem, we reestimate our baseline model in (1) excluding low-income

countries.²¹

Results are reported in Table 9 and confirm the previous results: the size of the requested fiscal adjustment increases in the fiscal deficit. The magnitude of coefficients is a bit smaller but still similar to those reported in our baseline regression. We obtain opposite results for the effects of the economic linkages of a country to G5 members: the fiscal adjustment is stronger when bilateral trade increases over time in a given country (Model 3 and 5) but smaller when G5 banks' claims increase (Models 4 and 5). Finally, the political proximity variable remains statistically insignificant in almost all specifications.

5 Concluding remarks

This paper studies how economic and political variables affect two different measures of stringency of IMF conditionalities: the sheer number of conditionalities and the fiscal adjustment requested by the IMF. We find a very small correlation between those two measures. They can thus be seen as two different indicators.

As previously found in the literature, political proximity of the borrowing country to the Fund's major shareholders has an important effect on the number of conditions requested by the IMF. However, the fiscal adjustment requested by the IMF is mainly determined by a country's fiscal deficit and is not significantly affected by the political variable. One of the most important conditions in IMF agreements, perhaps the most relevant and controversial one, is mainly driven by economics not by politics.

²¹Classification follows World Bank criteria, which establishes thresholds determined by gross national income per capita, in U.S. dollars. We exclude low-income countries rather than concessional loans due to data availability. In our sample, not all low-income countries have concessional loans (and vice-versa).

A Additional Results

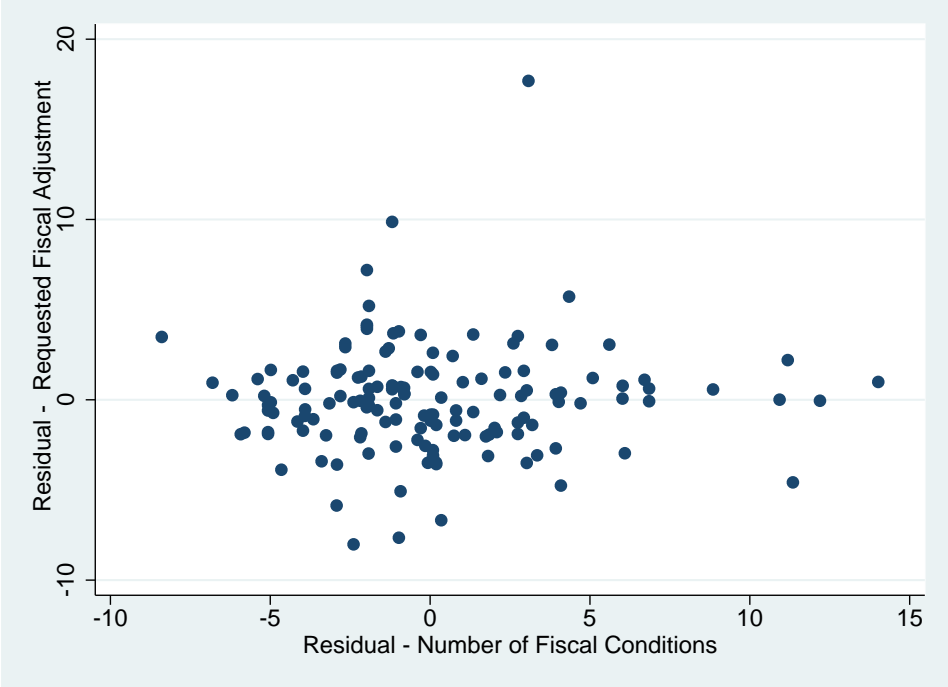


Figure 2: Correlation between the Number of Fiscal Conditions and Fiscal Adjustment

Table 7: The determinants of the requested fiscal adjustment

	Model 1	Model 2	Model 3	Model 4	Model 5
Votes		0.037 (0.04)	0.072* (0.04)	0.039 (0.04)	0.083* (0.04)
Current Account	-0.039 (0.08)	-0.034 (0.08)	-0.168*** (0.06)	0.030 (0.08)	-0.179** (0.08)
Monetary Expansion	-0.009 (0.006)	-0.008 (0.006)	-0.032 (0.02)	-0.007 (0.005)	-0.030 (0.03)
GDP Growth	0.015 (0.07)	0.041 (0.08)	-0.065 (0.10)	0.025 (0.09)	-0.078 (0.12)
Gov. Consumption	0.593** (0.23)	0.621** (0.23)	0.392** (0.19)	0.628** (0.27)	0.450* (0.22)
Tax Revenue	-0.779*** (0.19)	-0.792*** (0.19)	-0.508*** (0.16)	-0.770*** (0.18)	-0.498*** (0.17)
Public Debt	-0.032** (0.01)	-0.031** (0.01)	-0.0197 (0.01)	-0.034** (0.01)	-0.019 (0.01)
Trade with G5			0.136* (0.07)		0.156 (0.10)
G5 Bank Exposure				-0.008 (0.03)	-0.008 (0.05)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	129	129	115	117	103
Countries	51	51	47	47	43
R-squared	0.57	0.57	0.55	0.62	0.58

Dependent variable is the requested fiscal adjustment (end of program) by the IMF.
 Huber-White robust standard errors are reported in parenthesis. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 8: The determinants of the requested fiscal adjustment

	Model 1		Model 2		Model 3		Model 4		Model 5	
	T+1	End	T+1	End	T+1	End	T+1	End	T+1	End
Notes										
Current Account	0.048 (0.08)	0.045 (0.09)	0.024 (0.02)	0.026 (0.02)	0.019 (0.02)	0.027 (0.02)	0.027 (0.02)	0.027 (0.02)	0.020 (0.02)	0.025 (0.02)
Monetary Expansion	-0.001 (0.004)	-0.001 (0.003)	-0.001 (0.004)	-0.001 (0.003)	-0.002 (0.003)	-0.002 (0.002)	0.007 (0.004)	0.001 (0.003)	-0.0006 (0.003)	0.0002 (0.002)
GDP Growth	-0.021 (0.06)	0.024 (0.06)	-0.007 (0.06)	0.039 (0.06)	-0.111* (0.06)	-0.072 (0.09)	-0.005 (0.06)	0.037 (0.06)	-0.111* (0.06)	-0.079 (0.10)
Gov. Consumption	0.367* (0.21)	0.496** (0.19)	0.357* (0.20)	0.483** (0.19)	0.176 (0.14)	0.338** (0.14)	0.360* (0.21)	0.501*** (0.19)	0.175 (0.15)	0.345** (0.14)
Tax Revenue	-0.384 (0.23)	-0.489** (0.22)	-0.397* (0.24)	-0.499** (0.22)	-0.180 (0.16)	-0.336** (0.15)	-0.391 (0.24)	-0.501** (0.22)	-0.164 (0.17)	-0.320** (0.15)
Public Debt	-0.011* (0.006)	-0.008 (0.006)	-0.009* (0.005)	-0.007 (0.006)	-0.006 (0.01)	-0.007 (0.007)	-0.013 (0.007)	-0.010 (0.01)	-0.08 (0.01)	-0.010 (0.01)
Trade with G5					0.028 (0.03)	0.027 (0.02)			0.027 (0.03)	0.024 (0.02)
G5 Bank Exposure							0.008 (0.005)	0.009** (0.004)	0.004 (0.008)	0.0001 (0.009)
Country Fixed Effects	No	No	No	No	No	No	No	No	No	No
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	129	129	129	129	115	115	117	117	103	103
Countries	51	51	51	51	47	47	47	47	43	43
R-squared	0.41	0.47	0.43	0.48	0.34	0.41	0.48	0.52	0.35	0.44

Dependent variable is the requested fiscal adjustment by the IMF.
Huber-White robust standard errors are reported in parenthesis. Significance levels: * p<0.1, ** p<0.05, *** p<0.01.

Table 9: The determinants of the requested fiscal adjustment - without LIC

	Model 1		Model 2		Model 3		Model 4		Model 5	
	T+1	End	T+1	End	T+1	End	T+1	End	T+1	End
Votes			0.014 (0.08)	-0.041 (0.08)	0.176* (0.10)	0.033 (0.13)	0.078 (0.08)	0.043 (0.08)	0.252** (0.11)	0.146 (0.13)
Current Account	-0.089 (0.10)	-0.080 (0.12)	-0.087 (0.11)	-0.087 (0.12)	-0.097 (0.11)	-0.169 (0.11)	-0.009 (0.13)	0.035 (0.12)	0.008 (0.13)	-0.041 (0.13)
Monetary Expansion	-0.073*** (0.03)	-0.055** (0.03)	-0.071** (0.03)	-0.063** (0.03)	-0.046 (0.03)	-0.030 (0.03)	-0.056* (0.03)	-0.042 (0.03)	-0.050 (0.04)	-0.025 (0.04)
GDP Growth	-0.017 (0.08)	-0.010 (0.11)	-0.011 (0.08)	-0.029 (0.11)	-0.012 (0.11)	-0.084 (0.12)	-0.096 (0.09)	-0.131 (0.11)	-0.016 (0.12)	-0.103 (0.12)
Gov. Consumption	0.480** (0.18)	0.443** (0.18)	0.485** (0.19)	0.428** (0.18)	0.496*** (0.17)	0.443** (0.18)	0.420** (0.17)	0.362** (0.17)	0.467*** (0.14)	0.414** (0.18)
Tax Revenue	-0.473** (0.17)	-0.543*** (0.17)	-0.470** (0.18)	-0.553*** (0.17)	-0.494*** (0.16)	-0.569*** (0.15)	-0.314* (0.17)	-0.360** (0.17)	-0.356** (0.15)	-0.399** (0.18)
Public Debt	-0.042*** (0.01)	-0.044** (0.02)	-0.041*** (0.01)	-0.045** (0.02)	-0.039** (0.01)	-0.041** (0.02)	-0.039** (0.02)	-0.045** (0.02)	-0.037** (0.02)	-0.041* (0.02)
Trade with G5					0.202** (0.09)	0.217** (0.09)			0.149 (0.11)	0.199* (0.11)
G5 Bank Exposure							-0.119** (0.05)	-0.129** (0.05)	-0.111* (0.06)	-0.101 (0.06)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	90	90	90	90	84	84	82	82	76	76
Countries	36	36	36	36	35	35	33	33	32	32
R-squared	0.57	0.57	0.57	0.58	0.67	0.68	0.64	0.65	0.71	0.72

Dependent variable is the requested fiscal adjustment by the IMF.
Huber-White robust standard errors are reported in parenthesis. Significance levels: * p<0.1, ** p<0.05, *** p<0.01.

B Fiscal adjustment by IMF Program

Table 10: Fiscal Balances by Program

Country	Year of Approval	Fiscal Balance (T-1)	Fiscal Balance (T+1)
GREECE	2010 / 2012	-13.58 / -9.29	-7.58 / -4.62
TURKEY	1999 / 2005	-7.80 / -10.54	-12.60 / -6.65
ARGENTINA	2000 / 2003	-2.50 / -3.27	na / -3.27
BRAZIL	2001 / 2002	-3.20 / -5.23	na / -2.69
COLOMBIA	1999 / 2003 / 2005	-3.90 / -5.19 / -1.97	-3.60 / -4.47 / -3.79
DOMINICAN REPUBLIC	2003 / 2005 / 2009	-2.10 / -2.19 / -4.58	-1.10 / 0.70 / -4.05
ECUADOR	2000 / 2003	-6.00 / 2.90	-3.00 / 0.80
EL SALVADOR	2009 / 2010	-1.86 / -5.55	-1.61 / -3.58
GUATEMALA	2002 / 2003 / 2009	-2.91 / -1.45 / -0.46	-2.04 / -0.76 / -2.00
HONDURAS	1999 / 2004 / 2008 / 2010	-3.20 / -4.90 / -0.91 / -4.62	na / -4.80 / -0.23 / -3.10
NICARAGUA	2003 / 2007	-4.40 / -3.48	-1.80 / -2.38
PERU	1999 / 2001 / 2004 / 2007	-0.80 / -2.60 / -2.60 / 0.31	-1.00 / -1.00 / -2.40 / -0.67
URUGUAY	1999 / 2000 / 2002 / 2005	-1.00 / -3.80 / -3.17 / -2.95	-1.30 / -1.20 / -1.29 / -2.45
DOMINICA	2002 / 2003	-2.09 / -9.04	-2.04 / -4.98
JORDAN	1999 / 2002 / 2012	-6.90 / -3.67 / -5.74	-2.90 / -4.29 / -5.48
SRI LANKA	2001 / 2003 / 2009	-9.40 / -8.00 / -7.51	-6.30 / -4.98 / -5.83
PAKISTAN	2000 / 2001 / 2008	-6.50 / -4.00 / -3.99	na / -2.70 / -4.03
DJIBOUTI	1999 / 2008	0.90 / -2.57	0.70 / -1.85
BURUNDI	2004 / 2008 / 2012	-6.24 / 1.05 / -2.50	-4.01 / 1.05 / -3.99
CAPE VERDE	2002 / 2006 / 2010	-3.97 / -2.87 / -6.31	-6.98 / -4.34 / -11.01
CENTRAL AFRICAN REPUBLIC	2006 / 2012	12.18 / -2.39	15.14 / 0.49
CHAD	2000 / 2005	-5.40 / -2.16	-6.40 / -2.04
BENIN	2000 / 2005 / 2010	-2.30 / -1.05 / -4.13	0.60 / -2.51 / -2.41
GAMBIA, THE	2002 / 2012	-3.11 / -4.37	0.11 / -2.49
GUINEA-BISSAU	2000 / 2010	-9.90 / -4.10	-13.70 / -1.49
GUINEA	2001 / 2012	-3.20 / -2.95	-1.30 / -3.42
COTE D'IVOIRE	2002 / 2009 / 2011	-1.17 / -0.78 / -2.30	-0.71 / -1.65 / -4.44
KENYA	2000 / 2003	0.10 / -4.13	0.50 / -2.59
MALAWI	2000 / 2005 / 2008 / 2010 / 2012	-5.00 / -5.89 / -3.12 / -5.97 / -5.00	0.00 / -0.81 / -2.45 / -1.76 / -1.99
MALI	1999 / 2004 / 2008 / 2011	-2.40 / -3.80 / -3.75 / -2.67	-3.20 / -5.13 / -3.15 / -2.87
MAURITANIA	1999 / 2003 / 2006 / 2010	4.00 / 8.78 / -7.04 / -5.13	2.80 / -0.14 / -6.74 / -4.20
MOZAMBIQUE	1999 / 2004 / 2007 / 2010	-2.30 / -3.19 / -1.25 / -5.57	-3.50 / -3.73 / -3.31 / -7.24
NIGER	2000 / 2005	-5.90 / -4.51	-4.70 / -2.71
NIGERIA	2000 / 2005	-7.70 / -7.67	-1.90 / 17.36
SIERRA LEONE	2006 / 2010	-1.94 / -3.16	-0.35 / -4.74
TANZANIA	2003 / 2007 / 2010 / 2012	-4.35 / -5.72 / -4.12 / -5.94	-3.98 / -3.82 / -5.56 / -5.49
UGANDA	2002 / 2006 / 2010	-2.62 / -0.70 / -1.89	-2.68 / -1.74 / -3.19
BURKINA FASO	1999 / 2003 / 2007 / 2010	-2.90 / -5.49 / -15.97 / -4.74	-5.10 / -3.67 / -5.68 / -3.79
ZAMBIA	1999 / 2004	-7.10 / -6.46	-5.80 / -2.48
ARMENIA	2001 / 2005	-6.40 / -1.69	-2.50 / -2.69
ALBANIA	2002 / 2006	-8.29 / -3.77	-7.54 / -3.49
GEORGIA	2001 / 2004 / 2010	-4.60 / -2.30 / -3.64	-0.60 / -0.50 / -3.00
KYRGYZ REPUBLIC	2001 / 2005 / 2011	-9.70 / -4.22 / -6.50	-4.90 / -3.70 / -7.10
MOLDOVA	2000 / 2006 / 2010	-5.30 / 1.73 / -15.12	-3.50 / -0.48 / -4.97
UKRAINE	2004 / 2008 / 2010	-1.14 / -2.00 / -6.25	-1.09 / -4.54 / -3.50
LATVIA	1999 / 2001	-0.80 / -3.30	-1.90 / -0.90
LITHUANIA	2000 / 2001	-8.60 / -2.80	na / -1.30
MONGOLIA	2001 / 2009	-6.80 / -4.98	-7.10 / -4.04
CROATIA	2001 / 2003 / 2004	-6.50 / -6.57 / -5.50	-4.20 / -4.47 / -3.70
MACEDONIA	2000 / 2005	0.00 / 0.75	-1.20 / -0.65
BOSNIA AND HERZEGOVINA	2002 / 2009 / 2012	-6.10 / -3.99 / -3.09	-6.00 / -3.94 / -2.35
ROMANIA	1999 / 2001 / 2004 / 2009 / 2011	-3.30 / -4.00 / -2.30 / -4.89 / -6.55	-1.10 / -3.00 / -1.84 / -3.62 / -3.00

C Data description and source

Table 11: Data Description

Variable	Description	Source
Number of Conditions	Total number of conditions in a program	MONA/IMF
Number of Fiscal Conditions	Number of fiscal conditions in a program	MONA/IMF
Fiscal Adjustment	Difference between fiscal balances in percentage of GDP	MONA/IMF
Votes	Vote compliance with G5 countries at UNGA	Strezhnev and Voeten
Current Account Balance	All transactions other than those in financial and capital items	WEO/IMF
Monetary Expansion	Average annual growth rate in money and quasi money	World Bank
GDP Growth	Real GDP (annual) growth	WEO/IMF
Public Debt	Gross public debt, percent of GDP	IMF
Government Consumption	Cash payments in providing goods and services	WEO/IMF
Tax Revenue	Taxes, social contributions, grants receivable, and other revenue	WEO/IMF
Trade with G5	Country's bilateral trade with G5 members in over GDP	UN Comtrade
G5 Bank Exposure	Total G5 banks' claims over GDP	BIS
Trade Openness	Sum of exports and imports of goods and services over GDP	Unctad
Population 0-64	Population between the ages 0 to 14 as a percentage of the total	World Bank
Population 15-64	Population between the ages 15 to 64 as a percentage of the total	World Bank

D 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.

References

- Alesina, A. and Dollar, D. (2000). Who gives foreign aid to whom and why?, *Journal of Economic Growth* **5**(1): 33–63.
- Alesina, A., Favero, C. and Giavazzi, F. (2015). The output effect of fiscal consolidation plans, *Journal of International Economics* **96**: S19–S42.
- Andersen, T. B., Harr, T. and Tarp, F. (2006). On US politics and IMF lending, *European Economic Review* **50**(7): 1843–1862.
- Barro, R. J. and Lee, J.-W. (2005). IMF programs: Who is chosen and what are the effects?, *Journal of Monetary Economics* **52**(7): 1245–1269.

- Beazer, Q. H. and Woo, B. (2015). IMF conditionality, government partisanship, and the progress of economic reforms, *American Journal of Political Science* .
- Caraway, T. L., Rickard, S. J. and Anner, M. S. (2012). International negotiations and domestic politics: The case of IMF labor market conditionality, *International Organization* **66**(01): 27–61.
- Corsetti, G., Meier, A. and Mueller, G. (2012). Fiscal stimulus with spending reversals, *Review of Economics and Statistics* **94**(4): 878–895.
- Diniz, A. (2016). Effects of fiscal consolidations in Latin America, *Working Paper* .
- Dreher, A. (2009). IMF conditionality: theory and evidence, *Public Choice* **141**(1-2): 233–267.
- Dreher, A. and Jensen, N. M. (2007). Independent actor or agent? An empirical analysis of the impact of US interests on International Monetary Fund conditions, *Journal of Law and Economics* **50**(1): 105–124.
- Dreher, A. and Jensen, N. M. (2013). Country or leader? Political change and UN General Assembly voting, *European Journal of Political Economy* **29**: 183–196.
- Dreher, A., Marchesi, S. and Vreeland, J. R. (2008). The political economy of IMF forecasts, *Public Choice* **137**(1-2): 145–171.
- Dreher, A., Sturm, J.-E. and Vreeland, J. R. (2009). Global horse trading: IMF loans for votes in the United Nations Security Council, *European Economic Review* **53**(7): 742–757.
- Fafchamps, M. (1996). Sovereign debt, structural adjustment, and conditionality, *Journal of Development Economics* **50**(2): 313–335.
- Fatás, A. and Mihov, I. (2003). The case for restricting fiscal policy discretion, *Quarterly Journal of Economics* **118**(4).
- Gonçalves, C. E. and Guimaraes, B. (2015). Sovereign default risk and commitment for fiscal adjustment, *Journal of International Economics* **95**(1): 68–82.
- Gould, E. R. (2003). Money talks: Supplementary financiers and International Monetary Fund conditionality, *International Organization* **57**(03): 551–586.
- Guajardo, J., Leigh, D. and Pescatori, A. (2014). Expansionary austerity? International evidence, *Journal of the European Economic Association* **12**(4): 949–968.
- Guimaraes, B. and Iazdi, O. (2015). IMF conditionalities, liquidity provision, and incentives for fiscal adjustment, *International Tax and Public Finance* **22**: 705–722.

- Ilzetzki, E., Mendoza, E. G. and Végh, C. A. (2013). How big (small?) are fiscal multipliers?, *Journal of Monetary Economics* **60**(2): 239–254.
- Kilby, C. (2009). The political economy of conditionality: An empirical analysis of World Bank loan disbursements, *Journal of Development Economics* **89**(1): 51–61.
- Lamdany, R. and Hamann, A. J. (2008). *Structural Conditionality in IMF-supported Programs*, International Monetary Fund.
- Marchesi, S. and Thomas, J. P. (1999). IMF conditionality as a screening device, *The Economic Journal* **109**(454): 111–125.
- Norambuena, V. (2014). Sovereign debt default: Are countries trapped by their own default history?, *Working Paper* .
- Oatley, T. and Yackee, J. (2004). American interests and IMF lending, *International Politics* **41**(3): 415–429.
- Passarelli, F. and Tabellini, G. (2013). Emotions and political unrest, *CESifo Working Paper Series*, pp. 359–378.
- Persson, T. and Tabellini, G. (2004). Constitutional rules and fiscal policy outcomes, *American Economic Review* **94**(1): 25–45.
- Ponticelli, J. and Voth, H.-J. (2011). Austerity and anarchy: Budget cuts and social unrest in europe, 1919-2008, *Working Paper* .
- Presbitero, A. F. and Zazzaro, A. (2012). IMF lending in times of crisis: Political influences and crisis prevention, *World Development* **40**(10): 1944–1969.
- Reinhart, C. M. and Rogoff, K. S. (2010). Growth in a time of debt (digest summary), *American Economic Review* **100**(2): 573–578.
- Reynaud, J. and Vauday, J. (2009). Geopolitics and international organizations: An empirical study on IMF facilities, *Journal of Development Economics* **89**(1): 139–162.
- Stefani, A. D. (2014). Social Conflict and Fiscal Adjustment in IMF-Supported Programs, *Working Paper* .
- Strezhnev, A. and Voeten, A. (2013). United Nations General Assembly voting data, *Available at <http://hdl.handle.net/1902.1/12379>* .
- Thacker, S. C. (1999). The high politics of IMF lending, *World politics* **52**(01): 38–75.

- Umana Dajud, C. (2013). Political proximity and international trade, *Economics & Politics* **25**(3): 283–312.
- Woo, B. (2013). Disaggregating IMF Conditionality: Comparing Determinants of Fiscal Conditions and Financial Sector Conditions, *Working Paper* .
- Woo, J. (2003). Economic, political, and institutional determinants of public deficits, *Journal of Public Economics* **87**(3): 387–426.