

# The determinants of IMF fiscal conditionality: 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. Empirical work on the determinants of IMF conditionalities usually employs the sheer number of conditions as a proxy for program austerity. This paper estimates the effects of political and economic factors on the number of conditions and 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 conditions; fiscal adjustment; political proximity; fiscal deficit; UNGA

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 conditionality, the set of policies that participating countries agree to uphold. The implication would be that a country's connections in the international political arena impact the level of austerity in IMF programs.

Corroborating this view, one important finding in the literature is that the number of conditions in an IMF program, the most frequently used proxy of its stringency, is affected by the level of political alignment between a country and the Fund's main shareholders. Since a fundamental component of IMF conditionality is a target for the government budget balance,

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Dreher and Jensen (2007) conclude that “for 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, there are vast differences among the conditions requested by the IMF in terms of scope and in the extent of economic changes they would bring about once implemented. The relationship between political alignment and number of conditions indicates that politics play some role, but in order to understand what politics really affects, we need to go beyond the sheer number of conditions.<sup>1</sup>

This paper contributes to the literature by estimating the effects of political and economic factors on a different measure of IMF program stringency, namely, the size of fiscal adjustment requested in an agreement between the IMF and a country’s authorities (henceforth the requested/required fiscal adjustment). This is defined as the difference between the requested target for the government budget balance (as a proportion of GDP) and its pre-program value. The requested fiscal adjustment is a crucial indicator of fiscal austerity in an IMF program. The vast majority of IMF programs include a target for the government budget balance. The implementation of fiscal discipline can be politically costly and often leads to social unrest.<sup>2</sup> One of the most common criticisms of IMF programs is indeed the prescription of fiscal consolidation, which could aggravate economic downturns.<sup>3</sup>

Our empirical strategy is based on a simple specification of the IMF objective. We posit that the IMF would like to: (i) minimize the distance between its requested fiscal balance and an ideal one, that depends on economic fundamentals; (ii) minimize the distance between its requested fiscal balance and the current one, since fiscal adjustment is costly; and (iii) request a larger fiscal balance from recipient countries that are less politically aligned with IMF shareholders. The first order condition yields a specification that allows us to estimate the weight on each of the three objectives.

Our baseline econometric models include country and year fixed effects, so identification comes from within-country variations in economic and political factors. This is important

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<sup>1</sup>It is perhaps surprising that the literature has focused mainly on the number of conditions in an agreement and overlooked other indicators of program stringency. One possible reason is that before the IMF’s Monitoring of Fund Arrangements Database (MONA) was released, in January 2009, building a data set with other variables was costly; and when MONA was released, the number of conditions had already established itself as the key dependent variable in the literature.

<sup>2</sup>Passarelli and Tabellini (2017) 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.

<sup>3</sup>The 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 adverse effects, and Diniz (2018) finds short-lived contractionary effects for tax increases only. Moreover, 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).

because the 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 more substantial need for fiscal adjustment. We also control for standard time-varying country-specific characteristics that correlate with the likelihood of program participation and the stance of fiscal policy.

We build a data set comprising information from 143 programs and 52 countries in the period between 1999 and 2012 to investigate the influence of economic and political factors over our measure of requested fiscal adjustment. Following Dreher and Jensen (2007) we use voting patterns in the United Nations General Assembly (UNGA) to measure political alignment between countries.<sup>4</sup> We consider the proportion of occasions in which a country votes in the same way as G5 members, which hold around 38% of voting power within the IMF Board of Governors, exercising *de facto* control over lending decisions.<sup>5</sup> We also test whether the requested fiscal adjustment responds differentially to executive elections in countries more or less aligned with G5 countries on UNGA votes.<sup>6</sup>

We find that the requested fiscal adjustment is strongly affected by the level of a country's fiscal deficit, while political proximity to G5 members has no significant effect on this measure. An increase in the fiscal deficit by one percentage point increases the requested fiscal adjustment by about half percentage point. Using our specification of the IMF objective, this implies that deviations between the requested and the ideal fiscal balance are about as costly to the IMF as deviations between the requested and the current fiscal balance – the costs of a suboptimal fiscal target are similar to those from fiscal adjustment. Moreover, we cannot reject the null hypothesis of irrelevance of political proximity.

In order to compare our findings to existing results, we test how economic and political factors affect the number of conditions in an IMF agreement – the typical proxy for program austerity in the literature. As found in previous work, countries that vote more frequently with G5 members in UNGA receive much less fiscal conditions. Nevertheless, we do not find evidence of an electioneering effect, since the reduction in the number of conditions is not significantly affected by the occurrence of an election.

The results for both measures of stringency of conditionality are thus very different, but that is because they are entirely different indicators: the correlation between the number of fiscal conditions and the requested fiscal adjustment is close to zero in our sample. Our

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<sup>4</sup>Voting behavior in UNGA has been found to matter for a variety of issues, including the allocation of foreign aid (Alesina and Dollar (2000)) and its interference in patterns on international trade (Umana Dajud (2013).)

<sup>5</sup>Lang and Presbitero (2018) and Copelovitch (2010) also focus on this subgroup of main shareholders.

<sup>6</sup>In a similar setting, Kersting and Kilby (2016) apply a difference-in-difference approach to explore whether World Bank lending responds differentially to executive elections conditional on the level of political alignment between countries. They find evidence of an electioneering mechanism: World Bank lending accelerates for U.S. allies when domestic elections approach.

main findings are quantitatively robust to using different measures of political alignment, to variations on election timing, and to controlling for alternative channels.

Our results imply that the stringency of the fiscal adjustment requested by the IMF is driven by economic factors, not by politics. However, they also provide empirical support for geopolitical interests as determinants of the number of conditions in an IMF agreement. Therefore, our findings do not contradict those in the literature but call for a different interpretation. While political proximity seems to play a role in IMF agreements, the rationale behind fiscal consolidation in IMF programs seems to be the restoration of budget discipline.

The remainder of the introduction discusses the related literature. Section 2 then briefly describes the process of IMF lending, highlighting the main components of a program. Section 3 explains the empirical strategy, and Section 4 provides details on the data. Section 5 presents the results, while Section 6 concludes.

## 1.1 Related Literature

A branch of the empirical literature about the IMF focuses on the determinants of program participation and the design of conditionality.<sup>7</sup> Much of this work studies whether foreign policy interests of the Fund’s major members affect its lending decisions. The widely used indicator for the degree of political alignment between countries consists of UNGA voting records, ranging from zero to one, with one indicating perfect affinity.

Thacker (1999) provides one of the first empirical analysis investigating the political influence of the United States over IMF lending decisions. Considering similarity on key votes, the results strongly support the argument that moving towards the U.S. political preferences raises the probability of a country obtaining a loan.<sup>8</sup> 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.<sup>9</sup> Their empirical analysis corroborates this theoretical prediction. The results in Barro and Lee (2005) and Presbitero and Zazzaro (2012) also suggest that political proximity affects Fund’s decisions. Both papers find that countries voting more frequently with the U.S. in UNGA have a higher probability of getting a package approved, with larger loans. In a recent study, Lang and Presbitero (2018) also show that “U.S. friend” countries are more likely to receive improved ratings in

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<sup>7</sup>Dreher (2009) presents a survey of the theoretical literature on the reasons for IMF conditionality. In Marchesi and Thomas (1999), IMF conditionalities act as a screening device. In Fafchamps (1996), Gonçalves and Guimaraes (2015) and Guimaraes and Iazdi (2015), conditionality helps to deal with time inconsistency problems.

<sup>8</sup>According to the U.S. State of Department, key votes are “votes on issues which directly affected United States interests and on which the United States lobbied extensively.”

<sup>9</sup>They measure political concessions by the difference between the overall voting record of a country and the votes on issues considered important by the U.S. Department of State.

the context of World Bank - IMF Debt Sustainability Framework.<sup>10</sup>

Many empirical papers find that IMF loans and conditionality are responsive to the economic interests of the Fund’s major shareholders and the domestic political environment of recipient countries. Previous research finds evidence that private financial institutions pressure the IMF for more “bank-friendly” conditions when their financial interests are at stake (Gould (2003)), that IMF loans are larger for countries highly indebted to American commercial banks (Oatley and Yackee (2004)), and for countries with strong trade connections with the U.S. (Barro and Lee (2005)). Regarding the role of domestic politics, Caraway et al. (2012) develop a measure for the stringency of labor market conditionality, and find that countries with stronger domestic labor power receive softer conditions.<sup>11</sup> The results in Beazer and Woo (2016) indicate that a higher number of structural conditions jeopardizes reform implementation by reducing government’s policy space for building pro-reform coalitions.

Closer to our paper is the work of Dreher and Jensen (2007). Their empirical analysis evaluates the extent to which the number of conditions in an IMF agreement depends on domestic economic factors such as real GDP growth and government budget deficit, or on political proximity to the U.S. (and G7 countries). They find that countries closely allied with the U.S. sign deals with a significantly smaller number of conditions. Their results also suggest that countries voting more frequently with the U.S. receive fewer conditions before elections. Similarly, Dreher et al. (2009) estimate the effects of temporary participation on the United Nations Security Council (UNSC), and find that non-permanent members receive a significant reduction in the number of conditions. Building on Dreher and Jensen (2007), Woo (2013) finds that closer political proximity to the U.S. leads to fewer financial-sector conditions, though the effect on the number of fiscal conditions is not statistically significant. In a related contribution, Stone (2008) empirically investigates the influence of U.S. interests and the role of domestic political opposition over the design of IMF conditionality. The measure of intrusiveness corresponds to the number of categories of conditions subject to test in a given program review. He finds that countries that are more likely to be offered a program accept it with fewer conditions attached.

## 2 IMF lending

An IMF program consists of a package that includes three main components: financing, conditionality, and technical assistance. The Fund offers several lending instruments which are,

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<sup>10</sup>Empirical research on World Bank lending also finds that countries more politically allied to the U.S. receive better access to loans. See, for instance, Kilby (2009) and Kersting and Kilby (2016).

<sup>11</sup>The stringency of conditionality 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.

according to official statements, designed and made available according to country-specific characteristics and sources of economic instability. Concessional facilities are designed to assist low-income countries, while advanced and emerging economies have access to non-concessional loans.<sup>12</sup> The nature of IMF's financial assistance has changed significantly over time, from the traditional support to countries facing short-term trade fluctuations to supporting macroeconomic adjustment and addressing a wide range of balance of payments problems resulting from terms of trade shocks, broad economic transition, sovereign debt restructuring, and banking crises.

The second component of an IMF program is a set of macroeconomic and structural policies that a participating country agrees to uphold, known as conditionality. These can take different forms. Prior actions are conditions that must be met before the Executive Board approves a program. Performance criteria include quantitative targets for macroeconomic variables which must be met by a corresponding program review, or officially be waived by the Executive Board if compliance is not achieved. There are also structural benchmark conditions, usually non-quantifiable, which require more specific structural reforms such as privatizations and tax reform. As an example, the Appendix shows the Letter of Intent of a Stand-By Arrangement approved for Greece in 2014.

Technical assistance and training are also provided by the IMF, usually in core areas of expertise such as central banking, tax policy, and official statistics. The view is that the provision of expertise helps the design and implementation of economic policies and the reestablishment of government institutions after episodes of social unrest.

The terms of a loan are negotiated between a country's authorities and the IMF's staff. This process culminates in a Letter of Intent and a Memorandum of Economic and Financial Policies, where the targets and goals of a program are described. These documents are then submitted to the Executive Board, which decides whether the program is approved (with possible modifications in the initial Letter of Intent) or not. Once approved, the resources are released usually in phased installments, and the Fund starts to monitor program implementation. The Executive Board can also decide on post-programming monitoring for a country at any time during or after a program expires. Countries under post-program monitoring undertake more frequent consultations than countries under normal surveillance. Once strong policies are in place and the country's external position is safe, the Executive Board agrees to discontinue post-program monitoring.

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<sup>12</sup>Concessional lending carries zero interest rates, while non-concessional loans are subject to the IMF's market-based interest rates. A detailed description of all credit lines offered by the IMF can be <https://www.imf.org/external/np/exr/facts/howlend.htm>.

### 3 Empirical strategy

The fiscal balance requested by the IMF might be driven by different objectives: (i) getting closer to an economically ideal fiscal balance; (ii) minimizing the costs of fiscal adjustment; and (iii) benefiting or harming countries for political reasons. We start from a simple specification of the IMF objective function with weights on each of these three factors:

$$V = -a \left( s_{i,t}^* - \hat{s}_{i,t} \right)^2 - b \left( \hat{s}_{i,t} - s_{i,t-1} \right)^2 + c(1 - p_{i,t}) \left( \hat{s}_{i,t} - s_{i,t-1} \right) \quad (1)$$

where  $s_{i,t}^*$  is the ideal fiscal surplus of recipient country  $i$  at time  $t$ ,  $\hat{s}_{i,t}$  denotes the fiscal surplus requested by the IMF,  $s_{i,t-1}$  is the fiscal surplus before the agreement,  $p_{i,t} \in [0, 1]$  is a measure of political proximity and  $a, b, c$  are positive weights on each of the IMF's objectives.

The first term in (1) captures the loss owing to the difference between the requested and the ideal surplus. An excessively low requested surplus is costly for implying a larger probability of recidivism and loss of reputation, while a very high requested surplus reduces the chances of an agreement and might hurt the country's economy. Since it is not clear which type of error is more important, we assume a simple quadratic specification.

The second term allows for costs of fiscal adjustment, as it considers that larger deviations from the current state are costly. Substantial changes in taxes and government spending are usually politically difficult and may lead to short term disturbances in the economy.

The third term allows the IMF to request a larger fiscal surplus for countries that are politically distant from its main shareholders. The linear specification implies that a marginal increase  $ds$  in the requested fiscal adjustment  $\hat{s}_{i,t} - s_{i,t-1}$  yields a marginal benefit to the IMF equal to  $c(1 - p_{i,t})ds$ . The marginal benefit is thus proportional to political distance  $(1 - p_{i,t})$  and to the weight  $c$ . This captures the IMF political motivation in a simple way.

This specification portrays the three drivers of the requested fiscal balance needed in the model: economic fundamentals, adjustment costs, and political motivations. Taking the first order condition and rearranging yields a simple linear expression:

$$\hat{s}_{i,t} - s_{i,t-1} = \frac{c}{2(a+b)} + \left( \frac{a}{a+b} \right) s_{i,t}^* - \left( \frac{a}{a+b} \right) s_{i,t-1} - \left( \frac{c}{2(a+b)} \right) p_{i,t}$$

In the absence of adjustment costs and political motivations (i.e.,  $b = c = 0$ ), the IMF would request a surplus equal to  $s_{i,t}^*$ , and the coefficient on the current surplus  $s_{i,t-1}$  should be one. Larger values of  $b$  bring this coefficient towards zero. In contrast, in the absence of an economic motivation (i.e.,  $a = 0$ ), the coefficients on  $s_{i,t}^*$  and  $s_{i,t-1}$  should be zero and only the political variable could matter.



The key issue is that  $s_{i,t}^*$  is not observable. We assume that the ideal fiscal surplus is given by

$$s_{i,t}^* = \alpha_i + \nu_t + \gamma X_t + \epsilon_{i,t} \quad (2)$$

where  $\alpha_i$  is country  $i$ 's fixed effect,  $\nu_t$  is time  $t$ 's fixed effect,  $X_t$  are economic variables and  $\epsilon_{i,t}$  is an error term. Changes in the world economic outlook that might lead the IMF to be more or less fiscally conservative would be captured by  $\nu_t$ , while slow-moving institutional characteristics of a country would be captured by the term  $\alpha_i$ .

Rearranging (and dropping constants multiplying or adding to fixed effects or coefficients), we get that

$$\hat{s}_{i,t} - s_{i,t-1} = -\left(\frac{a}{a+b}\right) s_{i,t-1} - \beta p_{i,t} + \gamma X_t + \alpha_i + \nu_t + \epsilon_{it} \quad (3)$$

The key identifying assumption is that  $\epsilon_{i,t}$  is uncorrelated with  $p_{i,t}$  and  $s_{i,t-1}$ . In words, the ideal fiscal balance is well described by (2) and shocks to this variable are unrelated to our regressors. One could imagine that  $s_{i,t-1}$  would be positively related with  $\epsilon_{i,t}$ : a larger observed surplus in the previous period could be reflecting, at least in part, a larger ideal fiscal surplus (not captured by  $\alpha_i$ ,  $\nu_t$  and  $X_t$ ). Importantly, that would likely bias our estimate towards zero. If large values of  $s_{i,t-1}$  would often coincide with large and positive values of  $\epsilon_{i,t}$ , large values of  $s_{i,t-1}$  would not necessarily lead to smaller fiscal adjustments  $\hat{s}_{i,t} - s_{i,t-1}$ . Hence our estimator would be smaller than  $-(a/(a+b))$  in absolute value. Intuitively, if changes in  $s_{i,t}^*$  are captured in part by  $s_{i,t-1}$ , the country has already moved in the required direction and the IMF will require smaller adjustments, so  $\hat{s}_{i,t} - s_{i,t-1}$  will be smaller.

### 3.1 The determinants of the requested fiscal adjustment

Define the requested fiscal adjustment for country  $i$  with a program approved in year  $t$  as

$$RFA_{i,t} = \hat{s}_{it} - s_{it-1} \quad (4)$$

The relationship between requested fiscal adjustment, government consumption, tax revenue, and political proximity follows from (3):

$$RFA_{i,t,h} = \delta_0 G_{i,t-1} + \delta_1 T_{i,t-1} + \beta VoteG5_{i,t-1} + \gamma X_{i,t-1} + \alpha_i + \nu_t + \epsilon_{i,t} \quad (5)$$

where  $G_{i,t-1}$  is government consumption as share of GDP,  $T_{i,t-1}$  is tax revenue also as share of GDP, and  $VoteG5_{i,t-1}$  indicates how frequently a country votes in the same way as G5 members in UNGA. The vector  $X_{i,t-1}$  consists of standard time-varying country-specific economic and demographic control variables such as annual GDP growth, public debt-GDP ratio, trade



openness, and the share of population between 15 and 64 years old. The term  $\alpha_i$  is a vector of country fixed effects capturing any time-invariant unobserved heterogeneity, and  $\nu_t$  is a vector of year fixed effects absorbing global shocks that affect different countries in a similar way in a given year.

The only meaningful difference between (3) and (5) is that in the estimation, we consider  $G_{i,t-1}$  and  $T_{i,t-1}$  separately instead of considering the difference between them,  $s_{it-1}$ . The model implies  $\delta_0 = a/(a+b)$  and  $\delta_1 = -a/(a+b)$ . This thus yields a sanity test of the model. Note also that the estimates of  $\delta_0$  and  $\delta_1$  provide information about the relative weights on requesting a suboptimal target and on the costs of fiscal adjustment.

A fixed-effect regression is particularly suitable for our empirical strategy 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 country-specific characteristics. Fixed effects capture each country’s “natural” propensity to default on its debt and to adopt a particular type of fiscal policy.

Arguably, 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.<sup>13</sup>

After estimating the relation in (5), we turn to investigate the hypothesis that G5 members use their influence over the IMF to request a differentially lower fiscal adjustment in election years to more politically aligned countries. We thus estimate

$$\begin{aligned}
 RFA_{i,t,h} = & \delta_0 G_{i,t-1} + \delta_1 T_{i,t-1} + \beta VoteG5_{i,t-1} + \theta_0 Elec_{i,t} + \\
 & + \theta_1 Elec_{i,t} \times VoteG5_{i,t-1} + \gamma X_{i,t-1} + \alpha_i + \nu_t + \epsilon_{i,t}
 \end{aligned} \tag{6}$$

where  $Elec_{i,t}$  is a dummy variable that assumes the value 1 if country  $i$  held an executive election in a window of 6 months before and 12 months after it had a program approved. There are 41 elections in 29 countries in our sample according to this definition. We interpret  $\theta_1$  as estimating the difference-in-differences between election year effects conditional on the

<sup>13</sup>Corroborating this argument, Reinhart and Rogoff (2010) show that thresholds for external debt sustainability are significantly lower for emerging market economies than for industrialized countries.

level of political alignment. Importantly, under the assumption that the timing of elections is exogenously defined, this interaction term can be interpreted causally. We believe this is a reasonable assumption in our context: it seems very unlikely that incumbents deliberately reschedule elections because of an upcoming IMF program.<sup>14</sup>

### 3.2 The determinants of the number of conditions

We repeat our analysis using the number of conditions instead of the requested fiscal adjustment as the dependent variable. This specification is similar to others from the literature and helps us to compare our estimates of the determinants of the requested fiscal adjustment and previous results found in the literature.

The estimation employs a Poisson specification for the conditional mean. For brevity of exposition, we show only the version of equation 5, as follows:

$$\mathbb{E}[Number_{i,t}|\alpha_i, W_i] = \exp(\delta_0 G_{i,t-1} + \delta_1 T_{i,t-1} + \beta VoteG5_{i,t-1} + \gamma X_{i,t-1} + \alpha_i + \nu_t), \quad (7)$$

where  $\mathbb{E}$  is the expectations operator and  $W_i$  is the vector of all explanatory variables on the right-hand side of the equation.<sup>15</sup> The dependent variable  $Number_{i,t}$  counts either the total number of conditions or the number of fiscal conditions for country  $i$  with a program approved in year  $t$ .

## 4 Data and descriptive evidence

Our main data set is extracted from the IMF’s Monitoring of Fund Arrangements Database (MONA), which contain all the relevant information on programs such as the approval date, duration, and the economic targets. Our sample consists of 143 programs approved between 1999 and 2012 for 52 countries with at least two programs, and with fiscal conditionality attached.<sup>16</sup> The analysis focuses on the initial program design, mainly because this is when

<sup>14</sup>In similar settings, Lang and Presbitero (2018) and Kersting and Kilby (2016) do not find evidence for endogenous election timing with regard to the World Bank - IMF Debt Sustainability Framework and World Bank lending, respectively.

<sup>15</sup>To estimate the model, the statistical software Stata transforms equation (7) to remove the individual fixed effects. Thus, we obtain a multinomial distribution for  $Number_{i,t}$ , as follows:

$$\mathbb{E}[Number_{i,t}|\alpha_i, W_i, \overline{Number}_i] = \frac{\exp(\delta_0 G_{i,t-1} + \delta_1 T_{i,t-1} + \beta VoteG5_{i,t-1} + \gamma X_{i,t-1} + \alpha_i + \nu_t)}{\sum_{r=1}^T \exp(\delta_0 G_{i,r-1} + \delta_1 T_{i,r-1} + \beta VoteG5_{i,r-1} + \gamma X_{i,r-1} + \alpha_i + \nu_r)} \overline{Number}_i, \quad (8)$$

where  $\overline{Number}_i = \sum_{r=1}^T Number_{i,t}$  is the number of conditions in a program for country  $i$  over the entire sample. Estimation of equation (8) is then carried using conditional quasi-maximum likelihood.

<sup>16</sup>Since we use country fixed effects in our baseline estimation, countries with only one program provide no useful information.

its broad outlines are defined.<sup>17</sup>

Our measure of the required fiscal effort is the difference between the requested fiscal balance and the observed one immediately before the agreement, as defined in (4). We take from MONA the envisaged overall government balance for each year of the program.

We define two versions of the requested fiscal adjustment  $RFA_{i,t}$ : one that uses the proposed fiscal balance for one year after program approval, and another that considers instead each program's final year requested fiscal balance. While programs can last from one to four years, the bulk of them are signed for three years.<sup>18</sup> Moreover, the average country participates with three programs in the sample period. There are four programs in our sample with a mismatch between its duration and the available information on the envisaged fiscal balance.<sup>19</sup> For these programs, we use the last available data on the targeted fiscal balance to construct the second version of the requested fiscal adjustment. For one-year programs, the two versions of the requested fiscal adjustment coincide by definition.

Out of those 143 programs, MONA does not provide information on the envisaged fiscal balance in any year following approval for five programs: Honduras (1999), Argentina (2000), Pakistan (2000), Lithuania (2000), and Brazil (2001). We thus exclude such observations when running the regressions in (5) and (6) and their counterparts in the robustness exercises. We also adjusted the data set for the following programs: Nigeria (2005), Central African Republic (2006), and Burkina Faso (2007). According to MONA, the first two countries entered into IMF programs with very high levels of fiscal surpluses and were still required to improve them. The IMF's WEO data tell us that the Central African Republic actually ran a fiscal deficit in 2005 (of 4.6 % of its GDP), while Nigeria had a high fiscal surplus indeed in 2004 (but not as high as in MONA). In the case of Burkina Faso, we identified an inconsistent value (by historical standards) for the fiscal balance of 2006, a surplus of around 16% of GDP. This unusually high balance results from an extraordinarily fiscal revenue for that year, around 40% of GDP. The IMF's WEO provides roughly the same values for these two variables. However, the country's Letter of Intent confirms our suspicion and leads us to adjust for this program/country.<sup>20</sup> We use the 2006 fiscal balance of -5.88% of GDP (from the World Bank), with the tax revenue adjusting (by residual) to 18.72% of GDP.<sup>21</sup>

As a first piece of evidence on the determinants of the requested fiscal adjustment, we

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<sup>17</sup>As noted by (Copelovitch; 2010), there is evidence that the IMF rarely alters the number of "hard" conditions.

<sup>18</sup>An exception is the eight-year program Tanzania obtained in 2003.

<sup>19</sup>They are Mauritania (1999), Malawi (2000), Pakistan (2001) and Burundi (2012).

<sup>20</sup>According to the Letter of Intent of April 2007, "fiscal revenues in 2006 were considerably less than projected, mainly because of lower domestic consumption and income taxes in part related to the crisis in the cotton sector. Though total expenditures were also reduced in nominal terms, the overall deficit excluding grants reflected the revenue shortfall and increased to 11 percent of GDP (on an engagement basis). However, with higher than expected capital expenditures funded by additional project grant disbursements, the overall balance including grants was in line with projections at 5.2 percent of GDP".

<sup>21</sup>The World Bank data on fiscal balance use another official IMF's data set, the Government Finance Statistics Yearbook (GFSY).

analyze the bivariate relationship between pre-program fiscal balance and the requested fiscal adjustment. That is plotted in Figure 1. The straight line is what the requested adjustment would be if the IMF always aimed at a zero fiscal balance.

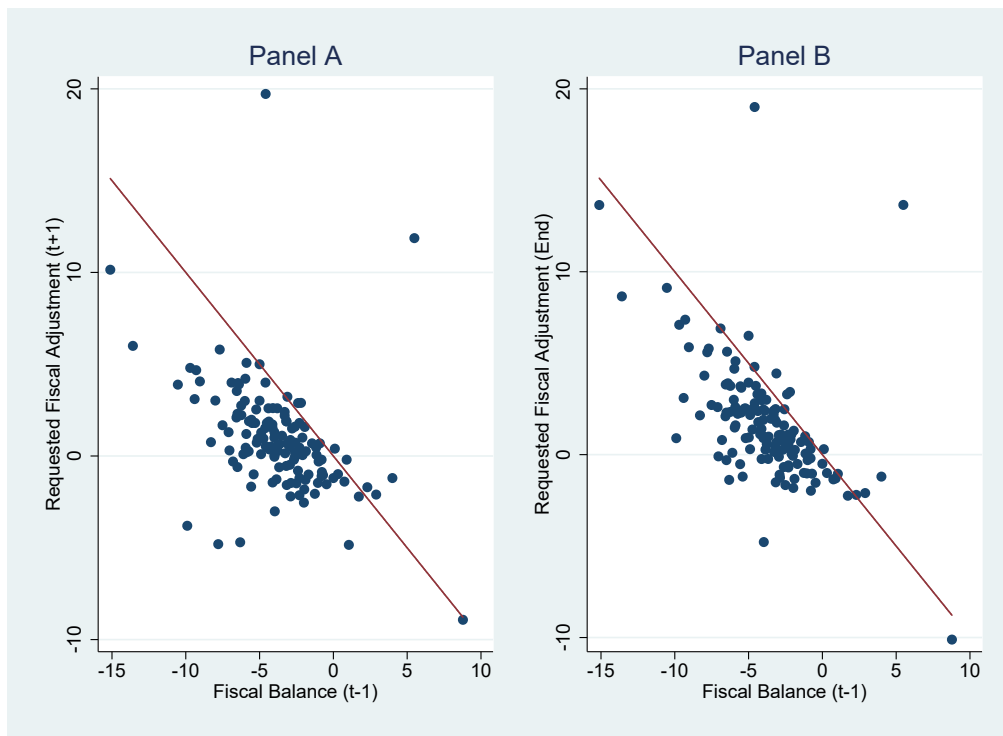


Figure 1: Correlation between Requested Fiscal Adjustment and initial deficits

The figure suggests a negative correlation between current fiscal balance and the requested fiscal adjustment as implied by (3). The requested adjustment is usually below the negative 45-degree line, implying that requested adjustments aim at reducing but not eliminating fiscal deficits – perhaps reflecting a substantial cost of fiscal adjustment  $b$ . This simple relationship will be confirmed by more rigorous empirical analysis.

Additional interesting features emerge from Figure 1. While there is an initial deterioration in the existing fiscal deficits for some countries, in many of those cases there is a request for fiscal improvement throughout their programs – or at least an improvement compared to their first year targeted fiscal balances. In Figure 1, points in the third quadrant move (vertically) towards the 45-degree line as we go from Panel A to Panel B.<sup>22</sup> Some countries enter into IMF arrangements with fiscal surpluses, but the number of such cases is small in our sample (eleven), and the size of the surpluses is arguably moderate for most of them (eight), not

<sup>22</sup>Indeed, an official report in Selowsky and Mansoor (2003) that analyzes fiscal adjustment in 133 IMF programs in the 1993-2001 period states that “contrary to the general perception that IMF-supported programs invariably enforce austerity, it finds many instances where fiscal deficits were actually projected to widen and expenditures to increase as a percentage of GDP”.

exceeding 3% of GDP. The requested fiscal adjustment for these countries is negative, but we cannot tell whether their realized fiscal balances would be even more negative in the absence of an IMF agreement.

Turning to the number of conditions, MONA classifies them according to their type (prior actions, quantitative performance, and structural benchmarks) and targeted sectors (such as fiscal and monetary). While the total number of conditions is the most frequent indicator of overall program austerity in the literature, our work also looks at the number of fiscal conditions. We do so for two reasons. First, there is evidence that fiscal conditions are deeper in scope and harder to implement.<sup>23</sup> Second, it allows for a more direct comparison with our measure of requested fiscal adjustment.

Defining what counts as a fiscal condition is mostly straightforward. For each condition, there is a criterion code and an economic descriptor that indicate whether it is a fiscal condition or not. In general terms, the fiscal conditions extracted from MONA are distributed in categories related to revenue or expenditure measures, debt management, public enterprise reform, pricing policy, and social security and pensions.

Figure 2 shows the first result of this paper: there is no significant correlation between the two measures of conditionality. A given number of fiscal conditions can correspond to either high, moderate, or soft requirements for fiscal adjustment. The absence of a strong correlation remains when we eliminate the noisy effects of time. When we regress each measure of fiscal conditionality against year dummy variables and focus on the residuals, we actually observe a small negative correlation between them.<sup>24</sup>

Conditions are very different in scope. Some of them do not require any economic or political effort by a participating country, while others involve domestic political battles, and produce significant institutional and economic changes once implemented (Lamdany and Hamann (2008)). In a 2002 program, Peru’s authorities agreed on the privatization of its electricity generation company, a measure that 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 conditionality.

On average, IMF programs request a fiscal adjustment of either 0.93% of GDP (t+1) or 1.71% of GDP (end year). Fiscal conditions are pervasive, with almost 8 conditions per program on average, which represents 39% of all conditions included in a package. A “ceiling

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<sup>23</sup>For instance, the IMF’s report in Lamdany and Hamann (2008) finds that structural conditions related to tax policy and public expenditure measures are the most stringent.

<sup>24</sup>Available upon request.

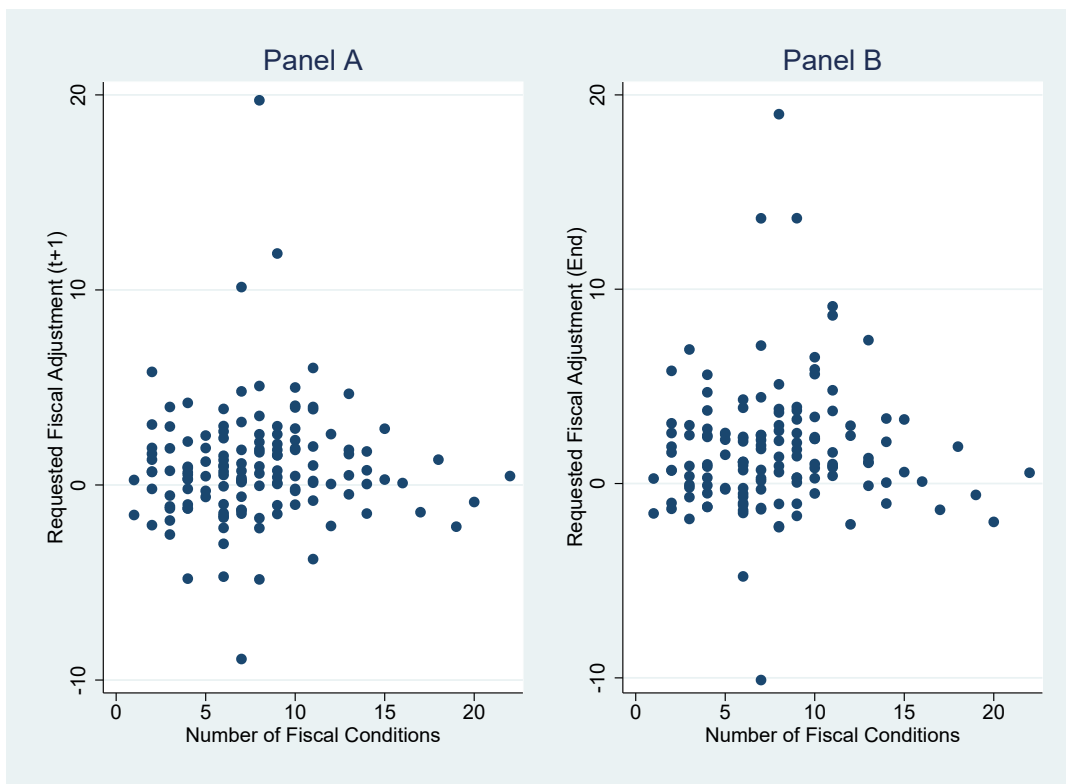


Figure 2: Correlation between the number of fiscal conditions and requested fiscal adjustment

on the overall stock of central government debt” is an example of a fiscal quantitative conditionality, and 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.<sup>25</sup> We report some descriptive statistics of IMF programs in Table 1, which in turn suggest significant variability in both measures of fiscal conditionality.

Table 1: Fiscal Conditionality in IMF Programs

Years of Program	Number of Programs	Fiscal Adjust.(t+1)		Fiscal Adjust.(End Year)		N. of Fiscal Conditions	
		Mean	SD	Mean	SD	Mean	SD
1	24	0.95	1.80	0.95	1.80	6.00	4.18
2	25	1.14	2.84	1.84	2.80	7.24	3.87
3	86	0.82	3.35	1.80	3.69	8.42	3.92
4+	3	2.11	2.27	3.92	3.02	7.33	5.51
All Programs	138	0.93	3.00	1.71	3.27	7.76	4.05

To measure political alignment between countries, we use data on voting behavior in UNGA (Strezhnev and Voeten (2013)). In our baseline regressions, we set political proximity to reflect

<sup>25</sup>These examples were taken from the Letter of Intent for Greece (December 8, 2010).

the degree to which participating countries voting records match that of G5 members. This measure of political proximity ranges from zero to one, with one indicating perfect alignment. Additional economic and demographic control variables are drawn from WEO, World Bank, and Unctad. A complete description of our data is available in the Appendix.

Table 2 details the means and variances of the data used in some of our regressions for programs with fiscal conditionality. We also include statistics for out of sample programs, i.e., without fiscal conditionality.

**Table 2. Data, Means, and Variances**

Variable	Mean	Std Deviation	Observations
Data Set 1: In Sample Programs			
VoteG5	48.4	16.4	138
Election	0.29	0.45	138
Government Consumption (%GDP)	28.3	9.3	131
Tax Revenue (%GDP)	24.6	8.7	135
Public Debt (%GDP)	66.9	52.4	131
Current Account Balance (%GDP)	-6.4	6.6	138
GDP annual growth (%)	3.7	4.9	138
Monetary annual expansion (%)	19.1	45.4	138
Trade openness (%GDP)	70.0	27.8	136
Population 15-64 (%Total)	60.6	4.8	138
Population 65 and above (%Total)	6.1	4.4	138
Data Set 2: Out of Sample Programs			
VoteG5	42.9	17.2	80
Government Consumption (%GDP)	30.0	14.9	70
Tax Revenue (%GDP)	26.8	13.1	71
Public Debt (%GDP)	79.0	63.5	63
Current Account Balance (%GDP)	-5.3	9.5	80
GDP annual growth (%)	4.2	8.2	79
Monetary annual expansion (%)	19.0	28.2	80
Trade openness (%GDP)	87.8	41.5	74
Population 15-64 (%Total)	57.8	9.1	80
Population 65 and above (%Total)	5.4	3.6	80

## 5 Results

### 5.1 The determinants of number of conditions

We start showing how economic and political factors affect the number of conditions. The results are in Table 3. Columns 1-2 and 5-6 report estimates of (7). In columns 3-4 and 7-8, we add the election variable and its interaction with *VoteG5*.

We find a negative correlation between the number of conditions and political proximity in terms of voting similarity in UNGA. The effect is large, especially for fiscal conditions. When the political alignment measure is one standard deviation above the country mean, the



number of fiscal conditions is 23% – 26% smaller than the country mean. The decrease in the total number of conditions is around 11%.

**Table 3. Regressions of the Number of Conditions**  
**Dependent Variables: Fiscal and Total Conditions**

	Fiscal				Total			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VoteG5		-0.02*** (0.006)		-0.01** (0.006)		-0.007* (0.004)		-0.006 (0.004)
Election			0.23* (0.12)	-0.32 (0.30)			0.11 (0.09)	0.07 (0.27)
VoteG5 x Election				0.01* (0.01)				0.0005 (0.005)
Gov Consumption	-0.01 (0.02)	-0.02 (0.02)	-0.006 (0.02)	-0.02 (0.02)	-0.03 (0.02)	-0.04 (0.02)	-0.03 (0.02)	-0.03 (0.02)
Tax Revenue	-0.003 (0.02)	0.002 (0.02)	-0.01 (0.02)	0.001 (0.02)	0.01 (0.02)	0.01 (0.02)	0.006 (0.02)	0.008 (0.02)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Full set controls	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline
N	124	124	124	124	124	124	124	124
Countries	46	46	46	46	46	46	46	46

Notes: \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . Standard errors clustered at the country level.

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 only 8.6% of the occasions. According to our results, an increase in voting compliance to match the sample average (48.4%) would reduce the number of fiscal conditions to around 6, all else constant.<sup>26</sup> 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.

Our findings regarding the economic determinants of the number of conditions are similar to those reported in [Dreher and Jensen \(2007\)](#) – the partial effects of government consumption and tax revenue are indistinguishable from zero.

In sum, the effects on the number of conditions are closely related to those obtained by [Dreher and Jensen \(2007\)](#), [Dreher \(2009\)](#) and [Woo \(2013\)](#). Hence the differences between the results in this paper and those from the literature are unlikely to be due to different samples or techniques.

<sup>26</sup>The average partial effect of VoteG5 on the number of fiscal conditions is 24.5%.

## 5.2 The determinants of requested fiscal adjustments

Table 4 presents the main results of the paper. Columns 1-2 and 5-6 report estimates of (5), in which the political proximity variable enters (unconditionally) as a determinant of the requested fiscal adjustment. The results suggest that the fiscal effort required by the IMF is primarily driven by economic factors: as the coefficients of government consumption and tax revenue ratios indicate, the size of the requested fiscal adjustment sharply increases in the deterioration of the fiscal balance.

The absolute value of coefficients on tax revenues and government consumption are similar in magnitude, as implied by the model. When the fiscal deficit is one percentage point higher than the country average, the requested fiscal adjustment is about half percentage point higher than the country mean, *coeteris paribus*. Using (3), these coefficients correspond to  $(a/(a+b))$ , hence our point estimates imply that  $a$  is approximately equal to  $b$ : the cost of deviating from the ideal fiscal adjustment (cost of a suboptimal requested target) is similar to the cost from moving away from the current fiscal balance (cost of fiscal adjustment).

Differently from what the political-influence hypothesis would imply, we observe a positive direct relationship between the size of fiscal adjustment and political alignment. However, the effect is statistically insignificant in most specifications.

Columns 3-4 and 7-8 of Table 4 reports the results regarding the estimation of (6). Columns 3 and 7 show that the IMF demands smaller fiscal adjustment in election years, the effect being large (around 1.5% of GDP) and statistically significant.<sup>27</sup> The results reported in columns 4 and 8 consider the effect of interacting *VoteG5* with the election dummy. They do not support the hypothesis that G5 members, through their influence over the IMF Executive Board, demand differentially softer fiscal adjustment in election years for countries that vote more frequently with them in UNGA. The unconditional election effect loses statistical significance, but it is still large and negative.

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<sup>27</sup>As one possible explanation, the IMF might take into account domestic political instability in election years, and the fiscal consolidation contribution to exacerbate social unrest (Ponticelli and Voth (2011)).

**Table 4. Fiscal Adjustment Regressions**  
**Dependent Variable: Requested Fiscal Adjustment**

	T+1				End Year			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VoteG5		0.12*		0.11		0.11		0.09
		(0.07)		(0.07)		(0.07)		(0.07)
Election			-1.37**	-1.58			-1.87***	-1.28
			(0.52)	(2.49)			(0.55)	(2.55)
VoteG5 x Election				0.009				-0.008
				(0.05)				(0.05)
Gov Consumption	0.46*	0.55**	0.40	0.49*	0.54**	0.62**	0.45*	0.53*
	(0.24)	(0.24)	(0.24)	(0.26)	(0.27)	(0.28)	(0.26)	(0.28)
Tax Revenue	-0.45**	-0.50**	-0.38*	-0.43**	-0.57**	-0.61***	-0.48**	-0.53**
	(0.21)	(0.20)	(0.20)	(0.21)	(0.22)	(0.22)	(0.20)	(0.21)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Full set controls	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline
$R^2$	.34	.40	.38	.43	.37	.41	.43	.45
N	125	125	125	125	125	125	125	125
Countries	51	51	51	51	51	51	51	51

Notes: \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . Robust standard errors clustered at the country level in parenthesis.

These findings are consistent with an IMF policy that aims at bringing a country’s fiscal balance closer to its historical average, supporting the view that the rationale behind fiscal consolidations in IMF programs is the restoration of budget discipline.

### 5.3 Robustness

As a first robustness exercise, we consider three alternative measures of political alignment: Key Votes U.S, U.S. Friend, and G5 Friend.<sup>28</sup> The first two make use of “key votes” in UNGA, which the U.S. State Department classifies as “possible to make judgments about whose values and views are harmonious with our own, whose policies are consistently opposed to ours, and whose practices fall in between”.<sup>29</sup> Key Votes U.S. computes political alignment only using important votes as aforementioned, and U.S. Friend is an indicator that takes the value 1 if a given country was more closely aligned with the U.S. on key votes than on all UNGA votes,

<sup>28</sup>We do not examine the impact of temporary UNSC membership on IMF conditionality (as in Dreher (2009)) because in our sample UNSC status is time invariant for most countries.

<sup>29</sup>In 2000, for example, “important” resolutions included Resolution A/Res/ES-10/7 on Israeli actions in occupied territory, and resolution A/Res/55/20 on the U.S. embargo of Cuba.

and 0 otherwise.<sup>30</sup> We then turn to G5 Friend indicator, which exploits the estimates of the distances between the “ideal point” of participating countries and the mean of G5 members. The measure of “ideal point” has the methodological advantage of using the information on the content of the UNGA agenda to make estimates comparable across time (Bailey et al. (2017)). A country is coded as a G5 Friend if it is in the lowest quintile of the distribution of the ideal point distance (as in Lang and Presbitero (2018)). Table 5 reports the results in Panel A (Key Votes U.S.), Panel B (U.S. Friend), and Panel C (G5 Friend).

The bottom line of this robustness exercise is that the estimated effect of the political variable is not robust to seemingly small changes in the econometric specification. While the baseline specification yields a marginally significant positive estimate, Panel A of Table 5 shows that a significant negative estimate of a similar magnitude arises when we restrict our attention to “key votes” in UNGA. Panel B and C of the table show, respectively, negative but often insignificant estimates and positive but insignificant estimates. Importantly, we never find evidence supporting the electioneering hypothesis.

Turning to the second robustness analysis, we subject our election indicator to a variety of tests. First, we consider  $Election_{i,t}$  taking the value 1 when country  $i$  held an election in a window of 6 months before and after program approval. In our sample, there are 30 elections according to this definition. Then we modify  $Election_{i,t}$  to assume the value 1 when country  $i$  held an election in the year of program approval, for which we observe 26 episodes. Results using these alternative definitions are reported in Table 6. Our main findings are stronger under these modifications: the estimated effect on the requested fiscal adjustment of an increase in the fiscal deficit by one percentage point is higher than 0.5 in most specifications.

Table 7 reports the results of running regressions 5 and 6 when we augment the set of control variables to include each country’s economic connections to G5 members. We follow Copelovitch (2010) and Lang and Presbitero (2018) and include BankG5 Exposure, which corresponds to the financial exposure that commercial banks from G5 members have in borrowing countries (%GDP). Data on bank exposure are drawn from the Bank for International Settlements’ Consolidate International Banking Statistics database. Similarly to Barro and Lee (2005), we add TradeG5 Exposure, the ratio of a country’s bilateral trade with G5 members to the country’s GDP. We lose some observations, but the main findings are robust: the size of the requested fiscal adjustment is increasing in the level of fiscal deficit, while political proximity is positively and significantly correlated with  $VoteG5$  in many cases.

As final robustness exercises, we turn to the number of conditions as the dependent variable. We first use OLS instead of a Poisson specification. The latter is more appropriate when

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<sup>30</sup>The U.S. State Department excludes abstentions and absences to calculate voting coincidence. These two versions of political proximity were also used by Thacker (1999), Kilby (2009) and Kersting and Kilby (2016).

**Table 5. Fiscal Adjustment Regressions**  
**Dependent Variable: Requested Fiscal Adjustment**

	T+1				End Year			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Panel A: Key Votes U.S.</b>								
Key Votes U.S.		-0.09*** (0.03)		-0.09*** (0.03)		-0.07* (0.03)		-0.06* (0.03)
Election			-1.37** (0.52)	-2.06* (1.18)			-1.87*** (0.55)	-2.24 (1.38)
Key Votes U.S. x Election				0.02 (0.02)				0.01 (0.03)
Gov Consumption	0.46* (0.24)	0.49** (0.22)	0.40 (0.24)	0.41* (0.24)	0.54** (0.27)	0.56** (0.25)	0.45* (0.26)	0.46* (0.26)
Tax Revenue	-0.45** (0.21)	-0.42** (0.17)	-0.38* (0.20)	-0.35* (0.18)	-0.57** (0.22)	-0.55*** (0.19)	-0.48** (0.20)	-0.46** (0.18)
<b>Panel B: U.S. Friend</b>								
U.S. Friend		-2.02** (0.97)		-1.62 (1.01)		-1.26 (0.89)		-0.59 (0.87)
Election			-1.37** (0.52)	-0.76 (1.13)			-1.87*** (0.55)	-2.26 (1.48)
U.S. Friend x Election				-0.37 (1.44)				0.51 (1.69)
Gov Consumption	0.46* (0.24)	0.50* (0.25)	0.40 (0.24)	0.45* (0.25)	0.54** (0.27)	0.56** (0.27)	0.45* (0.26)	0.45* (0.27)
Tax Revenue	-0.45** (0.21)	-0.49** (0.19)	-0.38* (0.20)	-0.44** (0.20)	-0.57** (0.22)	-0.60*** (0.22)	-0.48** (0.20)	-0.49** (0.19)
<b>Panel C: G5 Friend</b>								
G5 Friend		1.24 (2.12)		1.85 (2.45)		0.82 (2.19)		1.59 (2.55)
Election			-1.37** (0.52)	-1.07 (0.69)			-1.87*** (0.55)	-1.48* (0.76)
G5 Friend x Election				-1.50 (1.72)				-1.85 (1.92)
Gov Consumption	0.46* (0.24)	0.43* (0.22)	0.40 (0.24)	0.39* (0.22)	0.54** (0.27)	0.52** (0.25)	0.45* (0.26)	0.45* (0.24)
Tax Revenue	-0.45** (0.21)	-0.44** (0.20)	-0.38* (0.20)	-0.39* (0.19)	-0.57** (0.22)	-0.56** (0.21)	-0.48** (0.20)	-0.50** (0.19)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Full set controls	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline
N	125	124	125	124	125	124	125	124

Notes: \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . Robust standard errors clustered at the country level.

the dependent variable is skewed (as ours), but our main findings do not rely on which model we use. In particular, *VoteG5* has a strong negative partial effect on the number of fiscal conditions, which however does not depend on an election event. We then include BankG5 Exposure and TradeG5 Exposure as additional control variables. Voting similarity in UNGA remains negatively correlated with the number of total or fiscal conditions in all

**Table 6. Fiscal Adjustment Regressions**  
**Dependent Variable: Requested Fiscal Adjustment**

	T+1				End Year			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Panel A: Elec(-6,+6)</b>								
VoteG5		0.12*		0.12*		0.11		0.10
		(0.07)		(0.07)		(0.07)		(0.06)
Election			-1.23**	-0.69			-1.60**	-0.34
			(0.61)	(2.89)			(0.67)	(2.96)
VoteG5 U.S. x Election				-0.007				-0.02
				(0.05)				(0.05)
Gov Consumption	0.46*	0.55**	0.45*	0.54**	0.54**	0.62**	0.52*	0.60**
	(0.24)	(0.24)	(0.24)	(0.25)	(0.27)	(0.28)	(0.26)	(0.27)
Tax Revenue	-0.45**	-0.50**	-0.42**	-0.47**	-0.57**	-0.61***	-0.54**	-0.59***
	(0.21)	(0.20)	(0.20)	(0.20)	(0.22)	(0.22)	(0.20)	(0.21)
<b>Panel B: Elec(year)</b>								
VoteG5		0.12*		0.11		0.11		0.09
		(0.07)		(0.07)		(0.07)		(0.07)
Election			-1.20*	-1.03			-1.71**	0.56
			(0.71)	(3.41)			(0.74)	(3.53)
VoteG5 x Election				0.005				-0.04
				(0.06)				(0.06)
Gov Consumption	0.46*	0.55**	0.47*	0.55**	0.54**	0.62**	0.55**	0.61**
	(0.24)	(0.24)	(0.25)	(0.25)	(0.27)	(0.28)	(0.26)	(0.28)
Tax Revenue	-0.45**	-0.50**	-0.43**	-0.48**	-0.57**	-0.61***	-0.55**	-0.61***
	(0.21)	(0.20)	(0.21)	(0.21)	(0.22)	(0.22)	(0.21)	(0.22)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Full set controls	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline
N	125	125	125	125	125	125	125	125

Notes: \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . Robust standard errors clustered at the country level.

specifications, but statistically significant only when we control for financial exposure. We do not find evidence that the direct economic interests of G5 members influence the number of conditions. These results are available upon request.

## 6 Concluding remarks

Empirical work on the determinants of IMF conditionality usually employs the sheer number of conditions as a proxy for program austerity. A robust finding in the literature, confirmed by this paper, is that political proximity of the borrowing country to the Fund's major shareholders has a significant effect on the number of conditions in an IMF agreement.

There is indeed some anecdotal evidence of political influence on the IMF's decisions. Momani (2004) assesses whether IMF-Egyptian agreements were facilitated by the U.S. in 1987 and 1991, as a reward to Egypt for not participating in the Persian Gulf War. She

**Table 7. Fiscal Adjustment Regressions**  
**Dependent Variable: Requested Fiscal Adjustment**

	T+1				End Year			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VoteG5	0.12*	0.12	0.20**	0.21**	0.10	0.09	0.20**	0.21**
	(0.07)	(0.07)	(0.09)	(0.09)	(0.06)	(0.07)	(0.08)	(0.08)
Election		0.04		-0.67		0.81		-0.68
		(2.99)		(2.59)		(2.92)		(2.84)
VoteG5 x Election		-0.02		-0.01		-0.04		-0.03
		(0.05)		(0.05)		(0.05)		(0.05)
Gov Consumption	0.59*	0.55*	0.56**	0.49**	0.67**	0.62*	0.61**	0.50**
	(0.30)	(0.31)	(0.21)	(0.21)	(0.32)	(0.32)	(0.23)	(0.22)
Tax Revenue	-0.50*	-0.47*	-0.51***	-0.46***	-0.62**	-0.58**	-0.61***	-0.53***
	(0.25)	(0.25)	(0.17)	(0.16)	(0.24)	(0.23)	(0.18)	(0.15)
BankG5 Exposure	-0.02	-0.02			-0.04	-0.03		
	(0.05)	(0.05)			(0.05)	(0.04)		
TradeG5 Exposure			-0.03	0.004			-0.04	0.02
			(0.08)	(0.09)			(0.09)	(0.11)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Full set controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
$R^2$	.45	.47	.56	.59	.47	.50	.56	.63
N	113	113	112	112	113	113	112	112
Countries	47	47	47	47	47	47	47	47

Notes: \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . Robust standard errors clustered at the country level.

compares IMF's Article IV Consultations (with staff recommendations) and the actual agreements (which are more likely to be subject to political intervention). In the 1987 agreement, IMF staff recommended eight conditions, but only three were included in the program. The 1991 agreement had ten conditions attached, but three other recommended conditions were absent. Akerman (2019) finds that proximity to communist countries during the cold war implies a smaller number of conditions in an IMF agreement and illustrates this finding with the case of Zaire. In 1975, Zairian president Mobutu Sese Seko was struggling to finance his military. This issue was particularly important for U.S. authorities after Angola had adopted a Soviet-aligned socialist regime. Owing to these political concerns, the IMF provided funds to Zaire through a Stand-By Arrangement subject to no binding conditions.

However, according to our results, the IMF's conditions on fiscal consolidation have been driven by economics, not politics. The first take-home point of this paper is that the correlation between the number of conditions and the fiscal adjustment requested by the IMF is very small. The second and most important finding is that the requested fiscal adjustment is mainly determined by a country's fiscal deficit and does not seem to be significantly affected by the political variable.



It is left for future research the task of identifying the set of conditions in an IMF agreement that are prone to political influence. This would shed further light on the workings of the Fund and would enhance our understanding of the effects of politics on policy decisions.

## A Fiscal adjustment by IMF Program

Table 8: 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

## B Data description and source

Table 9: 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
VoteG5	Vote compliance with G5 countries at UNGA	Strezhnev and Voeten
Key votes U.S.	Vote compliance U.S. on important votes	U.S. State Depart.
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
TradeG5 Exposure	Country's bilateral trade with G5 members in over GDP	UN Comtrade
BankG5 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

## C 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

- Akerman, A. (2019). *US geopolitical goals and IMF conditionality: was Cold War relevant?*, Master's thesis.
- 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.
- Bailey, M. A., Strezhnev, A. and Voeten, E. (2017). Estimating dynamic state preferences from united nations voting data, *Journal of Conflict Resolution* **61**(2): 430–456.
- 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. (2016). IMF conditionality, government partisanship, and the progress of economic reforms, *American Journal of Political Science* **60**(2): 304–321.
- 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.
- Copelovitch, M. S. (2010). Master or servant? Common agency and the political economy of IMF lending, *International Studies Quarterly* **54**(1): 49–77.
- Corsetti, G., Meier, A. and Mueller, G. (2012). Fiscal stimulus with spending reversals, *Review of Economics and Statistics* **94**(4): 878–895.
- Diniz, A. (2018). Effects of fiscal consolidations in Latin America, *IMF Economic Review* **66**(4): 694–731.
- 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., 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.
- Kersting, E. K. and Kilby, C. (2016). With a little help from my friends: Global electioneering and world bank lending, *Journal of Development Economics* **121**: 153 – 165.
- 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.
- Lang, V. F. and Presbitero, A. F. (2018). Room for discretion? biased decision-making in international financial institutions, *Journal of Development Economics* **130**(Supplement C): 1 – 16.
- Marchesi, S. and Thomas, J. P. (1999). IMF conditionality as a screening device, *The Economic Journal* **109**(454): 111–125.
- Momani, B. (2004). American politicization of the International Monetary Fund, *Review of International Political Economy* **11**(5): 880–904.
- 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. (2017). Emotions and political unrest, *Journal of Political Economy* **125**(3): 903–946.
- 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.
- Selowsky, M. and Mansoor, A. (2003). *Fiscal Adjustment in IMF-Supported Programs*, International Monetary Fund.
- Stone, R. W. (2008). The scope of IMF conditionality, *International Organization* **62**(4): 589–620.
- 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.