It's Politics, Stupid! Political Constraints Determined Governments' Reactions to the Great Recession

Fabian Gunzinger and Jan-Egbert Sturm*

I. INTRODUCTION

After the collapse of Lehman Brothers in September 2008, the world economy was hit by an economic crisis of a scale not seen since the Great Depression; during the winter half-year 2008/2009, world trade collapsed by almost 20 percent, while world industrial production shrank by about 12 percent. The Great Recession, as the shock came to be known, came – at least in terms of its size – as a surprise to virtually everyone. Governments around the world were surprised too, yet many reacted quickly by introducing fiscal stimulus packages.

However, the size of these packages varied considerably across countries. The UNCTAD Trade and Development Report (UNCTAD 2009) highlights that countries such as Kazakhstan, Saudi Arabia and Singapore had scheduled to implement discretionary packages amounting to 11.1, 9.2 and 8 percent of GDP, respectively. At the other end of the spectrum, the packages scheduled by the governments in Italy and Switzerland were 0.3 and 0.5 percent of their respective GDP levels.¹

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¹For an overview of stimulus sizes for all countries, see Table A1 in the Supplementary Information (SI).

What explains these differences? Policy-oriented organizations and recent academic research have so far concentrated on three factors: 'need', the size of the shortfall in aggregate demand that discretionary spending aims to compensate for; 'fiscal space', the government's fiscal ability to spend in time of need; and 'effectiveness', the fraction of the fiscal spending that translates into aggregate demand.²

In contrast, the role of domestic political factors is often neglected. Given that fiscal policy is enacted within a political environment, this environment should be expected to influence the outcome. In this paper, we attempt to address this shortcoming by explicitly taking politics into account. We do this by estimating the effect of political constraints on the size of stimulus packages that were enacted in the wake of the crisis. We approximate the degree of political constraints by looking at whether a country's executive party had control over the majority of legislative branches that are relevant for policy making. If it did, we consider it to have been free of political constraints as it had unilateral law-making power and was not required to cooperate with the opposition in order to enact fiscal stimulus measures.

We find that the effect of political constraints on the size of fiscal stimulus packages that governments have enacted in reaction to the shock of 2008-09 is large, statistically significant and robust to alternative dependent variables, alternative model specifications and changes in the sample. Our results suggest that on average, governments without political constraints have implemented stimulus packages that were – depending on the fiscal stimulus measure used – about 1 to 2.7 percentage points of GDP larger in size than packages enacted by governments that faced political constraints, and thus did have to cooperate with the opposition.

What our results do not and cannot show is whether these stimulus packages were appropriate responses to the crisis in the sense that they were effective in supporting economic recovery. For that we would have to analyse the consequences of different fiscal measures on the business cycle. There is a substantial, at times ideologically driven, literature on these questions,³ but our concern here is a different one: we are interested in the drivers behind the size of these stimulus packages, not in their effectiveness.

The remainder of this paper is organized as follows. The next Section discusses our conceptual framework. In Section III a selective overview of the

³See, for instance, Auerbach and Gorodnichenko (2012), Chodorow-Reich et al. (2012), Cogan and Taylor (2011), Conley and Dupor (2013), Feyrer and Sacerdote (2011), Furceri and Sousa (2009).

²See, for instance, OECD (2009), IMF (2009a), Aizenman and Jinjarak (2011) and Ilzetzki et al. (2013). Aizenman and Jinjarak (2011) directly test for, and confirm, their importance for the size of stimulus packages, while the findings of Ilzetzki et al. (2013) suggest that more fiscal space and less trade openness makes stimulus more effective. For a more elaborate discussion on the link between fiscal space, or fiscal leeway, and fiscal policy, see Blanchard et al. (2010).

related literature is given. Whereas the data and the empirical model are introduced in Section IV, Section V presents the empirical results. Section VI offers some concluding remarks.

II. CONCEPTUAL FRAMEWORK

Why should political constraints have an impact on a government's response to an economic shock? A vast literature on economic voting finds that if voters are satisfied with the economic performance prior to an election, they re-elect the incumbent government while if they are not, they do not.⁴ Bartels (2011) looks at the electoral consequences of economic stimulus packages during the Great Recession and finds that

voters consistently punish [...] incumbent governments for bad economic conditions, with little apparent regard for the ideology of the government or global economic conditions at the time of the election. [There is also] some evidence of electoral responses to specific fiscal policy choices, most notably, a boost in incumbent governments' electoral support associated with spending on economic stimulus programs. (p. 1)

These findings have strong implications for political incentives. If incumbent governments expect to be punished for bad economic performance and to be rewarded for enacting stimulus packages in the wake of economic downturns, then we should expect them to enact stimulus packages of a size they deem optimal given need, fiscal space and the effectiveness of such packages. For the same reason, we would expect opposition parties to try to block, delay or reduce the size of such packages. In addition to political calculus, any type of fiscal stimulus will have distributional consequences that the opposition may oppose based on ideological differences. Hence, in countries where the opposition has the political means to influence legislation, we should, everything else being equal, expect stimulus packages to be smaller, at least initially.

What about autocratic regimes? To the extent that the legitimacy of the political regime depends on its delivery of economic progress, the same logic for enacting fiscal stimulus packages applies. Olson (2000) argues that a stable and durable autocratic regime has a strong interest to provide prosperity-enhancing public goods to protect the economic system from which it extracts taxes. When faced with a shortfall in aggregate demand, the goal of such a regime is the preservation of its rent, creating the incentive to introduce fiscal stimulus measures. What is different, of course, is the absence of an opposition that can delay or negotiate down the size of such packages or attempt to change its composition. All else equal, we therefore expect packages of non-

⁴For major contributions see Lewis-Beck (1988) and Duch and Stevenson (2008). For summaries of the literature see Lewis-Beck and Paldam (2000) and Hibbs (2006).

democracies, like those in democracies that do not face political constraints, to be larger than those of democracies that do face such constraints.

The above reasoning rests on the premise that voters hold the government responsible for poor economic conditions, and reward it for enacting stimulus packages as a reaction to crises, regardless of whether the government faces political constraints or not. If this assumption is relaxed, then alternative interpretations for the negative relationship between the size of stimulus packages and political constraints emerge.

Suppose that voters realise that politically constrained governments should not be (fully) blamed for poor economic conditions. In such a case, constrained governments might spend less political capital and effort on enacting the stimulus package they deem optimal, because they know that they will not be blamed (as much) for a poor economic recovery. The observed outcome would remain the same: we would expect stimulus packages to be smaller in the presence of political constraints.

A further explanation for the negative relationship is that political constraints might prevent governments from enacting stimulus packages that are larger than what is socially optimal. If unconstrained governments are faced with an exogenous economic shock that reduces their re-election chances, this might shorten their time-horizon substantially. As a result, such governments might try to enact stimulus packages that are larger than what is socially optimal as a high-risk strategy to secure re-election. Political constraints could prevent this kind of behaviour. Not only would they make the implementation of oversized packages more difficult, but also the political burden of facing poor economic conditions would, as argued above, be shared with the opposition and so the time-horizon of such governments would not be shortened as much.

All of these explanations have in common that they lead to a negative relationship between stimulus size and political constraints and, given the data at hand, we cannot empirically discriminate between them. Nevertheless, they all underline the main message of this paper: political constraints matter.

III. RELATED LITERATURE

There are three strands of the literature on the interaction between politics and economics that are related to our argument.

First, there is research that highlights the importance of politics for both fiscal and monetary policy outcomes: Porteba (1994) finds that one-party governments can and do react faster to unexpected fiscal deficit shocks than their divided-government counterparts. Weise (2012) concludes that the political environment in the United States in the 1970s was a main determinant of the Federal Reserve's too moderate anti-inflationary policy, and that a change in the political environment was also behind the Federal Reserve's switch to a more aggressive policy

after 1979. Spolaore (2004) argues that cabinet systems in which there is a single decision maker adjust faster to shocks than systems with multiple decision makers.

A second strand highlights political economy considerations as a major drawback for discretionary fiscal policy. Blinder (1997) outlines the merits of moving a greater number of policy decisions away from the realm of politics into the realm of technocracy, so as to make them the result of a deliberative and objective process rather than the outgrow of political considerations. Blanchard et al. (2010) mention the limits that political constraints impose on the de facto usefulness of discretionary fiscal policy. Cecchetti (2002) argues that when it comes to fiscal policy, political considerations tend to collide with economic prescriptions, while Romer (2012) mentions political-economy aspects to be important in understanding fiscal policy responses to the crisis.

Finally, Armingeon (2012) directly investigates the importance of politics in government's reaction to the Great Recession. He finds that a unified government was a necessary condition for deviating from what he calls the default reaction to the crisis: a moderate fiscal expansion. In particular, in his qualitative and categorical analysis, he finds that it was only unified governments that enacted large fiscal stimulus packages. While these findings indicate that politics have played a role in determining the size of fiscal stimulus packages, they provide limited information on the size and strength of this relationship. It is this literature to which our paper contributes most directly.

IV. EMPIRICAL MODEL AND DATA DESCRIPTION

Our estimation relies on a simple OLS framework, with stimulus package size as the dependent variable, political constraints as the main explanatory variable, and a set of control variables to capture need, fiscal space, and effectiveness. This section discusses the precise definition, measurement and data sources for each of these variables.

1. Size of Stimulus Packages

To measure the size of the fiscal stimulus we rely on two different sources and construct four different variables. All four of these variables have in common that they concentrate on fiscal policy measures initiated or carried out in the crisis year 2009.⁵ We consider the bankruptcy of Lehman Brothers in autumn 2008

⁵We consciously decide against differentiating between expenditure increases and bank bailouts. The reason is that the underlying political calculus for incumbent and opposition parties should be the same: if bailing out banks helps alleviate the economic shock (or prevent an even larger one), incumbents should want to do it, while the opposition should want to prevent or at least delay it. As such, the expenditures on bank bailouts are simply part of the overall fiscal package. However, taking those countries out in which substantial bank bailouts have occurred does not change our results.

and the subsequent collapse in world trade as a largely exogenous shock and do not want to mix this up with events, like the euro crisis, happening after an initial recovery in the second half of 2009 and early 2010.

Our first variable is directly taken from Table 1.8 in UNCTAD (2009). This table was compiled by the UNCTAD secretariat using a number of different sources.⁶ The variable corresponds to discretionary measures on public spending or revenues in response to the financial crisis, excluding so-called automatic stabilizers and scheduled to be implemented across a one to three year window. Hence, it covers discretionary 'promises' of governments in selected countries as percentage of GDP over a somewhat varying implementation horizon. There are a few caveats when using this data: time horizons of these stimulus packages differ and the exact definition of what is part of a stimulus package is likely to be country- and source-dependent to some extent.⁷ Furthermore, this particular data set only allows us to use a sample of 44 OECD and emerging market countries. Both data quality and coverage has led us to also look for other data sources.

The second variable is taken from Appendix Table 5 in Horton et al. (2009). It compares primary deficit forecasts for 2009 as published by the IMF in its July 2009 Update (IMF 2009b) and its October 2007 release of the World Economic Outlook (IMF 2007). We view this as a measure for the forecasted change in fiscal policy induced by the Great Recession and not related to changing interest payments of the government. The difference with the UNCTAD measure is twofold. First, it includes both discretionary measure as well as changes caused by automatic stabilizers.⁸ Second, it has a fixed time horizon: it reflects 'promises' for the year 2009. These differences notwithstanding, in both cases, we are looking at forecasts, i.e. 'promises', and not at actual realizations.

But there might be a difference between the political promises for spending made during the crisis year and the spending that was actually implemented. To take this into account, our two remaining variables focus on actual realizations. Focusing on actual spending also has the advantage that it avoids issues surrounding the definition of stimulus packages, which, as discussed above, are likely to differ between countries. To construct our variables we use information released

⁶For six countries where UNCTAD does not provide data, we use data from OECD (2009). The relevant countries are the Czech Republic, Denmark, Finland, Luxembourg, New Zealand and Slovakia.

⁷Note, however, a country's method for measuring its stimulus package is unlikely to be correlated with the size of that package. The consistency of our results is therefore not compromised.

⁸Conceptually, we prefer a measure that only takes discretionary aspects into account. However, we do have to realize that it is far from obvious to disentangle cyclical and structural movements in fiscal data. Cyclically-adjusted data are well-known to be heavily revised – up to the size of the actual measure (See e.g. Orphanides (2001), Orphanides and Van Norden (2002) and Jong-a-Pin et al. (2012)) – making it problematic to link it to real-time decisions. Furthermore, the sample of countries for which such data is available is very limited. As it is likely that the extent of automatic stabilizers in an economy is related to the size of the public sector, we include the latter as explanatory variable in all of our models.

in the April 2013 IMF World Economic Outlook (IMF 2013) and take actual changes in *primary* fiscal deficits between 2008 and 2009. To increase the sample size, we also look at actual changes in (total) fiscal deficits during the crisis year.

Table 1 summarizes our four main dependent variables. Overall, the size of the fiscal stimulus is substantial with averages ranging from close to 2.5 to almost 5 percent of (pre-crisis) GDP. Although it covers up to three years, the UNCTAD variable contains the lowest values. A likely explanation for this is that by construction, it is the only variable that does not include the effect of automatic stabilizers. The table also reveals that, on average, democracies have enacted smaller fiscal stimulus measures than autocracies.⁹ Finally, with standard deviations between 3.3 and 4.5 percent of GDP, it is also safe to say that there is wide variation in the size of stimulus packages initiated during the Great Recession.

2. Political Constraints

Political constraints are captured by a binary variable that equals one if during the Great Recession (i.e. during the winter of 2008/2009) a country's executive party did not have a majority in the legislative branches that have law-making power. Conversely, the variable is equal to zero if throughout that same period, the party of the executive did have a majority in these branches and could therefore unilaterally enact law. All political variables – including this one – are taken from the 2012 version of the Database of Political Institutions (Beck et al., 2002). This particular variable is based on the variable 'ALLHOUSE'.^{10, 11}

Given the exogenous character of the shock we are analysing, we are convinced that we can treat our political constraint dummy as exogenous. Nonetheless, in the Supplementary Information (SI) file, we present robustness exercises where we investigate possible endogeneity issues. The results support our view.

While the constraints dummy likely captures the most direct dimensions of political constraints, there are more subtle constraints that, by virtue of being a dummy variable, it cannot capture. Consider, as an example, the events in the United States in early 2011. At the time the American Recovery and

⁹In defining democracies, we use the classification of Cheibub et al. (2010). Accordingly, the basic conditions for a regime to be coded as democratic are that i) the executive and legislative are elected and ii) multiple parties are allowed for and exist. A two-group mean-comparison test reveals that the averages of democracies and non-democracies are significantly different from each other.

¹⁰During the year 2009, the only election that potentially led to a change in this variable relative to 2008 was the legislative election in June 2009 in Argentina. We, however, take values as relevant for the winter 2008/2009, which always equal those for 2008.

¹¹Henisz (2000; 2002) constructed political constraint variables that indicate whether the executive party is the largest party in the upper- and lower house. As being the largest party does not necessarily imply having a majority, the correlations between the ALLHOUSE variable and those from Henisz are merely around 0.3. Given that in our line of argumentation having a majority is indispensable, we stick to using the ALLHOUSE variable.

Table 1

Descriptive statistics and correlation matrix for the dependent variables

| | | r a construction of the second se | | _ | | | | | |
|-----|-----------------------------|--|-------|-------|-----------|--------------------|------------------------|-------|----------------|
| | | | | | | Descripti | Descriptive statistics | cs | |
| | | | Obs. | Avg. | St.D. | Min. | Max. | | Source |
| | Promised stimulus 2008-2012 | Discretionary measures | 4 | 2.44 | 3.39 | -8.3 | 8.0 | | UNCTAD |
| | Promised stimulus 2008-2009 | Change forecasted primary deficit | 40 | 4.97 | 3.29 | -0.7 | 14.9 | | IMF 2009b/2007 |
| | Realised stimulus in 2009 | Change primary deficit 2009 (% 2007-GDP) | 108 | 4.16 | 4.31 | -3.4 | 21.6 | | IMF 2013 |
| | | (only democracies) | 77 | 3.58 | 3.36 | -3.4 | 15.7 | | IMF 2013 |
| | Realised stimulus in 2009 | Change deficit 2009 (% 2007-GDP) | 151 | 4.00 | 4.48 | 4.1 | 25.3 | | IMF 2013 |
| | | (only democracies) | 100 | 3.52 | 3.50 | 4.1 | 17.5 | | IMF 2013 |
| | | | | | correlati | correlation \ obs. | | | |
| | Variable description | | (1) | (2) | (3) | (4) | (5) | (9) | |
| (1) | Promised stimulus 2008-2012 | Discretionary measures | | 36 | 40 | 36 | 44 | 39 | |
| 0 | Promised stimulus 2008-2009 | Change forecasted primary deficit | -0.01 | | 37 | 34 | 40 | 36 | |
| 3 | Realised stimulus in 2009 | Change primary deficit 2009 (% 2007-GDP) | 0.14 | 0.75 | | LL | 108 | LL | |
| (4) | | (only democracies) | -0.01 | 0.79 | 1.00 | | LL | LL | |
| (2) | Realised stimulus in 2009 | Change deficit 2009 (% 2007-GDP) | 0.03 | 0.74 | 0.98 | 0.96 | | 100 | |
| 9 | | (only democracies) | -0.11 | 0.77 | 0.96 | 0.96 | 1.00 | | |
| | | Correlation with the Political constraints dummy: | -0.31 | -0.29 | -0.16 | -0.18 | -0.10 | -0.11 | |

POLITICAL CONSTRAINTS AND THE GREAT RECESSION

Reinvestment Act was enacted and signed into law by the democratic president Barack Obama, the Democratic Party also controlled both the Senate and the House of Representatives. So, according to the definition of our constraints dummy, the Democrats were free of political constraints. And yet, there is evidence to suggest that both the Democratic Party's internal disputes as well as public pressure prevented the stimulus package from being even larger than the actual \$787 billion. Alter (2011) and Wallace-Wells (2001) report, for instance, that Christina Romer and Larry Summers, the President's key economic advisers at the time, both believed that to close the entire output gap, the stimulus package would need to be above the politically incendiary 1 trillion dollar mark. So, as in the case of our stimulus measures, it is important to realize that while the variable captures an important part of what we aim to measure, it cannot account for all the country-specific subtleties.

3. Need for Fiscal Stimulus

The need for discretionary measures depends on both the expected size and type of the shock and the expected degree to which automatic stabilizers will alleviate it.

To proxy the size of the shock, we use the realised drop in exports during the winter half-year 2008/2009 relative to the winter half-year 2007/2008, measured as a percentage of 2007 GDP levels. For this we resort to the monthly export figures published in the IMF Direction of Trade Statistics. The timing of when stimulus measures were announced and implemented makes it very unlikely that they had a substantial impact on the size of this export shock, so that we can treat the variable as exogenous.

To proxy the role of automatic stabilizers we follow Gali (1994) and use the pre-crisis level of government expenditure as a percentage of GDP, as measured for 2007 and published by the IMF in April 2013 (IMF 2013). We thus assume that a larger public sector is more stabilizing than a smaller one. Depending on the dependent variable, we expect either a positive or a negative effect of this variable: for a given output gap, a higher level of government expenditure should reduce the size of discretionary measures, while it should increase the change in the deficit (i.e. in the total fiscal stimulus). The change in the deficit should increase because for a given size of the discretionary stimulus, higher government expenditures automatically alleviate the negative consequences of the shock, independent of the political decision making process.

4. Fiscal Space

To capture a government's fiscal space, we use two variables: the gross public debt-to-GDP ratio as measured for 2007, and the deficit-to-GDP ratio for 2007.

Both are taken from the IMF World Economic Outlook published in April 2013 (IMF 2013). The differences across countries, particularly in pre-crisis deficit levels, are substantial. These reflect, among other things, differences in natural resources. In particular, those countries that export substantial amounts of oil or gas tend to have much smaller deficits or even substantial surpluses.¹²

5. Effectiveness of Fiscal Stimulus

To take the effectiveness of any fiscal stimulus into account, we include a broad measure of economic globalization as part of the KOF Globalization Index. We refer to figures for the year 2007. Small open economies have fewer opportunities to stimulate their own economy because a larger part of a given measure evaporates away to the rest of the world. At the same time, they also benefit more from measures undertaken by large trading partners. Both of these mechanisms reduce incentives to undertake large fiscal stimulus measures.

Table 2 shows the descriptive statistics for the above-mentioned right-handside variables as well as for all variables used in our robustness exercises and discussed in the SI.13 Regarding our main variable of interest, about half of the countries in our sample face political constraint, in the sense that the executive and legislative are controlled by different parties. Quite a number of the countries in our sample are non-democratic. When focusing on democracies only, around 70 percent of the governments were not able to enact law unilaterally and were thereby politically constrained during the crisis period. The constraints dummy is not highly correlated with any of the control variables, so that including these variables into the model will most likely only have the effect of increasing the precision by which we can estimate the effect of the constraints dummy. There is also hardly any correlation among the control variables themselves, with the natural exception being the dummies for EU and euro area membership, where the correlation coefficient is 0.71. Apart from that, the second highest correlation coefficient is between narrow money growth and official reserves and equals 0.56. Furthermore, our economic globalization measure and our measure of government size have a high absolute correlation of 0.45; more globalized economies, which often are European, also tend to have higher government expenditure shares.14

¹²We have also looked into using oil and gas reserves as published by British Petroleum. However, that would reduce our sample substantially.

¹³We try to avoid issues of reverse causality by using pre-crisis data – data that is not yet influenced by the economic shock following the collapse of Lehman Brothers in September 2008.

¹⁴This is in line with the findings of Rodrik (1998). He makes the point that more open economies are more likely to have larger government sectors as a form of insurance against the volatility created by openness.

| | | Desci | Descriptive statistics | istics | | |
|--|------|-------|------------------------|--------|-------|----------------------------|
| | Obs. | Avg. | St.D. | Min. | Мах. | Source |
| Political constraint dummy | 151 | 0.54 | 0.50 | 0.0 | 1.0 | DPI2012 IME WEO Am 2013 |
| Change in 2009-growth forecast in | 148 | -0.47 | 1.23 | -5.0 | 4.1 | IMF, WEO Apr.2009/Oct.2008 |
| Change of exports in winter 2008/09 (%2007-GDP) | 143 | -4.03 | 5.31 | -44.2 | 2.6 | IMF, DOTS 2013 |
| %-change local currency to USD between 200802 and 200804 | 140 | 12.43 | 11.68 | -8.0 | 63.5 | IMF |
| Growth official reserves (in USD) between 200802 and 200804 | 142 | -4.65 | 18.27 | -48.1 | 94.9 | IMF |
| Gov.debt in 2007 (% of GDP) | 145 | 49.22 | 50.17 | 1.3 | 494.9 | IMF, WEO Apr. 2013 |
| Gov.deficit in 2007 (% GDP) | 151 | -0.48 | 6.91 | -57.1 | 15.7 | IMF, WEO Apr. 2013 |
| Lending rate in winter 2008/09 | 116 | 13.46 | 7.95 | 1.0 | 52.6 | IMF |
| Central bank independence, legal measure | 88 | 0.62 | 0.20 | 0.2 | 0.9 | Crowe and Meade (2008) |
| Central bank governor irregular turnover rate | 124 | 0.12 | 0.10 | 0.0 | 0.6 | KOF |
| Change in the lending rate between Aug. and Dec. 2008 | 116 | 0.46 | 2.33 | -8.1 | 8.2 | IMF |
| Growth rate of M1 between between Aug. and Dec. 2008 | 78 | 5.14 | 10.25 | -18.4 | 31.7 | Datastream, central banks |
| KOF Economic Globalisation in 2007 | 131 | 63.82 | 16.95 | 23.9 | 96.4 | |
| KOF Political Globalisation in 2007 | 150 | 69.45 | 19.64 | 23.4 | 98.0 | |
| G20 dummy | 151 | 0.12 | 0.33 | 0.0 | 1.0 | G20 |
| Dummy for EU membership | 151 | 0.18 | 0.38 | 0.0 | 1.0 | EU |
| Dummy for EMU/euro area membership | 151 | 0.10 | 0.30 | 0.0 | 1.0 | ECB |
| Under an IMF program | 151 | 0.24 | 0.43 | 0.0 | 1.0 | ECB |

Descriptive statistics and correlation matrix for the main exulanatory variables

Table 2

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(continues)

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| Warnish description (1) (2) (3) (4) (3) (3) (1) | | | | | | | | | | 5 | correlation \ observations | on \ ob. | servatio | ns | | | | | | | |
|---|--|--|---------------|----------------|------------|------------|--------------|------------|------------|------------|----------------------------|----------------|---------------|--------------|-----------|--------------|--------------|------------|------------|------------|------------|
| Political constraint durmy 101 131 148 143 140 142 143 151 </td <td></td> <td>Variable description</td> <td>(1)</td> <td>(2)</td> <td>(3)</td> <td>(4)</td> <td>(5)</td> <td>(9)</td> <td>(2)</td> <td>(8)</td> <td>(6)</td> <td>(10)</td> <td>(11)</td> <td>(12)</td> <td>(13)</td> <td>(14)</td> <td>(15)</td> <td>(16)</td> <td>(17)</td> <td>(18)</td> <td>(19)</td> | | Variable description | (1) | (2) | (3) | (4) | (5) | (9) | (2) | (8) | (6) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) | (18) | (19) |
| Change in 2009-growth forcast in App. 2009. II. App. 2009. II. App. 2009. 0.01 0.13 140 138 143 114 77 129 147 148 148 148 Table of export. Marker Constrated respont. Marker 2008009 (e2007-GDP) 0.01 0.02 1.34 138 133 141 136 137 137 134 138 133 134 137 137 137 134 133 134 138 135 136 137 137 134 133 134 134 135 134 136 135 134 135 134 135 136 137 136 137 134 < | (j) (j) (j) (j) (j) (j) (j) (j) (j) (j) | Political constraint dummy Gov.exp. in 2007 | 0.10 | 151 | 148 148 | 143 143 | 140 140 | 142 142 | 145 145 | 151 151 | 116 116 | 88 88 88 | 124 124 | 116 116 | 78 78 | 131 131 | 150 150 | 151 151 | 151 151 | 151 151 | 151 151 |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | (3) | Change in 2009-growth forecast in Apr. 2009 r.t. Apr. 2008 | 0.04 | -0.13 | | 140 | 138 | 139 | 142 | 148 | 114 | 86 | 121 | | LL | 129 | 147 | 148 | 148 | 148 | 148 |
| | (4) | Change of exports in winter 2008/09 (%2007-GDP) | -0.10 | -0.01 | -0.27 | | 134 | 134 | 138 | 143 | 111 | 86 | 119 | | LL | 127 | 143 | 143 | 143 | 143 | 143 |
| Growth official reserves (in USD) 0.06 0.01 0.01 0.11 0.23 1.36 1.26 1.26 1.27 1.41 1.42 $1.$ | (2) | %-change local currency to USD between 2008Q2 and 2008Q4 | 0.24 | 0.24 | -0.17 | 0.02 | | 138 | 135 | 140 | 109 | 85 | 122 | | 76 | 125 | 140 | 140 | 140 | 140 | 140 |
| Gov debt in 2007 (% of GDP) 001 0.04 0.25 0.45 0.18 0.11 0.01 0.41 0.25 0.45 0.18 0.11 0.07 (% of GDP) 141 145 </td <td>(9)</td> <td>Growth official reserves (in USD) between 200802 and 200804</td> <td>-0.06</td> <td>0.00</td> <td>0.05</td> <td>-0.11</td> <td>-0.23</td> <td></td> <td>136</td> <td>142</td> <td>110</td> <td>87</td> <td>122</td> <td></td> <td>78</td> <td>125</td> <td>141</td> <td>142</td> <td>142</td> <td>142</td> <td>142</td> | (9) | Growth official reserves (in USD) between 200802 and 200804 | -0.06 | 0.00 | 0.05 | -0.11 | -0.23 | | 136 | 142 | 110 | 87 | 122 | | 78 | 125 | 141 | 142 | 142 | 142 | 142 |
| Gov deficit in 2007 (% GDP)-0.120.11-0.010.13-0.010.13-0.010.13-0.050.11-0.10.11-0.110.11-0.11101116 | 6 | Gov.debt in 2007 (% of GDP) | 0.01 | 0.04 | 0.25 | -0.45 | -0.18 | 0.12 | | 145 | 110 | 87 | 119 | 110 | 76 | 127 | 144 | 145 | 145 | 145 | 145 |
| Lending rate in winter 2008/090.08-0.11-0.010.19-0.010.13-0.050.11-0.00.13-0.050.110.060.160.161.161 | (8) | Gov.deficit in 2007 (% GDP) | -0.12 | 0.17 | -0.07 | 0.34 | -0.15 | -0.14 | 0.21 | | 116 | 88 | 124 | 116 | | 131 | 150 | 151 | 151 | 151 | 151 |
| Central bank independence, legal measure 0.24 0.12 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.11 0.10 0.11 | 6) | Lending rate in winter 2008/09 | 0.08 | -0.11 | -0.01 | 0.19 | -0.01 | 0.13 | -0.05 | 0.11 | | 99 | 100 | 116 | | 101 | 116 | 116 | 116 | 116 | 116 |
| Central bank governor integular (16) (-0.15) (-0.03) (0.20) (-0.01) (0.02) (-0.11) (0.03) (0.25) (0.26) (-0.12) | (10) | | 0.28 | 0.22 | -0.19 | 0.00 | 0.10 | | -0.17 | 0.03 | 0.16 | | 86 | | 68 | 86 | 88 | 88 | 88 | 88 | 88 |
| Change in the lending rate 0.09 0.06 0.00 0.03 0.20 -0.17 -0.12 -0.02 0.23 0.23 0.21 -1.16 116 | (11) | | 0.16 | -0.15 | -0.03 | 0.20 | -0.01 | | -0.11 | 0.03 | 0.35 | 0.26 | | | | 115 | 124 | 124 | 124 | 124 | 124 |
| | (12) | 0 1 | 0.09 | -0.06 | 0.00 | 0.03 | 0.20 | | | | 0.28 | 0.20 | 0.31 | | | 101 | 116 | 116 | 116 | 116 | 116 |
| KOF Economic Globalisation 0.24 0.48 -0.31 0.37 0.31 -0.26 0.23 0.27 -0.10 0.02 -0.35 131 | (13) | | -0.07 | -0.07 | 0.23 | | -0.03 | 0.56 | 0.21 | 0.20 | | -0.04 | | -0.11 | | 74 | LL | 78 | 78 | 78 | 78 |
| KOF Political Globalisation in 2007 0.10 0.20 -0.21 0.12 0.38 -0.20 0.01 0.14 -0.19 0.27 150 151< | (14) | | 0.24 | 0.48 | -0.31 | -0.37 | | | | | -0.23 | | -0.10 | 0.02 | -0.35 | | 131 | 131 | 131 | 131 | 131 |
| G20 dummy -0.03 0.12 -0.10 0.13 0.21 -0.05 0.05 0.06 -0.04 -0.10 0.01 0.01 0.05 0.06 0.38 151 | (15) | - `` | 0.10 | 0.20 | -0.21 | 0.12 | | | -0.10 | | -0.03 | 0.17 | 0.09 | 0.14 | -0.19 | 0.27 | | 150 | 150 | 150 | 150 |
| Dummy for EMU/euro area 0.13 0.44 -0.15 -0.05 0.17 -0.16 0.05 0.09 -0.06 0.34 0.08 0.7117 membership 0.11 -0.14 0.07 0.06 0.02 0.12 0.02 0.24 0.13 0.45 0.34 0.08 0.7117 membership 0.11 -0.14 0.07 0.06 0.02 0.24 0.11 0.03 0.12 -0.12 0.24 0.11 0.03 0.12 -0.13 -0.19 0.11 -0.11 <td>(16) (17)</td> <td>• -</td> <td>-0.03 0.25</td> <td>$0.12 \\ 0.54$</td> <td>-0.10</td> <td>0.13</td> <td>0.21 0.32</td> <td>-0.05</td> <td>0.05-0.05</td> <td></td> <td></td> <td>-0.10 0.45</td> <td>0.01 -0.09</td> <td>0.04 0.03</td> <td>0.05-0.45</td> <td>0.00 0.62</td> <td>0.38 0.44</td> <td>0.04</td> <td>151</td> <td>151 151</td> <td>151 151</td> | (16) (17) | • - | -0.03 0.25 | $0.12 \\ 0.54$ | -0.10 | 0.13 | 0.21 0.32 | -0.05 | 0.05-0.05 | | | -0.10 0.45 | 0.01 -0.09 | 0.04 0.03 | 0.05-0.45 | 0.00 0.62 | 0.38 0.44 | 0.04 | 151 | 151 151 | 151 151 |
| Under an IMF program 0.11 -0.14 0.07 0.00 -0.05 0.05 0.12 0.02 0.24 0.11 0.00 0.03 0.12 -0.31 -0.10 -0.21 -0.18 | (18) | | 0.13 | 0.44 | -0.15 | -0.05 | 0.17 | -0.16 | 0.05 | | -0.19 | | | -0.10 | -0.24 | 0.45 | 0.34 | | .7117 | | 151 |
| | (19) | - | 0.11 | -0.14 | 0.07 | 0.00 | -0.05 | 0.05 | 0.12 | 0.02 | 0.24 | 0.11 | 0.00 | 0.03 | 0.12 | -0.31 | | | | -0.19 | |

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Table 2 (Continued)

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V. EMPIRICAL RESULTS

Table 3 presents our main results. Columns (1), (2), (3) and (5) report results for each of the four dependent variables using the full sample for which data is available.¹⁵ Columns (4) and (6) of the table restrict the sample of our two realised deficit measures to only democratic countries.

The political constraints variable has a strong impact on the size of each of these fiscal stimulus measures, although it is only marginally significant when using our first measure of promises.¹⁶ Depending upon the dependent variable the results suggest that, on average, political constraints decrease the size of the fiscal stimulus by between 1 and 2.7 percentage points of GDP. The last row of the table reports the average size of the stimulus packages within each sample. The average stimulus packages range from 2.4 to 5.0 percent of GDP. Relative to that, the average impact of such political constraints amounts to between 25 and 80 percent of this average size. Figure 1 visualises these results. It compares the average sizes of our different stimulus measures for governments that do face political constraints and for those that do not. Whereas unconstrained governments did initiate stimulus packages of on average around 5 percent of GDP, this is roughly reduced to 3 percent for those that were politically constrained. Compared to the remaining variables in the model, the political constraint variable is by far the most robust and has a high explanatory power. When removing the political constraint variable the adjusted R-squared drops by 0.09 points.17

Of the other variables, only the initial government deficit turns out to be significant with the expected sign as often as our political constraints dummy; countries with high deficits enacted smaller stimulus packages, on average. The initial debt level has the expected negative sign, but is not statistically significant in most specifications. Nevertheless, fiscal space indeed appears to have been an important factor when explaining the size of the fiscal stimulus measures.

Perhaps surprisingly, 'need' does not appear to have been that important. The effect of the change in exports during the winter half-year 2008/2009 mostly has

¹⁶When removing the IMF dummy from the first column the political constraint variables turns significant with an estimated coefficient of about -1.8. More in general, we have checked for outlying observations and, besides some countries that were under an IMF program, did not encounter such. Removing individual countries from our analysis or reducing the sample size be taking other specific groups of countries out (like oil-producing countries) does not affect our conclusions.

¹⁷Only the initial deficit share explains more of the variation in the dependent variable; its removal leads to a reduction of 0.19 points of the adjusted R-squared.

¹⁵The last row in Table 1 reports correlation coefficients between the political constraint dummy and these dependent variables. All of these are negative and mostly statistically significant indicating that also in a parsimonious regression that only includes political constraints and a constant, political constraints reduce the size of the stimulus measures. The coefficient estimates of such bivariate regressions (not shown) are comparable to those presented in Table 3.

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|---------------|--|
| able | |
| В | |

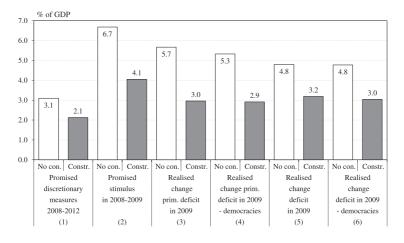
| | | Main Results | tesults | | | |
|--|--|--|--|--|--|--|
| | (1) | (2) | (3) | (4) | (5) | (9) |
| VARIABLES | Promised discretionary measures 2008-2012 | Promised stimulus 2008-2009 | Realised change prim. deficit 2009 | Realised change prim. deficit 2009 - democracies | Realised change deficit 2009 | Realised change deficit 2009 - democracies |
| Political constraint Gov.expenditures in 2007 (%GDP) Change of exports in winter 2008/09 | -0.971 (-1.354) -0.0483 (-0.716) -0.106 (-0.596) | -2.629 ^{**} (-2.259) -0.00225 (-0.0418) 0.188 (0.740) | -2.712**** (-3.397) 0.0567 (1.325) -0.212 (-1.402) | $\begin{array}{c} -2.413^{**} (-2.223) \\ 0.0848^{**} (2.050) \\ -0.215 (-1.366) \end{array}$ | -1.613 ^{**} (-2.357) 0.0527 (1.440) -0.154 (-1.196) | $\begin{array}{c} -1.730^{*} (-1.770) \\ 0.0864^{**} (2.426) \\ -0.135 (-0.935) \end{array}$ |
| $7^{0.2007-UDP}_{0.2007}$ -0.00356 -0.379 0.000598 $(0.035)6$ $7^{0.2007}_{0.2016}$ 0.007 $(\% GDP)_{0.007}$ -0.00356 -0.384^{***}_{***} $(3.611)6$ $Gov.debtin 2007$ $(\% GDP)_{0.007}$ -0.0833 $(-0.284^{***}_{***}$ $(3.611)6$ KOF $Economic Globalisation in 2007 -0.0803 (-1.278)_{-0.024} (-1.136)_{-1.127} Volder an IMF Program -0.0833 (-1.27)_{-0.024} (-1.127)_{-1.127} Volder an IMF Program -0.0833 (-2.462)_{-1.147} (-1.127)_{-1.127} Constant -0.284_{-0.01} -0.284_{-0.01} -1.147 (-1.127)_{-1.127} Constant 0.082_{-0.01} 0.082_{-0.01} 0.0359_{-0.01} 0.00059_{-0.01} Mean dependent variable 2.444 4.973_{-0.02} 3.432_{-0.02} 3.292_{-0.02} Nex_{-0.01} Nex_{-0.01} Nex_{-0.01} 3.406_{-0.01} 3.292_{-0.01} 3.292_{-0.01} $ | -0.00356 (-0.379) -0.165 (-1.278) -0.0803 (-1.082) -6.272** (-2.462) 10.82*** (3.464) 43 0.389 2.444 3.432 -White robust standa | 0.000598 (0.0350) -0.284*** (-3.615) 0.0684 (1.136) -1.147 (-1.127) 2.561 (0.770) 40 0.200 0.200 0.200 3.292 3.292 ard errors are used. | $\begin{array}{c} -0.00845 \ (-0.619) \\ -0.428^{***} \ (-2.643) \\ -0.0150 \ (-0.398) \\ -1.216 \ (-1.237) \\ 4.658^{***} \ (2.433) \\ 94 \\ 0.343 \\ 4.111 \\ 4.318 \end{array}$ | $\begin{array}{c} -0.0242^{*} (-1.846)\\ -0.206^{*} (-1.882)\\ -0.285 (-0.812)\\ -0.0285 (-0.812)\\ -1.816^{*} (-1.948)\\ 5.163^{**} (2.236)\\ 71\\ 71\\ 0.253\\ 3.594\\ 3.594\end{array}$ | $\begin{array}{c} -0.00451 \ (-0.355) \\ -0.419 ^{***} \ (-2.695) \\ -0.00534 \ (-0.169) \\ -0.733 \ (-1.165) \\ 3.353 ^{**} \ (2.113) \\ 3.353 ^{**} \ (2.113) \\ 123 \\ 0.287 \\ 3.896 \\ 3.998 \end{array}$ | $\begin{array}{c} -0.0182 \ (-1.445) \\ -0.229^{*} \ (-1.736) \\ -0.229^{*} \ (-1.736) \\ -0.0247 \ (-0.815) \\ -0.888 \ (-1.251) \\ 4.259^{*} \ (1.981) \\ 88 \\ 0.168 \\ 3.535 \\ 3.090 \end{array}$ |
| p < 0.1, $p < 0.1$ | | | | | | |

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Figure 1

Differences in average size of stimulus packages across politically constrained and unconstrained countries. Note: this figure is based upon the results presented in Table 3. The numbers at the bottom of the graph refer to the columns in Table 3.



the expected negative sign – a stronger drop has led to larger stimulus measures –, but it is not significant.¹⁸

The initial size of the government sector, as measured by government expenditures as share of GDP, turns significantly positive when focusing on realised changes in primary deficits. In line with the argument that government size largely reflects the importance of automatic stabilizers, and that larger automatic stabilizers reduce the need for discretionary stimulus in a crisis, the measure has a (insignificant) negative effect on the size of discretionary stimulus packages in column 1.¹⁹

Our measure of the effectiveness of the stimulus packages, the degree of globalization of a country, mostly has the expected negative sign, albeit is never significant. The correlation with our measure of government size might be causing a multicollinearity problem. However, also without the government expenditures as share of GDP included, the KOF Economic Globalization Index is never significant (and the political constraints coefficient is hardly affected by this).²⁰

¹⁸Our growth forecast comparison for the year 2009 usually did not lead to an expected significant negative coefficient and is therefore not included in this baseline regression.

¹⁹Although government expenditures are mathematically used in the construction of the government deficit variable, in our sample these two variables are hardly correlated (see Table 2). As therefore to be expected, the conclusions do not change if we include each of them separately.

²⁰Removing the KOF Economic Globalization Index does, however, increase the level of the government size measure somewhat. This has no effect on our main variable of interest, political constraints.

Being under an IMF program reduces at least the promises made by the government. Regarding actual realization it is less often significant. Nevertheless, these results indicate that this kind of international pressure does have an effect on the fiscal policy stance.

These results could be sensitive to both alternative specifications of factors we do include into our model and to the inclusion of different variables. Furthermore, the underlying sample of countries might have consequences. In the SI, we discuss a number of alternatives and present a large battery of robustness checks. In a nutshell: changing the set of explanatory variables, the sample of countries, or removing (potentially) extreme observations does not alter our conclusion. We always find very similar results to those presented in Table 3.

These robustness checks do provide some indication regarding the channel through which the effect is likely to emerge. When including a dummy for the occurrence of executive elections before June 2009 and interacting that with our political constraint variable, we find that in an environment without political constraints the realised primary deficit (and thus the fiscal stimulus) turns out to be about 2.4 percentage points larger than without upcoming elections. Conversely, in a country where the government faces political constraints, the occurrence of an executive election leads to a reduction of the fiscal stimulus by about 1 percentage point of GDP. This suggests that especially, but not only, during election times, political constraints tie the hands of the incumbent government. Hence, political budget cycles are more likely to occur in countries in which the executive party has control over the legislative branches. Note, though, that these interaction results should not be overemphasized (and are therefore not included in Table 3), as they rest upon only a handful of observations.²¹

Overall the conclusion of all our robustness tests is that our results are highly robust to changing the dependent variable, the use of alternative sets of explanatory variables and changing the sample of countries.

VI. CONCLUDING REMARKS

In this paper, we use a simple framework to assess the impact of political constraints on the size of fiscal stimulus packages. We find that on average, political constraints reduce the size of fiscal stimulus packages by about 1 to 2.7 percentage points of GDP – an effect that is large, statistically significant and robust to alternative specifications. The results are thus in line with the widespread perception that political realities limit the de facto usefulness of discretionary fiscal

²¹This is in line with the findings of Streb et al. (2009) who find that political business cycles are smaller in countries where the government faces effective checks and balances, which they proxy by incomplete control of the legislative body and adherence to the law.

policies as a tool to ameliorate negative economic shocks. To our knowledge it is, however, the first paper that quantifies that effect. Whether this implies that fiscal packages have been too small under a political constrained government, or too large under a politically unconstrained one cannot be answered by the data at hand. For this a thorough analysis of the effectiveness of different fiscal stimulus programmes is needed. Whereas the United States, as an example of a country having an unconstrained government in our set-up, appear to have successfully implemented large fiscal stimulus measures during 2009, a politically constrained country like Switzerland has also fared well while implementing hardly any fiscal stimulus. Already this anecdotal evidence makes clear that analysing how to most successfully bring an economy back on its feet is not going to be an easy task.

The result that political constraints matter is important because in trying to make sense of policy decisions, we naturally focus on what we deem important. The accuracy of growth forecasts and, even more so, the role of fiscal space are omnipresent in policy discussions since the outset of the crisis. What our findings suggest is that discussing how legislative procedures can be designed to allow for optimal reactions to an economic crisis would be important as well.

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SUMMARY

This paper quantifies the effect of political constraints, as measured by legislative control by the incumbent government, on the size of fiscal stimulus packages that have been put in place as a reaction to the Great Recession. On average, political constraints reduced the size of a country's fiscal stimulus package by between 1 and 2.7 percentage points of GDP. This finding is robust to a number of alternative dependent variables, control variables, and sample specifications and is in line with the widely held, but never tested, perception that political reality limits the de facto application of discretionary fiscal policy as reaction to economic shocks.

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