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FISCAL CONSOLIDATION UNDER ELECTORAL RISK

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ABSTRACT

The European debt crisis has uncovered a serious tension between democratic politics and market pressure in contemporary democracies. This tension arises when governments implement unpopular fiscal consolidation packages in order to raise their macroeconomic credibility among financial investors. Nonetheless, the dominant view in current research is that governments should not find it difficult to balance demands from voters and investors because the economic and political costs of fiscal consolidations are low. This would leave governments with sufficient room to promote fiscal consolidation according to their ideological agenda. We reexamine this proposition by studying how the risk of governments to be replaced in office affects the probability and timing of fiscal consolidation policies. The results show that governments associate significant electoral risk with consolidations because electorally vulnerable governments strategically avoid consolidations towards the end of the legislative term in order to minimize electoral punishment. Specifically, the predicted probability of consolidation decreases from 40% after an election to 13% towards the end of the term when the government's margin of victory is small. When the electoral margin is large, the probability of consolidation is roughly stable at around 35%. Electoral concerns are the most important political determinant of consolidations, leaving only a minor role to ideological concerns. Governments, hence, find it more difficult to reconcile political and economic pressures on fiscal policy than previous, influential research implies. The results suggest that existing studies underestimate the electoral risk associated with consolidations because they ignore the strategic behavior that our analysis establishes.

Keywords: fiscal policy, austerity, elections, policy change, political economy

INTRODUCTION

The European debt crisis has again uncovered the severe tension between democratic politics and market pressure during economically 'hard times' (Gourevitch, 1986). The crisis confirms how essential it is for governments to maintain their macroeconomic credibility among private investors in order to borrow from capital markets (Hallerberg and Wolff, 2008). Government credibility, in turn, is closely linked to fiscal policy because the fiscal balance is a key indicator of investors to judge governments (Mosley, 2000). Recurrent fiscal consolidations and austerity policies, therefore, have become a central aspect of government policymaking during the past decades (e.g., Hallerberg, 2004, Afonso, 2013, Hübscher, forthcoming)

At the same time, governments face demands from citizens who often support policies that are targeted by fiscal consolidations and austerity policies, including welfare states and the provision of various public goods (Blekesaune and Quadagno, 2003, Armingeon et al., 2016). Citizens will hold governments accountable if they do not respond to these demands (Soroka and Wlezien, 2010). With the delegation of monetary policy to independent central banks, the importance of fiscal policy has further increased for democratic accountability (Sattler et al., 2008, 2010). This gives rise to a potential dilemma for governments because social and political instability increases when the tension between demands from investors and citizens is large (Polanyi, 1954).

How can governments resolve this tension? A popular view implies that governments can implement fiscal consolidation policies independent of electoral concerns because voters will not punish them for these choices (Alesina et al., 1998, 2011). This would leave governments with sufficient room to promote fiscal consolidation according to their ideological agenda. The alternative view suggests that the electoral risk associated with these policies is high, which means that governments have an incentive to engage in opportunistic behavior and strategically time

consolidations to minimize punishment. In this case, electoral and strategic concerns should trump the ideological considerations of government parties.

Surprisingly, there is very little research that explicitly examines how governments' assessment of electoral risk influences the probability and timing of consolidations. To examine this question, our analysis builds on models of strategic fiscal policy (Rogoff, 1990), and highlights the intertemporal distributional effect that arises from the trade-off between consolidations and deficit-financed public goods. It suggests that governments enhance their reelection chances by strategically avoiding consolidations before elections. But this strategy leads to an increase in debt, which is costly because greater debt-servicing costs constrain the government in the next legislative term. Since governments with good reelection prospects minimize these costs, strategic timing of consolidations mostly occurs when the government faces a significant risk to be replaced.

Our analysis of fiscal consolidations in industrialized countries since 1978 confirms this. The predicted probability of consolidation decreases from ca. 40% after the election to ca. 13% towards the end of the legislative term, but only when the electoral margin of the main government party is small. Governments with low replacement risk implement consolidations independently of the electoral cycle. Electoral concerns are the most important political determinant of consolidations and dominate ideological considerations. This finding contradicts previous conclusions that consolidations are unrelated to government support (Mierau et al., 2007). Our results differ because we consider that high-risk governments with a higher risk do not avoid consolidations per se, but they exploit their strategic options more. We also use more adequate measures of consolidations and replacement risk.

These results imply that governments find it more difficult to reconcile political and market pressures than previous research suggests (Giavazzi and Pagano, 1990, Alesina et al., 1998, European Central Bank, 2010). Contrary to this research, governments face a strong trade-off between the short-term costs and long-term benefits of consolidations. They can partially resolve this challenge through strategic behavior, but this requires incomplete information or even myopic behavior on the side of voters. All parties face this strategic incentive and do not vary much in their decision to implement consolidation packages. The strong tension between politics and markets, thus, leaves little room for parties to follow a distinct aggregate fiscal policy trajectory.

ELECTORAL RISK AND FISCAL CONSOLIDATION

Electoral incentives to time consolidations strategically

Electoral risk, i.e. the risk of government parties to be replaced in office if voters are dissatisfied with government policy, is a fundamental aspect of the tension between democracy and globally integrated markets, especially during hard times (Vis, 2009, Ezrow and Hellwig, 2014). Fiscal policy is at the center of this tension because it is the main policy instrument to provide a desired level of public goods, such as investments in public education, public research institutions, public transportation, public security and defense, public health, and social stability (Rogoff, 1990). In the past decades, pressure on fiscal policy increased because of austere budget situations in which the costs of public goods exceed revenues (Hallerberg, 2004). Governments then have the choice between fiscal consolidation, either through spending cuts or tax hikes or both, and a significant increase in debt through deficit-financing.

In such situations, governments face an intertemporal trade-off between running a deficit and implementing fiscal consolidation measures (Tröger and Schneider, 2012). Fiscal consolidations

have short-term costs and long-term benefits, while the opposite applies to deficit-financed public goods. When revenues shrink, the current level of public goods can be sustained by increasing the fiscal deficit, but deficits translate into greater debt-servicing costs in the future (Hallerberg and Wolff, 2008).[1] This higher level of debt servicing constrains the government's future ability to provide public goods even further. In contrast, fiscal consolidation reduces the current level of public goods through spending cuts or increases the current costs of public goods through higher taxes. But the lower fiscal deficit leads to lower future interest payments on debt and provides greater room in fiscal policy for future governments. This setup is consistent with previous claims that reforms have short-term costs, but long-term benefits (e.g., Przeworski, 1991).

This intertemporal trade-off is most pressing for governments that face elections. If a government is not reelected after implementing consolidation measures, the government party will not be able to enjoy the future benefits of this policy. Instead, the opposition party that replaces the government party will benefit from the greater room in fiscal policy in the next legislative term. This additional room will make it easier for the new government to implement popular policies, which, in turn, undermines the losing party's prospects to reclaim office in the future. But if the government does not consolidate and is reelected, it constrains its own fiscal room to maneuver in the future. A forward-looking government therefore will choose fiscal consolidations strategically. It has an incentive to deviate from the optimal policy if this reduces the risk to be replaced by another political party, but only as much as necessary.

Previous research raises the question to what extent these electoral incentives equally apply to different political parties. In most research, electoral risk arises from special interest politics when electorally important societal subgroups who are negatively affected by retrenchment policies

[1] More broadly, financial investors punish governments when macroeconomic policies are not market-friendly and deficits increase (Mosley, 2000, Sattler, 2013).

withdraw their support for the government (e.g., Immergut, 1990, Pierson, 1996, Wenzelburger, 2011, Afonso et al., 2015, Hübscher, 2016, forthcoming). Left governments, therefore, may be more sensitive to the electoral costs of retrenchment than right governments because their constituencies rely more on the state (Giger and Nelson, 2011). If this is the case, we should see a difference between left and right parties in power when it comes to implementing fiscal consolidations (Hübscher, 2015). At the same time, large-scale fiscal consolidations differ from the specific, tailored socio-economic reforms that this previous research examines. Fiscal consolidations affect broad segments of society and involve across-the-board cuts encompassing all jurisdictions that do not only touch upon the privileges of particular groups (Hallerberg, 2004, p.145, Devries et al., 2011, p.70).[2] This means that the traditional cleavage among political parties is less pressing for the large consolidations that we examine.

Given the trade-off between short- and long-term costs and benefits, what can governments do to improve their reelection chances? Under naïve retrospective voting, voters evaluate governments based on past outcomes, and they put more weight on more recent outcomes (Nordhaus, 1975). Consistent with this view, governments benefit from clustering consolidations at the beginning of the electoral cycle. Fiscal consolidations that were implemented early in the term will be discounted when the next election approaches. In addition, fiscal consolidations lead to economic contractions, but growth may resume over time through a *J*-curve effect (Guajardo et al., 2011). This logic requires, however, that voters are myopic, unable to understand the government's strategy and inadequately consider the future consequences of fiscal policy.

These concerns about the cognitive ability of voters directly relate to research examining how much voters discount policies from the more distant past. Bartels (2008) finds that voters reward

[2] Almost all fiscal consolidations that we analyze are a mix of tax increases and spending cuts (Devries et al., 2011). The former are detrimental to the interests of right constituencies, while the latter are against the interests of left constituencies.

governments for good performance in the last year of the electoral term, even if performance before the last year was poor. This is consistent with the naïve retrospective voting view above. Bechtel and Hainmüller (2011) also find that the electoral effects of policies decay over time, but voters hold governments accountable for longer time spans after major policy interventions. They estimate that the electoral impact of an intervention after a natural disaster is about one fourth of the original effect after three years. These estimates for the rather unique situation after a disaster suggest that governments can indeed reduce electoral punishment by a nontrivial amount by implementing consolidations shortly after an election. Nonetheless, voters do remember past outcomes, which puts limits on the strategic behavior of governments.

But even if voters are more sophisticated than assumed by the naïve model, governments still have room for opportunistic choices in fiscal policy. In more recent theoretical models, policy choices reveal important information about policymakers because voters are uncertain about their economic competence (Rogoff, 1990). [3] Applied to fiscal consolidations, the models imply that governments can signal their competence by strategically avoiding consolidations before elections. A competent government will be able sustain a higher level of public goods with less consolidation because it is able to generate more fiscal revenues through skillful macroeconomic management. More competent governments then can separate themselves from less competent policymakers by choosing less consolidation before an election. Voters observe this and infer from the lower level of consolidation that the government is more competent.

[3] In the original model, governments chose a lower level of taxation to provide a fixed level of public goods (Rogoff, 1990). They do this by resorting to an alternative income source, which is not immediately observed by voters. Applied to fiscal consolidations, this requires that voters observe the exact deficit with a delay. This assumption is defensible considering that governments regularly pass supplementary budgets and that public statistics are regularly revised.

The mediating effect of replacement risk

How much will government decisions be guided by such strategic considerations? So far, the argument suggests that governments simply maximize the absolute number of votes. Although this is consistent with the theoretical models (Nordhaus, 1975, Rogoff, 1990), absolute vote maximization is not necessarily desirable when this strategy is associated with significant costs. Delaying consolidations is costly because higher debt constrains the government's options in the next period. Governments should minimize these costs when reelection prospects are good and the risk to be replaced is low. In contrast, governments that face a close election and have a greater risk to be replaced should be more likely to exploit the electoral gains from delaying consolidations. Whether consolidations are postponed before an election, then, depends on the electoral competition and the replacement risk that the government faces.

We expect that the government's assessment of replacement risk depends on the electoral margin that it enjoys over its main political competitor. Government parties with larger political support have more flexibility and can afford to engage in fiscal consolidation whenever the fiscal situation deteriorates beyond a critical point. Greater electoral margins serve as buffer when political support decreases and provide insurance against electoral risk.[4] With greater margins, the likelihood of losing office after fiscal consolidation measures decreases, which means that the government's inclination to engage in consolidation should be greater. The risk of losing office after fiscal consolidation becomes very small when the electoral margin over the opposition is large.[5]

[4] The importance of electoral margins for policy change was examined by Keeler (1993), but his theoretical focus is on government mandates and not electoral risk.
[5] Armingeon and Giger (2008) find that the losses can accumulate to 5%-10% if fiscal cuts are a salient topic in the election campaign.

Since the nature of political competition is characterized by a differing number of parties across political systems, we need to specify which margins matter most. In majoritarian systems, political competition is usually dominated by two parties. The electoral margin of the largest party, the prime minister party, over the second largest party, the leading opposition party, therefore properly captures the lead of the government over its main competitor. In proportional systems with more than two important parties and frequent coalition governments, the situation is more complex. Multiple margins are important for government survival. The most important one is the difference between the largest government party, which usually is the prime minister party, and the main opposition party, which usually is the main competitor for the prime minister post.

From the perspective of the competence models discussed above, the margin of the prime minister party should be decisive. When voters assess governments, the competence of the prime minister is central. Competent prime ministers can have a positive, direct impact on fiscal policy through their ability to set the policy agenda and their disproportionate influence on decisions. They can also have a positive, indirect impact on outcomes through competent leadership, the skillful moderation of intra-government negotiations, and the selection of government members. prime ministers also stay in power when other ministers leave the government and are particularly exposed when fiscal decisions are explained to the public. Empirical patterns supports this idea showing that voters hold the prime minister party more accountable for news about economic performance than smaller coalition partners (Debus et al., 2014).

In addition to the raw margin, general electoral volatility matters for replacement risk because political systems differ in the extent to which voters move from one party to another. There are also differences in the extent to which such movements affect government majorities. Although electoral margins tend to be larger in majoritarian than in proportional systems, this does not mean that the government is safer. The reason is that margins also tend to change more from one election to the

next in majoritarian than in proportional systems. As an example, volatility of margins is much greater in Canada than in Austria.[6] The same margin then implies a greater replacement risk for a government in Canada than for a government Austria. The incentive to strategically delay consolidations, therefore, varies with electoral margins in combination with the volatility of vote shares in a country and in a particular period.

The following hypotheses summarize the main empirical implications of this discussion.

Hypothesis 1: The greater the replacement risk of the leading government party, the lower the probability that the government implements fiscal consolidation measures.

Hypothesis 2: The probability of fiscal consolidation decreases, the more time has passed since the last election.

Hypothesis 3: The effect of replacement risk on fiscal consolidation increases, the more time has passed since the last election.

EMPIRICAL ANALYSIS

To assess the hypotheses, we examine fiscal consolidation packages in 16 OECD countries between 1978 and 2009.[7] Our empirical approach differs from the previous literature in three ways. First, we use fiscal consolidation data, which better capture government policy than the previously used measures. Second, we assess the replacement risk of the key government party instead of using the

[6] The average standard deviation of changes in vote shares in the last five elections is 3.8 percentage points in Austria and 7.3 percentage points in Canada. The latter is somewhat extreme because the average standard deviation for the other majoritarian countries varies between 4 and 5.5. The average standard deviation for most proportional systems varies between 3 and 4.

[7] The countries are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Portugal, Spain, Sweden, United Kingdom and the United States. Two observations with caretaker governments in Italy and Portugal were excluded.

overall government majority. Third, our analysis takes into account how government concerns about losing office vary throughout the electoral cycle.

Our dataset is built around the action-based fiscal consolidation data provided by the IMF (Devries et al., 2011), which specifies the year and the magnitude of fiscal consolidation packages (as % of GDP) in the different countries. The instances of fiscal consolidations were identified using policy documents by public authorities including government announcements in budgetary debates, reports from national fiscal authorities, and central bank, IMF and World Bank reports. We use this information to build a time-series cross-section dataset with a dependent variable that takes the value 0 in years when no fiscal consolidation occurred and the value 1 in years when the government engaged in fiscal consolidation as captured by the IMF data. A second version of the dependent variable takes the value 0 when no fiscal consolidation occurred and the value of the consolidation size as estimated by the IMF in years when a government implemented fiscal consolidation measures. As we discuss in section A1 in the Appendix, the action-based data capture deliberate policy choices by the government better than previously used indicators of fiscal consolidation, notably the changes in the adjusted primary fiscal balance.

Different options are available to measure the electoral risk of governments. The most widely used measure is the electoral margin of the main political parties in the system. However, variation in electoral and party systems means that a given vote margin yields different degrees of electoral risk in different systems (Kayser and Lindstädt, 2015). Some studies, therefore, resort to system-level characteristics, like institutional proxies (Alesina et al., 2006, Schleiter and Voznaya, 2014), measures of democracy (Pemstein et al., 2010) or indices including various variables related to competitiveness (Immergut and Abou-Chadi, 2014). However, these indices do not or only modestly capture over-time changes in competitiveness for the main government party, which is the central aspect of our analysis. More recently, Kayser and Lindstädt (2015) develop a time-varying

measure that considers country- and period-specific electoral volatility and the geographic distribution of political support to measure electoral risk. This measure is the most sophisticated one, but it is only available for the plurality party in a political system. Our analysis focuses on the main government party, which, in a fair amount of cases, is not the plurality party.

To address the concerns about electoral margins, we follow a basic idea of Kayser and Lindstädt (2015) and take into account that greater electoral volatility increases the risk that is associated with a particular margin. We use vote margins of the main government party over the next party in the political system that competes for the prime minster office, and we weight them by the standard deviation of changes in vote shares in the five previous elections.[8] A greater standard deviation implies that vote shares tend to change more from one election to the next because voters show a greater tendency to switch parties. A greater electoral margin is worth less and replacement risk is greater if the standard deviation is higher because the current margin can more easily shrink.[9] In addition, the empirical model described below includes country-fixed effects to account for differences in electoral and party systems. For robustness checks, we also use seat shares. We primarily use the logarithm of the margins variable because its distribution is skewed towards low margins. The theoretical motivation for the logarithmic transformation is the expectation that the effect of margins on consolidation is nonlinear. An increase in margins by a fixed amount should have a stronger effect when the margin is small than when it is large.

[8] When the prime minister party is the largest party in the system, we assume that the second largest party is the main competitor party, be it in opposition or in government. If the second largest party holds the prime minister office, we assume that the largest party would be the natural alternative to claim the prime minister office. In this case, the electoral margin variable takes negative values, which do not have an intuitive interpretation. We recode these negative values as 0, which simply means that the prime minister party faces a high risk to be replaced when it is not the largest party in the system. We explore the implications of this recoding in detail below.

[9] We compute country-specific standard deviation because party-specific standard deviations produce many missings, for instance when parties merge or change names or when parties have existed for a few years only.

Our measure of replacement risk differs from the most prominent studies on the political economy of fiscal consolidations. Prior research takes shortcuts and measures electoral considerations of the government using time-invariant, institutional variables (Alesina et al., 2006).[10] Others use overall government majority, which inadequately captures the electoral concerns of key actors in multi-party governments (Mierau et al., 2007). To see why, suppose there is a system with three political parties that each receive about one third of the votes. A coalition between two of these parties yields a large government majority, but the risk of the largest party to be replaced by one of the others as leading party is very high. Also, greater majorities often are associated with more and more diverse government parties, which inhibits policy adjustment.

To assess whether the electoral margins really capture replacement risk as we describe it, we estimate the effect of various versions of the margins variable on the probability that the prime minister party drops out of government. The results are in table A1 and figure A2 in the Appendix. Essentially, all versions of the unweighted and the weighted margins variable predict replacement very well. Overall, vote share margins perform better as predictors than seat margins. We conclude from these results that our measures capture the risk of the prime minister party to be replaced as the leading government party well.

To measure the point in the electoral cycle, we use the number of years that have passed since the last election. The importance of the electoral cycle should be particularly pronounced in political systems where the government's ability to freely call elections is limited. Previous research shows that governments often call elections when the economic or political situation appears favorable (Kayser, 2005), but the institutional provisions that allow governments to dissolve the parliament

[10] Alesina et al. (2006) suggest that "stabilizations are more successful ... in systems in which the majority of the ruling party (or parties) is large" (p.2/3). But they " "proxy'" strength of governments with presidential systems'" (p.14, emphasis in original). The study thus does not capture replacement risk as we define it and really mixes institutional features, like presidentialism, and government characteristics, like size of government majority.

vary significantly (Kayser, 2006, Schleiter and Morgan-Jones, 2009). To assess how easy it is for governments to call early elections, we use an index that classifies the institutional provisions allowing governments to dissolve the parliament before the end of the term (Goplerud and Schleiter, 2016; see also table A2 in the Appendix).[11] We also examine whether early elections make a difference. Following the literature, we code early elections as those that were held at least three months before the government's regular term ended.[12]

The main control variables are the fiscal balance, the real interest on 10-year government bonds, government ideology and political constraints. The two economic variables reflect economic pressures on fiscal policy, e.g. from unemployment, growth, demographic structure, international financial flows and debt-servicing costs. Since all these variables affect consolidation through their impact on the fiscal balance, we prefer to bundle their role in these two crucial variables for reasons of econometric efficiency. In the Appendix, we establish the connection between the underlying structural variables and the fiscal balance. In additional robustness tests, we also examine how a series of government and institutional characteristics mediate our findings, notably grand coalitions, single-party and coalition government, minority and majority government and majoritarian and proportional electoral systems.

Finally, we follow Carter and Signorino (2010) and include a time counter and its squared and cubic terms in the binary regression models described below. Theoretically, these variables capture the 'passage of time' (Alesina et al., 2006) reflecting the growing pressure to consolidate when the fiscal balance does not improve. Empirically, they transform the binary model with time-series

[11] The index exists for European countries, but not for Australia, Canada and the United States. For our analysis, we use the continuous index to divide countries into four broader categories of dissolution powers and assign Australia and Canada into the category with greatest dissolution powers and the United States into the category with the lowest dissolution powers.

[12] Kayser (2006) uses a three-month threshold, while Schleiter and Morgan-Jones (2009) use a one-month threshold. We opt for former because some elections that were not called early happened outside the one-month window, e.g. in Germany.

cross-section data into a duration model that captures how the risk of an event changes over time. The data sources are in table A3 in the Appendix. The summary statistics are in table 1.

<< Table 1 about here >>

The analysis is based on the following basic model to estimate the effect of electoral margins and electoral cycles on fiscal consolidations:

$$\begin{aligned}\text{Consolidation}_{i,t} = \alpha_0 + \alpha_1 \text{Log(Margin}_{i,t}) + \alpha_2 \text{ElectionCycle}_{i,t} \\ + \alpha_3 \text{Log(Margin}_{i,t}) * \text{ElectionCycle}_{i,t} + \ldots + \mu_i + \nu_{i,t}\end{aligned}$$

For the first part of the analysis, we estimate a probit model using the binary variable $\text{Event}_{i,t}$ that takes the value 1 if the government in country *i* passes a consolidation package in year *t*, and 0 if it does not. This means that $\text{Consolidation}_{i,t}$ is a latent variable with

$$\text{Event}_{i,t} = \begin{cases} 1 & \text{if Consolidation}_{i,t} > 0 \\ 0 & \text{if Consolidation}_{i,t} \leq 0 \end{cases}$$

and $\nu_{i,t}$ is a normally distributed disturbance term. The second part uses a continuous consolidation variable that represents the magnitude of fiscal consolidation in a particular year as represented by the variable $\text{Size}_{i,t}$. In this model, the dependent variable is censored, i.e. the consolidation process is only observable for positive values. We primarily use Tobit models, which account for the problem that governments that do not engage in consolidation, i.e. observations with $\text{Size}_{i,t} = 0$, can have very diverse characteristics. The specification above includes country-specific constants, μ_i, but we also estimate models without country-fixed effects.

RESULTS

We first consider the results from the binary dependent variable model, which examines the probability that a consolidation event takes place in a particular year. These results are presented in the first six columns of table 2 entitled 'Consolidation event'. We estimate specifications using simple vote margins and vote margins weighted by electoral volatility. The first two columns show that the margin of victory alone does not have a statistically significant effect, but the election counter does. We get the same result for all different versions of the margins variable. This means that the results do not support hypothesis 1, but hypothesis 2.

<< Table 2 about here >>

The results in the third and fourth columns for specifications with the interaction term between margins and election cycles, however, show that the electoral margin has a strong impact on consolidation if we condition its influence on the electoral cycle. The coefficient on the interaction between the margin and the election counter is statistically significant for this and all other specifications. Its positive sign means that a greater margin increases the likelihood of fiscal consolidation when the electoral counter takes on greater values; vice versa, the likelihood of consolidation decreases for later periods in the electoral cycle when the margin is smaller. The result holds for various alternative specifications. It is the same when we use raw margins or margins weighted by electoral volatility. It is also the same for specifications with and without country fixed effects. This is consistent with hypothesis 3.

To illustrate the substantive effects, we examine how the predicted probability of a consolidation event changes throughout the legislative term for governments with different margins using the

results in the third column of table 2. Since the predicted effects vary with the values of the other variables in a probit model, we need to assign values to the control variables when computing the predictions. We follow the suggestion by Hanmer and Kalkan (2013) and use an 'observed-value approach', which calculates the average effect of a variable in the population.[13]

<< Figure 1 (comprising two graphs: 1A and 1B) about here >>

Figure 1(a) shows the predicted probabilities for a government with a low and one with a high margin. A low- (high-) margin government has a margin of one standard deviation below (above) the mean, which corresponds to a margin of ca. 2% (16%). The probability of a consolidation event for the high-margin government is fairly stable throughout the term. Although the point prediction increases slightly from 0.3 to ca. 0.35, this change is not statistically significant. The predictions look very different for the low-margins government. The probability of consolidation is ca. 0.4 at the beginning of the term, but it falls sharply to ca. 0.19 (0.13) in the fourth (fifth) year of the term.[14] As the confidence intervals show, the change in probabilities for low-margin governments over the legislative term is statistically significant. Figure 1(b) presents the difference between the probabilities of the low- and the high-margins governments in the top panel to show that this difference is also statistically significant.

Among the control variables, the variables measuring the economic need of consolidation, i.e. the fiscal deficit, interests on government bonds and the time variable, are the most important ones. The predicted probabilities in figure A3 in the Appendix show that the probability of consolidation

[13] To do this, predictions are computed for each combination of control variables as they appear in the dataset. We then compute the average predicted probability across all observations. Confidence intervals were computed by repeating this procedure for 1000 random draws from the distribution of the coefficients.

[14] Some countries have maximum terms of four years, while others have 5-year terms.

sharply drops from almost 0.8 for high deficits towards zero when the fiscal balance moves into surplus. The probability of consolidation increases from about 0.2 to around 0.5 when interests on bonds increase. The time variable shows a strong nonlinear effect: the probability of consolidation is high and decreasing in the first years after a consolidation events and then increases again after ca. 6 years until ca. 16 years, but the confidence intervals for the later years are wide.

Our results also suggest that party ideology matters weakly, but electoral concerns clearly dominate. The coefficient on ideology is consistently positive, implying that right governments consolidate more often, but it is not statistically significant for many specifications. This suggests that parties matter less for the basic direction of fiscal policy as defined by the trade-off between aggregate deficit-spending or consolidation. Within this basic direction, i.e. given that governments decide to consolidate, parties may still be important for the specifics of consolidations, like exact consolidation size (Hübscher, 2015) or the implications for particular policy areas (Armingeon et al., 2016).[15]

<< Figure 2 about here >>

The last four columns in table 2 entitled 'Consolidation size' examine how electoral considerations translate into varying magnitudes of fiscal consolidations. The Tobit models suggest that electoral margins in combination with election cycles affect consolidation size as expected. To illustrate the substantive effect, Figure 2 presents the predicted effect of a one-unit *de*crease in the logged electoral margin on consolidation size for the different years after the last election.[16] Such a

[15] Armingeon et al. (2016) find that left governments, given that they consolidate, cut welfare spending more than right governments. This means that, unlike in our analysis, consolidation is the independent and not the dependent variable.

[16] A one-unit decrease of the logged variable is equivalent to a decrease from a margin of 1.7% to 0%, 6.4% to 1.7%, or 19.1% to 6.4%.

decrease does not have a statistically significant effect in the first years after the election, but it leads to a decrease in consolidation up to 0.5 percentage points of GDP towards the end of the electoral term. Overall, these analyses provide support in favor of hypothesis 3.

<< Table 3 about here >>

Table 3 examines how the ability of governments to dissolve the parliament and to call early elections affects our results. The first three columns present the results for countries where government dissolution powers are more restricted as indicated by lower values on the index. Compared to the whole sample, the joint effect of margins and the electoral cycle increases when dissolution power decreases. This means that governments with restricted dissolution powers are more likely to strategically time consolidations than governments with greater powers. The latter can avoid consolidations in pre-election periods by strategically setting the election date. This confirms that governments use all available strategies to minimize the electoral effects of consolidations. The last two columns in table 3 examine whether it makes a difference if early elections were held in the legislative term, in which fiscal consolidation measures were implemented. We can see that the results do not depend on early or non-early elections.

We also examine how governmental and institutional characteristics interfere with our results. The results are in table A4 in the Appendix. There is not much difference between single-party and coalition, and minority and majority government. The interactive effect of margins and election cycles is a bit more pronounced when grand coalitions are excluded. This is plausible because the second largest party can try to exploit dissatisfaction with consolidations when it is in opposition. The effect is also stronger for majoritarian than for proportional systems. Since majoritarian systems are generally characterized by the dominance of two parties, competition is more clear-cut

between the party in government and the party in opposition. Nonetheless, the result for proportional systems suggests that the theoretical mechanism also applies to this system.

The question arises whether the economic need for consolidation affects the size of electoral margins because fiscally conservative voters do not appreciate an expansion of public spending (Peltzman, 1992). Our explicit analysis of the time sequence makes such feedback less likely. If conservative voters appreciated consolidations, governments with low margins would not have to fear electoral punishment and to strategically time consolidations early in the legislative term. In a related paper, we also show that – consistent with the findings here – voters are not very enthusiastic about consolidations and withdraw rather than increase support for governments who implement such measures (Hübscher et al., 2015). We also explicitly consider the economic need of consolidations through various control variables, specifically the size of the deficit, interest rates and consolidation cycles as represented by the time variables.

The results in this section are robust to a variety of further analyses presented in the Appendix. We use seat instead of vote margins (table A5). The results are the same for the unweighted margins. The coefficients consistently point in the same direction for weighted margins and are statistically significant for the models that consider consolidation size. The results also do not change if we use the original margins variables that were not log-transformed (tables A6 and tables A7). It also makes no difference if we distinguish between tax- and spending-based approaches to fiscal consolidations (table A8). We also examine whether our findings reflect the consequences of electoral business cycles if governments systematically reverse pre-electoral fiscal expansions after the election. The results show that this is not the case (table A9).

CONCLUSION

This paper analyzes the relationship between democratic politics and market pressure in industrialized countries since the late 1970s. It focuses on the political willingness of governments to adjust fiscal policy and to cut fiscal deficits in order to enhance their macroeconomic credibility. It shows that governments make significant strategic efforts when implementing fiscal consolidation packages. Government parties facing a large risk to be replaced in office systematically avoid consolidations when the end of the legislative term approaches.

Three major implications follow from our results. First, governments find it more difficult to reconcile political and economic pressures on fiscal policy than previous, influential research implies. Policymakers themselves are very skeptical about the often-mentioned, double benefits of fiscal consolidations, i.e. low short-term costs and high long-term gains, described by the popular 'expansionary fiscal contractions thesis' (e.g., Giavazzi and Pagano, 1990, European Central Bank, 2010, p. 83-85). This means that fiscal consolidation programs, like those in European crisis countries, need to be more consistent with the electoral interests of government parties in order to be durable and credible.

Second, previous studies underestimate the electoral risk of consolidations (Alesina et al., 1998, 2011). These studies find a weak empirical relationship between consolidations and electoral loss, but the observed effect of consolidations on elections should be small when vulnerable governments deliberately minimize electoral punishment (Wenzelburger, 2011, 2014, Vis, 2016). Consistent with this proposition, Armingeon and Giger (2008) find that retrenchment has a substantial effect on elections if this topic is salient during electoral campaigns. Future research should reexamine the

electoral consequences of consolidations taking into account the strategic behavior that we establish in this paper (e.g., Hübscher et al., 2015).

Finally, our analysis identifies electoral concerns as the most important political determinant of consolidations, leaving only a minor role to ideological concerns. In other words, the role of political parties is limited when governments define the basic trajectory of aggregate fiscal policy in response to market pressure (Raess and Pontusson, 2015). This supports the previously held view that political parties increasingly subordinate their long-term policy goals to short-term electoral benefits in contemporary democracies (Mair, 2008) at least in one of the most important policy domains. Within this grand fiscal policy trajectory, it remains to be examined whether party governments concentrate their fiscal consolidation efforts on different policy areas, like health or unemployment (Jensen, 2014), potentially in counterintuitive ways (Armingeon et al., 2016). Future research should disaggregate consolidations packages to explore the role of parties for the specifics of fiscal consolidation further.

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Table 1: Summary statistics

	Mean	Std. Dev.	Min.	Max.	N
Event	0.314	0.464	0	1	510
Size	0.315	0.697	-0.75	4.74	510
Size (Event=1 only)	1.003	0.927	-0.75	4.74	160
Margin	1.709	1.071	0	3.384	510
Margin (weighted by volatility)	0.888	0.628	0	2.265	509
Election Cycle	2.392	1.159	1	5	510
Ideology	0.571	0.15	0.23	0.986	510
Constraints	0.451	0.123	0.12	0.72	510
Deficit	0.043	3.068	-10.09	9.01	510
Bond yield (real)	3.776	2.498	-7.66	11.99	510
t	4.347	3.92	1	21	510

Table 2: Determinants of fiscal consolidation events and consolidation size

	Consolidation event						Consolidation size			
	Probit	Probit	Probit	Probit	Probit	Probit	Tobit	Tobit	Tobit	Tobit
ElectionCycle$_t$	-0.104**	-0.105**	-0.405***	-0.311***	-0.384***	-0.295***	-0.423***	-0.319***	-0.410***	-0.318***
	(0.046)	(0.046)	(0.113)	(0.089)	(0.111)	(0.089)	(0.100)	(0.071)	(0.098)	(0.075)
Log(Margin$_t$)	0.025		-0.364**		-0.381***		-0.391**		-0.456***	
	(0.082)		(0.145)		(0.132)		(0.161)		(0.159)	
Log(Margin$_t$)*Cycle$_t$			0.169***		0.166***		0.186***		0.184***	
			(0.058)		(0.057)		(0.048)		(0.050)	
Log(Margin$_t$(w))		-0.056		-0.576**		-0.597**		-0.627**		-0.703**
		(0.138)		(0.255)		(0.241)		(0.278)		(0.283)
Log(Margin$_t$(w))*Cycle$_t$				0.228**		0.225**		0.252***		0.258***
				(0.099)		(0.099)		(0.075)		(0.082)
Ideology$_t$	0.954	0.818	0.869	0.746	1.052**	0.949**	1.625*	1.487	1.414	1.369
	(0.607)	(0.602)	(0.570)	(0.582)	(0.471)	(0.457)	(0.972)	(0.985)	(0.903)	(0.882)
Constraints$_t$	0.180	0.300	0.263	0.307	0.561	0.570	-1.988	-1.953	1.436**	1.451**
	(1.272)	(1.287)	(1.319)	(1.329)	(0.390)	(0.426)	(1.891)	(1.885)	(0.649)	(0.663)
Deficit$_{t-1}$	-0.155***	-0.158***	-0.159***	-0.161***	-0.158***	-0.161***	-0.219***	-0.220***	-0.224***	-0.225***
	(0.041)	(0.039)	(0.041)	(0.040)	(0.037)	(0.035)	(0.065)	(0.064)	(0.062)	(0.061)
BondRate$_t$	0.105**	0.103**	0.109**	0.106**	0.104***	0.101***	0.169**	0.169**	0.159***	0.159***
	(0.046)	(0.048)	(0.048)	(0.048)	(0.038)	(0.038)	(0.072)	(0.071)	(0.058)	(0.058)
t	-0.825***	-0.829***	-0.816***	-0.816***	-0.842***	-0.839***				
	(0.109)	(0.110)	(0.107)	(0.109)	(0.105)	(0.107)				
t^2	0.080***	0.081***	0.079***	0.079***	0.081***	0.081***				
	(0.015)	(0.015)	(0.015)	(0.015)	(0.014)	(0.015)				
t^3	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***				
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)				
Constant	0.078	0.198	0.700	0.655	0.581	0.518	-0.907	-0.961	-1.934**	-2.077**
	(0.836)	(0.851)	(0.819)	(0.862)	(0.523)	(0.517)	(1.249)	(1.282)	(0.910)	(0.897)
Fixed effects	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No
Pseudo R^2	0.32	0.32	0.33	0.33	0.32	0.32	0.14	0.14	0.12	0.11
N	510	509	510	509	510	509	510	509	510	509

Notes: Margin$_t$(w) refers to margins weighted by the degree of vote share volatility: Margin$_t$/Volatility$_t$. Robust standard errors in parentheses cluster on countries. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 3: Strategic election timing

	Dissolution Index			Early election	
	≤ 7.5	≤ 5	≤ 2.5	No	Yes
ElectionCycle$_t$	-0.577***	-0.628***	-0.600**	-0.424***	-0.450***
	(0.178)	(0.205)	(0.236)	(0.122)	(0.132)
Log(Margin$_t$)	-0.399	-0.530*	-0.544*	-0.015	-0.576**
	(0.256)	(0.278)	(0.300)	(0.205)	(0.237)
Log(Margin$_t$)*Cycle$_t$	0.209**	0.268***	0.258***	0.170**	0.175**
	(0.096)	(0.091)	(0.098)	(0.074)	(0.080)
Ideology$_t$	0.811	0.205	0.100	0.982	1.124
	(0.755)	(0.627)	(0.499)	(0.812)	(0.912)
Constraints$_t$	0.565	0.095	0.270	1.414	0.754
	(1.381)	(1.536)	(1.473)	(1.933)	(1.920)
Deficit$_{t-1}$	-0.115	-0.111	-0.049	-0.232***	-0.116*
	(0.080)	(0.087)	(0.075)	(0.056)	(0.062)
BondRate$_t$	0.036	0.066	0.033	0.046	0.111*
	(0.052)	(0.057)	(0.061)	(0.043)	(0.063)
t	-0.527***	-0.476***	-0.463***	-0.619***	-2.363***
	(0.105)	(0.146)	(0.172)	(0.155)	(0.422)
t^2	0.023	0.012	0.017	0.031	0.466***
	(0.018)	(0.023)	(0.032)	(0.032)	(0.091)
t^3	0.001	0.001	0.001	0.000	-0.027***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.006)
Constant	1.277	1.871**	1.933**	-0.004	1.728
	(0.906)	(0.825)	(0.923)	(1.170)	(1.435)
Fixed effects	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.28	0.30	0.22	0.43	0.33
N	237	190	156	300	202

Notes: Dissolution index reflects the ability of governments to freely call elections. Robust standard errors in parentheses cluster on countries. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Figure 1: Estimated effect of electoral margins and electoral cycles on probability of consolidation event; predicted probabilities were computed using the 'observed-value approach' (Hanmer and Kalkan 2013); 95% confidence intervals were computed using a simulation of 1000 draws

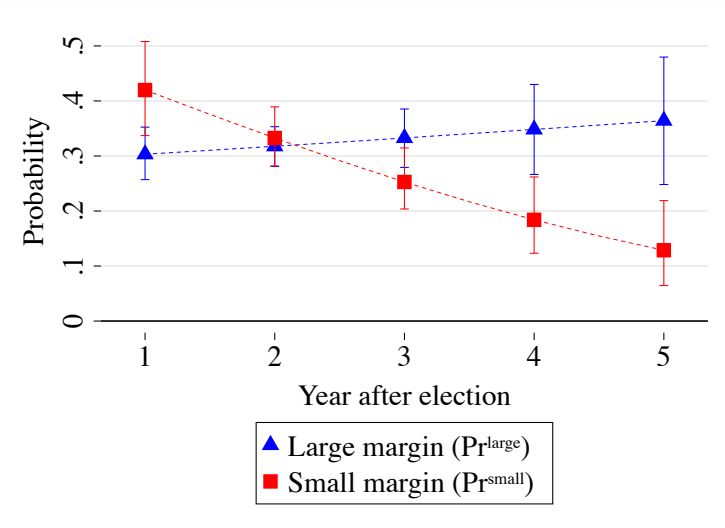

Figure 1(a): Predicted probability of fiscal consolidation for governments with large and small margins of victory

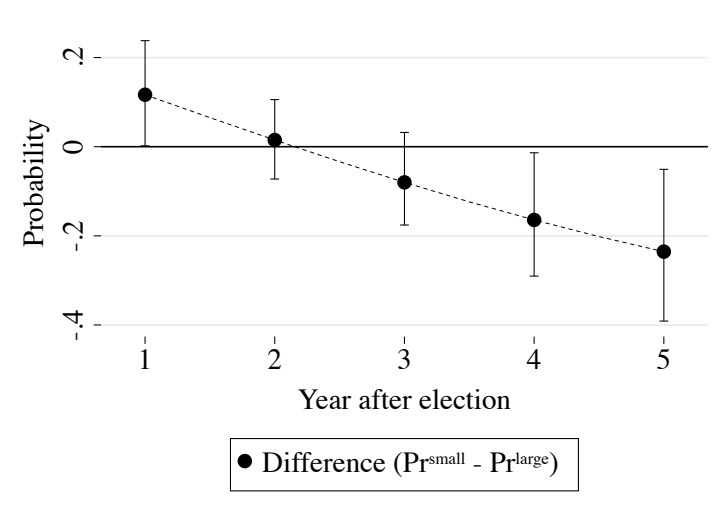

Figure 1(b): Difference in predicted probability of fiscal consolidation between the two governments

Figure 2: Effect of one-unit *de*crease in logged margin of victory on fiscal consolidation size (% of GDP); 95% confidence intervals were computed using the Delta Method