Electoral Cycles in Government Policy Making:

Strategic Timing of Austerity Reform Measures in Western Europe

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Abstract

This paper investigates whether governing parties strategically time austerity policies to their benefit at elections. It contributes to existing research by focusing directly on government policy output, analyzing over 1,200 welfare and taxation austerity measures in 13 Western European countries over 20 years. In line with previous research, we find that the probability that governments introduce austerity measures decreases towards elections. We introduce original hypotheses about which governments have the *ability* and *opportunity* to strategically time policy decisions. We suggest that minimal winning cabinets with leadership change (new prime ministers) face less complex bargaining environments and can credibly shift responsibility for austerity measures to the preceding government. Our empirical analyses show that these governments are most likely to strategically time austerity policies.

Keywords

Electoral Cycles; Austerity Reforms; Social Policy; Taxation Policy; Western Europe

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Introduction

Political electoral cycles – the periodic occurrence of government policy decisions induced by the cyclicality of elections – have long been investigated as a strategic element of politics in modern democracies (e.g. Nordhaus 1975; MacRae 1977). Given that voters punish or reward incumbents for their performance in office, parties can use the timing of reforms to influence their popularity before elections.

Austerity measures, which we define as policy changes that either cut welfare benefits or raise taxes (see e.g., Jordà and Taylor 2016; Martin and Philippon 2017), in particular should necessitate careful consideration by governments, especially since voters might be more sensitive to (monetary) losses than to gains (Weaver 1986: 373; see also Pacek and Radcliff 1995; Kahneman and Tversky 1986). Existing research thus expects that governments strategically time austerity reforms according to the electoral cycle to maximize their re-election chances (Hübscher and Sattler 2017). While recent research on voting behavior challenges the notion that welfare cuts are unconditionally damaging to parties in government (e.g., Giger and Nelson 2011, 2013; Schumacher et al. 2013), politicians demonstrably perceive austerity measures as politically risky and try to avoid accountability for their implementation (Klitgaard and Elmelund-Præstekær 2014; Pierson 1996; Wenzelburger 2014; Weaver 1986; Wenzelburger and Hörisch 2016; König and Wenzelburger 2017; Vis 2009). This manuscript contributes to the literature on political electoral cycles by investigating whether and under what conditions governments strategically time austerity measures for electoral benefit.

Given the central role of the economy for voting decisions (e.g. Duch and Stevenson 2008), analyses of political cycles have been pioneered by the Political Business Cycles literature, which suggests that governments boost the economy prior to elections in order to win additional votes (Nordhaus 1975; MacRae 1977). However, the political business cycle

literature has been widely challenged on theoretical and empirical grounds and finds mixed support (e.g. Alesina et al. 1993; Drazen 2001; Krause 2005). Weak or mixed findings might be largely due to the fact that scholars in this field typically investigate macro-economic outcomes such as GDP growth, inflation, and unemployment rates (see e.g. Drazen 2001), that depend only partially upon the decision of national governments. Many scholars have therefore shifted their focus towards fiscal outcomes (e.g. government spending), which are under more direct influence of the government. Studies on fiscal outcomes provide a strong theoretical basis (e.g. Rogoff and Sibert 1988; Blais and Nadeau 1992; Persson and Tabellini 2000; Prichard 2018) and empirical evidence for the existence of political budget cycles (see e.g. Shi and Svensson 2006; Mink and De Haan 2006; Alt and Lassen 2006; Chang 2008; Klomp and De Haan 2013). However, this line of research mainly focuses on policy outcomes rather than the governments' direct policy decisions, which carries the risk that external factors rather than parties' choices drive some of the observed dynamics.

This paper addresses the challenges of the cycles literature by completing the shift from policy outcomes to actual government policy decisions. In line with previous research, we argue that governments minimize the risk of alienating voters by strategically introducing austerity reforms earlier instead of late in the legislative cycle. The rationale for this behavior is not only that voters discount past events in favor of recent actions (Nordhaus 1975), but also that new governments have the opportunity to credibly shift responsibility for such measures to the previous incumbents and their heritage. According to this theoretical argument, we expect that the strategic timing of austerity measures should be more likely when there are major reshuffles in government leadership, like a change of the prime minister in the newly formed government. We further suggest that not all governments are able to use the short window of opportunity to introduce austerity measures early on. We expect that governments facing a lower bargaining complexity, such as minimal winning cabinets (as

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opposed to minority or oversized cabinets), are more effective in strategically timing austerity measures.

To evaluate our theoretical expectations we analyze the timing of austerity measures and use a new and unique dataset with more than 1,200 important reform measures introduced by the government in the taxation and social policy areas in 13 Western European countries between 1985 and 2005. For this purpose, we coded more than 1,000 periodical country reports issued by the Economist Intelligence Unit (EIU) and the OECD, following an extensive coding scheme.

In line with past findings of the electoral cycles literature, our results show that governments introduce and adopt austerity measures with greater probability at the beginning of the legislative term. We find that minimal winning governments are more likely to strategically time austerity measures, especially when there is a change in the prime minister. Hence, the results support the theoretical argument that governments with less complex bargaining environments have the ability to act swiftly and use the short window of opportunity that results from leadership change. Our results also lend support to the argument that governments use the opportunity to blame their predecessors for current budgetary problems and credibly shift the responsibility for the necessity of austerity measures to the previous government. These findings have important implications for our understanding of how governments in representative democracies structure their reform agenda and make strategic policy choices.

The literature on electoral cycles

Political business and budget cycles

The idea that governments seek to maximize their chances for re-election by strategically timing policies following the electoral cycle was presented in the literature on Political

Business Cycles. It takes as a starting point the economic voting literature, which has shown that economic conditions (e.g. growth, inflation, and unemployment levels) play a central role in the electoral decisions of voters and the parties' electoral fortunes (e.g., Fiorina 1981; Lewis-Beck 1990; Powell and Whitten 1993; Duch and Stevenson 2008). The seminal contributions by Nordhaus (1975) and MacRae (1977) hypothesized that governments manipulate the economy so that economic conditions are good when they are up for re-election.

Despite some initial supporting evidence, political business cycles models have vanished for both theoretical reasons and due to lack of or mixed empirical support in later empirical studies (e.g., McCallum 1978; Alesina et al. 1993; Krause 2005, for reviews see Drazen 2000, 2001: 228–46; Mueller 2003). One central reason for the weak empirical support is the limited control of governments upon economic outcomes, due, for instance, to the delegation of monetary policy to central banks and the growing influence of global markets (Clark et al. 1998; Hellwig and Samuels 2007).[1]

Considering these constraints, later research has focused on the impact of elections on fiscal decisions, which are under the direct control of governments (e.g. Rogoff and Sibert 1988; Blais and Nadeau 1992; Persson and Tabellini 2000; Franzese 2002; Prichard 2018).[2] The Political Budget Cycle literature argues that governments improve their electoral prospects by adapting their spending behavior to the electoral cycle, and by distributing money among the electorate prior to elections (Schultz 1995; Drazen and Eslava 2010, for reviews see De Haan 2014; De Haan and Klomp 2013; Shi and Svensson 2006). An increase in welfare spending in the run-up to elections should not only boost the economy and directly benefit voters (e.g. Bickers and Stein 1996; Kriner and Reeves 2012), but could also signal economic competence to voters (Rogoff and Sibert 1988), thereby increasing government popularity.

Electoral cycles and legislation

While fiscal policy directly relates to government decisions, external factors beyond the control of the cabinet can influence budget deficits and government spending. For example, higher unemployment rates can automatically increase government spending on unemployment benefits, and a growing elderly population leads to higher pension expenditures.

A more direct way to investigate the electoral opportunism of political parties is to focus directly on government policy decisions. Policies, as implemented through laws or decrees, provide voters with valuable information about governments' agendas, and send signals about their policy competence and efficiency, which voters are likely to take into account when they cast their vote. Additionally, the news media regularly cover important policy changes, such as austerity reforms, thus making them more visible to voters than budget figures.

Despite the fact that legislation is the core business of governments, current evidence about the existence of legislative electoral cycles is limited to a small number of studies providing mixed empirical support (for a review, see Kovats 2014). For instance, Shughart and Tollison (1985) argue that political manipulation of the macro-economy necessitates an increase of legislative output, yet their analysis finds no empirical correlation between macroeconomic indicators, elections, and legislative outputs. In contrast, Lagona and Padovano (2008) report increases of legislative output in Italy shortly before elections.

While these studies paved the way to research on legislative electoral cycles, their potential shortcoming is that they investigate *all* passed legislation, including incremental laws, which may not have a substantive impact on the economy (Willett and Bananian 1988). Furthermore, only substantive laws have a high likelihood of getting attention by the news media and reaching voters. Therefore, taking the mere quantity of formal legislation when

investigating political cycles can result in misleading findings. To address this issue, Kovats (2014) investigates important legislative decisions of the European Union and provides some support for the idea that there is opportunistic timing of European legislation.

While the studies by Lagona and Padovano (2008) and Kovats (2014) concentrate on the *volume* of legislation, Hallerberg and Scartascini (2017) focus on the *substance* of laws and investigate tax changes in Latin America. In line with the political cycle literature's expectations, they find that tax increases are less likely in election years. Similarly, Stokes (1999) demonstrates that Latin American governments time austerity measures strategically after elections to avoid negative voter responses.

We contribute to this literature by investigating electoral cycles of reform making across Western European countries and time, whereby we focus on *important* legislation and take its *content* into account. Specifically, we concentrate on *important austerity reform measures*, introduced across 13 West European countries over a period of 20 years. We extend the current understanding of electoral cycles of policy making by presenting original hypotheses suggesting that some governments are more likely to have the *opportunity* and *ability* to strategically time legislation. We present our theoretical expectations in the ensuing section.

Theoretical expectations on the timing of austerity measures

In this section, we argue that governments follow a vote-seeking strategy and introduce austerity measures early on in the electoral term, banking on voters' recency bias and blurred lines of responsibility with the previous government. We theorize that such behavior is more likely when the prime minister is new and when the governments is minimal winning (rather than oversized or minority) as these conditions allow governments to shift blame to predecessors and reach consensus on austerity measures quickly. We start out by presenting the assumptions we make about parties and voters.

Underlying assumptions about parties and voters

One of our core assumptions is that politicians are vote-seeking – in order to increase their electoral chances, governments will try to send positive signals to the voters and will avoid introducing policies which are costly for the voters in the run-up to elections. At the same time, governments operate within strict budgetary constraints. In order to achieve fiscal balance and to finance current and future public expenses governments may need to introduce austerity measures at some point during their office time. We also assume that political parties see austerity policies as a political risk (see e.g. Vis 2009; Wenzelburger and Hörisch 2016), and that politicians will engage in various blame avoidance strategies to avert drawing the ire of voters for such policies (see e.g. Weaver 1986; McGraw 1990).

Drawing on previous research, we assume that voters heavily discount the past and give greater weight to recent political accomplishments when they decide for whom to vote (see e.g. Healy and Lenz 2014).[3] This 'recency bias' may arise due to a number of reasons: For one, voters may value recent events more because they are more informative and relevant for predicting future actions and policy developments than distant events (MacKuen et al. 1992). Second, it is easier to access and retrieve current information from memory. This cognitive bias leads voters to place more weight on the period right before elections when they evaluate the economic performance of incumbents (Healy and Lenz 2014).

Another important assumption that we make here is that voters are likely to pay attention to the introduction of austerity measures prior to their actual implementation. While some austerity measures can take considerable time until voters carry their monetary costs, we expect that voters evaluate current austerity measures when these are introduced and passed in parliament. The introduction of austerity measures in cabinet or parliament, and later on their passage, can entail electoral costs for the government parties that introduced and passed these reforms. This should even be the case for austerity measures, which induce a

substantive impact only after decades, such as pension reforms. If an austerity measure increases the retirement age or lowers monthly pension payments, we expect that citizens punish the responsible government in the election immediately following the introduction and passage of a reform measure, rather than waiting for the legislation to take effect in the future. We therefore assume that voters will respond to information surrounding the introduction of austerity measures, which is also when policy changes are the focus of the public debate and news media coverage. Governments thus should be careful in announcing and passing austerity measures, and we therefore expect them to time these policy signals opportunistically.

Theoretical expectations

Our central argument is that parties in government strategically avoid the introduction of austerity measures late in the electoral cycle, that is, in the run-up to elections. We further argue that the extent to which governments will use this strategy depends both on the opportunity to shift responsibility to previous cabinets, as well as the new cabinet's capacity for timely decision-making and swift action. In the following sections, we elaborate on our theoretical arguments.

Opportunistic timing of austerity measures

Austerity measures, such as increases in tax rates and public spending cuts, have an immediate adverse impact on the affected citizens by decreasing their expected and actual disposable income. While parties in government have incentives to avoid reforms that are likely to be negatively perceived by voters (e.g. austerity measures), they often need to introduce such reforms to achieve fiscal balance. Given governments' budgetary constraints, and voters' recency bias, strategically timing the same set of policy actions can minimize voters' alienation and maximize support. A government's risk of inflicting self-damage on

its popularity becomes much more critical the closer the election date (see also König and Wenzelburger 2017). We therefore expect that governing parties will favor introducing austerity measures early in the legislative term, which allows negative signals to dissipate until the time of the election. In line with these considerations, our first hypothesis states that:

Hypothesis 1: Governments are more likely to introduce austerity measures early in the legislative term.

Clarity of responsibility and opportunistic timing of austerity measures

Besides the recency bias of voters, an additional incentive for governments to introduce austerity measures early on is the fact that time spent in office is important for responsibility attribution. We draw on the literature on the 'clarity of responsibility', which suggests that incumbents are punished to a lower extent in settings with blurred lines of responsibility (Powell and Whitten 1993).

We expect that the longer a government is in office and the more time it had to influence the policy agenda, the more voters will hold the government responsible for policy outcomes. At the beginning of the legislative term, governments inherit the policy status quo from the previous incumbent. We suggest that when there is a change in government leadership, a new government can credibly claim that unpopular measures are necessary to cope with the budgetary gap inherited from the previous government. The credibility of this claim fades the longer the new government is in office. In such a way, new governments can credibly shift the responsibility for the necessity of austerity measures to the preceding government.[4] Due to blurred lines of responsibility between the current and previous governments at the

beginning of the legislative term, it is less likely that austerity measures negatively affect a new government when they are introduced early rather than late in the term.

We take a change in the prime minister as an indicator for a major change in government leadership (e.g., Bunce 2014). While small changes in the party composition of the cabinet may not substantially shift public perceptions of government responsibility, new prime ministers can signify a major change of governmental policy direction, which enables the new government to shift responsibility for the inherited problems to its predecessor. Such a shift of responsibility is particularly straightforward when the new prime minister represents a different party than the predecessor, but it may also be credible when a politician from the same party replaces the prime minister (in the context of party leadership change).[5] We suggest that both scenarios provide newly formed governments a viable opportunity to shift the responsibility for austerity measures to the previous government. Our second hypothesis therefore says that:

Hypothesis 2: Governments with a new prime minister are more likely to introduce austerity measures early in the legislative term than governments with a sitting prime minister.

Government type and opportunistic timing of austerity measures

We also expect that some governments are better equipped to time their policy output strategically according to the electoral cycle. To take advantage of their chance to shift blame, newly formed governments need to act fast and decide on major austerity measures early in the legislative term. Governments have a short window of opportunity to secure a parliamentary majority willing to approve measures that impose direct costs on voters. This benefits governments that face a lower decision-making complexity in cabinet and parliament.

To capture how much decision-making complexity governments face when they make policy decisions, we propose to focus on government types: minority, minimal winning, and oversized cabinets, where a minority cabinet does not control a majority of seats in the legislature, and an oversized cabinet includes at least one party that is not necessary for obtaining a legislative majority. This measure entails valuable information about the legislative majorities of the parties in government and captures internal bargaining dynamics that influence the government's ability to act swiftly and time legislation opportunistically. In addition, government type is a simple measure which is easy to operationalize and entails little measurement error. Our argument is, in short, that minimal winning cabinets face a lower bargaining complexity than minority and oversized cabinets and will thus be more capable to expeditiously introduce austerity measures.

As minority governments do not hold a parliamentary majority, they need to secure the support of opposition parties. Opposition parties might be willing to support the government and agree to reform policies when these are directly beneficial to them and their electorate. However, austerity measures impose direct costs on voters without clear direct benefit for opposition parties. Government parties need austerity measures to consolidate the budget, to cover the running costs, and to pay for their own new policies. In contrast, opposition parties may have more to gain from the failure of the government strategy as this limits the government's room for maneuver and perhaps leads to its fall. Opposition parties therefore might be willing to support austerity policies when they face poor options for government participation in case of cabinet termination or uncomfortable electoral prospects in case of early elections. If this is not the case, opposition parties are in a strong bargaining position vis-à-vis the government. We therefore expect that even centrally located minority cabinets that can juggle between opposition parties and play them off against each other (Laver and Schofield 1998; Crombez 1996), will have difficulties to secure the support of opposition parties for austerity measures without delay and will have higher bargaining costs in case

they succeed. Accordingly, minority cabinets may be unable to pass austerity measures within the short window of opportunity at the beginning of the legislative term.

Regarding oversized coalitions, we suggest that while surplus parties in oversized coalitions can help sustain the coalition logrolls, thus enabling the cabinets to pass many bills successfully throughout the legislative term (see Carrubba and Volden 2000), such 'superfluous' parties are also likely to delay the introduction and passage of costly bills (e.g. austerity measures) early in the legislative term.

Despite the fact that surplus parties are not necessary to pass a bill in oversized coalitions, ignoring their wishes comes with certain costs that governments should try to avoid, especially in the case of costly policies such as austerity measures. When government parties decide whether to ignore the wishes of the surplus party, they weigh the expected costs from doing so against the expected costs from making policy concessions to accommodate for the policy demands of the surplus party. If it is more (less) costly to ignore the surplus party compared to agreeing to policy concessions which benefit the surplus party, then the government parties will choose to respect (ignore) the surplus party's policy preferences. Ignoring this party's preferences induce some fixed reputation costs and variable opportunity costs.

Specifically, if government parties ignore the demands of a surplus party, this can hamper their reputation of being trustworthy coalition partners with current and potential future coalition partners. Poor reputation decreases their expected benefit from future logrolls, as they might have to coalesce with less desirable partners.

With respect to opportunity costs, introducing austerity measures against the wishes of a government partner installs doubt in the necessity of these measures, which in turn lowers their legitimacy and thus increases audience costs. In addition, by excluding the surplus party from coalition decisions, government parties bypass the possibility to gather broad support and to disperse the responsibility for costly measures among all government parties.

We suggest that parties' incentives to avoid costly intra-cabinet conflict related to austerity measures and to divide the responsibility among all coalition partners should be stronger the higher the costs a bill imposes on *voters*. For very costly bills, such as austerity reform measures, government parties should clearly benefit from the support of the surplus cabinet parties, as this increases the legitimacy of the bill and blurs the lines of responsibility between the governing parties. Both of these consequences should reduce the electoral losses that are likely to arise from introducing austerity measures for each of the government parties.

Why should this delay the introduction of austerity reforms? While coalition partners need the support of surplus parties for costly reforms such as austerity measures, they need surplus parties to a lesser extent for less costly policy measures and thus may ignore their demands. Given that governments have incentives to pass reforms which impose costs on voters early in the legislative term and thus need surplus parties more strongly early on, surplus parties face uncertainty whether they can get their desired bills passed later. Surplus parties will therefore seek to ensure that coalition partners need their support throughout the entire legislative period. They thus have incentives to delay and disperse the introduction of austerity measures throughout the legislative term. They can do so by threatening to oppose costly measures and hence reduce these measures' legitimacy and increase audience costs. By delaying the passage of austerity measures, surplus parties can keep the costs of ignoring them high and bargain to get their desired policies early on. The other government parties, in turn, are likely to accept the demands of surplus parties in order to benefit from higher legitimacy of their austerity measures and blurred lines of responsibility.

In contrast, in minimal winning coalitions, no party can be ignored, and all government parties will have strong incentives to introduce austerity measures early rather than late in the legislative term. The decision-making processes in oversized governments are thus more complex, and may considerably delay the passage of legislation. Hence, it will take longer

for parties in oversized cabinets to agree on controversial and costly reform measures, and such cabinets thus should be less able to introduce austerity measures early on in the legislative cycle.

Given the above considerations, we expect that minimal winning governments are better equipped to strategically time austerity measures to their needs when compared to minority and oversized governments, and we thus hypothesize that:

Hypothesis 3: Minimal winning governments are, compared to minority and oversized governments, more likely to introduce austerity measures early in the legislative term.

Lastly, we expect that the impact of both factors is conditional on each other. That is, the opportunity to shift responsibility for austerity measure to the previous governments should result in the strategic timing of austerity measures when governments can act swiftly. Accordingly, we expect that minimal winning cabinets with a new prime minister are most likely to time austerity measures strategically. In such cabinets, parties can credibly shift responsibility to the previous government and face minimal bargaining complexity, which allows them to use the short window of opportunity and introduce austerity measures early on. Conversely, cabinets that have neither the possibility to shift blame (i.e., when there is no change in leadership) nor a bargaining environment that expedites decision-making should be less effective in timing austerity measures strategically. We thus hypothesize that:

Hypothesis 4: Minimal winning governments with a new prime minister are, compared to oversized and minority governments with a sitting prime minister, more likely to introduce austerity measures early in the legislative term.

Data and methods

A new dataset on reform measures in 13 Western European countries over 20 years

We evaluate our hypotheses using data on substantive social and taxation reform measures introduced in 13 Western European countries for a period of 20 years (ca. 1985–2005, covering the entire office periods of the cabinets beginning or ending closest to these dates). Our sample includes data from 89 cabinets in Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Portugal, Spain, Sweden, and the United Kingdom. These countries either were part of the European Common Market for the entire observation period or acceded in 1995 (Austria, Finland, and Sweden). The selection of Western European countries ensures that the broader economic framework conditions are comparable across all countries.

While existing analyses of electoral cycles predominantly focus on policy outcomes and economic indicators which are only partially in control of the government – such as GDP growth or spending and deficit levels –, we analyze direct policy decisions of governments. For this purpose, we manually coded more than 1,000 periodical country reports issued every three months (every month after 2007) by the *Economist Intelligence Unit* (EIU) and country reports issued annually or biannually by the OECD.

The leading goal of EIU reports is to inform business investors, international organizations, and government agencies about the current policy situation and concrete policy changes invoked by the government in a given country. The EIU reports provide information on relevant reform measures introduced via laws or government decrees which change the policy status quo; they do not report merely incremental provisions. In terms of coverage of Western countries and time frequency, breadth, and detail of reporting on economic and social policy developments, these sources are unmatched. Designated country experts prepare reports on socio-economic policy making using various information

channels, such as official statements, media reports, as well as through direct contact with government officials. The reporting follows common guidelines and is closely monitored by the EIU's central editorial team, which allows for cross-country comparison. To cross-validate the EIU country reports' coverage we also coded more than 200 country reports issued by the OECD. Whenever the OECD Economic Surveys mention additional information on reform measures omitted in the EIU reports, we included these measures in our database.

We follow an extensive coding scheme to extract all socio-economic reform measures mentioned in the EIU and OECD country reports.[6] We coded every reform measure individually, even if it occurred in a package with other measures, which allows for comparability across cases. Further, we code only concrete reform measures, indicating the policy instrument used to change the policy status quo. For example, the April 1990 EIU report on Sweden includes information on recent policy changes:

"With the second Carlsson administration now in place and the new finance minister, Allan Larsson, promising to pursue market-oriented policies like his predecessor, Kjell-Olof Feldt, the Social Democrats again had to look for parliamentary support for their economic policy. [...] A deal was therefore hammered out, and was confirmed in Parliament on April 25. Its main features include:" (EIU 1990: 10)

The report then lists a number of measures introduced as part of the policy package, in particular two austerity measures which increase consumption taxes and social security contributions of employees:

"• an increase in VAT of one and a half percentage points to 25 per cent as of July 1 this year. [...]

• *an increase in wage earners' unemployment contributions from 5 per cent to 10 per cent."* (EIU 1990: 10)

After identifying a relevant policy change from the original reports, we capture the available information for each reform measure in a number of variables. We code information on the dates of policy changes at four different stages: cabinet decision, bill brought into parliament, law enactment, and legislation coming into force. We coded the timing of a reform measure at each stage for which the reports explicitly indicated the date; however, for some reform measures we do not have information about the dates of all stages. Hence, focusing only on one stage would result in missing cases of austerity measures. We focus on all cases and adopt a standardized coding whereby we choose the date of an austerity measure based on the best available information. Governments send to voters a strong signal about their policy decisions when the parliament enacts a law, which finalizes the policy decision. We therefore pick the date of a *law's enactment in parliament* as the primary date of the reform measure. Announcements of cabinet decisions and bringing a bill for deliberation in parliament are also stages when governments send a strong signal and to which the news media devote considerable attention. Accordingly, where the enactment date was not available, we choose the date at which the draft bill was *brought before parliament*. Whenever this information was not available, we chose the date of the *cabinet decision* or, lastly, the date at which a measure *came into force*.[7]

Aside from descriptive information, such as the date when a reform measure was introduced, we also capture the *content* of the reform measures in three policy variables with increasing levels of precision. At the most general level, we assigned each reform measure to one of four broad policy areas: social, taxation, labor market, or economic policy. To identify austerity measures, we focus on social and taxation policy. We classified each measure from these policy areas in 14 categories and 22 sub-categories, which allow us to

capture the direction of a given reform measures (e.g. higher corporate taxes, lower pension rates) (see Table A1 in the Appendix). The first example from above, 'an increase in VAT', was assigned to taxation policy, under the category 'consumption taxes' and then under the sub-category 'increase of tax rate'. The second example, 'an increase in wage earners' unemployment contributions' was assigned to social policy, under the category 'unemployment' and the sub-category 'insured's fees/contributions up'

In the following analysis, we use the information about the direction of the reform measures to classify the coded social and taxation reform measures into 'austerity' measures (see Table 1). We generally classify tax increases and spending cuts as austerity measures. These measures have a positive effect on the fiscal balance as they bring in tax revenue and reduce budget outlays, but impose direct costs on voters.

[TABLE 1 ABOUT HERE]

Dependent and independent variables

We structure our dataset into monthly units and analyze the probability that a cabinet introduces austerity reform measures in a given month. Using the database on austerity reform measures described above, we code the dependent variable as a dichotomous variable which indicates whether one or more *austerity measures* were introduced in a given month or not (0 = no, 1 = yes). All technical information on cabinets (start and end dates of the legislative term, party composition, government type, prime minister, etc.) was gathered using the *Comparative Parliamentary Democracy Data Archive* (Strøm et al. 2008) in combination with the *ParlGov* database (Döring and Manow 2016).

Our main explanatory variable is the *percentage of time remaining in the legislative term* (*TIME*). We calculate this variable as the number of months until the next scheduled election,

divided by the maximum number of months in a regular legislative term (e.g., 48 months in countries where there is a regular four-year legislative term).[8] We start our count from the election month, which we gather from the *ParlGov* database (Döring and Manow 2016).[9] For instance, the variable has a value of 100 percent for those observations (= months) where an election took place and a new legislative term has started, and a value of 50 percent when half of the legislative term has passed (24 months in a four-year term or 30 months in a five-year legislative term).

All models include a control variable that indicates whether there was an economic crisis at the beginning of the cabinet term (*CRISIS*). This modeling choice is guided by Hallerberg and Scartascini (2017), who suggest that governments introduce reforms which increase revenues when they most need it, for example during crisis situations. At the same time, following the economic voting literature (see Duch and Stevenson 2008), the probability of a change in the government may increase during crises because voters are dissatisfied with the economy. To account for this potential confounding factor, we generate a dummy variable based on three economic indicators from the *Comparative Political Data Set* (Armingeon et al. 2015): the level of unemployment, the gross domestic product (GDP), and debt in the year when the government was formed. We code the variable as 1 when either one of the following conditions occurs: unemployment levels are high (larger than 11.6 percent, thus greater than the sample mean plus one standard deviation); the change in the GDP is negative; or when debt levels are high (higher than the sample mean plus one standard deviation) (for a similar operationalization of economic crises, see Wiese 2014). We interact the crisis variable with our *TIME* variable as electoral cycles of austerity measures might be more pronounced during crises. The substantive effects in all models are robust to the exclusion of this interaction effect between the time left in the legislative term and the crisis variable.

As austerity measures are often introduced alongside other policy measures, we include a *count of the number of other social and taxation measures* introduced in the same months which are not classified as austerity measures according to our coding scheme (*NONAUSTERITY*). This sets up a strong test of our hypotheses, as it controls for all general decreases and increases in reform activity not related to substantive austerity measures. For instance, it may well be the case that governments are generally less active at the end of the legislative cycle as the parties in government focus on election campaigning.

We include yearly lags of three macroeconomic control variables to account for changes in the unemployment rate, the GDP, and the national debt (Armingeon et al. 2015). These controls vary by year: For instance, all twelve monthly observations in 1995 in a given country have the same value for *UNEMP*, which is the change in the unemployment rate from 1993 to 1994.

The variable *SPELLS* indicates the *months passed since the last austerity measure* and accounts for potential temporal dependence in the introduction of policy measures (Beck et al. 1998). We follow the recommendation by Carter and Signorino (2010) and include both a squared and cubed transformation of this variable. The results we report exhibit no sensitivity to the inclusion of these variables and are robust to alternative transformations (e.g., natural cubic splines, see Beck et al. 1998).

In order to evaluate Hypotheses 2 to 4, we interact our time variable with two cabinet level dummy variables indicating a *change in prime minister* (*NEWPM*) (Model 3) and whether the cabinet is *minimal winning* or not (*MWC*) (Model 4). The variable *NEWPM* indicates a leadership change, which we capture with a change in the person who holds the prime minister post. This approach allows us to capture two possible scenarios: 1) a change in the party which holds the prime minister post and 2) a change in the party leadership within the same prime minister party. The variable *MWC* is a dummy variable for government type. It takes a value of 1 for minimal winning cabinets and 0 for oversized coalitions or minority

cabinets.[10] We use information on the prime minister and government type provided by *ParlGov* (Döring and Manow 2016). Each of the categories has a reasonably high number of cases: 44 minimal winning governments (of which 16 are with a new prime minister) and 45 minority and oversized governments (of which 27 are with a new prime minister).

In the supplementary information, we test the robustness of our findings using the minimal winning dummy variable to other measures of the bargaining environment of cabinets, such as the number of institutional and partisan veto players and their ideological distance. While these measures are related, we argue that distinguishing between government types is the most straightforward approach to test our theoretical argument. For instance, the operationalization of veto players and their ideological conflict (measured as the ideological range between veto players) is complicated by the distinction between institutional veto players (legislative chambers, presidents, courts) and partisan veto players (government parties). Tsebelis (1995) has argued that while the agreement of institutional veto players is necessary for policy change, 'the agreement of partisan veto players is, *strictly speaking*, neither necessary nor sufficient' (Tsebelis 1995: 302, emphasis in original). In particular, in oversized cabinets at least one government party is not necessary for a majority and can be bypassed. In minority governments, the partisan veto players are not sufficient to pass a bill and need the support of the opposition, which might block the government for vote and office seeking reasons (Ganghof and Bräuninger 2006). Given that the majority in parliament ultimately decides the fate of a bill, it is particularly difficult in the case of minority and oversized cabinets to identify which parties are veto players and necessary and sufficient for policy change. [11]

We report the descriptive statistics for all variables in Table 2.

[TABLE 2 ABOUT HERE]

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Statistical model

We model the dichotomous dependent variable (the introduction of an austerity reform measure) using logistic regression models with unconditional fixed-effects at the cabinet level. We include dummy variables for each cabinet, which account for unobserved heterogeneity between cabinets. The fixed effects model controls for all factors that vary only between and not within cabinets, such as the cabinet's ideological position, or the number of parties in government. This is important as specific types of governments will be more likely to introduce austerity reform measures and these factors may correlate with our explanatory variables.

While the dummy variable approach to fixed effects logit regression results in biased coefficient estimates when t is small (e.g., Katz 2001; Greene 2004), it produces estimates for the fixed effects and intercepts. This allows us to calculate meaningful partial effects and predicted probabilities. We believe that the potential bias arising from the dummy variable approach is small for our analyses, as we have a sufficiently large amount of t (= months) for each n (= cabinet) (see discussion in Katz 2001).[12] We further restrict our analysis to cabinets that were in office for at least one year ($t \geq 12$). 79 of the 89 cabinets in our final sample have at least 20 monthly observations.

We model the probability p that cabinet i introduces an austerity measure during a given month t (see Models 1–5 in Table 3). We can express Model 1, which tests our first hypothesis, accordingly:

$$\log\left(\frac{p_{it}}{1-p_{it}}\right) = \begin{aligned}&\gamma_0 + \alpha_i + \\ &\beta_1 \times TIME_{it} + \\ &\gamma_1 \times TIME_{it} \times CRISIS_i + \gamma_2 \times NONAUSTERITY_{it} + \\ &\gamma_3 \times \Delta UNEMP_{it} + \gamma_4 \times \Delta GDP_{it} + \gamma_5 \times \Delta DEBT_{it} + \\ &\gamma_6 \times SPELLS_{it} + \gamma_7 \times SPELLS_{it}^2 + \gamma_8 \times SPELLS_{it}^3\end{aligned}$$

Model 1 and all other models (Models 2–5) include intercepts (γ_0), cabinet dummies (α_i), the explanatory variable *TIME$_{it}$ (percentage of time remaining in the legislative term),* and the same set of control variables (with parameters $\gamma_1, \dots, \gamma_8$) (for more information on the specific measures of each variable see the previous section on the dependent and independent variables).

In addition to the variables in Model 1, Model 2 includes the squared term of our main explanatory variable – time remaining in the legislative term, which tests for potential curvilinearity in this effect. Models 3, 4, and 5 include in addition dummy variables for a new prime minister (*NEWPM$_i$)* and minimal winning cabinets (*MWC$_i$)* separately (Models 3 and 4) and together (Model 5). Here we analyze whether the strategic timing of austerity reform measures is more likely in cabinets with new prime ministers (Hypothesis 2), among minimal winning governments (Hypothesis 3), and in cabinets with both a new prime minister and minimal winning status (Hypothesis 4). Due to the inclusion of cabinet fixed effects, the main effects of *NEWPM$_i$* and *MWC$_i$,* which are constant at the cabinet level, drop out of the models. Instead, these variables are only included as an interaction with our main explanatory variable, which measures the percentage of time remaining in the legislative term.

Model 5 tests Hypothesis 4 and includes a three-way interaction among the dummy variables for new prime ministers and government type with our primary explanatory variable (*time remaining until next scheduled election*). The model can therefore be written as follows:

$$
\log\left(\frac{p_{it}}{1-p_{it}}\right) = \begin{aligned}[t] &\alpha_i + \boldsymbol{\gamma}\mathbf{X} + \\ &\beta_1 \times TIME_{it} + \\ &\beta_2 \times TIME_{it} \times NEWPM_i + \\ &\beta_3 \times TIME_{it} \times MWC_i + \\ &\beta_4 \times TIME_{it} \times NEWPM_i \times MWC_i \end{aligned}
$$

Empirical analysis

Descriptive results on the timing of austerity measures

To test the occurrence of electoral cycles of policy making we analyze the relationship between the time remaining in the legislative term and the introduction of austerity measures. We first show the bivariate relationship between time and the introduction of austerity policy changes in Figure 1, which depicts the average number of policy measures across all cabinets during a given month after an election.

[FIGURE 1 ABOUT HERE]

For each month after the last election, we calculate the mean of the raw number of austerity reform measures over the entire sample. For instance, cabinets introduced on average approximately 0.39 austerity measures 36 months after the last election. We plot the distribution of our main explanatory variable measuring the *percentage of time remaining in the legislative term* against this average number of austerity reform measures by months. The scatterplot reveals that the average number of austerity measures that cabinets introduce increases immediately after an election and then decreases steadily towards the next election. This pattern is in line with the hypothesized cycle for austerity measures, suggesting that the probability that governments introduce such measures decreases with less remaining time in the electoral cycle (H1).

Multivariate results on the timing of austerity measures

We proceed with a multivariate analysis of the relationship between the time that remains until the next scheduled election in a country and the introduction of austerity policy

measures. We present the results from our fixed-effects logistic regression models in Table 3. Models 1 and 2 test Hypothesis 1. We report the exponentiated coefficients (*odds ratios*) of the logistic regression models alongside an approximation of the standard errors of the odds ratios as reported by *Stata*.[13] The exponentiated coefficient should be higher than 1 for Hypothesis 1 to be supported.

Model 1 reveals that an increase in our main explanatory variable (*percentage of time remaining in the legislative term*) increases the probability that governments introduce austerity measures. This means that the less the amount of time that remains in the legislative term, the lower are the chances that governments introduce tax increases or cutbacks in social benefits. We include the squared term of our main explanatory variable (*time remaining in the legislative term*) in Model 2, which allows us to test for potential curvilinearity in this effect (as revealed by the bivariate plot in Figure 1). The higher log-likelihood and the lower AIC of the second model both indicate that the curvilinear model fits the data better than the linear model.

[TABLE 3 ABOUT HERE]

A substantive representation of our results is provided in Figure 2, where we plot the predicted probabilities with 95% confidence intervals of austerity reform measures from the beginning of the legislative term (100 percent of time remaining) to the end of the term (0 percent of time remaining). In line with Hypothesis 1, we find a sharp decrease in the predicted probability of austerity measures towards the end of the electoral cycle. The predicted probability of the introduction of an austerity reform measure decreases approximately by half over the course of the legislative term: from 23 percent at the beginning to 13 percent at the end of the legislative term according to the linear model (left panel), or from 19 to 8 percent following the curvilinear model (right panel). Hence,

governments are clearly more likely to introduce austerity reforms early on during the legislative term.

[FIGURE 2 ABOUT HERE]

The effects of our control variables are in line with common expectations. For example, the economic literature expects that increases in public debt should trigger the introduction of austerity measures to compensate for the debt. A coefficient of approximately 1.05 of the lagged change in public debt in Model 1 indicates that, holding all other factors constant, a one percent increase in the public debt in the previous year increases the odds of an austerity reform by approximately 5 percent (95% CI: 1.015; 1.094). The signs of the estimated coefficients for the other macroeconomic control variables (lower than 1) suggest that governments are less likely to introduce austerity measures when GDP growth rates are high, and when the unemployment rate has increased. However, both coefficients are estimated with large standard errors and should thus be interpreted with caution. Lastly, the control variable for the introduction of reform measures not categorized as austerity measures has a large effect in the models, which indicates that austerity and other measures often occur together and may be used to balance each other. Excluding this control variable does not affect our substantive findings on the strategic timing of austerity measures.

We further investigate under which conditions governments are more likely to time austerity measures opportunistically. We evaluate Hypotheses 2, 3, and 4 in Models 3 to 5 in Table 3, and present predicted probabilities in Figures 3 and 4. Taken separately, a change in the prime minister (Hypothesis 2) and cabinet type (Hypothesis 3) do not have a strong conditional effect on the likelihood that governments time austerity measures early in the electoral cycle. Our analyses reveal that while the interaction between passed time and prime

minister change (Model 3), and between passed time and government type (Model 4) are, as expected, positive, these two-way interactions are not statistically significant.

[FIGURES 3 AND 4 ABOUT HERE]

However, the three-way interaction effect estimated in Model 5 supports our expectation in Hypothesis 4. Figure 4 illustrates the strategic timing of austerity measures according to the electoral cycle accounting for new prime ministers and cabinet type. The change in predicted probabilities shows that the strategic timing of austerity measures is strongest among minimal winning cabinets with a new prime minister, where the slope across the legislative cycle is steepest. As we argue in Hypothesis 4, these cabinets can most credibly shift the responsibility to the preceding cabinet, and are able to act swiftly and introduce austerity measures early on during the term. In line with this argument, we find that the probability of an austerity measure decreases much more towards the end of the electoral cycle among minimal winning cabinets with new prime ministers, compared to minority and oversized coalition governments without changes in the leadership.[14]

Based on the results from Model 5, the predicted probability decreases by 34 percent in the case of minimal winning cabinets with a new prime minister (95% CI: -54.2%, -14.0%; see solid line in the right plot in Figure 4) from the beginning to the end of the legislative term.[15] In contrast, the probability of introducing austerity measures decreases by only 10 percent among minority and oversized cabinets without a new prime minister (95% CI: -23.2%, 2.8%; see dashed line in the left plot in Figure 4). This constitutes a difference of about 24 percent (95% CI: -0.8%; 48.8%) between the changes in predicted probabilities of both scenarios. In other words, while the predicted probability of austerity measures drops towards the end of the legislative cycle among all cabinet types, the multivariate analysis

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indicates that this effect is stronger among minimal winning cabinets with a new prime minister.[16]

To sum up, we find clear support for Hypothesis 4, finding a three-way interaction between passed time, prime minister change, and government type. The fact that our empirical analyses support Hypothesis 4, as opposed to Hypothesis 2 and 3, which test the interactions between passed time and the two cabinet features separately, suggests that governments need to fulfill both conditions to introduce austerity measures early on. It is not sufficient for governments to face a lower bargaining complexity, or to have the opportunity to shift blame – these two features seem to work in tandem for strategic cabinet decision making on austerity reform measures.

Conclusion

The timing of policy making and reforms has long been of interest in the political economy literature. Given the desire of incumbent governments to be re-elected and the recency bias of voters, researchers have suggested that governments strategically time their policy making to increase their electoral support in the run-up to elections. We contribute to the literature by applying the general logic of electoral cycles to the legislative realm, where we investigate the strategic timing of governmental austerity reform measures using an unprecedented time-series cross-sectional dataset on substantive taxation and social reform measures introduced via laws and government decrees in 13 Western European countries over a period of 20 years.

In contrast to the vast majority of previous work, which studies economic indicators to evaluate arguments about electoral cycles, we test actions of political opportunism by focusing on reform measures, which are in direct control of the government. Instead of taking the mere number of all legislative acts, we take into account their content and concentrate on important reform measures, which are more visible to voters. Furthermore, the focus on

individual austerity reform measures as the unit of analysis rather than laws, which can include one or a package of many reform measures, ensures the comparability across cases.

Our empirical results support the idea that political parties strategically time austerity reforms early on to maximize their electoral support. They have incentives to do so because of the voters' recency bias, as well as to shift responsibility for costly measures to previous governments, which they can credibly do when there is a leadership change in the government. However, only certain types of governments have the ability to act swiftly and use the short window of opportunity to introduce costly measures early on. We find support for the 'ability' and the 'responsibility shifting' arguments, showing that the likelihood that governments introduce austerity measures earlier in the electoral cycle is higher for minimal winning governments with a new prime minister.

These findings make a direct contribution to the literature on political electoral cycles and have important implications for our understanding of how governments in representative democracies structure their reform agenda and policy choices. Our findings highlight the importance of governments' ability and opportunity to strategically time policy decisions, and provide valuable insights for scholars interested in the role of government types and leadership change in policy making and governmental policy agendas.

These findings also have direct implications for voting behavior. Knowledge about which governments strategically time austerity measures should provide voters with a better understanding of when to predominantly rely on recent policy events and when to consider the whole legislative term in their economic voting decisions. In particular, our findings imply that taking into account only the recent policy output of the government at the wake of elections might be misleading, especially for governments with higher ability to act swiftly and opportunity to shift responsibility to the previous government.

Our research sheds new light on the reform-making behavior of parties, opening up various avenues for future research. We have focused specifically on the dynamics and

strategic timing of *austerity* reform measures, which impose direct monetary costs on voters. According to the political business and budget cycle literatures, in order to increase their electoral chances, governments should not only try to avoid negative signals, but also to send positive signals and directly benefit voters' in the run-up to elections. Following this theoretical expectation, we hope that our work will encourage future research to focus also on the strategic timing of expansionary reforms that directly increase the monetary benefits for voters (e.g. increases in social benefits), as well as the balance between austerity and expansionary measures.

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Figures and Tables

Figure 1. The average number of austerity reform measures by the *percentage of time remaining in the legislative term* across all cabinets in the sample.
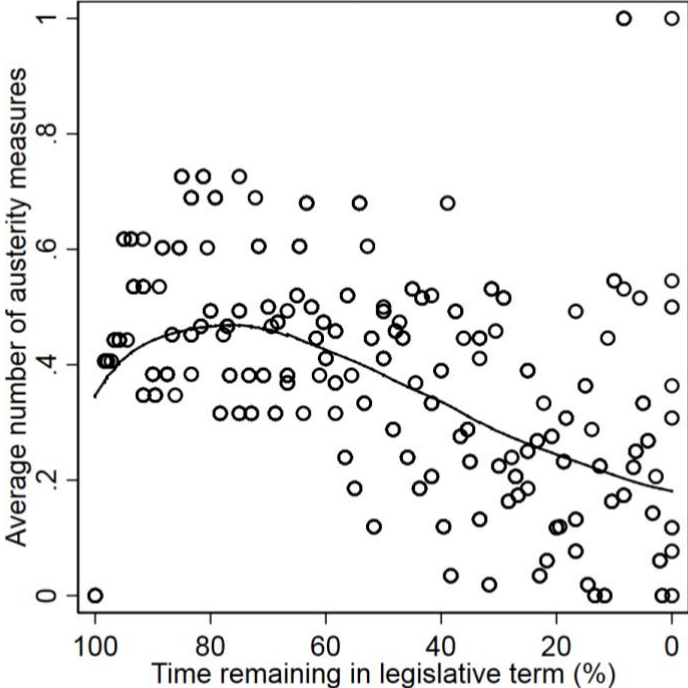

Note: Line represents the Lowess fitted curve; each dot indicates the mean number of austerity reform measures at a given time across all cabinets in the analysis.

Figure 2. Effect of the *percentage of time remaining in the legislative term* on the probability of introducing austerity measures.
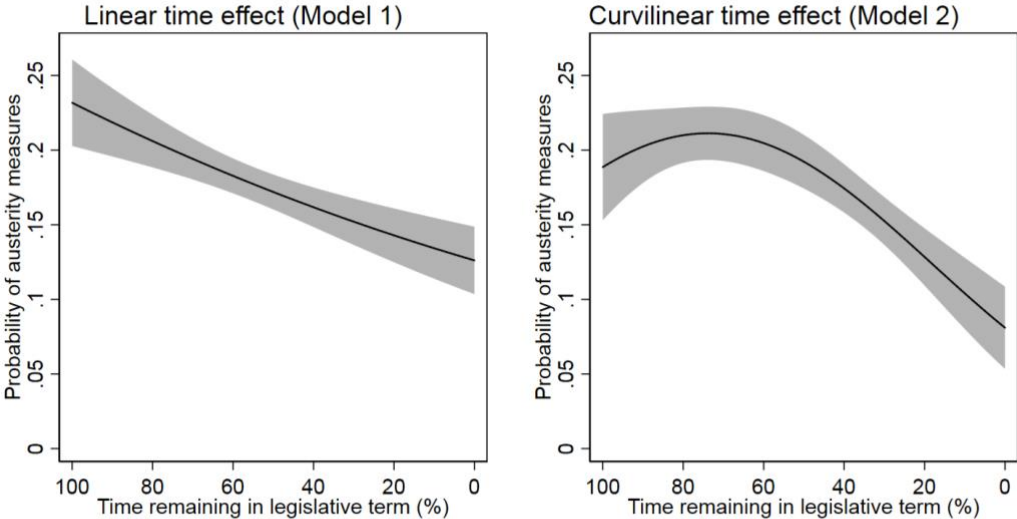
Note: Predicted probabilities with 95%-confidence intervals obtained by holding other variables at their observed values using the *margins* command in *Stata 15.0*.

Figure 3. Conditional effect of electoral cycles by cabinets with new prime ministers and government type (Models 3 and 4).
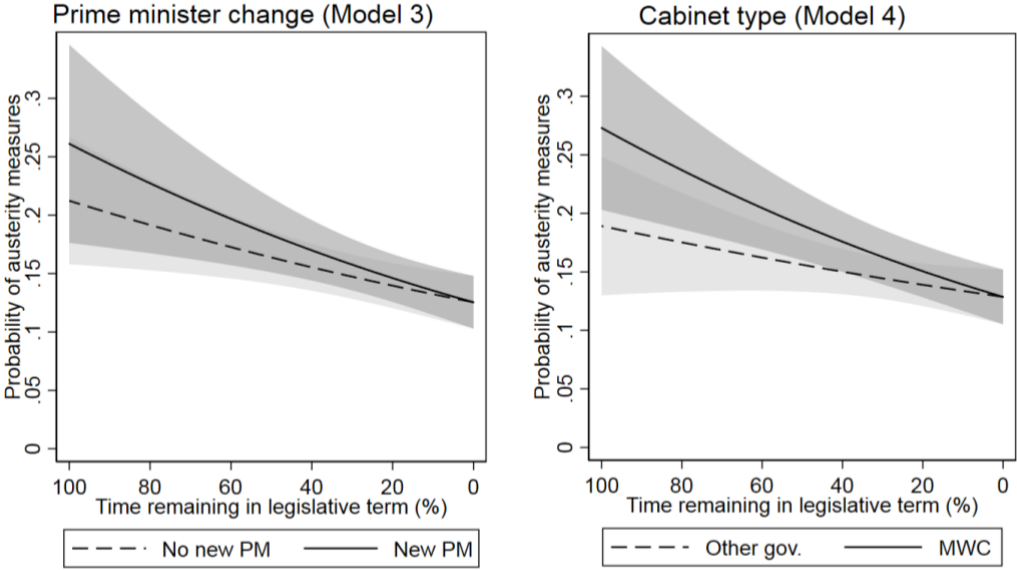
Note: Predicted probabilities with 95%-confidence intervals obtained by holding other variables at their observed values using the *margins* command in *Stata 15.0*.

Figure 4. Three-way conditional effect of electoral cycles by cabinets with a new prime minister and government type (Model 5).
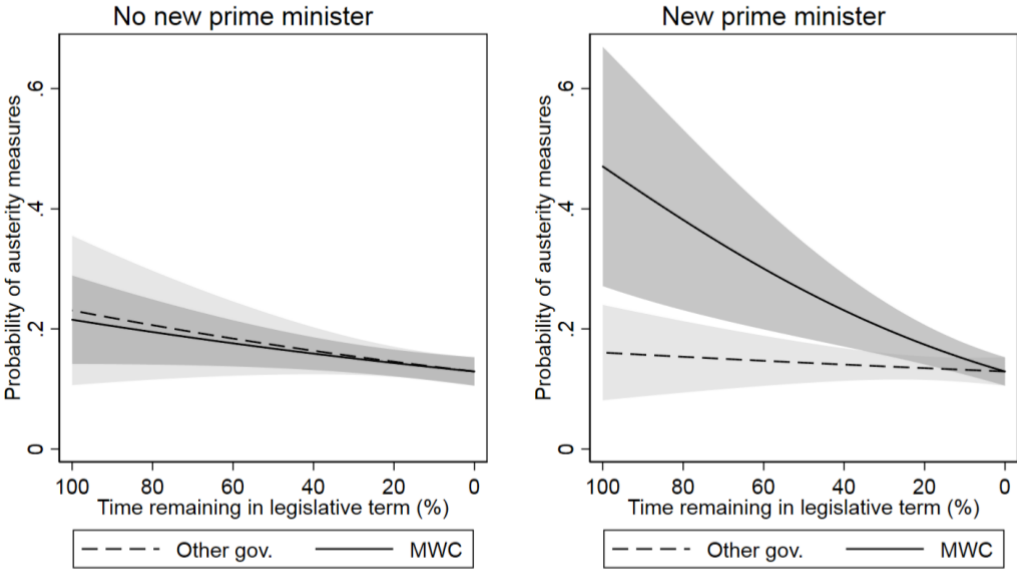

Note: Predicted probabilities with 95%-confidence intervals obtained by holding other variables at their observed values using the *margins* command in Stata 15.0.

Table 1. Classification of policy measures as austerity reform measures

Social policy	Taxation policy
o Insured's fees/contributions up	o Increase of tax rate
o Employer contributions up	o Creation of taxes
o State expenditure down	o Tax allowances: overall effect decrease
o Benefits/services down	
o Reduce beneficiaries / tighten eligibility criteria	
o Limit benefit growth	
$n = 496$	$n = 756$

Note: Observations refer to the number of individual measures that were coded from the country reports.

Table 2. Descriptive statistics

	Mean	*SD*	*Min.*	*Median*	*Max.*
Monthly variables (countries * months; *n*=3,296)					
Austerity reform measures (0/1)	0.18	0.38	0.00	0.00	1.00
Percentage of time remaining in the legislative term	55.21	27.15	0.00	55.67	100.00
Sum of other reform measures	0.63	1.57	0.00	0.00	19.00
Months since the last austerity measure	4.02	4.53	0.00	3.00	30.00
Yearly variables (countries * years; *n*=286)					
ΔUnemployment rate (yearly lag)	-0.06	1.01	-2.80	-0.10	5.10
ΔGDP growth (yearly lag)	2.77	2.13	-5.91	2.69	11.27
ΔDebt (yearly lag)	0.16	4.63	-15.35	0.07	19.35
Cabinet level variables (*n*=89)					
Crisis at cabinet formation (0/1)	0.19	0.40	0.00	0.00	1.00
New prime minister (0/1)	0.44	0.50	0.00	0.00	1.00
Minimal winning cabinet (0/1)	0.53	0.50	0.00	0.00	1.00

Note: Descriptive statistics for all variables are reported based on the final dataset used in the regression analyses (countries * months; *n* = 3,296).

Table 3. Regression estimates for the introduction of austerity reform measures.

	Model 1 Linear	Model 2 Curvi-linear	Model 3 New PM	Model 4 Cabinet type	Model 5 New PM * Cab. type
Time remaining in legislative term (%)	1.009*** (0.002)	1.040*** (0.010)	1.007* (0.003)	1.005 (0.004)	1.008 (0.005)
Time remaining in legislative term (squared)		0.99973** (0.00009)			
Time remaining in leg. term * New prime minister (*New PM*)			1.004 (0.005)		0.994 (0.007)
Time remaining in leg. term * Minimal winning cabinet (*MWC*)				1.006 (0.005)	0.999 (0.006)
Time remaining in leg. term * New PM * MWC					1.022* (0.010)
Control variables					
Time remaining in leg. term * Crisis at cabinet formation	1.006 (0.006)	1.007 (0.006)	1.005 (0.006)	1.006 (0.006)	1.006 (0.006)
ΔUnemployment rate (yearly lag)	0.901 (0.093)	0.900 (0.095)	0.900 (0.093)	0.887 (0.093)	0.881 (0.092)
ΔGDP growth (yearly lag)	0.972 (0.054)	0.952 (0.054)	0.973 (0.055)	0.962 (0.054)	0.955 (0.054)
ΔDebt (yearly lag)	1.054** (0.020)	1.052** (0.020)	1.055** (0.020)	1.054** (0.020)	1.052** (0.020)
Sum of other reform measures	2.021*** (0.080)	2.017*** (0.080)	2.023*** (0.081)	2.022*** (0.080)	2.027*** (0.081)
Constant	0.059*** (0.039)	0.037*** (0.026)	0.051*** (0.035)	0.077*** (0.053)	0.091*** (0.065)
Observations	3296	3296	3296	3296	3296
Log likelihood	-1208	-1203	-1208	-1207	-1204
AIC	2613	2604	2614	2613	2610

Note: Exponentiated coefficients from logistic regression analyses estimated in *Stata 15* with unconditional fixed-effects at the cabinet level; approximations for standard errors of the odds-ratios in parentheses (* $p <$ 0.05, ** $p <$ 0.01, *** $p <$ 0.001). The dependent variables indicate whether the government introduced an austerity measure during a given month or not (0/1). All models include a variable measuring the months since the last austerity measure, along with a squared and cubed transformation to account for temporal dependence following Carter and Signorino (2010; see methodology section for details) and dummy variables at the cabinet level (not reported).

[1]Another reason for the weak findings might be that instead of engaging in costly, hard to achieve, and often distortionary macroeconomic manipulations, some governments can choose the timing of elections and call for early elections when the economy is beneficial for their electoral prospects (see e.g. Ito and Park 1988; Kayser 2005; Heckelman and Berument 1998). In support of this suggestion, pre-electoral economic manipulations seem to be weak in countries that permit early elections (see e.g. Ito 1990).

[2] Besides a strong focus on fiscal policy, the political budget cycles literature has also devoted much attention to the role of elections for monetary policy decisions and outcomes (see e.g. Hallerberg et al. 2002; Clark 2002; Clark and Hallerberg 2000).

[3] Literature from various fields, such as political economy (Fair 1978; Alesina et al. 1993; Healy and Lenz 2014), research on electoral campaigns (Hill et al. 2013), and psychology (e.g., Schacter 1996), provides strong empirical support for the recency bias and the short memory of voters. Alesina et al. (1993), for example, report that the effect of current growth shocks on election results is two times stronger than the effect of lagged growth shocks. Fair (1978) finds considerably weaker economic voting for time frames exceeding one year prior to elections.

[4] Such responsibility shifts, or 'scapegoating' is one of the blame avoidance strategies identified by Weaver (1986).

[5] In more general terms, new leaders from the same party can reverse key policy decisions of their predecessors exactly to distinguish party from leader accountability (e.g. John Major's scrapping of Margaret Thatcher's poll tax) or visibly change course (such as the new generation of more market-oriented Social Democratic leaders taking over in the 1990s; Maravall 1997), without being held accountable for their predecessor's policies.

[6] The coding of reform measures using economic country reports, as any other data generating process, is associated with potential measurement error and the reports may miss some austerity measures that were introduced by governments. Due to the reports' stated policy of delivering comprehensive reporting on the most salient issues in a given country, we believe that this will primarily affect minor policy changes. As such, potentially missing austerity measures should have a marginal impact on voters and on the reputation of government parties.

[7] The variation in the availability of dates at various stages of the legislative process poses a potential issue for the validity of our empirical analyses. We provide robustness checks with a discussion in the Appendix (see Table A7 and Figure A1).

[8] We run robustness tests for all our models where we instead calculate the *percentage of time remaining until the next actual election* as our main explanatory variable. We find substantively similar results and present these in Table A8 and Figure A2 in the Appendix.

[9] We find slightly stronger effects when we exclude the election months (when parties are busy forming the government) from the analyses.

[10] We replicate the analyses from Model 3 and Model 5 with a government type variable consisting of three categories: minority, minimal winning and oversized. We report the regression results in Table A4 (see Model A11 and Model A12) and substantive effects (predicted probabilities) for each cabinet type in Table A5 in the Appendix.

[11] We run robustness checks with other factors which can influence the policy making process and can capture government's ability to make policies in the Appendix. We consider the following factors – single vs. multiparty governments, minority vs. majority status of governments, checks and balances, number of government parties, and left–right range in the government – as controls to government type and in separate models (see Table A2 and Table A3). The effect of government type holds when we include these measures as controls (see Models A1–A5). Our separate models, which replicate Model 5 using the above factors instead of government type (see Models A6–A10), reveal that most of these factors have an effect in the expected direction. However, none of the three-way interactions are statistically significant (for more information see the substantive results reported in Table A5 and our discussion in the Appendix).

[12] We replicate our main analyses using the conditional logit specification, which produces substantively identical results (see Table A6 in the Appendix).

[13] These approximated standard errors are calculated using the standard errors of the untransformed coefficients b as $SE_{OR} = OR * SE_b$. The 95% confidence intervals of the odds ratios can be calculated using the untransformed coefficients as $CI_{OR} = \exp(b \pm 1.96 * SE_b)$.

[14] As a change in the prime minister can be accompanied by an ideological shift in the government composition, the conditional effect of leadership changes could be partially explained by preference shifts, rather than blame-avoidance strategies. For instance, a shift from a left-wing to a right-wing government could lead to an increase in early austerity measures. To test the robustness of our findings, we run additional analyses where we examine the effect of the ideological position of the government on the probability of introducing austerity measures early in the legislative period (see Table A9 and Figure A4 in the Appendix). We find that governments which are more to the right than previous cabinets are indeed more likely to introduce austerity measures early in the legislative term, compared to governments which are ideologically more to the left. However, our findings on leadership change are robust to the inclusion of this variable. We provide a more detailed discussion of these findings in the Appendix.

[15] The predicted probability of introducing an austerity measure at the end of the legislative term (zero percent of time remaining) is the same irrespective of the value of the two dummy variables (*MWC* and *New PM*), since the estimated models include cabinet fixed effects. All variables that vary only on the cabinet level (e.g. *MWC* and *New PM*) enter the analyses *only* through the interaction between them and our TIME variable (percentage of time remaining the legislative term) and are otherwise dropped from the analysis.

[16] We rerun Model 5 with a more restrictive alternative measure for change in governmental leadership, where we consider changes in the prime minister *party*. We find substantively identical results, with similar effect sizes significant at the 0.1 significance level. Given the essentially identical effect sizes we believe that the slightly larger confidence intervals are due to the lower variance in the PM party change variable. The results and replication files for this analysis are available upon request from the authors.