

The Streets Speak: Unravelling the Impact of Austerity on Public Protests during the the Great Recession

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Abstract

This paper examines the impact of austerity policy announcements on protest mobilisation in 16 European countries during the Great Recession. It argues that austerity policies politicised grievances and enabled blame attribution, while institutional constraints and protest fatigue dampened reactions to later policies. Using monthly protest event data and systematically coded austerity policy announcements, the study utilises an interrupted time series design to analyse austerity announcements as shocks to protest levels. The findings indicate that earlier austerity announcements significantly increased economic protest levels, while later announcements had no effect or even decreased protest. Furthermore, the impact of austerity on protest was conditioned by economic and political contexts. Austerity had a larger effect when accompanied by rising unemployment, worsening household finances, external actor involvement, and higher prior protest levels. The study contributes to understanding varied public reactions to austerity and the dynamics between economic crisis, government policies, and contentious politics.

Keywords: austerity, fiscal consolidation, protest politics, intervention analysis, economic crisis

1 Introduction

In September 2008, Lehman Brothers filed bankruptcy in New York which unleashed what has come to be regarded as the most profound economic crisis of our time. The crisis started in the financial sector at the beginning and then crippled national economies across continents, which led to a sharp decline in economic activity, commonly known as the Great Recession. While some European countries have suffered substantial economic loss, such as Italy, Spain and Greece in Southern Europe, others, such as Germany, have been fortunate enough to evade some of the damaging repercussions. All governments firstly tried to counter the economic impact of the economic crisis with stimulus programmes. However, once the debt crisis kicked in in the aftermath of the Great Recession, European countries turned to strict austerity policies, as advised by the so-called ‘Troika’, i.e. the European Commission, the European Central Bank, and the International Monetary Fund, aiming halt and reverse the soaring levels of budget deficit. This kind of response became ‘the only game in town’ for national governments in Europe, leaving them in a difficult position between meeting the external requirements and dealing with citizens suffering distressing consolidation reforms.

So how have European citizens reacted politically both to the economic crisis and the policies adopted by their governments? One obvious institutionalised option is to change voting behaviour by punishing incumbents who are deemed as being responsible for the poor economic condition or at least seen as not being able to effectively parry the negative consequences of the crisis (e.g. [Bremer, Hutter, & Kriesi, 2020](#); [Hernández & Kriesi, 2016](#)). Beyond the electoral arena, hundreds of thousands of European citizens went into the streets, e.g. the well-known Indignados and Occupy movements, and voiced their discontent in the form of popular contention in the aftermath of the financial crisis (e.g. [Ancelevici, 2011](#); [Beissinger & Sasse, 2014](#); [Diani & Kousis, 2014](#); [Kriesi, Lorenzini, Wüest, & Häusermann, 2020](#)).

One important question remaining to be answered is whether people resorted to political reactions, as a direct consequence of the economic crisis and resulting economic hardship or in response to governmental policies. [Bermeo and Bartels \(2014, p.4\)](#) hypoth-

aised: “dramatic political reactions to the Great Recession were associated less with the direct economic repercussions of the crisis than with government initiatives to cope with those repercussions”. In other words, it is less likely that waning growth or heightening unemployment, i.e. economic crisis itself, led to radical political reactions, but it is rather austerity policies governments adopted in response to the crisis that induced citizens’ political responses. Recent research has shown, against the literature on the fiscally conservative voter, austerity policies actually brought about electoral punishment against the incumbents during the Great Recession (Bojar, Bremer, Kriesi, & Wang, 2021). For the protest arena, Beissinger and Sasse (2014), for example, have demonstrated that protest against austerity measures (cuts in pay, benefits, or services) dominated protest agendas in 2009 and 2010 in post-communist countries. Other case studies have also shown that cuts in public spending have caused protests in other European countries (e.g. Karamichas, 2009; Kriesi, 2014; Morell, 2012; Taylor-Gooby, 2013). However, there has not been a study which systematically analyses the impact of the implementation of austerity policies on protest across the European continent. Did the implementation of austerity policies indeed lead to massive protests?

Moreover, contention and mobilisations in the streets are by far the most noticeable expression of discontent concerning the economic crisis and governments’ policies handling it. However, while some countries witnessed massive mobilisation at certain time points, others experienced less dramatic responses. This considerable variation across time and countries has raised questions about the actual impact of austerity policies on protest. In some countries, “popular reactions to the Great Recession were surprisingly muted and moderate” as Bermeo and Bartels (2014, p.3) observed. All these observations suggest that austerity alone cannot explain the varying intensity and dynamics of protest movements and other factors have conditioned the political impact of austerity policies. So another question left to be answered is under what conditions the ‘combustible potential’ (Achen & Bartels, 2005; Bermeo & Bartels, 2014) of austerity policies was realised?

This study directly inquires into the relations between the austerity policies and

protest by analysing the effect of announcements of austerity policies on the level of public economic protest during the Great Recession. To do so, I compiled a new data-set which consists of the monthly series of protest level from 2000 to 2015 in sixteen European countries and methodically coded austerity policy announcements in the sixteen countries throughout the Great Recession. This approach using high-frequency data allows me to evaluate the immediate impact of austerity policies on the protest level by treating austerity policy announcements as shocks to the protest series, which is less likely to be ‘contaminated’ by other events in the same period compared with using yearly spending cuts and yearly protest level.

The principal empirical findings of this study are threefold. First, I expect that on average austerity policies do drive people to the street to voice their discontent. However, I expect the impact of austerity announcements on protest to decrease according to the sequence of announcements, i.e. people reacted more vehemently to earlier austerity policies while had gradually become disillusioned and no longer mobilised against later ones. The results reveal a significant and substantively large positive effect of austerity policy announcements on the level of public economic protest. The effect is indeed getting smaller for the second policy announcement and even becomes negative for later ones. Notably, the effect fades quickly over time, indicating this effect on protest level is fleeting. Additionally, I expect the impact of each austerity policy in a sequence to differ as per the economic and political context. In other words, I expect several economic and political context conditions condition the size of the effect: it is substantially large when accompanied with rising objective and subjective economic grievances, the involvement of external actors, and a higher level of the previous mobilisation.

The paper proceeds as follows. In the first part, I review the literature and outline the relevant theoretical considerations about the impact of austerity policies on protest level. Five context conditions are expected to shape the extent to which these austerity policies influence protest level. In the next section, I present the data, operationalisation and empirical strategy based on the pooled time series analysis. I then move to discuss the main results. In the conclusion, I discuss the implications of the results concerning

the literature and broader theoretical developments.

2 Theoretical considerations: austerity and protest

A well-established question in political sociology is the extent to which the consequences of economic crises lead to the rise of collective actions and protest. One possible scenario is that people might withdraw from politics and civic engagement due to the economic privation brought by crises. Citizens are primarily preoccupied with tackling the difficulties brought by economic hardship and making ends meet, therefore having less time and enthusiasm to be politically engaged. Furthermore, economic difficulties might reduce not only the feeling of internal and external efficacy but potential political attitudes, like interest in politics as well. This lack of efficacy and interest, in turn, dampens their enthusiasm for political participation (Norris, Walgrave, & Van Aelst, 2005). Lastly, economic privation might also render people socially isolated and alienated, stripping them of essential social networks and subsequently preventing people from sharing information and forming solidarity, which decreases the possibility of engaging mass collective actions.

Nevertheless, while hardship induced by economic crises may potentially decrease political actions, it may also be the case that harsh economic situations foster grievances in people which might drive them to engage political actions, and, most likely, protest (Kriesi, Wang, Kurer, & Häusermann, 2020; Van Stekelenburg & Klandermans, 2013). Hence, contrary to the alienation argument, it is equally likely that economic crises may provide a platform for political mobilisation where people can voice their discontent and rage towards the perceived unfair distribution of economic hardship, i.e. not all segments of society bear the costs of economic crisis equally.

When analysing the impact of the economic crisis on collective actions we need to recall Bermeo and Bartels's (2014) conjecture mentioned earlier, that it is not the economic crisis per se which triggered protests. However, it is the austerity policies implemented by national governments that encouraged protests. In this respect, existing literature has demonstrated the policy variations help explain the rise of protests in Latin American

countries (Machado, Scartascini, & Tommasi, 2011). Beissinger and Sasse (2014), when analysing protest in post-communist countries, have demonstrated that protest against austerity measures (cuts in pay, benefits, or services) dominated protest agendas in 2009 and 2010. Other studies on single countries have also shown that cuts in public spending have caused protests in other European countries (Karamichas, 2009; Kriesi, 2014; Morell, 2012; Taylor-Gooby, 2013).

So why are austerity policies expected to trigger protest? Austerity essentially means tax hikes, drastic cuts in expenditure, most prominently expenditure in the social sector. Predictably, the consequence of these measures has been experienced most directly by the most disadvantaged sectors of society, as cuts in government expenditure, for example, tend to hurt the most underprivileged sectors disproportionately considering these sectors depend on social help more. To make it worse, in the current economic crisis, even the middle class has borne the brunt of the negative consequences of the crisis and austerity. This encompassing impact, in turn, has contributed to the ‘combustible potential’ of the Great Recession in many European countries. In the first place, an economic crisis is already reflecting dwindling economic performance, and hence it can trigger general economic pessimism among citizens who might resort to protest. Also, people may prospectively anticipate the negative consequences brought by austerity measures which will further aggravate the economy. Harsh austerity results in cuts in public sector wages, frequent layoffs, and the general living standard will also drop as the government reduces subsidies in other areas. All these hardships lead to grievances which can potentially trigger protest (Galais & Lorenzini, 2017).

Additionally, the implementation of austerity plans makes the attribution of blame much easier for citizens. Since austerity packages are usually under heated debate in legislatures and also in the media, this salience is much more likely to drive up mobilisation than governments simply releasing statistics on GDP growth or unemployment rate. Issue salience gives rise to politicisation, and political challengers, either parties or social movement organisations, might grab the opportunity to mobilise the discontented citizens and to encourage protest against incumbents. Admittedly, sometimes policy-makers

might be able to escape blame or punishment for bad economic performance if citizens attribute economic suffering to international factors beyond domestic politics ([Alcañiz & Hellwig, 2011](#)). However, the more apparent connection between austerity policies and the government who implemented them, the more likely the government's response to the economic crisis sparks popular discontent.

Another reason why austerity leads to protest could be the absence of immediately available options in the institutionalised arenas. When elections are not near, dissatisfied groups of citizens are likely to take actions in the protest arena, aiming to force political concessions from policy-makers. [Ponticelli and Voth \(2020\)](#) using data going back to the pre-war period, show that political unrest increases systematically during recessions and fiscal retrenchments. [Francisco \(2006\)](#) documents the issue that precipitated social unrest episode for 28 European countries in 1980-1995, showing that social unrest is associated with fiscal retrenchments. These associations indicate that the threat of unrest in the streets could be an equally important source of political influence; particularly, they can illuminate the puzzle emphasised by [Alesina, Carloni, and Lecce \(2012\)](#) who argues that doing austerity is not electorally risky for incumbents. Governments' reluctance to resort to austerity measures may be due not only to the loss of votes but also to the pressure from the streets, as voting is not the only channel for political expression. So is protest. Extending the conflict from the institutional electoral arena to the social movement arena potentially raises issue salience to a greater extent. As shown in an analysis of austerity's impact on government popularity ([Bojar et al., 2021](#)), protest serves as the 'signal', which raises the political costs of austerity policies.

Taken together, this suggests that once the government announces austerity programmes, there is a high probability people will go protesting in the streets. Austerity, either spending cuts or tax hikes or both, put the burden of fiscal adjustment on multiple groups of the population. Governments justify austerity policies by arguing the necessity of budget deficits and government debt reduction, but it is highly likely that these fiscal targets are not a priority for citizens. Furthermore, austerity and structural reforms of welfare regimes and labour markets usually go together, which induces addi-

tional economic pressure for a large fraction of the population. Therefore, I hypothesise that announcements of austerity policies do give rise to protest (the baseline austerity hypothesis).

However, austerity packages do not always trigger radical reactions. While some countries witnessed massive mobilisation at certain time points, others experienced less dramatic responses. This considerable variation across time and countries have raised questions about the actual impact of austerity policies on protest. In some countries, “popular reactions to the Great Recession were surprisingly muted and moderate” as [Bermeo and Bartels \(2014, p.4\)](#) observed. All these observations suggest that austerity alone cannot explain the varying intensity and dynamics of protest movements and its effect on protest level may be conditional. In particular, I call attention to several political and economic contextual factors that could moderate the social movement response to austerity policies.

First, the sequence of announcements could play a role in conditioning the impact. Each country during the crisis has witnessed a series of austerity announcements. For the analysis of austerity and vote intention, it is plausible that each austerity announcement equally hurt incumbents’ popularity, as it does not cost any energy or resources to voice disapproval in surveys. This is indeed the case, as shown by [Bojar et al. \(2021\)](#)’s analysis. However, for the protest arena, the story will be different, as it requires extra efforts to organise and participate in protests. As time goes by, people may no longer react to later austerity announcements the same way as they react to the earlier ones. Their enthusiasm may be dampened, and they become disillusioned, partly because they realise, based on their earlier protest experience, that it will probably be futile to protest against austerity anymore, as it is already the only game in town and the government may have no alternatives. Mobilisation depends most significantly on whether people believe that continuing protest will pay off. As argued by [Kriesi \(2014\)](#), using Ireland as an example, “eventually, protest may subside...because the discontented population...loses faith in the effectiveness of protest or because it is forced to acknowledge the constraints” imposed on government. Therefore, I expect that announcements of austerity policies at a later

stage have a smaller impact on protest level than earlier ones. (the sequence hypothesis)

However, the momentum of protest could be maintained or even enlarged if there is innovation taking place. [Rochon \(1990\)](#) argued that for a successful movement, three factors matter, i.e. the number of participants, innovation or originality and militance or violence. These three factors correspond to the three basic strategies of social movements, namely demonstrative protest aims at large numbers, confrontative protest aims at surprise effects (innovation), and violent protest aims at militancy ([Tarrow, 2011](#)). Therefore, austerity announcement at a later stage might have a more significant impact if a new form of protest emerged, i.e. innovation. However, if even innovation did not help, people will no longer mobilise against later austerity packages.

The case of Greece illustrates how the sequence argument and the sense of futility come into play. When the first two packages were introduced, the level of contention was extremely high. The first wave of anti-austerity mobilisation in Greece was a direct reaction to the first bailout and the introduction of austerity measures in 2010 ([Psimitis, 2011](#)). Protesters from all walks of life took to the streets. The second episode, the mid-term adjustment, witnessed the emergence of new challengers, Aganaktismeni, who initiated a new protest form, focusing on the occupation of public spaces. This innovation tremendously expanded the foundation of the grassroots mobilisation to non-political elites. Despite the innovation, austerity policies stayed unchanged. In stark contrast to previous policy announcements, the episode of the third bailout is by and large non-contentious. Under the new agreement with the IMF and the European Union, the third bailout package was accepted by the Syriza government in less than a week following the referendum, which had been supported by the very same government who had obtained a majority of the votes against the bailout. Contention ended because, among other things, the institutionalisation of anti-bailout claims by Syriza in parliament and frustration and exhaustion contributed to demobilisation ([Altiparmakis, 2019](#)).

Second, existing literature shows that the effect of austerity policies on vote intentions for the government depends on the pre-existing level of economic grievances ([Bojar et al., 2021](#)) . Similarly, I expect resistance against austerity policies in the protest arena

is likely to depend on the accompanying objective economic grievance. In particular, unemployment has been the most important variable used by the economic voting literature. Increases in unemployment are profoundly salient and indicate worsening economic conditions and rising economic uncertainty. Under the situation of rising unemployment, a growing share of citizens become heavily reliant on government expenditure, further exacerbating the negative effect of fiscal retrenchment or structural reforms on people's economic and financial uncertainty. Hence, I hypothesise the effect of austerity announcements on protest level is greater when the unemployment rate is increasing. Considering the hypothesis of sequential impact above, I expect that the conditioning effect of the unemployment rate on protest mobilisation exists for the early austerity announcements. (the objective grievance hypothesis)

Third, similar to the objective economic context, subjective pocketbook concern could also play a role. Recent work on pocketbook voting has demonstrated that changes in personal or household financial conditions can influence voting behaviour in certain contexts. Voters react to specific government policies that may impact their livelihoods and household balance sheets, e.g. active labour market policies, family benefits, housing benefits and other forms of targeted government policies, and consequently alter their political preferences (see e.g. [Bechtel & Hainmueller, 2011](#); [Elinder, Jordahl, & Poutvaara, 2015](#); [Healy, Malhotra, et al., 2010](#); [Levitt & Snyder, 1997](#); [Margalit, 2011](#); [Zucco, 2013](#)). A similar mechanism may exist in the protest arena as well. Therefore, I hypothesise that the effect of austerity announcements on protest level is greater when the average household financial situation is getting worse. Similarly, I expect the conditioning effect of the household financial situation only to exist for the early austerity announcements. (the subjective grievance hypothesis).

Fourth, the most dramatic decisions on austerity occur when the government cannot save the economy by itself and has to call in international help (by the IMF or the 'Troika'), which is only provided under strict conditionality. A body of literature on responsibility and accountability examines how external constraints influence blame attribution. The multilevel governance context of the EU and the Eurozone allows national

policy-makers to turn away the blame for poor economic performance and certain policy choices to supranational institutions and foreign governments (Fernández-Albertos, Kuo, & Balcells, 2013; Hellwig & Coffey, 2011). During the debt crisis, the intervention of the IMF and the ‘Troika’ provided opportunities for some national governments to deflect the blame to external authorities. For example, Magalhães (2014) noted that whether the national governments experience electoral punishment is contingent upon the extent to which voters can ascribe blame to the incumbents. Genovese, Schneider, and Wassmann (2016) argued that the ECB was able to assuage dissatisfaction and political contention at the national level successfully. However, what is equally plausible is that instead of shifting blame away from the national government, international intervention directs public attention on the poor fiscal condition resulting from past failed policy choices by government. For example, existing research shows that IMF intervention triggered protest in central and eastern Europe and southern Europe during the Great Recession (Altiparmakis & Lorenzini, 2018; Beissinger & Sasse, 2014). When national governments have to ask for external help which only comes with stringent conditionality, their incompetence in managing the economy becomes much more apparent to citizens. This is consistent with other studies which show externally imposed austerity episodes result in an instant loss of government support (Bojar et al., 2021). Additionally, citizens are dissatisfied with the decision-making process if external actors are involved. Research shows that citizens are critical of supranational decisions that tie the hands of their governments; one example is bailout agreements that drove people to the streets during the economic crisis (Altiparmakis & Lorenzini, 2020). Citizens expect their elected representatives to defend their interests at both the national and supranational level. However, during the economic crisis, some national democracies failed to offer alternatives as super-national actors have constrained the choices available to democratically elected governments (Alonso, 2014). Hence, citizens not only hate austerity policies but also they hate how the policies are made. External involvement is likely to induce political dissatisfaction, which in turn aggravates the political impact of austerity. In this respect, I expect austerity policies

with external interventions to have a much bigger impact on the protest level¹. Again, the conditioning effect only exists for earlier announcements. Even with external involvement, later austerity policies are expected to have no or smaller impact on protest level, as illustrated by the Greek case. (the external involvement hypothesis)

Lastly, the impact of austerity on protest could be path-dependent. The impact of austerity on protest is likely to be larger when the previous level of protest was already high. Once the infrastructure for mobilisation is in place, it is easier to organise the subsequent protest. This is in line with resource mobilisation theory. People socialised into a specific form of protest are more likely to engage in similar behaviour in the future, though the likelihood of remobilisation is also affected by other factors, such as biographical availability and social networks. [Rüdig and Karyotis \(2013, 2014\)](#), when analysing protest waves in Greece, showed that there was a high share of the population with experience of protest even before the first bailout took place. Hence, there was an extensive reservoir of people who could be re-mobilised in the anti-austerity movement of 2010 and subsequently. According to their survey fielded in December 2010, 23% of the Greek adult population declared to have engaged in protests earlier in the year. The later survey showed that, during 2011, the portion of people declaring to have participated in a protest event rose to 36%, which means a large part of the Greek protest sector was already mobilised prior to another set of protest events. In this respect, I expect the impact of austerity on protest could be path-dependent, i.e. the effect is larger when the previous level of protest was already high. Same as other conditional hypotheses above, the conditioning effect is expected to only exist for earlier austerity policies. (the path-dependent hypothesis)

¹Some might argue that the conditioning role of the involvement of external creditors is driven by the depth of the underlying crisis (necessitating international bailouts in the first place) or the severity of the austerity package. While this is a perfectly valid concern, the results in the result section show that this is not the case. First, all models control for underlying economic conditions so the depth of the crisis in a strictly macroeconomic sense is already controlled for by the models. Second, severity is a multi-dimensional concept, and external involvement does not necessarily entail more severe austerity, even though externally imposed packages tend to aim for more stringent fiscal targets. The result in Online Appendix A5.3 shows the large size and significance of the interaction terms of IMF dummy and austerity survive even when measure severity is introduced in the model, suggesting that external creditor's involvement have an independent effect above and beyond the depth of the crisis and package severity. Moreover, no evidence is found for that more severe austerity packages having larger impact on protest.

3 Data and Methods

To analyse the effect of austerity policies on protest in the streets, I utilise a newly composed data-set on protest events which covers 30 European countries from 2000 to 2015 (Kriesi, Wüest, et al., 2020). Regarding the main analysis part in this study, I focus on 16 countries due to restraints posed by the major independent variable. These countries were chosen to guarantee adequate variation in their geographical, political and economic position within. Hence, I include countries in North-western Europe, namely Ireland, UK, Germany, France, Austria, the Netherlands, Denmark and Finland, countries in the South, i.e. Portugal, Spain, Italy and Greece, and Eastern-European countries, Latvia, Poland, Hungary and Romania. These countries are different from each other with respect to their situation of economic development, the size of their external deficit, their international creditor and debtor status, their institutional set-up and probably most importantly, how badly they were hit by the economic crisis.

The main outcome variable, level of public economic protest, is the count for each month of all protests events classified as protests concerning public economic issues then weighted by the average article count in the international press for a given country as well as logged population sizes to alleviate reporting bias towards big countries.² The main advantage of high frequency monthly data - as opposed to yearly aggregation - is that it allows for tracking immediate political impact of austerity announcements that may get confounded by other events happened during that year if we focus on yearly aggregation.

To measure the impact of policy events, a clear definition of the events themselves is needed. The standard approach in the fiscal adjustment literature (e.g. Alesina, Perotti, Tavares, Obstfeld, & Eichengreen, 1998) is to define adjustment episodes by changes in the cyclically adjusted budget balance. This approach allows to correct for the effect of the economic cycle, which can drive changes in government expenditure and revenues without any policy decision. This approach, however, is not well-suited for my aim because the key interest here is public reaction to policy announcements. In addition, it is difficult, with annual change in expenditure and revenue, to distinguish cyclically-driven austerity from

²See Online Appendix A2 for the chronological visualisation of protest level of each country.

deliberately-targeted policy measures aiming at restoring sustainability over the long run. Third, besides tax hikes and spending cuts, one more factor which got far less attention from the fiscal adjustment literature are structural reforms. The standard approach is mainly focused on fiscal issues, and it does not take into account structural reforms which are also a big part of austerity packages since the Crisis. Structural reforms, like labour-market reform, may also leads to resistance. Last but not least, to match with the high-frequency monthly outcome variable and to accurately capture the dynamics between policy decisions and protests in the streets, one has to document the exact timing of policy decisions.

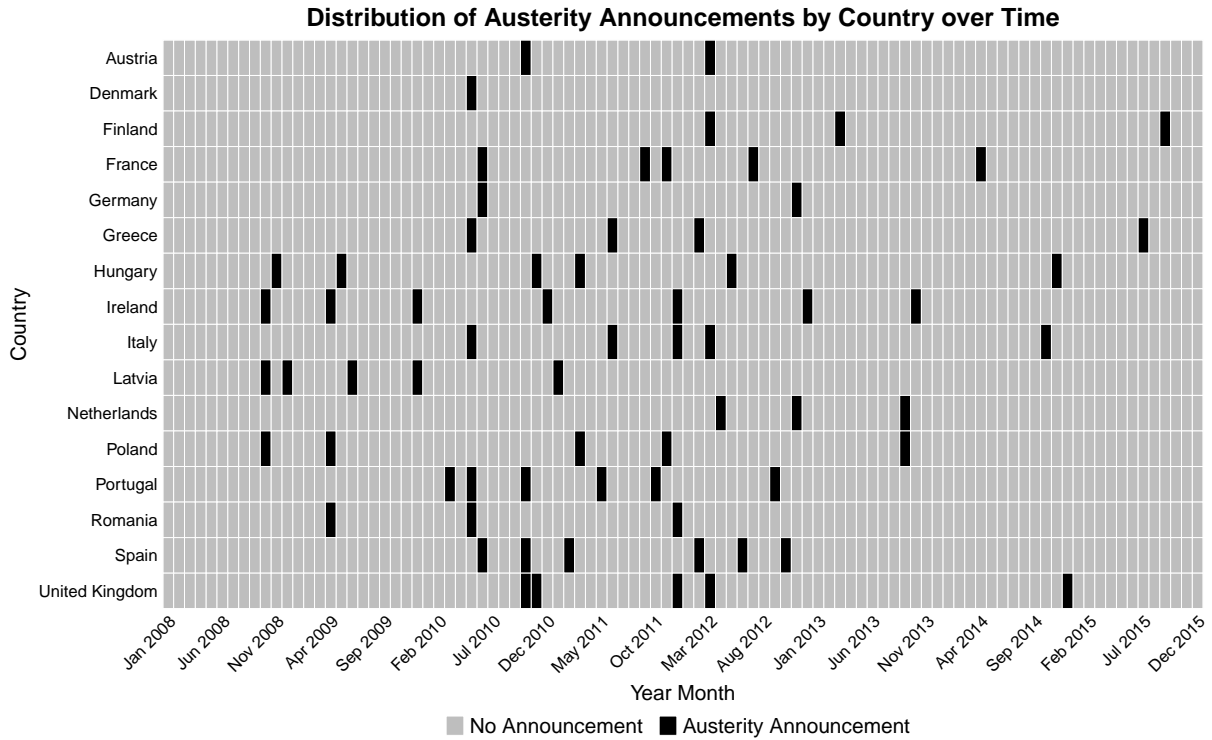
Therefore, a systematic newspaper-based event data analysis was conducted (Earl, Martin, McCarthy, & Soule, 2004) for the 16 countries in the international press. In particular, all austerity policy decisions (tax increases, budget cuts and structural reforms) reported in the international press³ throughout the sample period were collected. After this initial selection, the relevant types of policies decisions are then identified, i.e. austerity episodes including structural reforms (e.g. pension reforms, labour market reforms and product market liberalisation measures). Those with the most extensive coverage, i.e. the ones which have the highest article count in the same episode, were chosen. Relying on international coverage as opposed to domestic sources, has the advantage of finding the episodes with the highest political salience at the time as the international press is less likely to cover events of marginal salience. The timing of these events included in this study for all 16 countries during the crisis are shown in Figure 1⁴.

With the key policy announcements and their timing identified, I then define the functional form of their potential effect on protests levels. Based on the literature of interrupted time series (Box & Tiao, 1975; McDowall, McCleary, & Bartos, 2019), I assign and compare a pulse-intervention and three step-interventions. Pulse treats the impact of policy decisions as an immediate shock, i.e. a dummy switches to 1 when an

³I rely on the Financial Times, New York Times and the Neue Zürcher Zeitung as the sources. These three newspapers are chosen due to their well established reputation in high-quality international reporting. Moreover, they come from ‘neutral’ third-countries which are not analysed in the current study, except the Financial Times. The Financial Times is included in view of the fact that it has the widest coverage of economic issues.

⁴A list of the policy announcements is provided in Table A1 in the Online Appendix.

Figure 1: Distribution of austerity announcements



austerity episode occurred in a given month, whereas step-function specifies a level shift for the months after the intervention takes place. For the step-functions, I introduce a dummy that switches to 1 at the onset of intervention and remains there for 3 months, 6 months, and 12 months respectively. The best-fit model is with the pulse function based on goodness-of-fit criteria.⁵ This result is different from the previous analysis by [Bojar et al. \(2021\)](#) on the impact of policy announcements on vote intention which shows the impact stays there for half a year. The difference with protest event as outcome variable lies in the fact that protest is difficult to maintain over a longer period of time. It reacts immediately to a government announcement, but is not sustained.

In addition, the built-in assumption of the above mentioned intervention functions that different austerity policies have the same effect on protest lacks theoretical and empirical validation. Without assuming an arbitrary equal weight, I empirically test the hypothesis about sequential impact. I operationalise different austerity pulses as a series of dummies that distinguish between the order of austerity episodes during the same

⁵The results of comparing function forms of austerity are presented in Online Appendix A4.1.

government term. In particular, I created dummy variables for the first, the second, and all subsequent austerity pulses respectively.

Regarding the conditioning factors of the austerity policy episodes, I examine the conditioning role of the 1) the objective economic grievance, 2) subjective economic grievance, 3) external involvement and 4) past level of mobilisation. For the objective economic grievance, I employ the most widely accepted measure in the economic voting literature and economic grievances: unemployment. However, as argued by some scholars, it is the trend in rather than the level of the unemployment rate that best captures the economic climate. Hence, I calculate the annual change of unemployment rate between t_0 and t_{12} which is then used to represent objective economic grievances.

The subjective grievances measure I used for pocketbook concern is taken from the monthly Consumer Confidence Indicator (CCI) which is part of the Economic Sentiment Index (ESI). CCI and ESI are widely used for modelling voting behaviour and economic preferences, but rarely do studies dive deeper into the actually survey components of these indexes. In order to accurately measure personal/family financial situation evaluation, I take the single question which exactly asks about the current financial situation of the household. The answers ranges from “we are running into debt” to “we are saving a lot”. I use first-differenced series to measure change in household financial situation.⁶

Lastly, to measure external involvement, I identify episodes after IMF and/or Troika interventions and create a dummy variable that takes on the value 1 at the moment when a supranational actor steps in. See Table 1 for summary statistics.

Table 1: Summary statistics

Statistic	N	Mean	St. Dev.	Min	Max
protest(econ_public)	3,072	1.385	3.702	0.000	56.735
austerity (pulse)	3,072	0.022	0.146	0	1
Δ unemployment	3,072	0.090	1.577	-5.1	11.9
Δ household finances	3,038	0.001	2.555	-15.5	17.8
IMF	3,072	0.070	0.256	0	1

Having checked the stationarity of the dependent variable ⁷, I proceed to estimate the

⁶Different operationalisation using the level rather than the change and other components in the CCI survey is also checked, namely retrospective evaluation of household finances, instead of current financial situation of the household.

⁷Unit root tests can be found in Online Appendix A3.1.

following model with country and month fixed effects ⁸.

$$Y_{it} = \sum_{\ell=1}^4 \rho_{\ell} Y_{i,t-\ell} + \sum_{k=1}^3 \beta_k X_{kit} + \zeta Z_{it} + \sum_{k=1}^3 \omega_k X_{kit} Z_{it} + \alpha_c + \gamma_t + \epsilon_{it}$$

for $i = 1, \dots, N$ and $t = 5, \dots, T$ where Y_{it} is public economic protest level, and X_{it} represent the three austerity dummy variables. The model also includes four lagged outcome variables as well as a set of time-varying covariates Z_{it} . The four lags were chosen based on the varying autoregressive patterns of the protest series of each country.⁹ Including lagged dependent variables entails dynamic model specification, and hence the estimated coefficients of the austerity dummies only describe the instantaneous impact; the total effect over time is amplified through the long-run multiplier (De Boef & Keele, 2008).

4 Results

4.1 Baseline unconditional impact

Table 2 presents the baseline non-conditional effect of austerity policy announcements on protest level when estimated with a simple pulse and three sequential pulses. Model 1 and Model 3 estimate the impact via a bivariate dynamic model. Model 2 and 4 add the contextual controls.

Models 1-2 provide strong evidence that austerity, on average, leads to more protests in the streets. However, the coefficient estimates from Models 3-4 reveal whether the effect on protest is distributed more or less equally across time, or alternatively whether people are relatively more enthusiastic in protesting after the first austerity package than after later ones (or the vice versa). As it turns out, the coefficient estimates are indeed different and their differences are statistically distinguishable from zero. While first and second austerity announcements lead to more protest, the third (and later)

⁸Apart from the two-way fixed effects dynamic regression, I also used matching estimator for time-series cross-sectional data (Imai, Kim, & Wang, 2020) to test the robustness of the causal effect in the baseline model. See Online Appendix A5.1 for details.

⁹ACFs and PACFs can be found in Online Appendix A3.2.

austerity announcements actually decrease the protest level, which provides evidence for the sequential hypothesis.

When a government announces its first package, based on Model 4, we can see an immediate increase of roughly 3 unit increase in protest level. This instantaneous effect of the first austerity announcement, in addition, is further augmented in the long-run via the long run multiplier shown by the estimated coefficients of the lagged dependent variable. This yields a total long-run effect of roughly 6 unit increase in protest level over time.¹⁰ As for the contextual covariates, as expected, all three variables significantly predict protest level, though the effects are not as large as that of austerity.¹¹ When change in unemployment rate is getting bigger, more protest will ensue. Protest level will also increase when household financial situation is getting worse. The indicator for external involvement shows that in instances of supranational intervention, protest level tends to be higher.

¹⁰The total effect is calculated based on the following formula: $\frac{\beta}{1 - \sum \rho}$, where β is the instantaneous effect of austerity on protest and $\sum \rho$ is the sum of autoregressive parameters of the protest series.

¹¹See Online Appendix A4.2 for the detailed results in the longer regression table.

Table 2: Baseline models of pulse and sequential pulse functions of austerity

	Dependent variable: protest (public economic) _t			
	Model 1	Model 2	Model 3	Model 4
ρ_1	0.319*** (0.019)	0.306*** (0.019)	0.323*** (0.019)	0.310*** (0.019)
ρ_2	0.057** (0.020)	0.046* (0.020)	0.056** (0.020)	0.044* (0.020)
ρ_3	0.045* (0.020)	0.032 (0.020)	0.046* (0.020)	0.033 [†] (0.020)
ρ_4	0.090*** (0.019)	0.072*** (0.019)	0.089*** (0.019)	0.072*** (0.019)
austerity_pulse	1.662*** (0.407)	1.431*** (0.405)		
austerity_first			2.879*** (0.578)	2.693*** (0.575)
austerity_second			1.999** (0.691)	1.561* (0.689)
austerity_third			-1.595 [†] (0.859)	-1.589 [†] (0.853)
Country FE	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes
Covariates	No	Yes	No	Yes
Num. obs.	3008	2982	3008	2982
Num. groups	16	16	16	16
AIC	15121.06	14950.29	15104.19	14935.21
R ²	0.158	0.174	0.164	0.179
Adj. R ²	0.096	0.111	0.102	0.116
DW test p-value	0.618	0.514	0.618	0.500
Wald Test 1st=2nd			0.320	0.198
Wald Test 1st=3rd			0.001***	0.001**
Wald Test 2nd=3rd			0.001**	0.004*

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; [†] $p < 0.1$

4.2 Accounting for effect heterogeneity

In this section, I study whether the effects of austerity measures on protest depend on political and economic contexts. Using Model 4 as the baseline, I proceed in the following way by interacting the three sequential austerity announcements with each contextual variable, beginning with objective grievances, subjective grievances, external involvement, and finally the past level of mobilisation. Table 3 presents the results. I then resort to marginal effect plots¹² and dynamic simulation to illustrate the results graphically. Besides immediate impact, I also illustrate the total long-run impact over time as well as impulse response functions (IRFs), using the long-run multiplier with the corresponding confidence intervals calculated via parametric bootstrapping of the coefficient estimates¹³ (King, Tomz, & Wittenberg, 2000; Warner, 2016).

¹²Since the interaction pattern of the first austerity announcement and contextual variables is very similar to that of the second announcement, I only plot the marginal effect of the first announcement.

¹³Confidence intervals (95%) confidence intervals are constructed based on 10,000 samples from multivariate normal distribution.

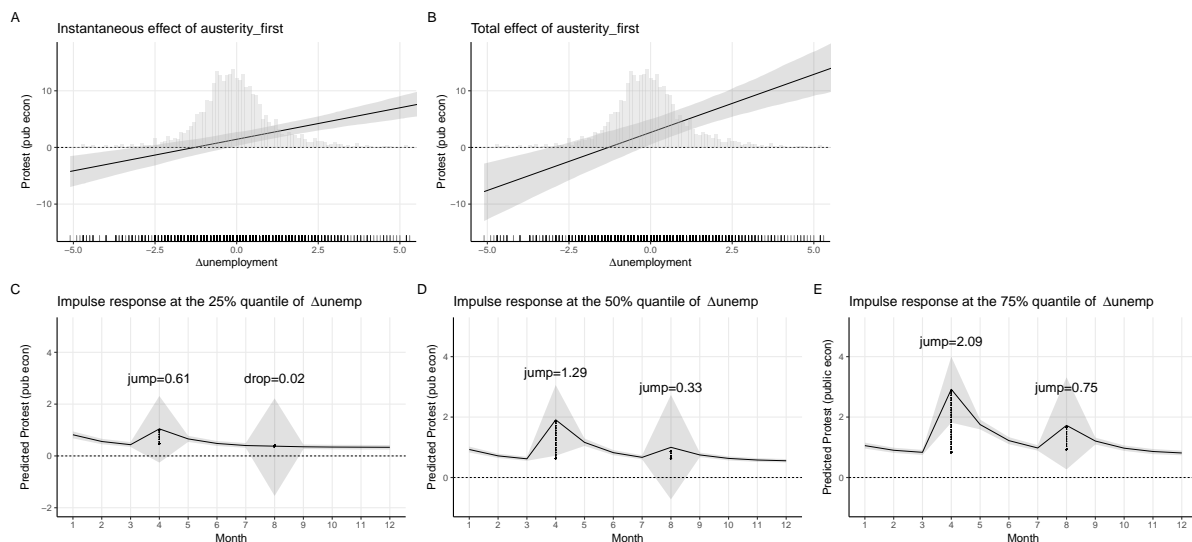
Table 3: Models of pulse functions of austerity interacting with contextual factors

	Dependent variable: protest (public economic) _t			
	Model 5	Model 6	Model 7	Model 8
austerity_first	1.469*	2.277***	1.158 [†]	0.093
	(0.619)	(0.588)	(0.659)	(0.650)
austerity_second	0.447	0.226	-0.200	0.158
	(0.823)	(0.796)	(0.800)	(0.789)
austerity_third	-1.139	-1.556 [†]	-1.992*	-0.830
	(0.914)	(0.851)	(0.960)	(1.035)
austerity_first × Δunemployment	1.108***			
	(0.213)			
austerity_second × Δunemployment	0.649*			
	(0.259)			
austerity_third × Δunemployment	-0.690			
	(0.501)			
austerity_first × Δhousehold finances		-0.625**		
		(0.192)		
austerity_second × Δhousehold finances		-0.696***		
		(0.210)		
austerity_third × Δhousehold finances		0.342		
		(0.366)		
austerity_first × IMF			6.114***	
			(1.305)	
austerity_second × IMF			6.418***	
			(1.525)	
austerity_third × IMF			1.762	
			(2.074)	
austerity_first × protest _{t-1}				1.260***
				(0.154)
austerity_second × protest _{t-1}				0.373***
				(0.102)
austerity_third × protest _{t-1}				-0.184
				(0.147)
Country FE	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes
Covariates	Yes	Yes	Yes	Yes
Num. obs.	2982	2982	2982	2982
Num. groups	16	16	16	16
Num. of ρ	4	4	4	4
AIC	14903.86	14917.48	14899.93	14854.23
R ²	0.189	0.185	0.190	0.202
Adj. R ²	0.125	0.121	0.127	0.140
DW test p-value	0.428	0.456	0.445	0.510

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; [†] $p < 0.1$

Model 5 shows the effect of austerity on protest conditioned by objective economic grievance. The significant interaction terms for both first and second austerity announcement offer strong evidence for the “objective grievance hypothesis”¹⁴. Figure 2 illustrates the instantaneous and the total effects as well as the dynamic simulation. We can see from the instantaneous and total marginal effects plot in panel A and B that in periods of decreasing unemployment rates, the marginal effect of first austerity packages is statistically indistinguishable from zero. On the contrary, when the unemployment rate is rising, austerity is associated with an ever larger protest increase. The dynamic simulations in panel C, D and E tell the same story where at the 75% percentile of Δ unemployment, the first austerity announcement can result in 2.07 unit increase of protest while only 0.62 unit increase at the 25% percentile of Δ unemployment. Similarly, the same pattern applies to the second austerity announcement, but the size of the effect is smaller compared to the first one. For later austerity packages, the interaction with Δ unemployment is no longer significant, which means even with rising objective economic grievances, citizens stop mobilising against later ones. This further confirms the hypothesis of sequential impact.

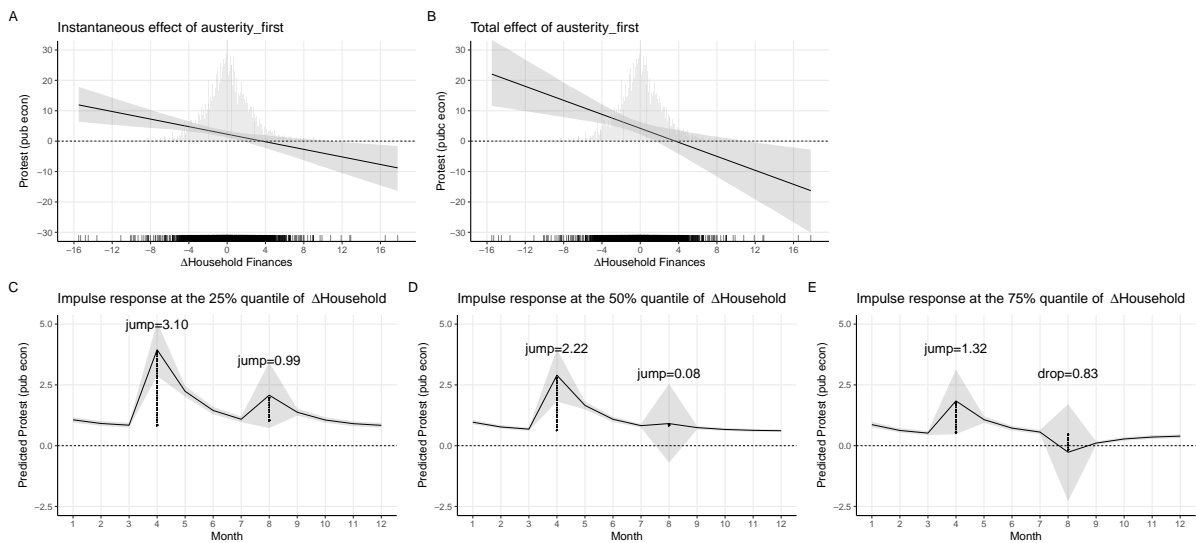
Figure 2: Marginal effects and IRFs of austerity at three quantiles of Δ unemployment



¹⁴I also checked different operationalisation using retail growth, which is a close monthly proxy for GDP growth, instead of unemployment change and get similar results which can be found in Table A5 in Online Appendix A5.2. This further substantiates the objective grievances hypothesis.

As for conditional effect of subjective pocketbook concerns, the results of Model 6 provide strong support for the “subjective grievance hypothesis” with both interaction terms being significant¹⁵. Figure 3 shows the immediate and the total long-run effect of the first austerity announcement on protest level and dynamic simulations conditional on change in monthly evaluation of financial situation of households. The results are very similar to the ones of objective economic grievance. The interaction term for first and second austerity packages are significant. In times of improving household finances, the instantaneous and total effects of the first (also the second) austerity are statistically indistinguishable from zero. By contrast, when household finances is getting worse, austerity is associated with an ever larger protest increase. The dynamic simulations in panel C, D and E show that at the 25% percentile of Δ household finances, the first austerity announcement can result in 3.10 unit increase of protest while only 1.32 unit increase at the 75% percentile of Δ household finances. For the second announcement, we can see at the 25% percentile of Δ household finances a 0.99 unit increase of protest but a 0.83 unit decrease at the 75% percentile of Δ household finances. Again, this conditioning pattern only applies to the first and second austerity packages, while for later ones, the interaction is not significant.

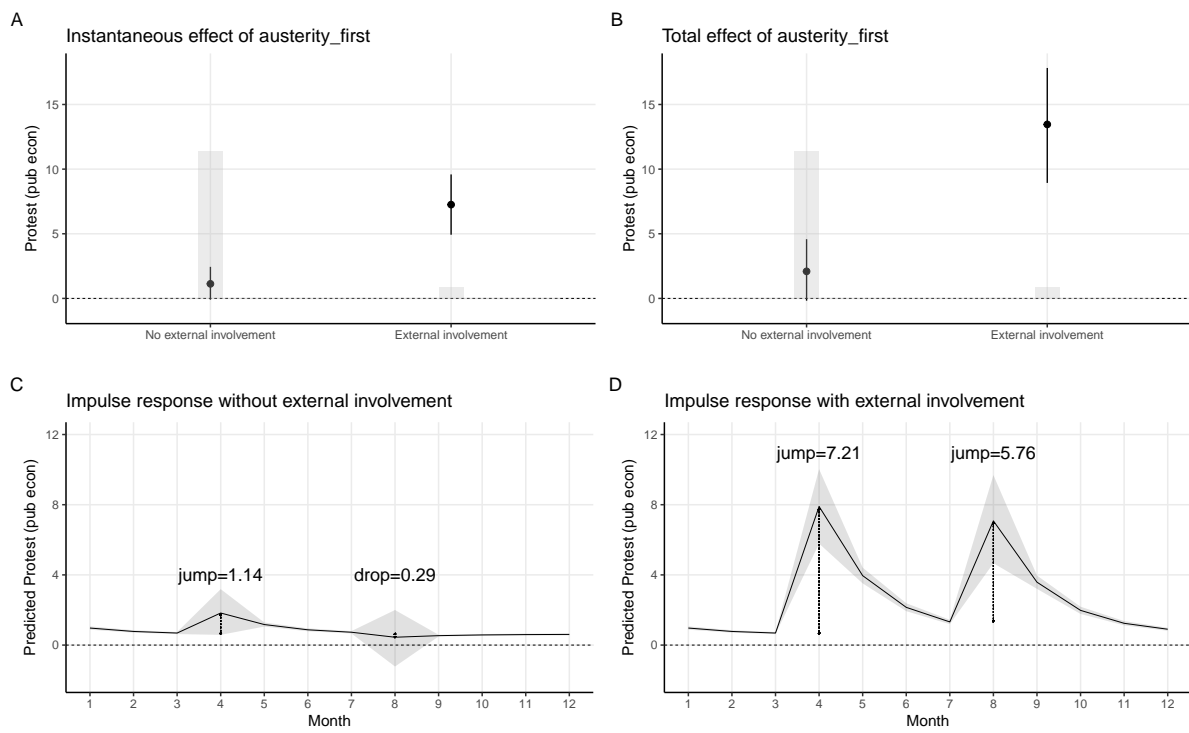
Figure 3: Marginal effects and IRFs of austerity at three quantiles of Δ household finances



¹⁵I find similar results with alternative operationalisation of subjective economic grievances (retrospective evaluation of household finances and the level of household finances). See Table A5 in Online Appendix A5.2

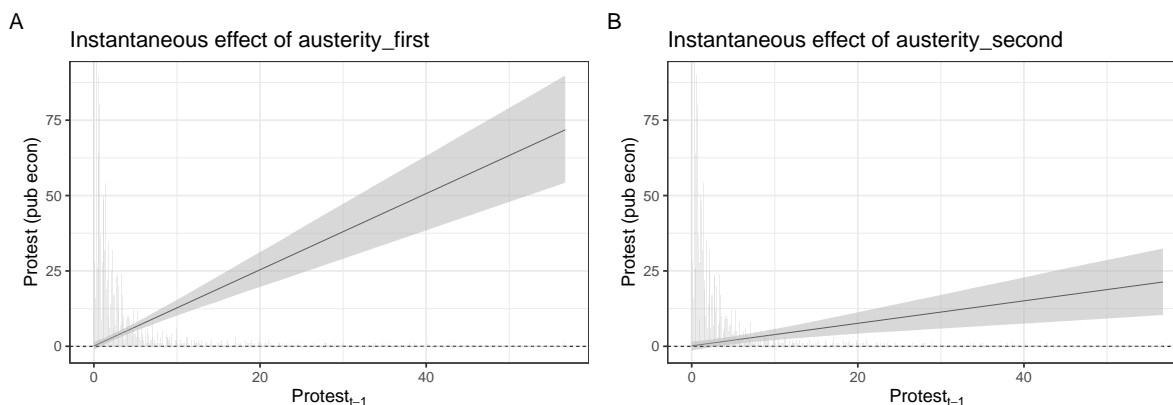
Concerning the conditioning role of external involvement (the external involvement hypothesis), we can see a fairly sharp pattern appear. The significant and substantively large interaction terms in Model 7 indicate that there is a huge difference in the size of the effect of austerity on protest according to whether or not austerity is imposed with external pressure. Again, this pattern only exists for the first and second austerity announcements. Even with external involvement, the third (and later) announcements do not increase protest level. As the instantaneous and total effects plots (for the first austerity) in Figure 4 illustrates, austerity imposed under external pressure leads to an instant jump of protest level of around 7.21 unit accumulating to a total estimated 12.5 unit increase. By contrast, the estimated immediate impact on protest level of domestically initiated austerity is substantially more limited: 1.14 unit increase, leading to a 2.5-unit total increase. The pattern is even stronger for the second announcement. Domestically driven second austerity announcement does not result in any jump in protest level, while that under external pressure leads to a 5.8-unit increase in protest level. The distinctive interaction dynamics between the involvement of external actors and austerity policy episodes helps to shed light on the debate on supranational imposition that ties the hands of their governments. Far from accepting the external rule, people reject vehemently undemocratically made decisions.

Figure 4: Marginal effects and IRFs of austerity under and not under external involvement



Finally, I test the path-dependent hypothesis by interacting the austerity dummy with the lagged value of the protest level while keeping other covariates in the model as control variables. The significant interactions in Model 8 offer strong support for the “path-dependent hypothesis”. As Figure 5 shows, the substantive impacts of first and second austerity announcements on protest are larger in times of high previous protest level. The effect is stronger with the first austerity announcement. Again, for later austerity packages, the effect on protest is not significant even with a higher level of past mobilisation. Hence, in accordance with my expectations, the past level of protest movement enhances the current impact of austerity policy announcement on protest.

Figure 5: Instantaneous effects of first and second austerity at different level of protest_{t-1}



5 Conclusion

It is essential to assess the political consequence of policies adopted during the Great Recession before making policy recommendations for future crises, which is all the more important given that European countries are likely to go through another severe recession due to the COVID-19 pandemic. Even after the pandemic is under control, the economic difficulties will not go away. Governments will need to boost the economy in order to avoid continuing recession. Apart from the monetary policies of central banks, correct fiscal policies are also needed. European economies will require massive fiscal stimulus packages to get back on track. Governments need to run deficits on a colossal scale to

finance this, which will raise government debt tremendously. Eventually, governments need to think about how to deal with the high deficit level. Austerity again or not, it is necessary to contemplate how to pay for the enormous effort required to save the economy today.

In this study, I systematically analysed the political effect of some of the most controversial policy decisions which European governments have adopted aiming at tackling the the sovereign debt crisis. In particular, I have examined how austerity packages and structural reforms which governments announced to reduce government budget deficits and lower their debt impact protest mobilisation. Utilising the intervention analysis of time series, I treated these austerity policy announcements as intervention shocks to the protest series that describe the monthly public economic protest level in 16 European countries between 2000 and 2015.

The central argument of this article has been that no matter whether there is electoral punishment or not, the earlier announcement of austerity measures does, indeed, lead to an increase in public economic protest, while later ones do not have an effect. In contrast to the literature on the fiscally conservative voter, I demonstrate that austerity policy announcements have significant and substantively important positive effects on monthly public economic protest level. In addition, I also demonstrated that the political and economic context condition the impact of policy announcements on protest level. Overall, I showed that certain contextual factors, namely the sequence of announcements, the pre-existing magnitude of both objective and subjective economic grievances, the involvement of external actors and previous level of mobilisation have important conditioning roles, affect not only the magnitude of austerity announcements' effect but also the dynamic pattern of protests.

The goal of this paper has been to examine the general pattern of people's reactions to austerity announcements in the social movement arena and how they vary with contextual characteristics. However, this paper paid less attention to the connection between the protest arena and the more institutionalised electoral arena. The focus and scope of this paper do not allow me to investigate whether austerity measures drive the ups and

downs in the electoral arena and the protest arena in a similar fashion and whether protest level might play a role in moderating and mediating the effect of austerity on electoral punishment of governments for the same policy. Future research should consider both arenas and analyse them together in a dynamic system. Second, this study focuses on average effects, but not all citizens oppose austerity and engage in protest. The question arises which groups respond negatively to austerity, and which ones do not? It is possible that a share of the public buy the TINA (“There is no alternative”) argument and think that the government could not have avoided austerity and recognise a sense of crisis which may lead them to favour reforms ([Grindle & Thomas, 1991](#); [Keeler, 1993](#); [Nelson, 1992](#)), and they might wonder whether the outcome would not have been worse in the absence of a programme. In a similar vein, people could oppose austerity for various reasons. Apart from personal materialistic view of political evaluations, people may oppose austerity due to sociotropic concern that austerity might deepen the recession or due to the fear that a growing inequality would ensue ([Berglund, 2018](#)). It is interesting to figure out in a society, possibly by running survey experiments, who support or oppose austerity and what kind of austerity in particular. Future research can also look into which lines of thinking or a combination of reasons determine the support for or opposition towards austerity.

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