Government Partisanship and Bailout Conditionality in the Midst of the European Crisis

Federica Genovese* Héctor Hermida Rivera†

September 30, 2016

Abstract

It is often argued that international financial institutions approach governments in the midst of a financial crisis in ways that are specific to the situation in consideration, tailoring bailout mechanisms to the context of the identified country. However, anecdotal evidence suggests patterns in which some countries that dove into the recent global financial crisis have received similar treatments from the saving institutions. Thus, it is unknown whether there are systematic reasons for why some governments may have received harsher bailouts than others. Addressing this puzzle, this paper investigates how government political orientation may have affected international rescue packages in the aftermath of the 2008 recession, focusing on the European sovereign debt crisis and the intervention of the so-called 'Troika'. The paper articulates the dynamics between a rescued state and the Troika and argues that the Troika should be more benevolent to countries with a majority of right-wing political representatives because their preferences for policy reforms tend to overlap with the Troika more than left-wing representatives. Hence, right-wing governments in crisis should be more likely to receive less conditional bailouts than left-wing governments. We test our hypothesis using a new dataset of bailout conditionality in the onset of European Union (EU) bailout countries between 2008 and 2015. Our econometric analysis suggests support to our argument that the Troika treats conservative governments more gently than left governments when bargaining in the midst of a financial crisis.

*Lecturer, Department of Government, University of Essex

†Master's student, Department of Economics and Economic History, Universitat Autònoma de Barcelona

1. Introduction

In 2008, the global economy entered the sharpest recession ever since the 1930's, not long after the US financial system collapsed due to the sub-prime mortgage crisis. Trust in financial markets vanished the day Lehman Brothers, the fourth largest US investment bank by that time, declared bankruptcy on September 15, 2008. On the aftermath of that event, panic took over several European economies: some of them were directly exposed to the US sub-prime mortgage crisis, while others had their own housing bubbles. In a short period of time, balance sheets of several commercial banks were full of toxic assets that had little or literally no value. Soon afterwards, it became clear that several banks would need some kind of re-capitalisation. The crisis first hit the US, but it soon proved to be deeper and longer in the European Union (EU), where "major asset bubbles occurred in Ireland's and Spain's property markets" (Collignon et al., 2013 p. 2).

In both sides of the Atlantic Ocean in the US and Europe, banks turned to national governments for aid. In all cases, there was a common pattern: taxpayers saw how part of their money was absorbed by a starving financial system. In fact, "on average, governments spen[t] 12.8% of their country's GDP on interventions to restore financial stability" (Niepmann & Schmidt-Eisenlohr, 2011 p. 21). Some of the countries that intervened in the financial sector to stop the spread of the crisis were successful in their goal; but many others failed to do so without additional external aid. Public debt rose and, in some cases, it did it so much, that financial markets became an unaffordable option due to investors' distrust in the re-payment capacity of the State. When that was the case, states only had two possibilities: bailout or default. In the EU framework, many states asked for aid and actually received it. But doing so implied a harsh bargaining process with the International Monetary Fund (IMF), the European Central Bank (ECB) and the European Commission (EC), a powerful group known as the Troika that has designed all EU bailout plans. Plans that, in turn, have greatly varied across countries.

For example, the Spanish conservative government of Mariano Rajoy obtained much more lenient conditions than the left-wing Greek government of Syriza. A first difference lays in the fact that, in Spain, "unlike in Greece, losses have not been imposed on holders of Greek government debt" (Treanor, 2012). Moreover, in Spain, "the supervision focus [was] on restructuring the banks —rather than the economy as has been the case with other [...] countries" (Treanor, 2012). For the left-wing Greek government of Syriza, on the other hand, "the rescue loan [came] with a host of conditions attached that amount to a radical overhaul of the Greek economy, stipulating major reforms of health, welfare, pensions and taxation systems, alongside more ambitious privatisation schemes" (Inman & Allen, 2015). Moreover, in Greece, the agreement "also [gave] the Troika —the European Commission, ECB and IMF— decisive influence over reforms of the country's struggling banking sector" (Inman & Allen, 2015). Something similar happened in Portugal, where the social-democrat Prime Minister Socrates received no mercy from the Troika and "resigned as prime minister after failing to get austerity measures through parliament" (BBC, 2011).

This set of diverse outcomes drives the main research question of this paper: does the Troika have a more friendly attitude towards conservative governments than it does towards left-wing ones? This question tries to shed light on an international outcome —bailout packages— focusing the attention on a key political domestic variable: government partisanship — i.e. ideology. To answer this question, we first qualitatively describe and analyse how bailouts took place in rescued EU member states between 2008 and 2015. We then review what we know about the main economic determinants of bailouts; as well as what we know about the impact of domestic politics in international bargaining. Next, we present a bargaining model between a failing State and the Troika that we use to derive an empirically testable hypothesis about the impact of government partisanship on bailout conditionality, keeping economic explanations constant. We then move to test our hypothesis with a set of pooled time-series cross-section models. Following the theoretical discussion and the empirical findings, we conclude by summarising the main implications of government partisanship when bar-

gaining with international financial organisations. The findings indicate that the Troika imposes stricter conditionality on left governments than it does on conservative ones.

2. A Story of EU Bailouts

All recent rescue packages in the EU have involved the IMF and several financial mechanisms[1] coordinated by the ECB and the EC. Because most public debt of European countries was and still is held by private commercial banks of other EU countries, the default of any member would put in great danger the financial system of the EU. Thus, international financial institutions pool "resources from its member countries and lend it to countries that experience a financial crisis and lack access to the international capital market to solve their balance of payments difficulties" (Schneider, 2013 p. 2). However, this money is accompanied by strict conditions on its usage to guarantee that the first priority is re-payment to international creditors, which has forced "governments to introduce painful austerity measures that provoke[d] a backlash from angry citizens" (Rickard & Caraway, 2014 p. 701). In addition, to restore the confidence of financial markets, public deficit was also limited following the directives of the Maastricht Treaty[2]; and the labour market was heavily liberalised. Fig. I shows a list of all the bailouts that took place in the aftermath of the 2008 crisis in the EU[3]. Following the information on Table I, there is a brief timeline that illustrates these bailouts graphically, in Fig. I.

The first EU member State that asked for a formal bailout was Hungary. The agreement included, on the one side, the IMF, the World Bank and the EU; and on the other

[1] Mainly, but not only, the EU Balance of Payment programme (BoP), the European Financial Stabilisation Mechanism (EFSM), the European Financial Stability Facility (EFSF) and the European Stability Mechanism (ESM).

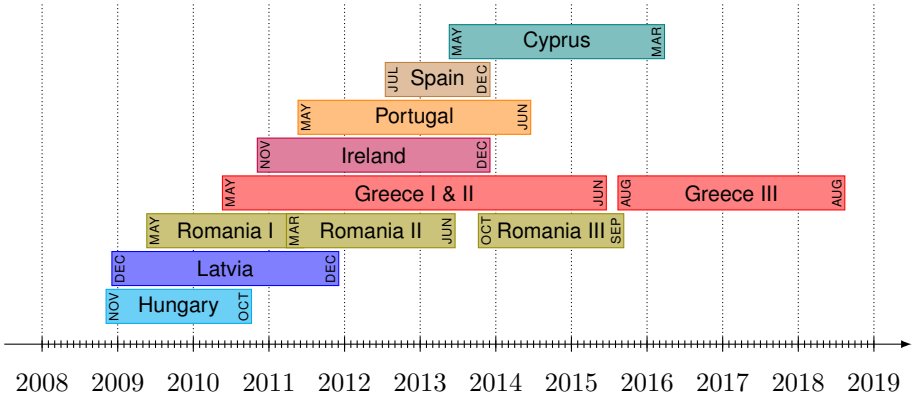
[2] The Maastricht Treaty Euro convergence criteria includes (a) a maximum public deficit of 3% each year, (b) a maximum share of public debt over the GDP of a 60%, (c) long-term price stability and (d) sufficiently low interest rates for a period of at least 2 years.

[3] The first column indicates the bailed out country; the second column indicates the period of the bailout; and the third column indicates the amount of money that was used out of the total disposable amount.

Table I. Detail of EU Bailouts

Hungary	November 2008 — October 2010	15.6 out of €20bn.
Latvia	December 2008 — December 2011	4.5 out of €7.5bn.
Romania I	May 2009 — June 2011	19.6 out of €20.6bn.
Greece I & II	May 2010 — June 2015	215.9 out of €245.6bn.
Ireland	November 2010 — December 2013	68.2 out of €68.2bn.
Romania II	March 2011 — June 2013	1.15 out of €6.15bn.
Portugal	May 2011 — June 2014	76.8 out of €79bn.
Spain	July 2012 — December 2013	41.3 out of €100bn.
Cyprus	May 2013 — March 2016	10 out of €10bn.
Romania III	October 2013 — September 2015	2.6 out of €6.5bn.
Greece III	August 2015 — August 2018	86 out of €86bn.

Figure I. Timeline of EU Bailouts



side, the social-democrat Hungarian government. It was reached on October 28, 2008, and it consisted in a €20bn loan "to help restore investors' confidence in the country's financial markets and its currency, the forint [...]" (Connolly & Traynor, 2008). In addition, the deal came "with strings attached, with the IMF insisting on an introduction of austerity measures to curb high public spending" (Connolly & Traynor, 2008). For instance, Hungary had to abolish the 13^{th} month pension for new beneficiaries, it had to tighten the eligibility criteria for disability benefits and it still has to rise the retirement age 3 years before 2025, among several others. These strings, though, were a

too heavy burden for Ferenc Gyurcsany, the social-democrat Prime Minister, who had to resign in April 2009. He was substituted by an independent economist who took the role of Prime Minister until the 2010 general elections, when the main conservative party got the government.

Only one month after the first bailout program in the the history of the EU, the IMF, the World Bank, the EU and some Scandinavian countries agreed on a €7.5bn. for Latvia. Technically, the programme had to "allow Latvia to maintain its currency's peg to the euro, but there [were] sacrifices such as cuts in public sector wages and state spending" (BBC, 2008). In addition, the bailout agreement forced Latvia to raise its "value added tax [...] from 18% to 21% [...]" (BBC, 2008), to adopt a comprehensible and credible export promotion strategy, or to implement public sector nominal wage and employment cuts; just to name a few conditions. These measures generated political and social unrest, and ultimately forced the conservative Prime Minister Ivars Godmanes to resign. He was substituted by the also conservative Valdis Dombrovskis, who won the elections in 2010 and the snap elections of 2011. Despite GDP "contracted 23% over $2008 - 2010$, while unemployment reached nearly 25%" (Peach, 2011); Latvia retook the path of growth in 2011.

The next year, 2009, European authorities agreed on the first bailout package for Romania, that had to agree on two additional bailout programmes on 2011 and 2015. In Spring 2009, the "European Union, [the] IMF and [the] World Bank [...] bailed out Romania with a 20bn loan in return for severe cuts in public spending and wages" (Gow, 2009). In addition, Romania "also sold stakes in major energy companies and moved to privatise its freight rail" (EUBusiness, 2008). In the middle of the second rescue, and one year before the next general election, the conservative Prime Minister Emil Boc had to resign. He was substituted by the social-democrat Victor Ponta, who won the 2012 elections and was thus responsible of the third bailout package. Romania was the last Eastern EU member State obtaining a bailout: after the first Romanian bailout, the European debt crisis hit the south of Europe and thus the Eurozone, deeply

transforming its nature and threatening the heart of the EU[4].

In 2010, it started the long Greek odyssey, known as Grexit[5], when Greek public debt turned out to be much larger than previously announced. The first Greek bailout package was "negotiated with the ECB, the EC and the IMF, [and was] worth 110 billion euro over three years" (Magnay et al., 2010). In compensation, the social-democratic government of Papandreou had to implement "cuts in the salaries of public-sector workers, including lawmakers, higher taxes [...], and an increase in the retirement age for women in the public sector" (Magnay et al., 2010). As a consequence, he was substituted by an independent economist who acted as Prime Minister with a large coalition government. Despite all, Greece needed an extension, consisting in a "second international financial bailout of the same magnitude as [previous] year's 110bn." (Smith, 2011). Following more austerity measures, two general elections were hold in May and June 2012. The Prime Minister, under a large coalition government, was the conservative Antonis Samaras, who remained in power until January 2015 snap elections, that led the left-wing politician Alexis Tsipras to power. In summer 2015, before the extension of the bailout had finished, the new Greek left government of Syriza started negotiating a new bailout package. Negotiations were extremely tough[6] but, finally, an agreement was reached[7]. Following the third rescue package, the left-wing party of Syriza lost cohesion, leading Greece to new snap elections in September 2015. Again, Tsipras won and remained as Prime Minister.

After the first Greek bailout, it was the turn of Ireland. "After a humiliating week of denying it needed help, the Dublin government succumbed to pressure from other euro zone countries and asked for a very big loan" (Waterfield, 2010). Following the

[4]The set of Romanian packages was the last one in which the World Bank was involved, given that this institution is aimed at helping developing economies, and not developed ones.

[5]Grexit is the name given to the possibility that Greece exits the Eurozone.

[6]A referendum on the third bailout package was proposed and carried on by the Greek Government on early July 2015. Despite the government defended the rejection to the bailout and despite the rejection option clearly won, Greece finally undertook another rescue package. However, the rescue package only arrived after the short imposition of capital controls and once the previous package was over.

[7]The end of the program is expected for 2018. Including all three packages, the Greek economy will have received €331.6bn.

pattern of the other already rescued countries, "negotiations were tense as the EU and IMF impose[d] tough conditions to force Ireland to cut public expenditure by 15bn. and to increase taxation on the vast majority of people" (Waterfield, 2010). That reduction in public expenditure was obtained, among others, through social expenditure reductions, reduction of public service employment, or a reduction of existing public service pensions. Not long after, the conservative Taoiseach Brian Cowen resigned. The snap elections of early 2011 led the other main conservative Irish party to power. Finally, after three long and painful years for the Irish economy and more than €68bn., the program came to an end on late 2013.

The next European economy in falling down was the Portuguese one, in early 2011. Portugal received close to €80bn., and the program lasted until 2014. Once again, the Troika imposed severe austerity measures. However, the social-democrat "Socrates resigned as prime minister after failing to get austerity measures through parliament" (BBC, 2011). Among many other austerity measures that had to be passed, there were "a cut in the public sector wage bill by freezing wages and limiting job promotion; an increase in sales tax on items such as cars and tobacco; the privatisation of stakes in national energy companies and the sale of national airline TAP Air Portugal; the reduction of the most generous state pensions and the freezing of others" (BBC, 2011). After the resignation of the social-democrat Prime Minister Socrates, snap elections took place in 2011, leading the conservative Passos Coelho to power until 2015, when the social-democrats returned to power.

After Portugal, Spain needed a bailout, becoming the largest EU economy ever rescued. In summer 2012, the Spanish conservative government of Mariano Rajoy received a credit line of €100bn. of which only a 41.3% was used during a period of almost 2 years. The main goal of the Spanish package was to "prevent a wider deterioration of the eurozone's fourth largest economy, which [was] paying punishing interest rates on borrowed money and is key to the survival of the single currency" (Tremlett, 2012). In addition, "there was confusion about conditions of the bailout. De Guindos[8]

[8]Luis de Guindos was the Spanish Minister of Finance of the conservative Government of Rajoy.

claimed these required Spain to take measures in the finance sector but did not involve austerity [and] told Spaniards that this was a simple loan rather than a bailout. Eurozone finance ministers, however, warned they would closely monitor Spain's ability to stick to deficit targets and structural reforms" (Tremlett, 2012). In any case, Spain left the bailout program in 2013, "becoming the second Eurozone country to do so, amid a tentative economic recovery marred by persistently high unemployment" (Frayer, 2014).

Finally, it was the turn of a very small European country, Cyprus, that "became the fifth nation to turn to the Eurozone as it agreed a 10bn. bailout to recapitalise its ailing banking system in return for a series of drastic measures which would hit the country's savers" (Cooper, 2013). Indeed, "Cyprus [...] agreed to a significant restructuring of its banking sector, along with other measures such as tax rises and privatisations" (BBC, 2013). To name a few, Cyprus had to freeze pensions, to increase the statutory retirement age by 2 years for several employees, or to raise both the standard and the reduced VAT. Following those measures, capital controls were imposed and banks branches remained closed for days. The bailout programme was negotiated under the left-wing government of Demetris Christofias, who had been in power since 2009 and who lost it in the next scheduled elections, in 2013, in favour of the conservatives.

Noticeably, all 8 rescued EU countries were asked to pursue economic policies of the same pro-market sign. However, some countries have been given more room than others by the Troika. Trying to understand this variation in bailout conditionality, the next section explores the key determinants of bailout agreements discussed in the literature

3. What Explains Variation in Bailout Conditionality?

In most bailout programs, a set of international financial institutions provide a large amount of affordable money to a State in financial difficulties in return of economic adjustment policies. Thus, bailouts usually share some common elements, such as

an amount of money supplied to the State and a level of conditionality requested to that State. As already noted, the puzzle is that "some borrowers receive fewer and less-stringent loan conditions than others" (Rickard, & Caraway, 2014 p. 701). Like in most bargaining process, there are many factors that may be relevant when trying to understand this variation in bailout conditionality.

Evidently, central determinants of bailout conditionality are the key macroeconomic variables that determine the capacity of debt re-payment of a given State. Collignon et al. argue that in the context of the recession, the general loss of trust in the financial markets "reduced financial markets' willingness to lend to highly indebted governments" (Collignon et al., 2013 p. 1). At first, "markets [...] were negligent to default risk, [but] they [...] panicked" (Collignon et al., 2013 p. 2). Indeed, "during the $2008 - 2013$ period [...], government debt in the euro area [...] increased by 26.3% of GDP" (Maurer & Grussenmeyer, 2015 p. 7). Thus, the amount of public debt seems to be a first factor to be considered when analysing variation in bailout conditionality: the greater the amount of public debt, the less willing are creditors to lend, and thus, more measures are needed to ensure its future sustainability. Alternatively, since public debt is the accumulation of unpaid public deficits, this same argument can be applied to public deficit.

An equally important factor is the so-called risk premium, defined as "the compensation demanded by investors for holding a financial asset with risky payoffs that exceeds the risk-free rate" (Schwarz, 2014 p. 1). In the case of European government bonds, the risk premium indicates the additional premium that creditors demand for a risky bond, like the Greek or the Irish ones, in comparison to a neutral-risk bond, like the German one. According to Saucedo & Rullan (2014 p. $57 - 58$), "the global financial crisis led to an increase in public debts in the Eurozone, which caused a boost of the risk premium, mainly in peripheral European countries". In addition, "from 2009 the risk premium increased for peripheral countries like Greece, Ireland, Portugal, and to a lesser extent, Italy and Spain, but in the summer of 2012, the risk premium of the latter countries reached record levels" (Saucedo & Rullan, 2014 p. $57 - 58$). With the

exception of Italy, the rest of the mentioned countries were bailed out. Thus, the risk premium seems to be a factor that may help us variation in bailout conditionality. A similar argument applies to the ratings of rating agencies like Fitch, Moody's or Standard & Poors, which "seek to assess the capacity and willingness of a sovereign government to service its debt within the maturity rates and in accordance with the conditions agreed with the creditors at the time the loans were contracted" (Canuto et al., 2014 p. 5).

A further key structural factor that directly affects the re-payment capacity of the State and, thus, the need for structural adjustments is the balance of payments. The balance of payments is a record of all the monetary transactions between a particular country and the rest of the world. If a country receives more money from the rest of the world than it sends to the rest of the world, the balance of payments of that country is in surplus. Following Cantor and Packer (1996 p. 39), "[a] large current account deficit indicates that the public and private sectors together rely heavily on funds from abroad. Current account deficits that persist result in growth in foreign indebtedness, which may become unsustainable over time". According to Saucedo and Rullan (2014 p. 48), "adverse shifts in the balance of payments [can] not continue in the long term in a currency area where countries already [have] their monetary and exchange rate policies" centralised. Thus, "the euro area crisis is best viewed as a balance of payments crisis triggered by an over-reliance on foreign capital" (Higgins and Klitgaard, 2014 p. $7-8$). Because bailout conditionality reflects, among others, the need for macroeconomic adjustments, the balance of payments needs to be considered when studying bailout conditionality. Moreover, general economic performance can be seen an indicator of the health of the economy and, thus, real GDP growth and inflate could influence the future capacity of re-payment of the State, if only indirectly.

Despite the central implications of pure economic trends on the level of burden that international institutions may enforce on governments in crisis, the domestic political context in which the bailout is about to be imposed should also play a critical role. In this regard, the so-called Schelling conjecture provides the necessary framework to

understand how domestic politics may affect bailout agreements. In general terms, Schelling (1960 p. 28) argued that "[w]hen national representatives go to international negotiations knowing that there is a wide range of potential agreements within which the outcome will depend on bargaining, they seem often to create a bargaining position by public statements, statements calculated to arouse a public opinion that permits no concessions to be made". In other words, by generating a commitment, bargaining parts send the signal that they cannot deviate much from their preferences. These commitments may take different forms, such as scheduled or snap elections, referenda or public statements in the media, among others. In the same line, Tarar (2001 p. 335) argues that "[u]nder complete information, a domestic constraint is a bargaining advantage to the extent that if one executive's constraint is high and the other's is only low or medium, the former gets a better deal than if neither side were constrained, and the latter is worse off".

In democracies, parties publicly locate themselves in some point between the extreme right and the extreme left. By doing so, within the Schelling conjecture, they are sending a clear message to any bargaining counterpart, since they are at least partially committed to the preferred policies of their electorate. Because left and right parties have different electorates to satisfy, their commitment to certain economic policies varies. For instance, Rickard, Caraway & Anner (2012 p. 35) argue that "left-leaning governments may be more sympathetic to labor's demands than right-leaning governments because left governments are more likely to have political ties to unions and/or to be ideologically inclined to oppose IMF reform conditions". Additionally, as argued by Sattler (2013 p. 343), "stock markets often punish incoming left governments and drop significantly after a left-wing electoral victory. Similarly, they welcome right governments with a positive, upward reaction in stock prices. This is because the probability of policies that are harmful for returns on investments increases under left governments, while right governments are more likely to choose policies that are beneficial for financial returns" (Sattler, 2013 p. 343). Thus, conservative governments seem to be more sensible to capital interests than labour ones, and markets seem to respond

accordingly. Under the Schelling conjecture, left governments are domestically more constrained when bargaining with international financial institutions, because there is a wider range of outcomes —pro-market economic policies— they cannot accept. However, the Troika may react like stock markets, punishing left governments and helping conservative ones to retain political power. If this is the case, a domestic constraint is no longer a bargaining advantage.

In a similar line, Beazer and Woo (2015 p. 1) argue that "the International Monetary Fund (IMF) often seeks to influence countries' domestic public policy via varying levels of conditionality —linking financial support to borrowing governments' commitment to policy reforms—". Their main argument is that because "left and right governments confront different types of opposition to market-oriented reforms, [...] the question of whether stricter IMF conditionality encourages or impedes reform progress depends heavily on IMF programs' partisan context" (Beazer & Woo, 2015 p. 4). Thus, they implicitly but clearly recognise that IMF reforms are market-oriented reforms —such as liberalisation of the labour market, privatisation and public spending reduction— that are, in general, more welcome in the right than they are in the left. And they also argue that, as a consequence, pressure from the IMF is more efficient in left-wing governments than it is in right-wing ones, which could imply that the Troika punishes left governments and rewards right ones with more flexible bailout agreements. Moreover, the Troika has no need to agree on an extremely tough bailout with a government if that government is already wiling to apply by itself some or many of those measures —e.g. austerity and other pro-market measure. Overall, the argument is that the Troika punishes left governments with more bailout conditionality, making them more vulnerable at home and reducing their chances of winning the next elections. In this scenario, a domestic constraint is no longer an advantage and the Schelling conjecture does not seem to apply.

Evidently, the impact of government partisanship on bailout conditionality may be interlinked with the closeness of the next election. Following the Schelling conjecture again, Rickard and Caraway argue that "governments facing democratic elections have

incentives to bargain with international lending institutions to reduce the stringency of such loan conditions" (Rickard, & Caraway, 2014 p. 701). Their argument is that "[g]overnments facing imminent elections at home can leverage their electoral vulnerability to strengthen their bargaining position with the IMF" (Rickard, & Caraway, 2014 p. 702). However, they recognise the Troika does not negotiate with "caretaker governments since they have limited tenure and no guarantee of parliamentary support. For example, IMF officials suspended talks with the Greek government in the months before the 17 June 2012 snap election" (Rickard & Caraway, 2014 p. $714-715$). Against this light, the next section focuses mainly on the role of government partisanship on the bargaining relations between the bailing international institutions and the domestic government of the bailed country.

4. Bargaining Over EU Bailout Packages: The Model

Building on the above discussion, we now move to present a game theory model that captures why and how left governments get more conditionality than right governments when they are bailed out. To develop such a model, we first formally present the players —a failing State and the Troika—, their utility functions and their possible strategies. Then, we define conditionality in equilibrium —in different words, actual bailout conditionality— as a function of government partisanship, or ideology. Then, we use the game to derive an empirically testable hypothesis on the impact of government partisanship on bailout conditionality, to which we incorporate a small set of key macroeconomic controls.

4.1 Players, Utilities & Strategies

This bargaining game has two utility-maximising players: (a) a failing State and (b) the Troika[9]. Both the State and the Troika bargain over a quantity of money and a set of

[9]Though the term Troika is usually employed to talk about the IMF, the ECB and the EC, the term Troika does not exclude those bailouts in which the World Bank or individual states were also involved.

economic policies to be implemented in return for that money. The key parameters of players' utility functions are the set of implemented economic policies in case of bailout and the preferred economic policy of each player. While the Troika mainly deserves to protect creditors' interest with pro-market economic policies, the party in the government wants an economic policy that maximises its chances of re-election. But this policy is not the same for all parties. Labour parties ideal economic policy is further away from the Troika's ideal policy than the conservative ideal economic policy is. This is so because, as argued in **??**, labour and conservative governments need to satisfy different electorates. Consequently, labour governments ideal policies are at odds with Troika's pro-market economic policies; whereas conservative governments, like the Troika, are more sensitive to capital interests.

The core element of the players' utility functions is thus defined as the absolute negative distance between the ideal policy of each player and the finally implemented economic policy. Notice that $\hat{\pi}$ indicates players' ideal policies; and that π indicates implemented policies. Additionally, the subscript s refers to the State, whereas the subscript t refers to the Troika. Then, for the State, the utility function can be defined as $-|\hat{\pi}_s - \pi_m|$, in case that the State continues to finance itself through the market; as $-|\hat{\pi}_s - \pi_d|$ if the State goes default; and as $-|\hat{\pi}_s - \pi_t|$ if the State accepts the offer of the Troika. For the Troika, it is the same but changing the corresponding subscript, such that: $-|\hat{\pi}_t - \pi_m|$ if a State finances through the market, $-|\hat{\pi}_t - \pi_d|$ if a State goes default, and $-|\hat{\pi}_t - \pi_t|$ if the State accepts the Troika's offer. This is the core, but not the only, element of the players' utility functions.

Once defined the political side of the utility functions, the next element that players take into consideration is the amount of money itself. In case that the State finances its needs through the market, as it usually does when there is no crisis, it gets an amount of money β, such that its utility is $-|\hat{\pi}_s - \pi_m| + \beta$; whereas if it asks for help to the Troika and then accepts its offer, it gets α, a scenario in which its utility is

In addition, the extent to which the Troika is a unified actor is arguable; but for the purpose of this research and for simplicity, it is assumed to be a unique and unified actor.

$-|\hat{\pi}_s - \pi_t| + \alpha$. In case the State decides to go default, it gets no money because the markets remain closed in the short run and the Troika, of course, offers no aid: in that scenario, utility is just $-|\hat{\pi}_s - \pi_d|$. On the other hand, the Troika subtracts the amount of money α to its pay-off, but only if its offer is accepted, case in which its utility is $-|\hat{\pi}_t - \pi_t| - \alpha$. Otherwise, no additional monetary parameter is incorporated to the Troika's utility function. Because this bargaining model has $T = 2$, this is, two periods, a common discount factor δ in $t = 2$ is added, such that $\delta \in [0, 1]$. The goal is to take into account both the idea that the future is less valuable than the present, and that bargaining is costly. Now, utilities have been fully defined. Table II presents the notation of all the variables and parameters that are part of players' utility functions.

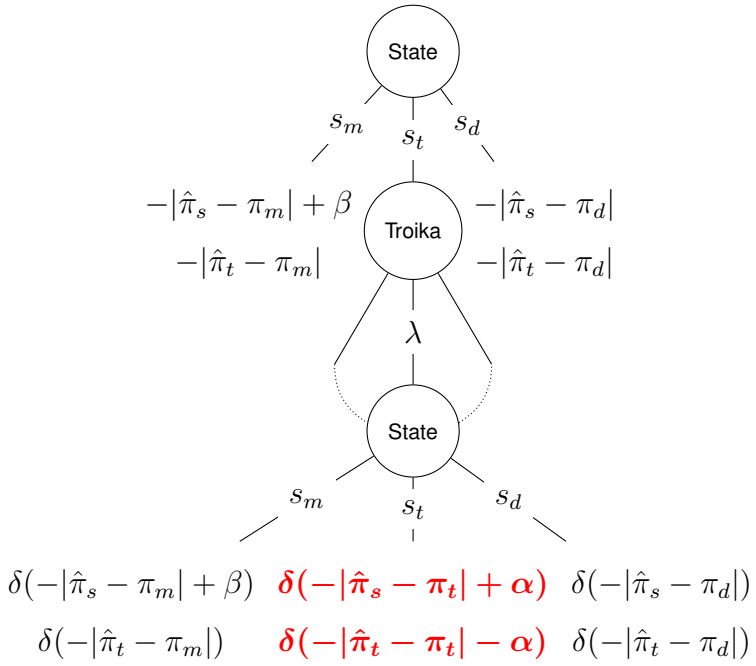
Table II. Parameters of the Model

$\hat{\pi}_s$	Ideal State's economic policy.
$\hat{\pi}_t$	Ideal Troika's economic policy.
π_m	Chosen economic policy in case of market financing.
π_t	Chosen economic policy in case of bailout.
π_d	Chosen economic policy in case of going default.
β	Amount of money obtained through the market.
α	Amount of money obtained through the Troika.
δ	Common discount factor.

The timing of the game is as follows. First, a State suffers an exogenous economic shock that increases the cost it faces when financing in the financial markets. Then, this State can do three different things: (a) assume this increasingly high cost —a strategy called market strategy or s_m—; (b) declare bankruptcy —a strategy called default strategy or s_d—; and (c) ask for help to international financial institutions —a strategy called 'Troika strategy' or s_t. Unless there is an exogenous shock, the best strategy of the State in the first stage of the game is to play s_m, case in which the game ends. If a State declares unilateral bankruptcy, the game also ends at $t =$

1. On the other hand, if the State suffers a shock and asks for aid to international financial institutions, such as the Troika, these institutions respond and make an offer λ. This offer λ consists of two elements: (a) a sum of money α and (b) an economic policy imposition —conditionality—, denoted as π_t. After this, the State has the same options it had in the first stage: (a) go to the market, (b) go default or (c) accept[10], but discounted by the common discount factor δ. In tree form, this extensive form game of perfect information is displayed in Fig. II[11].

Figure II. The Bailout Game



4.2 The Equilibrium

As any other finite extensive form game, this bargaining game is solved by backward induction. In the first stage, in normal conditions, a State will follow the market strategy s_m because usually $u_s(s_m) > u_s(s_d)$. However, when there is an exogenous shock that closes financial markets for a particular State —this is, financing through them becomes too costly—, that State has two alternatives: go default or go to the Troika.

[10] The game in extensive form in presented in the Appendix.
[11] The equilibrium is highlighted in red and bold font.

This is the point in which $u_s(s_m) \leq u_s(s_d)$. If the State goes default, the game ends. However, the costs of such strategy can be huge and no money is received: the Troika does not help and the markets, of course, remain closed. Given that a default has also a very high cost for capital interests and the Troika, the State knows that the Troika will make an offer λ such that $u_s(s_{t;t}, s_\lambda) \geq u_s(s_d, s_\lambda)$, if such an offer λ can also simultaneously satisfy $u_t(s_{t;t}, s_\lambda) \geq u_t(s_d, s_\lambda)$. When these three conditions are met[12], there is a unique Sub-game Perfect Nash Equilibrium, SPNE[13], in which the Troika makes an offer λ that is always accepted by the State: $\{s_{t;t}, s_\lambda\}$. Because all states that have asked for aid to the Troika have actually received it, these conditions are presumably met in reality. However, as we have seen, the conditionality imposed by the Troika π_t adopts different forms in every case. Following the game, π_t in equilibrium is isolated by adding the utilities of the two players and setting them to 0, as in Eq. (1). According to Eq. (1), π_t is always the middle point of the two bargaining players. Notice that the main assumption here is that both players have equal bargaining power[14].

$$\begin{aligned} \delta(\hat{\pi}_s - \pi_t + \alpha) + \delta(\hat{\pi}_t - \pi_t - \alpha) &= 0 \\ \delta(\hat{\pi}_s - 2\pi_t + \hat{\pi}_t) &= 0 \\ \delta(\hat{\pi}_s + \hat{\pi}_t) &= \delta(2\pi_t) \\ \delta(\pi_t) &= \delta\left(\frac{\hat{\pi}_s + \hat{\pi}_t}{2}\right) \\ \pi_t &= \frac{\hat{\pi}_s + \hat{\pi}_t}{2} \end{aligned} \tag{1}$$

Let's now suppose that implemented policies π and ideal policies $\hat{\pi}$ are located in an interval $[0, 1]$. First, assume that 1 indicates a high degree of conditionality and, thus, a larger amount and deeper pro-market economic reforms. On the other hand, assume that 0 indicates no conditionality and, thus, no need for pro-market reforms at all. Located at 0, there is the default policy π_d, that entails not meeting the obligations

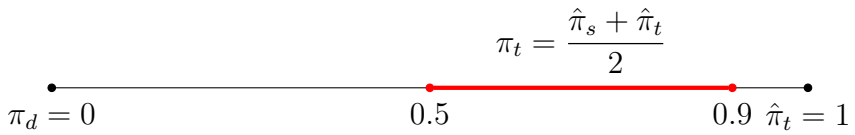
[12]These three formal conditions can be consulted in **??** .

[13]A Subg-game Perfect Nash Equilibrium, SPNE, is a refined solution of the Nash Equilibrium concept that rules out empty commitments —mainly, threats and promises— in extensive form games. It is obtained by backward induction.

[14]This assumption is later relaxed when adding the punishment function.

with creditors; at 1, there is the ideal pro-market economic policy of the Troika $\hat{\pi}_t$. Given that democratic governments depend on voters to stay in power, they are sensible to the demands of the majority, a majority mostly made of working citizens and not of capital owners. Thus, a key assumption is that $0 < \hat{\pi}_s \leq 0.8$ because even the most pro-market government needs votes to retain power[15]. Particularly, the threshold is set at $\hat{\pi}_s \leq 0.8\hat{\pi}_t$ because the most conservative government in the dataset[16] is $^{8.4}/_{10} \approx 0.8$. Additionally, not all governments are equally sensible to labour demands or equally prone to large public spending, such that $\hat{\pi}_s$ is different for conservative and left-wing governments. Particularly, $\hat{\pi}_s$ increases up to 0.8 as a government is closer to the right and decreases to 0 with extreme left governments. Fig. III shows, in red, the image of Eq. (1), whereas Fig. IV shows this function graphically. Thus, Fig. III shows the set of feasible bailout conditionality π_t in equilibrium; whereas Fig. IV shows the relationship between government partisanship and bailout conditionality in equilibrium if both players have equal bargaining power. Notice that, if players are rational, π_t in equilibrium must always be bounded between the ideal policies of the two bargaining players.

Figure III. Image of Eq. (1) for $\hat{\pi}_s \in [0, 0.8]$

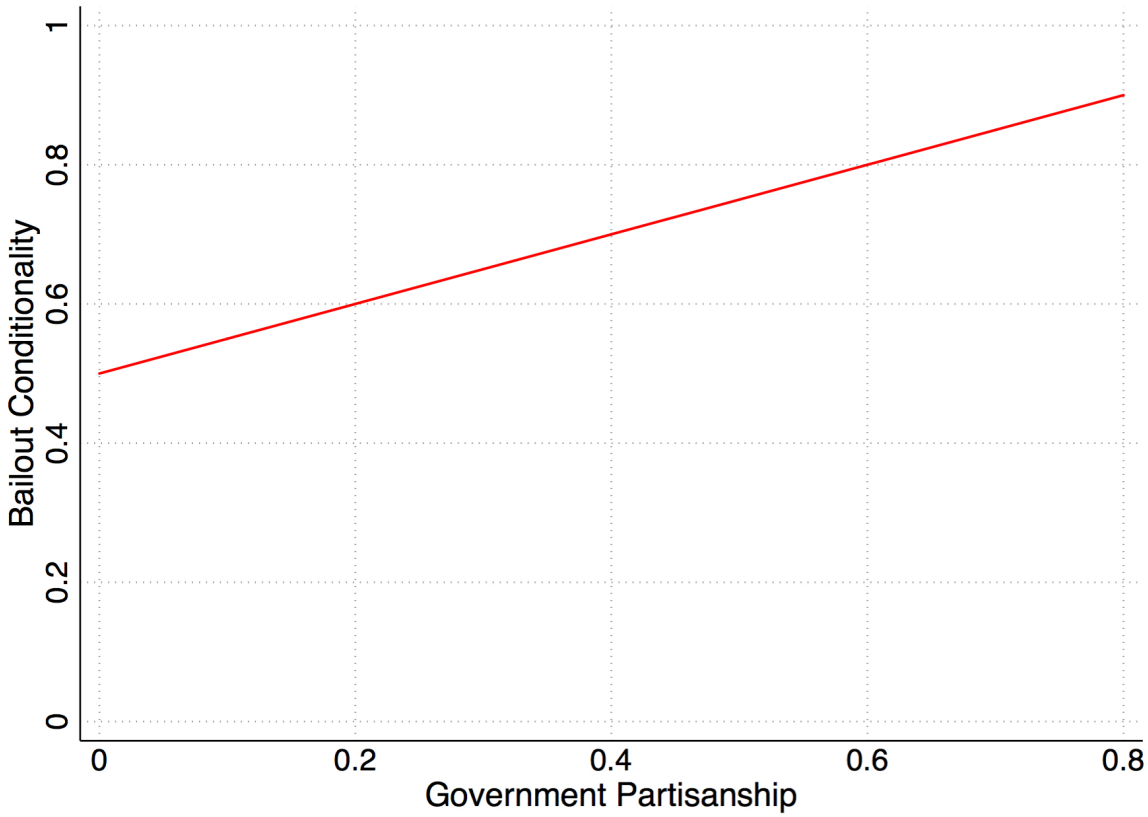


Then, another function $k(\hat{\pi}_s)$, called punishment function, is added to this function $\pi_t(\hat{\pi}_s)$, as in Eq. (2). In fact, Eq. (2) illustrates two key ideas. First, that the imposed policy in equilibrium is, a priori, the middle point between the ideal policy of the two bargaining players and; second, that left governments are punished by the Troika, that adds a monotonically decreasing punishment $k(\hat{\pi}_s)$. The maximum punishment, when $\hat{\pi}_s = 0$, is defined as $k = {}^{\hat{\pi}_t}/_2$, since this imposes the maximum policy possible in equilibrium. This is so because the agreed economic policy in equilibrium π_t will always

[15]Because the Troika is not a democratic institution, it does not need voters to stay in power. Thus, the Troika does not face any type of democratic constraint.

[16]This information is displayed in Table III.

Figure IV. Plot of Eq. (1) for $\hat{\pi}_s \in [0, 0.8]$



be bounded $\hat{\pi}_s \leq \pi_t \leq \hat{\pi}_t$, since any agreed policy will necessarily be between the ideal policy of both bargaining players. When the government is extremely pro-market, this is when $\hat{\pi}_s = 0.8\hat{\pi}_t$; the Troika rewards the parties in government by imposing lower conditionality. Or, in other words, a reward in form of negative punishment[17], such that $k = -\hat{\pi}_t/2 \times z$, where z is just a parameter that adjusts the slope and ensures that the policy in equilibrium is always bounded between the ideal policies of both bargaining players.

The reason for a reward in form of negative punishment for conservative governments is two-fold. First, there is no need to impose a lot of conditionality on a government that is already willing to apply on its own the same kind of measures to be agreed. And second, it allows conservative governments to send the message to voters that they have been able to retain economic sovereignty, which increases their chances of winning the next election. It is for analogous reasons that the punishment function

[17]For further discussion on the construction of the punishment function $k(\hat{\pi}_s)$, see the Appendix.

shifts the equilibrium to the Troika's ideal policy when bargaining with extreme left governments —mainly, to make sure that agreed measures are actually implemented, as well as to reduce extreme left parties' chances of re-election. Thus, as argued in **??**, the logic of the Schelling conjecture does not apply in this context, since the Troika uses the domestic constraint of left governments to reduce their chances of retaining political power. Though counterintuitive at first, the idea is simply that the Troika tires to help governments with similar economic interests – in other words, conservative ones. Precisely, the punishment function, once added to Eq. (1), reflects this key idea, as in Eq. (2).

$$\begin{gathered} \pi_t(\hat{\pi}_s) = \frac{\hat{\pi}_t + \hat{\pi}_s}{2} + k(\hat{\pi}_s) \\ \text{such that } k(\hat{\pi}_s) = \frac{\hat{\pi}_t}{2} - \frac{1}{2}(z+1)\hat{\pi}_s \\ \text{and that } \hat{\pi}_s \leq \pi_t(\hat{\pi}_s) \leq \hat{\pi}_t \end{gathered} \tag{2}$$

Then, using substitution, Eq. (3) is found. In fact, Eq. (3) shows that an extreme-left government will get the worst possible bailout; and that bailout agreements get monotonically loose as governments become more conservative.

$$\begin{gathered} \pi_t(\hat{\pi}_s) = \frac{\hat{\pi}_t + \hat{\pi}_s}{2} + \frac{\hat{\pi}_t}{2} - \frac{1}{2}(z+1)\hat{\pi}_s \\ \pi_t(\hat{\pi}_s) = \hat{\pi}_t - \frac{z}{2}\hat{\pi}_s \end{gathered} \tag{3}$$

The next step consists in isolating z for $\hat{\pi}_s \leq 0.8\hat{\pi}_t$, since this is the maximum value that $\hat{\pi}_s$ may take. By setting this inequality, Eq. (4) is found. In fact, Eq. (4) shows that the parameter z adjusting the slope will never be greater than 0.5.

$$\begin{gathered} \pi_t(\hat{\pi}_t) \leq 0.8\hat{\pi}_t \\ \hat{\pi}_t - \frac{z}{2}0.8\hat{\pi}_t \leq 0.8\hat{\pi}_t \\ z \leq \frac{1}{2} \equiv z \leq 0.5 \end{gathered} \tag{4}$$

Finally, there is Eq. (5), which illustrates that π_t in equilibrium shifts to $\hat{\pi}_t$ when $\hat{\pi}_s = 0$, and that $\hat{\pi}_t$ is monotonically decreasing in $\hat{\pi}_s$. In contrast to Eq. (3), Eq. (5) ensures that

the final outcome is bounded between the ideal policies of both bargaining process – for the rest, both functions are the same. The image of Eq. (5) when $z = 0.5$ is graphed in Fig. V, whereas the function itself is plotted in Fig. VI. Again, Fig. V shows the values that bailout conditionality in equilibrium π_t may adopt, whereas Fig. VI shows the relationship between government partisanship and bailout conditionality according to Eq. (5). Whereas Fig. IV shows the relationship between government partisanship and bailout conditionality when there is no punishment —this is, when players have equal bargaining power—, Fig. VI shows how this relation is inverted after the addition of the punishment function. Thus, according to Fig. VI, bailout conditionality should decrease as governments become more conservative[18].

$$\pi_t(\hat{\pi}_s) = \hat{\pi}_t - \frac{z}{2}\hat{\pi}_s \quad \text{such that } 0 < z \leq 0.5 \tag{5}$$

Figure V. Image of Eq. (5) for $\hat{\pi}_s \in [0, 0.8]$ & $z = 0.5$

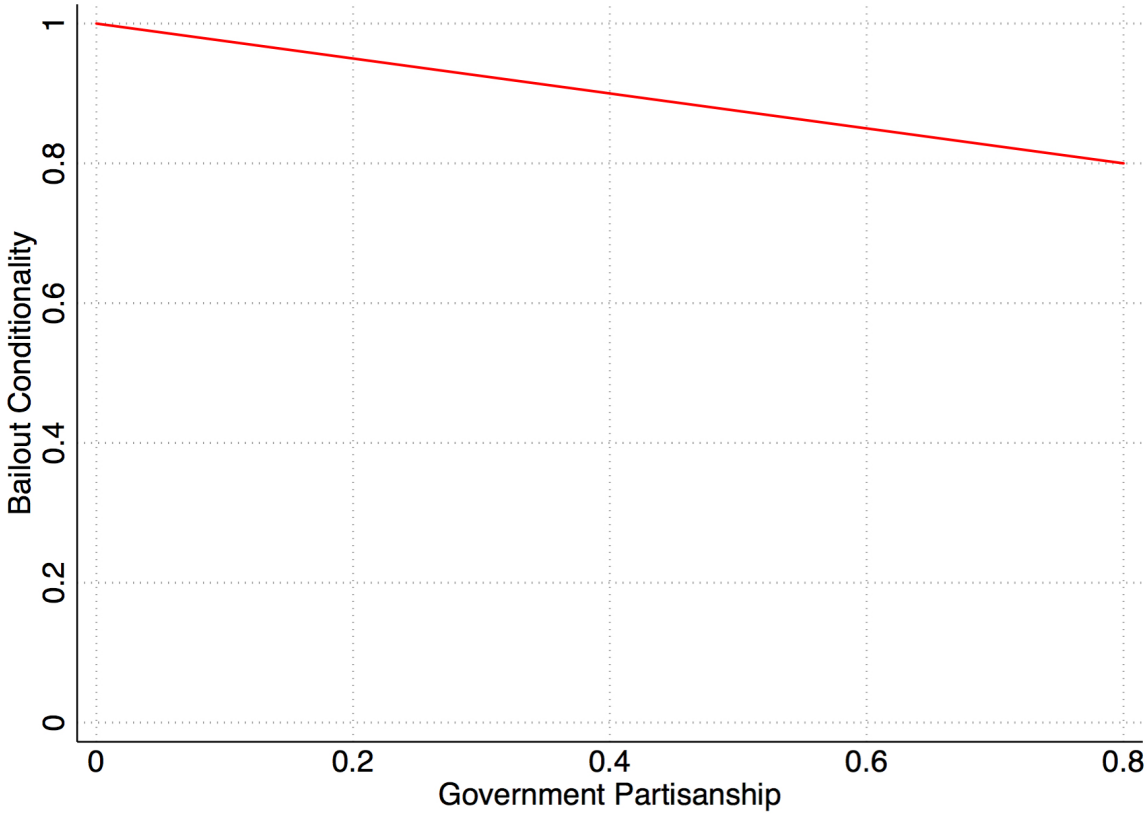
The function that defines conditionality π_t in equilibrium suggests the hypothesis that the Troika is more likely to agree on less stringent bailout programs with conservative governments than it is with labour ones, holding all else constant. Then, the main theory to be tested can be defined as in Eq. (6), where β_1 is expected to be negative:

$$\pi_t = \beta_1 \hat{\pi}_s \tag{6}$$

Following the standard approach in quantitate analysis, this hypothesis is tested with an econometric model that keeps constant a set of controls that could also affect bailout conditionality. Following the previous discussion on the economic determinants

[18]Notice that when $z = 0.5$, the model works only for all $0 \leq \hat{\pi}_t \leq 0.8$; however, as z decreases and the slope flattens, the model applies to a wider range of $\hat{\pi}_s$ values.

Figure VI. Plot of Eq. (5) for $\hat{\pi}_s \in [0, 0.8]$ & $z = 0.5$



of bailouts in **??**, these variables are public debt as a percentage of GDP θ, the balance of payments η and the risk premium ρ. Thus, π_t is now Eq. (7), which is Eq. (6) with controls, where β_2 and β_4 should be positive and β_3 should be negative.

$$\pi_t = \beta_1 \pi_s + \beta_2 \theta + \beta_3 \eta + \beta_4 \rho \tag{7}$$

Adding a constant and an error term, Eq. (8) is the overall model to be tested.

$$\pi_t = \beta_0 + \beta_1 \pi_s + \beta_2 \theta + \beta_3 \eta + \beta_4 \rho + \epsilon \tag{8}$$

Following this model, government partisanship should have a negative impact on bailout conditionality, indicating that as governments become more conservative, conditionality decreases, keeping key macroeconomic variables such as the balance of payments, risk premium and inflation constant. This is so if and only if the Troika pun-

ishes left governments; otherwise, according to the game and following the Schelling conjecture, conditionality in equilibrium steadily increases with $\hat{\pi}_s$. Thus, the main theory to test is that the level of conditionality imposed by the Troika in case of bailout π_t decreases as government partisanship $\hat{\pi}_s$ increases.

5. Empirical Analysis

In this section we present a set of econometric models that test if left governments are punished by Troika with more bailout conditionality when they are bailed out. We first discuss the data and variables used to to perform the econometric analysis. Then, we present the econometric models and discuss the implications of the main findings, which indicate that conservative governments get less conditionality when they are in power during the negotiation of their country's bailout.

5.1 Dataset & Variables

The central hypothesis —that left governments are punished by the Troika— is tested running a set of regression models on a pooled time-series cross-section dataset. In this type of dataset, each unit —each country— is observed repeatedly over a specific period of time —all quarters between 2008 and 2015. Following Beck (2001 p. 273), time-series cross-section datasets, in their simplest form, can be formalised as in Eq. (9):

$$y_{it} = \boldsymbol{x}_{it}\beta + \epsilon_{it} \tag{9}$$

such that i=1,...,N and t=1,...,T.[19] The cross-country dimension of this analysis is

[19] In words of Beck and Katz (2007 p. 182), "the paradigmatic comparative political economy studies [...] have about 30 annual observations on about 20 advanced industrial democracies. [...] TSCS typically have between 10 and 50 observations and between 10 and 50 units" (Beck and Katz, 2007 p. 183). Unlike classical microeconomic panels, that tend to be clearly N dominant, time-series cross-section datasets are usually T dominant. This implies that asymptotic properties of the estimators depend on T, the time window, and not on N, the number of cases. Thus, "[t]he critical issue is whether T is large enough so that i averaging over time yields stable results, and also whether it is large enough

formed by the 8 countries that were rescued by the Troika, whereas the time-series dimension is made of all the quarters since the crisis started or, in other words, of all the quarters between 2008 and 2015, both included[20]. The set of variables of the model, as well as their nature, scope and statistical treatment, are listed and explained below. Table III shows a summary of the main descriptive statistics of all the variables[21].

Following the qualitative discussion on the 8 bailout agreements at the beginning of this paper, **Bailout Conditionality** is a non-negative count variable that was created via a qualitative content analysis. First, all bailout agreements[22] and their revisions were downloaded and then, all the conditions to be taken on each quarter[23] were added. When there is no bailout going on or the bailout schedules no measures[24] for a particular quarter, this variable adopts the value of 0. Additionally, when a bailout agreement does not specify when measures are due to, all the measures on that bailout agreement are added and divided by the number of quarters for which the bailout is to be in force, getting an average. Finally, when bailout agreements are revised, the previous agreement remains in force. Thus, an additive approach is chosen, in the sense that the measures scheduled in revisions are added to the measures already agreed[25] in the original bailout and in previous revisions. Fig. VII presents a graphical representation of this variable.

to make some econometric issues disappear. While there is no magic cut-off level, [...] comparative politics TSCS data sets we work with commonly have T's of twenty or more" (Beck & Katz, 2009 p. 3). Since the dataset of this paper contains 8 cases and almost 30 observations per case, this key element is met.

[20]The start year is 2008 because there was no crisis going on before 2008, which means that there could be no bailout before 2008. Consequently, the dependent variable is censored for observations prior to 2008. The last year is 2015 because of data availability.

[21]Notice that, in this summary, variables are raw or, in other words, without any statistical treatment. The distribution of all variables after treatment is reported in the Appendix.

[22]All bailout agreements can be found in the European Commission website: `http://ec.europa.eu/economy_finance/assistance_eu_ms/index_en.htm`.

[23]Usually, measures are scheduled for particular quarters or months.

[24]Notice that a measure is a particular policy reform, usually of economic nature and pro-market sign. Measures —or reforms— constitute the so-called conditions discussed in Section 2.

[25]This approach is imprecise, since some measures in the revisions are not really new measures, but just target revisions of previous measures, or the same measures re-scheduled. For instance, if a government must, for a particular quarter, increase the retirement age 1 year and to reduce the average pension a 5%; these count as 2 different measures. If later on the agreement is revised and that government needs to increase the retirement age 2 years and to reduce the average pension a 10% instead, these count as 2 new measures, even if they are not really new but just a target update. However, these are a minority, and most measures in revisions are actually new measures.

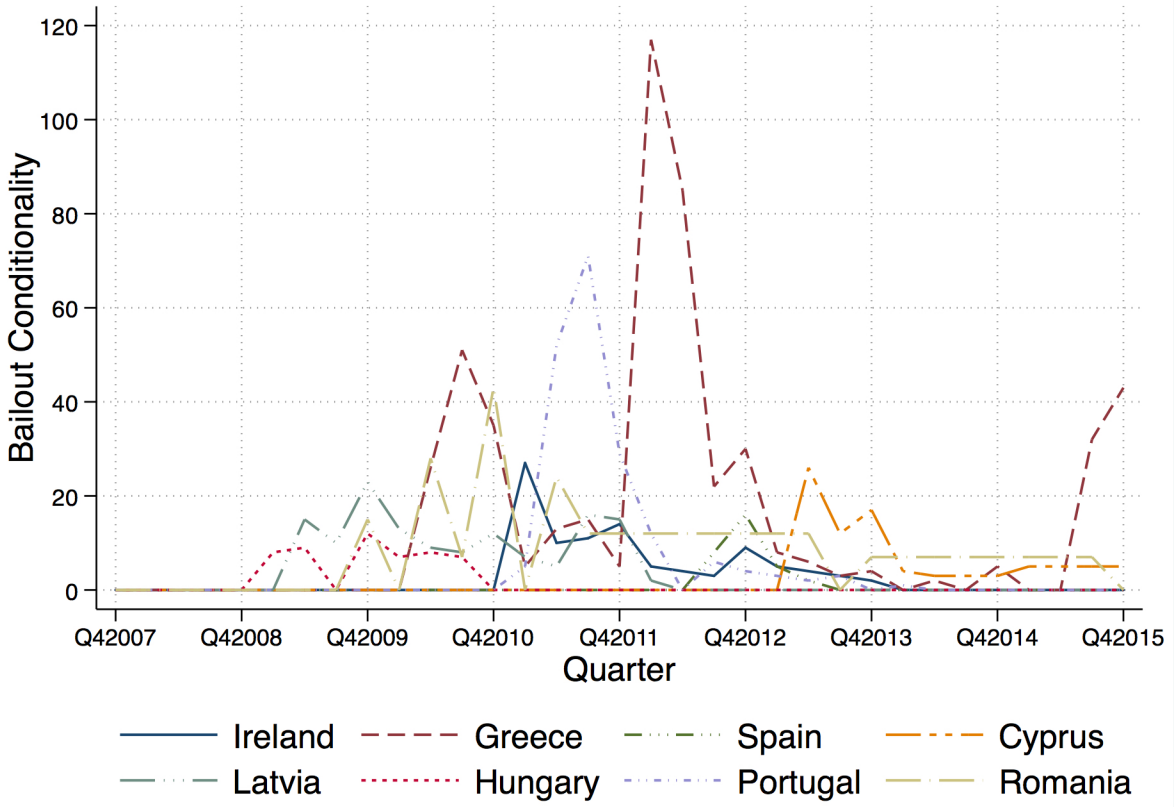
Table III. Variables Summary

Variable	Mean	S.Dev	Min	Max	Obs
Bailout Conditionality					
Overall	4.7	12.2	0.0	117.0	288
Between		4.3	0.9	14.1	8
Within		11.5	−9.3	107.7	36
Government Partisanship					
Overall	5.4	1.7	1.1	8.4	288
Between		0.9	4.2	7.2	8
Within		1.5	2.3	9.6	36
Public Debt					
Overall	76.4	41.6	8.2	181.8	288
Between		37.3	28.4	145.2	8
Within		22.5	16.8	118.4	36
Balance of Payments					
Overall	−3.8	7.3	−37.4	16.3	232
Between		3.3	−8.5	0.6	8
Within		6.6	−32.6	17.4	29
Interest Rate					
Overall	6.1	3.4	0.8	25.4	288
Between		1.7	4.1	9.3	8
Within		2.9	0.6	21.7	36

Government Partisanship is the main variable of interest and was created leveraging the ParlGov cabinet database[26]. This is a cabinet-party database that contains the

[26]ParlGov cabinet database website is `http://www.parlgov.org/static/static-2014/`

Figure VII. Bailout Conditionality



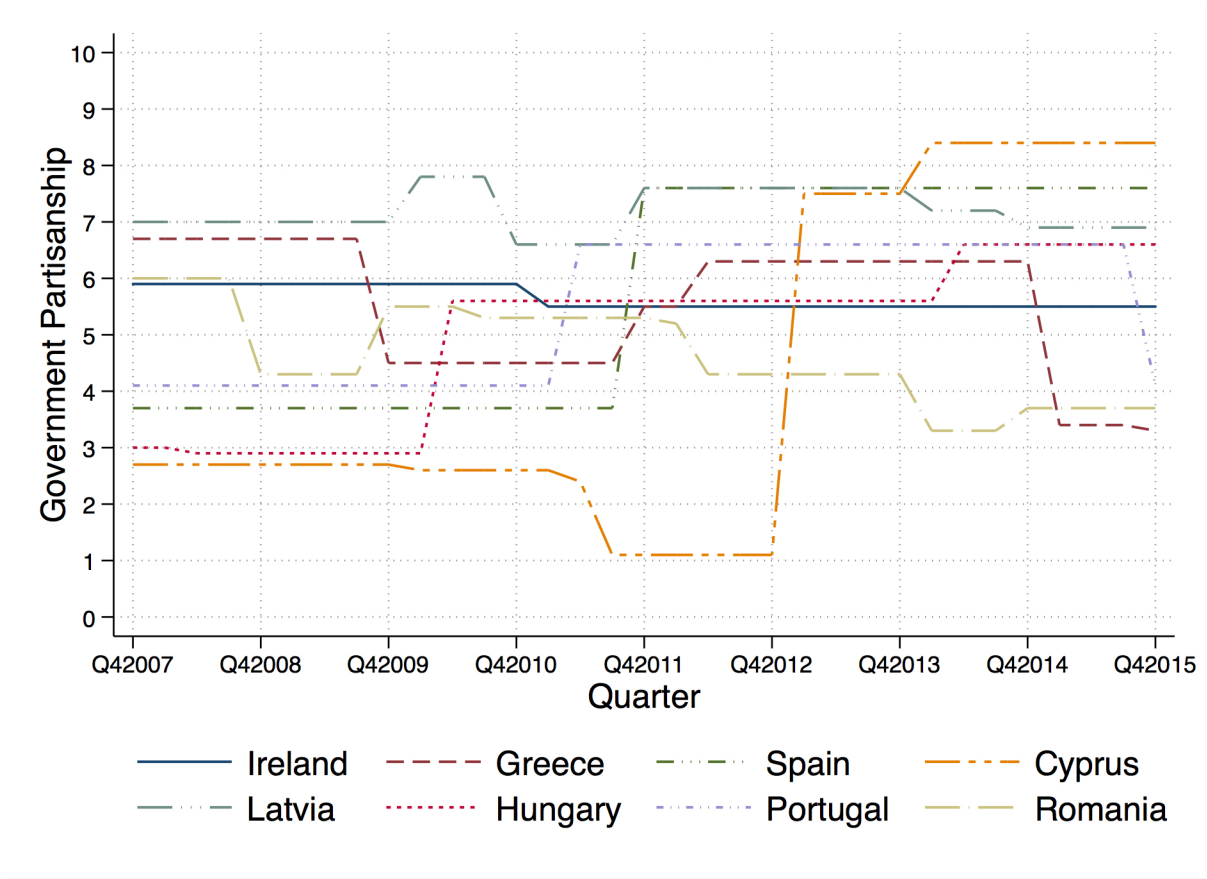
2010 CHESS scale[27] value for each party, as well as the number of seats of each party on the national Parliament. First, the total number of seats of each party in the cabinet over the total number of seats of the cabinet is computed. After, this variable is multiplied by the ideology of each party in the government coalition according to the CHESS scale. Doing so, a weighted average of each cabinet left-right ideology is generated. Notice that this average is weighted because the ideological position of each party in the government is multiplied by the share of seats of that party over the total seats of the cabinet. Fig. VIII presents this variable graphically.

Additionally, we make use of a number of control variables. **Public Debt as a $\%$ of GDP** is defined as the quarterly general government consolidated gross debt as a percentage of GDP, while **Balance of Payments** is defined as the quarterly balance of

stable/index.html.

[27]The Chapel Hill Expert Surveys Series (CHESS) is a $0-10$ scale that indicates 0 for extreme left parties and 10 for extreme right parties. Measured every 4 years by surveying a large sample of experts, the data this paper uses is from 2010.

Figure VIII. Government Partisanship



payments as a percentage of GDP. Finally, **Sovereign Interest Rate** represents the quarterly 10 years bonds interest rates used as the best approximation to each country's risk premium. All the macroeconomic variables are gathered from the Eurostat database.[28].

Before moving to show the results, a brief note on causal inference. Causal inference requires that changes in the independent variables precede changes in the dependent variable. But it turns out to be that bailout agreements take place occasionally in time and set conditions for the future. Consequently, how can future values of the covariates help us explain variation in bailout conditionality? It is reasonable to argue that players — rescued states and the Troika — have good forecasting capacities, but lagging the covariates is a useful tool to overcome this issue. By lagging the covariates 4 quarters[29], more past values of the covariates precede changes in the dependent

[28]Eurostat database website is `http://ec.europa.eu/eurostat/data/database`. A graphical representation of the variables can be found in the Appendix.

[29]Except government partisanship, which is only lagged 2 quarters. This is so because it is assumed

variable and, thus, the assumption of good forecasting capacities is reduced.

5.2 Results

Because the dependent variable is a non-negative count variable that does not follow a normal distribution, the model cannot be estimated using standard linear models[30]. Since the dependent variable presents both an excess of zeroes[31] and also over-dispersion[32], Poisson regression is not a good estimation method either. Negative binomial regression then arises as a significantly better approach, but with such an excess of zeroes, not even negative binomial may be the best choice. Thus, Poisson and negative binomial zero-inflated counterparts could do better, as long as there are two different data generating processes for the zeroes. Precisely, there is a majority of zeroes generated by the fact that there was no bailout going on; but there is also a small set of zeroes generated because the bailout package entailed no measures for that period[33]. Thus, zero-inflated models seem to be the way to go[34].

However, the nature of the dependent variable is not the only consideration to be made when specifying the model. Actually, unobserved time-persistent unit heterogeneity[35] is "one of the most frequently encountered challenges" (Clark & Linzer, 2014 p. 399) in time-series cross-section analysis. This phenomenon emerges "when the dependent variable exhibits group-level variation beyond what can be explained by the independent variables alone" (Clark & Linzer, 2014 p. 399). Unit unobserved time-persistent

that partisanship of the bargaining government, rather than the future governments that will apply the measures, is what affects the bargaining process and the final outcome.

[30] Scatterplots of bailout conditionality against covariates can be found in the Appendix.

[31] Approximately, two thirds —66.67%— of the observations are 0, and with a mean of 4.7, the number of expected zeroes under a Poisson regression should be just $0.87\% \approx 1\%$.

[32] Variance is 149.48 and the Pearson Dispersion statistic is 16.12. A variance greater than the mean, as well as a Pearson Dispersion statistic greater than 1 indicate over-dispersion.

[33] Zero-inflated models estimate a model with two separate parts. One is a logit or probit that explains if a count is a *true* 0 or otherwise. The other part is a negative binomial or a Poisson that predicts the value of the count when the count is not a *true* zero. In this case, *true* zeroes are those generated by the absence of bailout.

[34] A general concern with TSCS datasets is panel heteroskedasticity, but Poisson and negative binomial models do not assume homoskedasticity. Thus, heteroskedasticity is no longer a concern.

[35] Unobserved time-persistent unit heterogeneity can be formally defined as follows, where "heterogeneity, or individual effect is $\boldsymbol{z}_i'\boldsymbol{\alpha}$" (Greene, 2012 p. 385): $y_{it} = \boldsymbol{x}_{it}'\boldsymbol{\beta} + \boldsymbol{z}_i'\boldsymbol{\alpha} + \epsilon_{it}$.

heterogeneity can usually be modelled either using Fixed Effects (FE) or Random Effects (RE)[36]. However, bailed out European countries —and in fact all countries— are not randomly drawn from a representative sample; instead, they are fixed and constitute the entire population. Thus, when dealing with countries, the random effects moment condition usually fails and, consequently, fixed[37] rather than random effects should be the approach.

Because all the covariates are of political or economic nature, all of them are likely to be simultaneously affected by bailout conditionality. Consequently, the error term is likely to be correlated with the covariates, which implies that the strict exogeneity assumption may not be met.Following Wooldridge (2002 p. 490), "a simple test is to add [all the covariates suspect of not meeting the strict exogeneity assumption forwarded one period] as an additional set of covariates; under the null hypothesis, [they] should be insignificant". The results of the test yield that two covariates —public debt and the sovereign interest rate— are endogenous[38]. Since there are no valid instruments at hand, lagging 4 periods —a year— arises as the best approach. Notice, though, that government partisanship is only lagged 2 periods because it is assumed that partisanship of the bargaining government, rather than the future governments that will apply the measures, is what affects the bargaining process and the final outcome. When repeating the test but with the lagged covariates, only public debt is endogenous[39]. Thus, strict exogeneity is not fully met; but, as expected, endogeneity is reduced when lagging the covariates. Additionally, autocorrelation is frequently a problem in TSCS data (Worrall & Pratt, 2004). A very general test for serial autocorrelation is to regress the error in the predicted number of counts on the lagged error in the predicted number of counts. When doing so, serial autocorrelation seems to be present[40]. Consequently,

[36]Models that address not only intercept heterogeneity but also slope heterogeneity are not considered because these methods are data demanding and the dataset is not large. However, to the extent that the Troika may treat Eurozone and non-Eurozone members different, these varying slopes models could be of substantive interest.

[37]The inclusion of unit fixed effects means that inference is made using exclusively within unit variation, eliminating all between information.

[38]With p-values of 0.011 and 0.041, respectively.

[39]With a p-value of 0.009.

[40]With a p-value of 0.000.

the best strategy is to cluster the standard errors on the unit variable, allowing for intra-country autocorrelation.

Because this dataset has a relatively large time-series dimension, we also test for stationarity using the Levin-Lin Chu (2002) test. For a 10% significance level, the null of unit roots cannot be rejected only for public debt and sovereign interest rate, with p-values of 0.999 and 0.507, respectively[41]. A standard fix in the econometric literature is to first differentiate the covariates or, in different words, to transform levels into changes. To keep consistency, the two non-stationary covariates and the other economic covariate —the balance of payments— are all first differentiated, making them totally stationary[42]. More important, further unit-roots tests on the errors of the models effectively prove that the relationship between the covariates and the dependent variable is totally stationary.

Having discussed the basic econometric assumptions of our models, Table IV presents six specifications, all of them fitted under a zero-inflated negative binomial[43]. Models I, II and III are estimated clustering the standard errors on time, whereas Models IV, V and VI are estimated clustering the standard errors on the units. Thus, the first three models assume that errors are serially independent but contemporaneously correlated; whereas the last three assume the inverse situation[44]. In addition, to take into account unit time-persistent unobserved heterogeneity, unit dummies are incorporated in Models II, III, V and VI. Finally, to account for time dynamics in a simple fashion, a linear and a quadratic time trend are included in Models III and VI[45] —again, their inclusion is significant.

[41]The tests check the null that panels contain unit roots. In this case, the test is computed adding a time trend to the balance of payments and public debt, because a simple visual inspection of the variables indicates the presence of relatively clear trends.

[42]With p-values of 0.000.

[43]Notice that the logit part of the models has been left as a constant, only. This is so for simplicity and because this paper entails no theory of why bailouts occur.

[44]Clustering on different variables just transforms the standard errors and, thus, significance; but never the sign or the magnitude of the coefficients.

[45]Following the standard econometric notation, Models I and IV take the form of $y_{it} = \alpha + \boldsymbol{x}_{it}\beta + \epsilon_{it}$, Models II and V take the form $y_{it} = \alpha_i + \boldsymbol{x}_{it}\beta + \epsilon_{it}$ and, finally, Models III and VI correspond to $y_{it} = \alpha_i + \boldsymbol{x}_{it}\beta + \boldsymbol{z}_t\gamma_1 + \boldsymbol{z}_t^2\gamma_2 + \epsilon_{it}$, where z stands for the time trend, and γ for the coefficients of the linear and the quadratic time trends, respectively.

Table IV. Zero-Inflated Negative Binomial Models of Bailout Conditionality

	I	II	III	IV	V	VI
Government Partisanship	-0.215^{***}	-0.365^{***}	-0.324^{***}	-0.215^{*}	-0.365	-0.324^{**}
2-periods lagged	(0.068)	(0.127)	(0.100)	(0.111)	(0.279)	(0.130)
Public Debt	0.042^{***}	0.038^{**}	0.020^{*}	0.042^{***}	0.038^{***}	0.020^{*}
4-periods lagged & first differentiated	(0.015)	(0.015)	(0.011)	(0.009)	(0.009)	(0.011)
Balance of Payments	-0.040	-0.038^{*}	-0.050^{***}	-0.040^{***}	-0.038^{***}	-0.050^{***}
4-periods lagged & first differentiated	(0.026)	(0.022)	(0.013)	(0.014)	(0.013)	(0.010)
Interest Rate	0.233^{***}	0.205^{***}	0.140^{***}	0.233^{***}	0.205^{***}	0.140^{***}
4-periods lagged & first differentiated	(0.074)	(0.072)	(0.048)	(0.067)	(0.067)	(0.051)
Time Spline			0.119^{*}			0.119
			(0.064)			(0.104)
Quadratic Time Spline			-0.006^{***}			-0.006^{**}
			(0.001)			(0.002)
Fixed Effects		✓	✓		✓	✓
Constant	3.573^{***}	3.884^{***}	3.919^{***}	3.573^{***}	3.884^{**}	3.919^{**}
	(0.406)	(0.721)	(0.946)	(0.656)	(1.573)	(1.522)
Logit Inflated (constant)	0.333^{*}	0.308	0.222	0.333	0.308	0.222
	(0.175)	(0.195)	(0.217)	(0.286)	(0.298)	(0.283)
Ln(α)	-0.355^{**}	-0.562^{***}	-1.075^{***}	-0.355	-0.562^{**}	-1.075^{***}
	(0.153)	(0.176)	(0.232)	(0.254)	(0.273)	(0.347)
Cluster	28 quarters	28 quarters	28 quarters	8 countries	8 countries	8 countries
(Non-Zero) Observations	(89) 224	(89) 224	(89) 224	(89) 224	(89) 224	(89) 224
AIC	936.036	930.378	884.166	935.036	914.378	866.166

Clustered standard errors in parentheses. Unit fixed effects coefficients are omitted.

*** p<0.01, ** p<0.05, * p<0.1

All coefficients in Table IV have the sign predicted according to theory, and almost all of them remain significant in all models[46]. Taken altogether, these models are robust evidence in favour of the hypothesis that the Troika punishes left governments[47]. Notice also that coefficients of economic variables are generally smaller than the ones obtained for government partisanship. This is so not because economic variables matter less, but because economic covariates have been first differentiated and government partisanship has not. Thus, economic variables coefficients must be read as the impact of changes in differences. Because the presented coefficients are not linear and cannot thus be easily read, Fig. IX plots the predicted number of average measures per quarter against government partisanship according to Models III and VI. Thus, Fig. IX shows[48] that a left government located at 1 —where 0 is extreme left and 10 is extreme right— will get around 45 measures per quarter if it is bailed out. On the other hand, a very conservative government located at 8.5 in the same scale will only get around 5 measures per quarter, which is 9 times less than for extreme-left governments[49]. Moreover, the slope is steeper at first, indicating a clear non-linear relationship in which extreme-left governments are particularly punished by the Troika.

However, is this effect the same in all countries? Fig. X shows[50] the impact of government partisanship by unit or, in different words, for each country of the dataset. According to Fig. X, the impact of government partisanship on bailout conditionality greatly varies across countries. In fact, according to Models III and VI, an extreme-left Cypriot government would get an average of over 100 measures per quarter; while

[46] As a robustness check, these same models have been estimated with independent and robust standard errors. These other models are presented in the Appendix. The likelihood ratio and the Vuong tests confirm that zero-inflated negative binomial models are preferred to zero-inflated Poisson ones and standard negative binomial ones. Additionally, a visual residual analysis of the models shown here can be found in the Appendix.

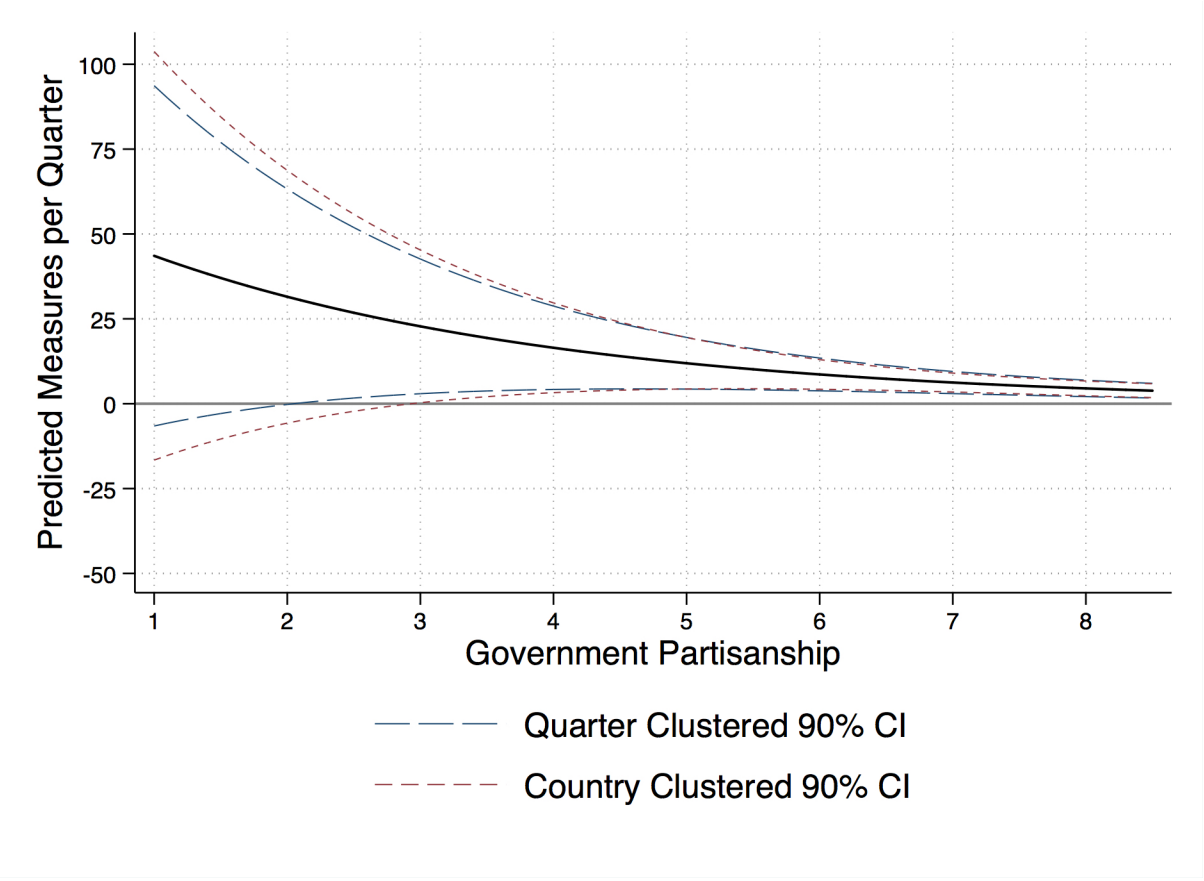
[47] Following the AIC, Models III and VI seem to have the best fit. Notice that Hilbe (2014) argues that the best method to asses the goodness of fit of count models is the AIC.

[48] Because clustering only changes the standard errors but not the coefficients, the same line represents both models. The dashed lines indicate 90% confidence intervals: long blue dashes are for the time clustered model, whereas red short dashes are for the country clustered model.

[49] The prediction is restricted to the range $1 - 8.5$ because the sample that does not include more extreme left or more extreme right governments. Notice also that the prediction for most extreme-left governments is not significant at the 90%, because the confidence intervals overlap with 0.

[50] Fig. X has no confidence intervals because otherwise it would be quite challenging to read.

Figure IX. Specifications III & VI

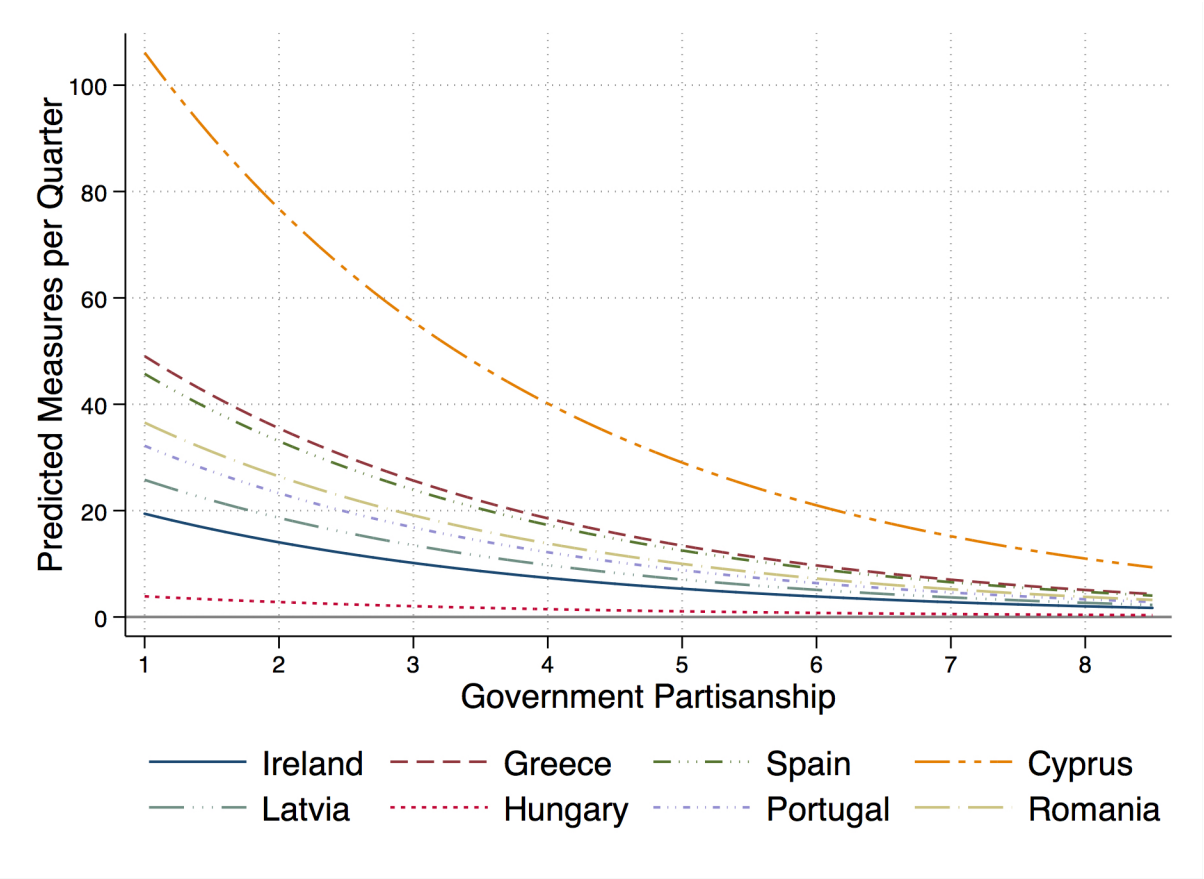


an equally lefty government in Hungary would get an average of no more than 10 measures per quarter. This apparently large unit heterogeneity is smaller for conservative governments, that get an average of 0 to 10 measures per quarter no matter the country. Additionally, the large impact that government partisanship seems to have in Cyprus is partly driven by the fact that Cyprus contains the most extreme observations. Or, said in different words, it is the country that has the most left and the most conservative governments —both the maximum and the minim values, 1.1 and 8.4 respectively, belong to it. At the opposite extreme, there is Hungary, which seems to be almost unaffected by government partisanship when explaining the variation in bailout conditionality. The rest of the countries behave in a similar fashion.

Finally, a general concern when there is a time dimension is how to model time. Generally, there are two simple possibilities: including time dummies or time trends[51]. Since

[51] Introducing time dummies allows for any kind of trend and takes into account unit-persistent time heterogeneity but, on the other hand, trends can actually adopt any polynomial form and avoid the risk overfitting, a risk particularly relevant in panels with large T and small N.

Figure X. Measures per Quarter on Government Partisanship by Country

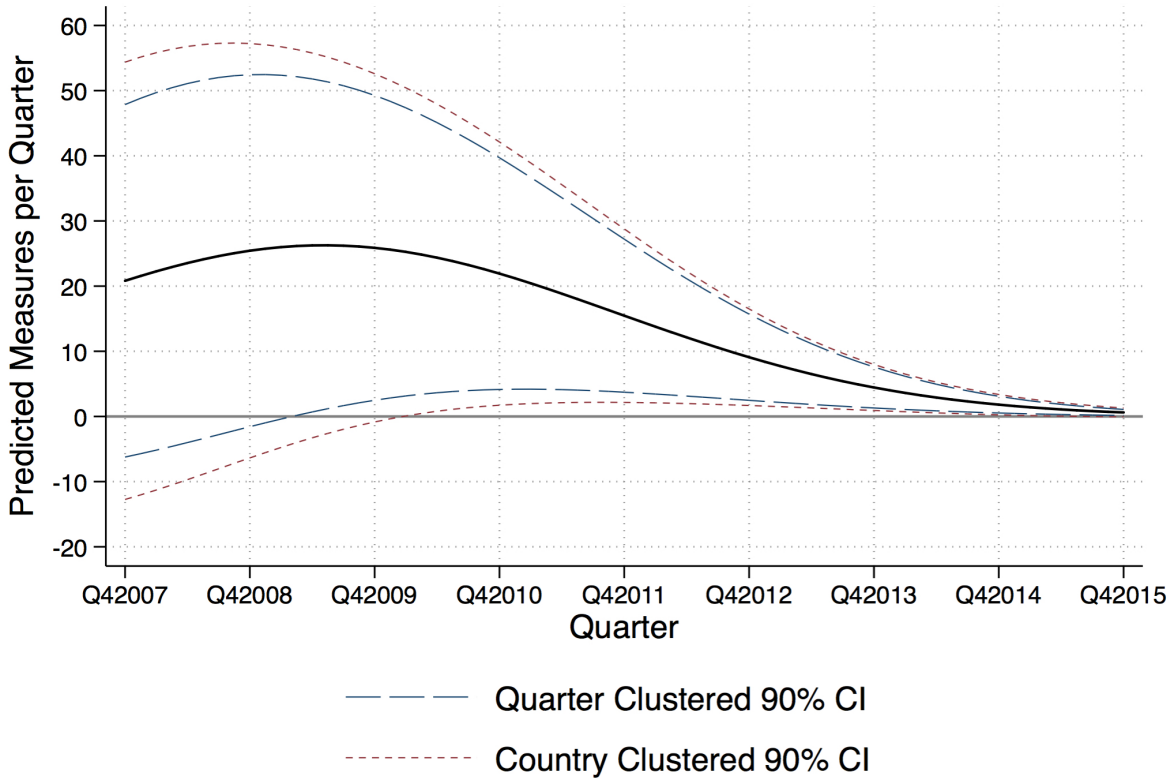


a visual inspection of the data suggests that bailout conditionality follows a quadratic rather a linear time trend, there is a good reason to model time with a quadratic time trend: thus, Models III and VI incorporate it. However, because a quadratic time trend is an interaction term, a linear time trend is also added. The impact of time is graphed in Fig. XI. This figure[52] shows that average bailout conditionality reached its peak around 2008 and 2009, with an average number of measures between 25 and 30. Then, the average number of measures per quarter decreased to almost 0 by the end of the period under study. In fact, Fig. XI seems to reflect the business cycle, to the extent that conditionality was a heavier burden when GDP was declining faster.

To sum up, our econometric analyses provide support to the hypothesis that left governments are forced to accept more conditionality when they are bailed out than their conservative counterparts. Consequently, we interpret these results as evidence that,

[52] Again, dashed lines indicate 90% confidence intervals: long blue dashes are for the time clustered model, whereas red short dashes are for the country clustered model.

Figure XI. Measures per Quarter on Time with 90% CI



given that the Troika prefers conservative to left governments, international institutions tend to impose more bailout conditionality on left governments than on conservative ones, reducing left parties chances of re-election. However, the impact of government partisanship on bailout conditionality is not homogeneous: instead, it seems to greatly vary across countries. But not only space matters: time does as well. In other words, the quadratic time trend seems to reflect the global business cycle, to the extent that bailout conditionality was larger during the peak of the 2008 world recession.

6. Conclusion

There is a large literature on the effect of domestic politics in international bargaining within the framework of the so-called Schelling conjecture. Building on this rich literature, this paper argues that, in addition to classic macroeconomic variables, gov-

ernment partisanship can also help us understand the huge variation in EU bailout conditionality. Thus, we have proposed a theory that suggests that the Troika imposes more bailout conditionality on left governments than it does on conservative ones when there is a national bailout. Thus, this theory challenges the application of the conjecture when studying EU bailout conditionality, to the extent that more domestically constrained governments —left ones— seem to get worse bailout agreements.

The argument and the related empirical results suggest that conservative governments are more likely to get lower conditionality when bargaining with the Troika than left-wing governments are. This empirical conclusion matches the implications of the theoretical model, as well as the political literature on international bailout bargaining. In other words, working on Rickard, Caraway & Anner's (2012) assumption that left and right governments satisfy different electorates, we find that Sattler's (2013) argument on market negative reaction towards left-wing governments can be extrapolated to EU bailouts, in which the Troika, like the markets, treats conservative governments better. Hence, the Schelling (1960) conjecture does not seem to apply in the context of EU bailout conditionality. This is presumably so because the differential domestic constraints between labour and conservative governments force left governments to step out of power if confronted with restrictive austerity or burdensome reforms policy, which we assumed to be the favourite mechanisms of international financial institutions such as the Troika. Further research may explore whether this finding holds in other cases outside of Europe or, perhaps, in a theoretical context in which the bargaining over policies attached to a bailout package are not unidimensional, as assumed in this paper.

7. Bibliography

1. BAEZAR, Q; & WOO, B (2015). *IMF Conditionality, Government Partisanship and the Progress of Economic Reforms.* Michigan: American Journal of Political Science. Available at: http://myweb.fsu.edu/qbeazer/research/BeazerWooAJPSforthcoming.pdf.

2. BANSAK, K; BECHTEL, M; HAINMUELLER, J; & MARGALIT, Y (2016). *The Ideological Basis of the Grexit Debate.* Stanford: Stanford University Graduate School of Business Research Papers. Available at: http://ssrn.com/abstract=2715746.

3. BECHTEL, M; HAINMUELLER, J; & MARGALIT, Y (2014). *Preferences for International Redistribution: The Divide over the Eurozone Bailouts.* Michigan: American Journal of Political Science. Available at: http://onlinelibrary.wiley.com/doi/10.1111/ajps.12079/epdf.

4. BECK, N (2001). *Time-Series Cross-Section Data: What Have We Learned in the Past Few Years?* Michigan: Annual Review of Political Science. Available at: http://www-personal.umich.edu/~franzese/Beck.TSCS.WhatHaveWeLearned.2001.annurev.polisci.4.1.271.pdf.

5. BECK, N (2006). *Time-Series Cross-Section Methods.* New York: New York University. Available at: as.nyu.edu/docs/IO/2576/beck.pdf.

6. BECK, N; & KATZ, J (2009). *Modelling Dynamics in Time-Series Cross-Section Political Economy Data.* Pasadena: Social Science Working Paper. Available at: http://jkatz.caltech.edu/research/files/wp1304.pdf.

7. BECK, N; & KATZ, J (1995). *Nuisance vs. Substance: Specifying and Estimating Time-Series Cross-Section Models.* Oxford: Political Analysis. Available at: http://www.jstor.org/stable/25791568.

8. BECK, N; & KATZ, J (2007). *Random Coefficient Models for Time-Series Cross-Section Data: Monte Carlo Experiments.* Oxford: Political Analysis. Available at: www.nyu.edu/gsas/dept/politics/faculty/beck/beck_katz.pdf.

9. BECK, N; & KATZ, J (1995). *What to do (and not to do) with Time-Series Cros-Section Data.* The American Political Science Review. Available at: http://www.jstor.org/stable/2082979.

10. CANTOR, R; & PACKER, F (1996). *Determinants and Impact of Sovereign Credit Ratings.* New York: Economic Policy Review. Available at: https://www.newyorkfed.org/medialibrary/media/research/epr/96v02n2/9610cant.pdf.

11. CANUTO, O; DOS SANTOS, P; & PORTO, P (2004). *Macroeconomics and Sovereign Risk Ratings.* Washington: World Bank. Available at: http://siteresources.worldbank.org/EXTPREMNET/Resources/ratingsUSP.pdf.

12. CARAWAY, T; RICKARD, S; & ANNER, M (2012). *International Negotiations and Domestic Politics: The Case of IMF Labor Market Conditionality.* International Organisation. Available at: http://personal.lse.ac.uk/RICKARD/imf.pdf.

13. CLARK, T; & LINZER, D (2014). *Should I use Fixed or Random Effects?* Political Science Research and Methods. Available at: http://www.tomclarkphd.com/publications/ClarkLinzerPSRM2015.pdf.

14. COLLIGNON, S; ESPOSITO, P; & LIERSE, H (2013). *European Sovereign Bailouts, Political Risk and the Economic Consequences of Mrs. Merkel.* Available at: http://www.stefancollignon.de/PDF/Political_Risk_Merkel.pdf.

15. CONNOLLY, K; & TRAYNOR, I (October 29, 2008). *Hungary receives rescue package, with strings attached.* The Guardian. Available at: http://www.theguardian.com/business/2008/oct/29/hungary-economy-imf-eu-world-bank.

16. COOPER, R (March 25, 2013). *Cyprus bailout: timeline.* The Telegraph. Available at: http://www.telegraph.co.uk/finance/financialcrisis/9951858/Cyprus-bailout-timeline.html.

17. EUROSTAT DATABASE. Available at: http://ec.europa.eu/eurostat/data/database.

18. FRAYER, L (January 23, 2014). *Spain exits bailout program; second Eurozone country to do so.* Los Angeles Times. Available at: http://www.latimes.com/world/worldnow/la-fg-wn-spain-exits-international-bailout-20140123-story.html.

19. GOW, D (October 29, 2008). *Romania becomes third eastern European EU country to be bailed out.* The New York Times. Available at: http://www.theguardian.com/business/2009/mar/25/romania-bailed-out-recession.

20. GREENE, W (2012). *Econometric Analysis. International Edition.* United States: Pearson.

21. GROSSMAN, E; & WOLL, C (2012). *Saving the Banks: the Political Economy of Bailouts.* Paris: Science Po. Available at: http://cps.sagepub.com/content/early/2013/06/17/0010414013488540.

22. HIGGINS, M & KLITGAARD, T (2014). *The Balance of Payments Crisis in the Euro Area Periphery.* New York: New York Federal Reserve. Available at: https://www.newyorkfed.org/medialibrary/media/research/current_issues/ci20-2.pdf.

23. HILBE, J (2014). *Modeling Count Data.* New York: Cambridge University Press.

24. HOECHLE, D (2007). *Robust standard errors for panel regressions with cross-sectional dependence.* Texas: The Stata Journal. Available at: http://www.stata-journal.com/sjpdf.html?articlenum=st0128.

25. — (December 24, 2008). *IMF approves bail-out for Latvia.* BBC. Available at: http://news.bbc.co.uk/1/hi/business/7798776.stm.

26. MAGNAY, D; MCLAUGHLIN, E; NAIK, B; & RETINIOTIS, M (May 2, 2010). *Greece accepts bailout package.* CNN. Available at: http://money.cnn.com/2010/05/02/news/international/greece_bailout/.

27. MAURER, H; & GRUSSENMEYER, P (2015). *Statistics Paper Series. Financial Assistance Measures in the Euro Area from 2008 to 2013: statistical framework and fiscal impact.* Frankfort: European Central Bank. Available at: https://www.ecb.europa.eu/pub/pdf/scpsps/ecbsp7.en.pdf.

28. NIEPMANN, F; & SCHMIDT-EISENLOHR, T (2011). *Bank bailouts in a global economy: the challenges for international cooperation.* London: London School of Economics. Available at: http://cep.lse.ac.uk/pubs/download/cp335.pdf.

29. OSBORNE, M (2003). *An Introduction to Game Theory.* Oxford University Press.

30. PAPADOPOULOU, E; & SAKELLARIDIS, G (2012). *The Political Economy of Public Debt and Austerity in the EU.* Brussels: Transform! European Network for Alternative Thinking and Political Dialogue. Available at: http://transform-network.net/uploads/tx_news/public_debt.pdf.

31. PEACH, G (December 22, 2011). *Latvia's 3-year bailout program comes to an end.* CSNews. Available at: http://www.cnsnews.com/news/article/latvias-3-year-bailout-program-comes-end.

32. PODESTA, F (2002). *Recent Developments in Quantitative Comparative Methodology: the Case of Pooled Time-Series Cross-Section Analysis.* Brescia: Universitá degli Studi di Brescia. Available at: http://www.unibs.it/sites/default/files/ricerca/allegati/1233pode202.pdf.

33. — (May 4, 2011). *Portugal reaches deal on EU and IMF bail-out.* BBC. Available at: http://www.bbc.co.uk/news/business-13275470.

34. — (March 28, 2013). *Q&A: Cyprus deal.* BBC. Available at: http://www.bbc.co.uk/news/business-21922110.

35. RICKARD, S; & CARAWAY, T (2014). *International Negotiations in the Shadow of National Elections.* International Organization. Available at: http://journals.cambridge.org/abstract_S0020818314000058.

36. — (October 29, 2008). *Romania to start talks on new IMF, EU deal.* EUBusiness. Available at: http://www.eubusiness.com/news-eu/romania-economy-imf.ptm.

37. SATTLER, T (2013). *Do Markets Punish Left Governments?* The Journal of Politics. Available at: http://www.jstor.org/stable/10.1017/s0022381613000054.

38. SAUCEDO, E; & RULLAN, S (2014). *Two Effects of the European Financial Crisis.* Business Systems Research. Available at: http://www.degruyter.com/downloadpdf/j/bsrj.2041.5.issue-2/bsrj-2014-0009/bsrj-2014-0009.xml.

39. SCHELLING, T (1960). *The Strategy of Conflict.* Cambridge: Harvard University Press.

40. SCHNEIDER, C (2013). *Bilateral Financial Bailouts.* San Diego: University of California SD. Available at: http://pages.ucsd.edu/~cjschneider/monnet/crisis/schneider.

41. SCHNEIDER, C (2015). *The Globalisation of Electoral Politics in the European Union.* San Diego: University of California SD. Available at: http://wp.peio.me/wp-content/uploads//PEIO9/102_80_1442875893041_electoralpolitics_peio.pdf.

42. SCHWARZ, C (2014). *Investor fears and risk premia for rare events.* Frankfort: Deutsche Bundesbank. Available at: https://www.bundesbank.de/Redaktion/EN/Downloads/Publications/Discussion_Paper_1/2014/2014_02_24_dkp_03.pdf?__blob=publicationFile.

43. SMITH, H (June 19, 2011). *Greece needs another €110bn bailout to avoid debt default, says Papandreou.* The Guardian. Available at: http://www.theguardian.com/world/2011/jun/19/greece-papandreou-second-bailout-figure.

44. TARAR, A (2001). *International Bargaining with Two-Sided Domestic Constraints.* Journal of Conflict Resolution. Available at: http://www.nyu.edu/gsas/dept/politics/seminars/tarar.pdf.

45. TREMLETT, G (June 9, 2012). *Spain to get bank bailout that may run up to 100bn.* The Guardian. Available at: http://www.theguardian.com/world/2012/jun/09/spain-bank-bailout-eurozone-crisis.

46. WATERFIELD, B (November 22, 2010). *Ireland forced to take EU and IMF bail-out package.* The Telegraph. Available at: http://www.telegraph.co.uk/finance/financialcrisis/8150137/Ireland-forced-to-take-EU-and-IMF-bail-out-package.html.

47. WOOLDRIDGE, J (2002). *Econometric Analysis of Cross-Section and Panel Data.* London: The MIT Press.

48. WORRALL, J; & PRATT (2004). *Estimation Issues Associated with Time-Series Cross-Section Analysis in Criminology.* Western Criminology Review. Available at: http://www.westerncriminology.org/documents/WCR/v05n1/article_pdfs/worrall.pdf.

Appendix

Extensive Form Game

Taking the formal definition of an extensive form game provided by Osborne in his book *An Introduction to Game Theory* (2003), the game can be formalised in extensive form as follows:

1. A set of two players P_i, such that $i \in \{\text{State}, \text{Troika}\}$.
2. A set of five terminal histories E, such that (s_m), (s_d), (s_t, λ, s_m), (s_t, λ, s_t) and (s_t, λ, s_d).
3. A player function ι for each player, such that $P(\emptyset) =$ State, $P(s_t) =$ Troika and $P(\lambda) =$ State.
4. For each player i, a set of preferences over the terminal histories, such that, for the State:

$$u_s = \begin{cases} -|\hat{\pi}_s - \pi_m| + \beta & \text{if } \{s_m, \lambda\} \\ \delta(-|\hat{\pi}_s - \pi_m| + \beta) & \text{if } \{s_{t;m}, \lambda\} \\ \delta(-|\hat{\pi}_s - \pi_t| + \alpha) & \text{if } \{s_{t;t}, \lambda\} \\ \delta(-|\hat{\pi}_s - \pi_d|) & \text{if } \{s_{t;d}, \lambda\} \\ -|\hat{\pi}_s - \pi_d| & \text{if } \{s_d, \lambda\} \end{cases}$$

   And, for the Troika:

$$u_t = \begin{cases} -|\hat{\pi}_t - \pi_m| & \text{if } \{s_m, \lambda\} \\ \delta(-|\hat{\pi}_t - \pi_m|) & \text{if } \{s_{t;m}, \lambda\} \\ \delta(-|\hat{\pi}_t - \pi_t| - \alpha) & \text{if } \{s_{t;t}, \lambda\} \\ \delta(-|\hat{\pi}_t - \pi_d|) & \text{if } \{s_{t;d}, \lambda\} \\ -|\hat{\pi}_t - \pi_d| & \text{if } \{s_d, \lambda\} \end{cases}$$

Uniqueness of the SPNE

Let's formally derive the conditions that make of $\{s_{t;t}, \lambda\}$ a unique Sub-Game Perfect Nash Equilibrium. First, (a) there must be an exogenous economic shock. Moreover, there must be room for the Troika to make a proposal λ that, if accepted, generates better outcomes than default for both (b) the Troika and (c) the State. If these three conditions are met, the already identified equilibrium is unique. The shock condition can be written as in Eq. (10).

$$-|\hat{\pi}_s - \pi_m| + \beta \leq -|\hat{\pi}_s - \pi_d| \tag{10}$$

And the two conditions that λ need to satisfy are, first, to be better for the State than going default in any of the two stages of the game, as in Eq. (11).

$$\delta(-|\hat{\pi}_s - \pi_t| + \alpha) \geq -|\hat{\pi}_s - \pi_d| \tag{11}$$

And, second, to be better for the Troika than the State going default in any stage of the game, as in as in Eq. (12).

$$\delta(-|\hat{\pi}_t - \pi_t| - \alpha) \geq -|\hat{\pi}_t - \pi_d| \tag{12}$$

Punishment Function

The punishment function $k(\hat{\pi}_s)$ has been defined as linear, following Eq. (13).

$$k(\hat{\pi}_s) = a + B\hat{\pi}_s \tag{13}$$

Then, it is only necessary to define two points that make it monotonically decreasing, as in Eq. (14). Specifically, the function $k(\hat{\pi}_s)$ is defined by identifying the two extreme values that $\hat{\pi}_s$ may take. The maximum value that $k(\hat{\pi}_s)$ takes is $\hat{\pi}_t/2$, because this pushes π_t up to 1, such that $\pi_t = \hat{\pi}_t = 1$ when $\hat{\pi}_s = 0$. The minimum punishment value is defined as $-\hat{\pi}_t/2 \times z$, when $\hat{\pi}_s = \hat{\pi}_t$, this is, when a government is as pro-market as the Troika is.

$$k(\hat{\pi}_s) = \begin{cases} \dfrac{\hat{\pi}_t}{2} & \text{if } \hat{\pi}_s = 0 \\ -\dfrac{\hat{\pi}_t}{2} z \text{ s.t. } 0 < z \leq 1 & \text{if } \hat{\pi}_s = \hat{\pi}_t \end{cases} \tag{14}$$

Consequently, it is possible to define $k(\hat{\pi}_s)$ as in Eq. (15).

$$k(\hat{\pi}_s) = \frac{\hat{\pi}_t}{2} + B\hat{\pi}_s \tag{15}$$

Then, in Eq. (16) B is isolated.

$$\begin{aligned} k(\hat{\pi}_s) = \frac{\hat{\pi}_t}{2} + B\hat{\pi}_s = -\frac{\hat{\pi}_t}{2} z \\ B = -\frac{1}{2}(z+1) \end{aligned} \tag{16}$$

Finally, using substitution again, $k(\hat{\pi}_s)$ is found, in Eq. (17).

$$k(\hat{\pi}_s) = \frac{\hat{\pi}_t}{2} - \frac{1}{2}(z+1)\hat{\pi}_s \tag{17}$$

Descriptive Plots

The following are descriptive plots of the main control variables for all the countries of the study for the period of interest. In Fig. A.1, there is the public debt as a percentage of GDP. In Fig. A.2, there is a graphical representation of the balance of payments and, finally; in Fig. A.3, there is the sovereign interest rate. The variables that are shown here are raw or, in different words, without any statistical treatment. These plots justify the inclusion of time trends for public debt and the balance of payments in the unit-roots tests.

Figure A.1. Public Debt

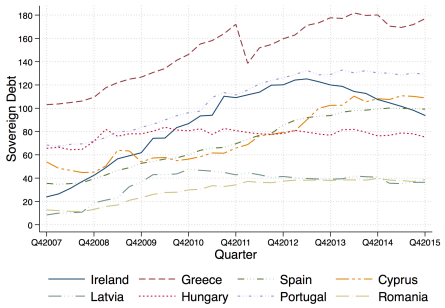


Figure A.2. Balance of Payments

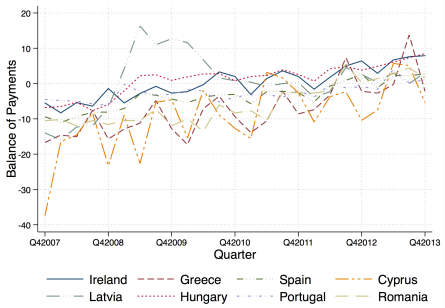
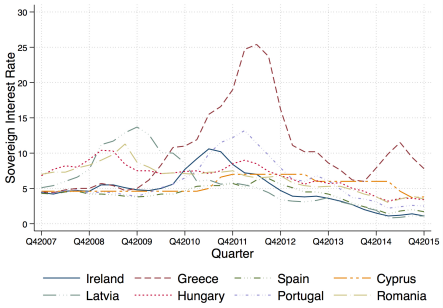


Figure A.3. Sovereign Interest Rate



Distribution Plots

The following are histograms with kernel densities on top for all the variables of the model, after first differentiating macroeconomic covariates. In Fig. A.4, there is the dependent variable. On the other hand, in Fig. A.5, there is the main covariate of interest: government partisanship. Finally, in Fig. A.6, there is the public debt as a percentage of GDP; in Fig. A.7, there is the balance of payments and, in the last place; in Fig. A.8, there is the sovereign interest rate. These plots justify the use of non-linear models and show the normality of the covariates.

Figure A.4. Bailout Conditionality

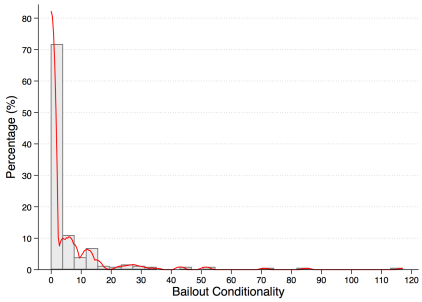


Figure A.5. Gov. Partisanship

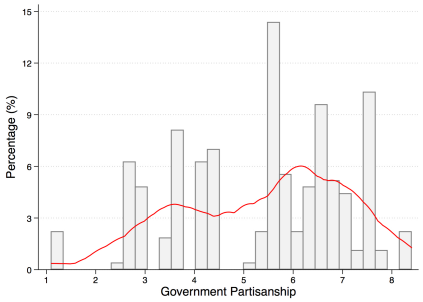


Figure A.6. Public Debt

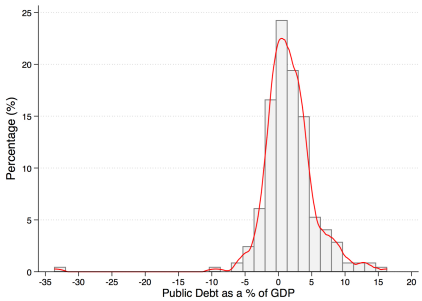


Figure A.7. Balance of Payments

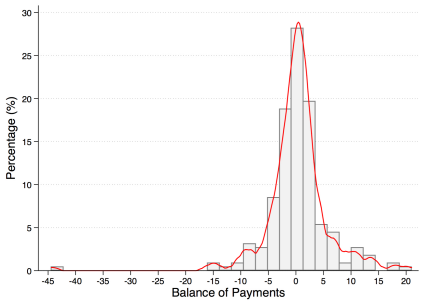
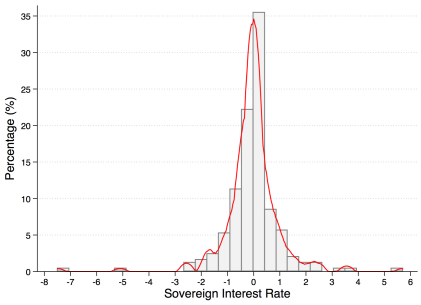


Figure A.8. Sovereign Interest Rate



Scatterplots

The following are scatterplots of all independent variables against bailout conditionality in raw form —notice that observations for which there was no ongoing bailout have been dropped to visualise the modelled relationship more clearly—. In Fig. A.9, there is the scatterplot of the main covariate of interest: government partisanship. Additionally, in Fig. A.10, there is the public debt as a percentage of GDP; in Fig. A.11, there is the balance of payments and, finally; in Fig. A.12, there is the sovereign interest rate. Mainly, the reader should notice that slopes are generally smooth; that variance is not constant and that some Greek observations seem to constitute outliers.

Figure A.9. Gov. Partisanship

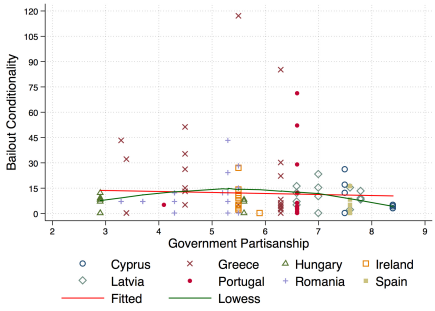


Figure A.10. Public Debt

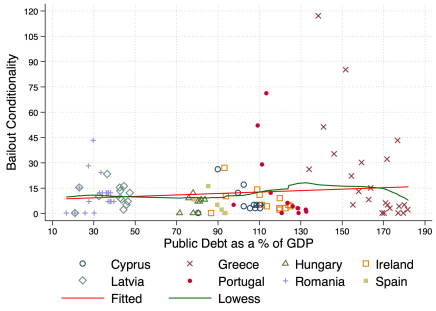


Figure A.11. Balance of Payments

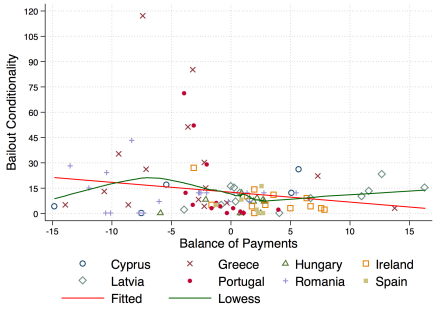
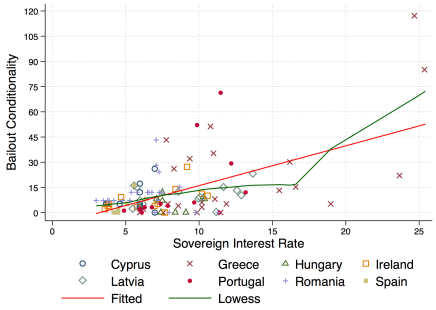


Figure A.12. Sovereign Interest Rate



Alternative Models

Table A.1 is analogous to Table IV, but the models are estimated assuming independent standard errors in VII, VIII and IX; and robust standard errors in X, XI and XII. The Vuong tests and the likelihood ratio tests of Models VII, VIII and IX indicate that zero-inflated negative binomial models are strongly preferred to standard negative binomial and zero-inflated Poisson ones, respectively.

Table A.1. ZINB Models with Independent & Robust S.E.

	VII	VIII	IX	X	XI	XII
Government Partisanship	-0.215^{***}	-0.365^{***}	-0.324^{***}	-0.215^{***}	-0.365^{**}	-0.324^{***}
2-periods lagged	(0.071)	(0.120)	(0.086)	(0.066)	(0.154)	(0.108)
Public Debt	0.042^{**}	0.038^{**}	0.020	0.042^{***}	0.038^{***}	0.020^{**}
4-periods lagged & first differentiated	(0.019)	(0.019)	(0.015)	(0.016)	(0.014)	(0.009)
Balance of Payments	-0.040^{**}	-0.038^{*}	-0.050^{***}	-0.040^{*}	-0.038^{**}	-0.050^{***}
4-periods lagged & first differentiated	(0.021)	(0.020)	(0.016)	(0.023)	(0.019)	(0.013)
Interest Rate	0.233^{***}	0.205^{***}	0.140^{***}	0.233^{***}	0.205^{***}	0.140^{***}
4-periods lagged & first differentiated	(0.062)	(0.062)	(0.052)	(0.077)	(0.063)	(0.049)
Time Spline			0.119			0.119
			(0.107)			(0.096)
Quadratic Time Spline			-0.006^{**}			-0.006^{***}
			(0.002)			(0.002)
Fixed Effects		✓	✓		✓	✓
Constant	3.573^{***}	3.884^{***}	3.919^{***}	3.573^{***}	3.884^{***}	3.919^{***}
	(0.413)	(0.736)	(1.305)	(0.410)	(0.896)	(1.199)
Logit Inflated (constant)	0.333^{**}	0.308^{**}	0.222	0.333^{**}	0.308^{**}	0.222
	(0.145)	(0.147)	(0.150)	(0.144)	(0.148)	(0.149)
Ln(α)	-0.355^{*}	-0.562^{***}	-1.075^{***}	-0.355^{*}	-0.562^{***}	-1.075^{***}
	(0.200)	(0.199)	(0.190)	(0.184)	(0.187)	(0.205)
(Non-Zero) Observations	(89) 224	(89) 224	(89) 224	(89) 224	(89) 224	(89) 224
AIC	935.036	930.378	884.166	935.036	930.378	884.166
Vuong Test (vs. NB)	4.59 (0.000)	2.87 (0.002)	2.70 (0.004)			
LR Test (vs. ZIP)	700.82 (0.000)	532.52 (0.000)	403.65 (0.000)			

Robust standard errors in parentheses.

Unit fixed effects coefficients are omitted.

*** p<0.01, ** p<0.05, * p<0.1

Vuong and LR Test show p-values in parentheses.

Residuals Analysis

Fig. A.13, Fig. A.14 and Fig. A.15 show different pseudo-residual plots for Models I & IV, II & V and III & VI, respectively. The residuals in the number of counts of these models are analysed in two different ways. First, plots on the left-hand side show the distribution of the errors in the predicted number of measures per quarter. In contrast, plots on the right hand side show the error in the predicted number of measures per quarter against the predicted number of measures per quarter. Clearly, the errors are heteroskedastic, which is not a problem since zero-inflated negative binomial models are designed to handle it. What might be slightly more problematic are the outliers. Models I, II, III & IV have some observations for Greece and Cyprus that could be considered outliers. However, the problem is more acute for Models III and VI. Mainly, these models have an incredibly large outlier: an observation for Cyprus with a predicted error of over 800 measures. Beyond this, the errors behave as expected.

Figure A.13. Models I & IV

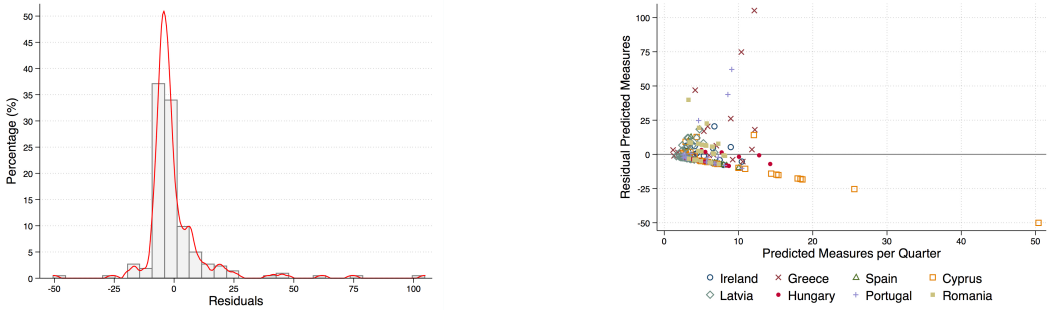


Figure A.14. Models II & V

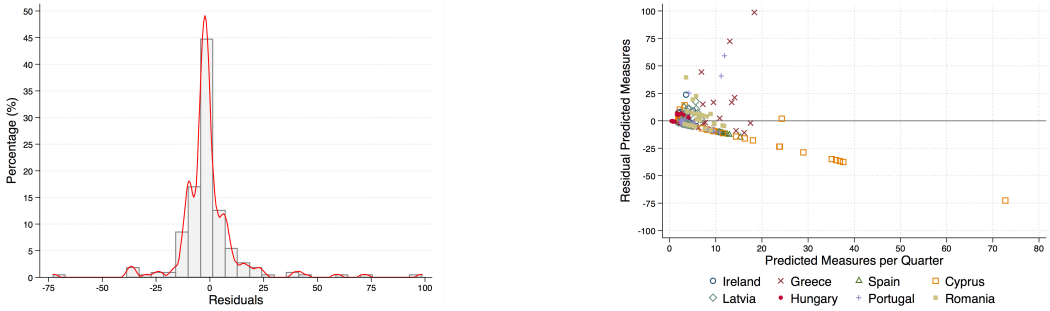


Figure A.15. Models III & VI