

# A Theory of Intra-Party Bargaining under Supranational Policy Constraints

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## Abstract

In this paper, we develop a model of electoral competition in the context of multi-party systems, where policy platforms consist of traditional spatial positions and a policy in favor or against membership in an international union that imposes binding policy constraint on the traditional left-right dimension. We assume that parties consist of two factions, the *Opportunists* (office-seekers) and the *Militants* (ideologues), and we extend John Roemer's Party Unanimity Nash Equilibrium (PUNE) concept for endogenously formed parties to derive a manifold of equilibria, ranging from moderate pro-membership, to populist, to polarized anti-membership equilibria. We then apply the Nash bargaining solution – by allowing for the possibility of

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party splits as disagreement outcomes – in order to refine our equilibrium predictions and to infer under what conditions party splits are the more likely outcomes depending on the perceived benefits of union membership and the scope of policy constraints that come with it. We show how populism can arise as an outcome of intra-party bargaining that keeps the party together in the face of strong factionalism over supranational integration. Another prediction of our model is that party fragmentation (as a result of party splits) and ideological polarization are more likely when the orthogonal benefits of integration are lower and the scope of policy constraints is narrower. Finally, we seek to test some of the empirical implications of our model by using data on party splits from the ParlGov dataset on European parties and party systems.

Keywords: party-system polarization; populism; fragmentation; multi-party systems; probabilistic abstention; European integration; supranational policy constraints

JEL classification:

## 1 Introduction

Advanced liberal democracies have entered a period of political turbulence, where fundamental questions pertaining to globalization and supranational integration run to the core of domestic government and politics by creating deep fissures in cabinets, parties, and society at large. The contemporaneous rise of right-wing nativism in the European “North” and left-wing populism in the European “South” (or even “Brexit” in the UK and Trump’s victory in the US) can be viewed through the same prism of a populist backlash against the “straitjacket” of economic globalization and political integration (Guiso et al., 2017; Rodrik, 2017; Colantone and Stanig, forthcoming). Effectively, the common thread that connects all these electoral results is that of increasing party-system polarization, fragmentation (see Figure 1), and extremism in connection with increasingly constraining supranational integration and economic interdependence. Any cogent theory of the so-called “globalization backlash” needs to “bring the party back” and delve into the

“second-image-reversed” of economic and political integration on electoral politics both *within* and *across* parties.

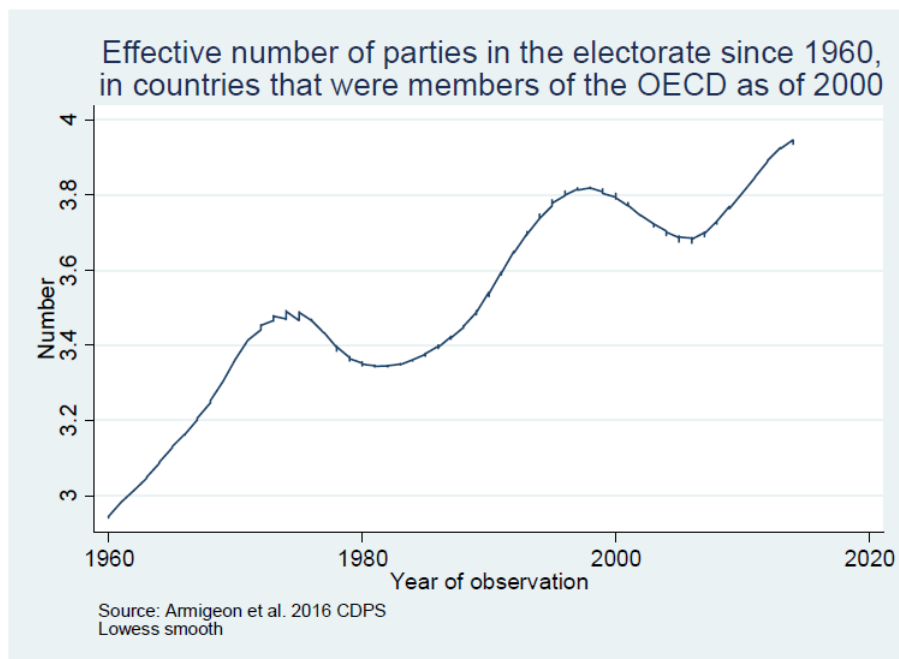


Figure 1: The effective number of parties by year (Source: Armigeon et al., 2016 CDPS)

Political scientists have shifted their attention to the study of political polarization because, even if policy outcomes remain the same, higher polarization implies heightened political uncertainty for citizens (or political country risk for foreign investors) but also better defined political platform choice. With polarization, legislative politics become increasingly adversarial, (coalition) governments more unstable, and policy outputs potentially more volatile. Domestic political instability may have multiplicative effects in the context of an international union – such as the European Union (EU) – as increased polarization along the pro/anti- integration axis may generate negative spillovers for the entire supranational project: policy deadlock, the rise in the political implementation costs of policy reforms, the undermining of public support, even the political unraveling of the integration process itself.

Political polarization may manifest itself at various stages of the domestic political

process: in elections (Cox, 1990), the government formation process (Indridason, 2011), legislative bargaining (McCarty et al., 2006), and political communication (Prior, 2012).<sup>1</sup> Within the burgeoning polarization literature in US politics, political polarization is tantamount to the ideological differentiation between the two main congressional parties (Layman et al., 2006). In the context of parliamentary multi-party systems, however, the concept of polarization is not as straightforward in terms of measurement as it needs to account for both ideological differentiation (also in the form of political extremism) and party fragmentation, whereby niche groups of extremist ideologues may splinter off from larger office-seeking parties (Ceron, 2013; Ezrow, 2010).<sup>2</sup> In both contexts, much of the existing literature has studied the effects of constitutional rules and institutions, such as the (dis)proportionality of the electoral system (Calvo and Hellwig, 2011; Curini and Hino, 2012; Dow, 2011; Ezrow, 2008; Iaryczower and Mattozzi, 2013; Matakos et al., 2016), gerrymandering (McCarty et al., 2009), and primary elections (Hirano et al., 2013), on party-system compactness, polarization, and extremism.

We focus instead on how extraneous policy rules and constraints – stemming from a country’s level of economic integration in global markets and political integration in international organizations and regional blocs – affect party-system polarization and fragmentation within the context of electoral competition. In fact, we focus more on the EU as a preeminent example of a regional experiment in economic globalization and political integration, where those policy rules and constraints are viewed as the the outcome of intensified supranational integration. In theorizing about this relationship, this paper derives the domestic political limits of economic and political integration by highlighting the trade-off between democratic “inputs” and “outputs”. In other words, we show that there is a point beyond which the “output legitimacy” of the globalization-bound pursuit of economic efficiency and welfare-enhancing openness will not be sufficient to counter-balance the inevitable loss of democratic responsiveness caused by externally imposed

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<sup>1</sup>Thus, the concept lends itself to different levels of measurement: at the voter level (using public opinion data), at the party level (using party manifesto data), at the electoral level (using vote share data), or at the legislative representation level (using seat allocation data).

<sup>2</sup>The aggregate measurement of polarization in multi-party systems need also consider that convergence may take place among centrist parties and divergence between smaller extremist parties and centrist ones. This might explain the shortcomings of existing measures of polarization in multi-party systems. See, e.g., Dalton (2008); Esteban and Ray (1994); Stanig (2011).

constraints on the domestic sources of “input legitimacy”.

We formally derive this implicit trade-off between input and output legitimacy by studying a game of multi-party electoral competition under supranational policy constraints. As we are primarily interested in the effects of European integration on polarization in European multi-party systems, we construct a formal model where three parties each consisting of two factions strategically choose an two-dimensional electoral policy platform as a result of intra-party bargaining. We identify three possible equilibrium outcomes: (i) one where a party runs on an anti-integration platform thereby rejecting any related extraneous constraints (*anti-membership*); (ii) one where a party runs on a pro-membership policy platform whereby its ideological stance is incompatible with the supranational policy constraints of union membership (*populist*); (iii) one where a party runs on an implementable pro-membership policy platform within those constraints (*pro-membership*); and (iv) one where the two factions decide to contest the election separately (*party split*). Interestingly enough, populism in our model arises as an outcome of intra-party bargaining that keeps a fragmented party together despite a latent rift between party factions with highly divergent policy agendas (Mutlu-Eren, 2015). In other words, populism in the face of stringent supranational constraints can be construed as a so-called “marriage of convenience” between *opportunistic* party elites and *ideological* party militants.

All in all, we identify the behavior of parties and the characteristics of party systems as intervening variables that capture the underlying relationship between the input and output legitimacy of national democracies in a globalizing environment.<sup>3</sup>

In doing so, we also seek to contribute to the literature on the convergence of national party systems and the transformation of electoral competition as a consequence of regional integration (Dorussen and Nanou, 2006; Hix, 2003; Mair, 2000). Nanou and Dorussen (2013), for example, find that, because EU legislation limits the set of policies that parties can pursue once in government, the distance between parties’ positions has tended to

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<sup>3</sup>Although we do acknowledge the potential spillover effects of domestic-level polarization on supranational political processes, ours is a “partial equilibrium” analysis in the sense that we do not study any such “second-image-reversed” effects between domestic and supranational politics. In fact, we take the process of integration deepening as exogenous and assume that there is always a majority of voters in favor of membership so that in effect adherence to the policy constraints is never really in question.

decrease in policy domains where EU involvement has increased (see Figure 2). We actually expand on their results by taking a systemic view of party-system polarization – thus obviating the need for an arbitrary distinction between mainstream and non-mainstream parties – and by deriving the conditions for both conditional convergence and divergence of party platforms. In this regard, this paper also contributes to the vast literature on spatial (voting) models of party competition, which tends to focus on the electoral consequences and long-term impact of the ideological movements of parties (see, e.g., Ezrow, 2005, 2008; Adams and Somer-Topcu, 2009; Hellwig, 2012), but does not always address the question of why they move to the center or to the margins.

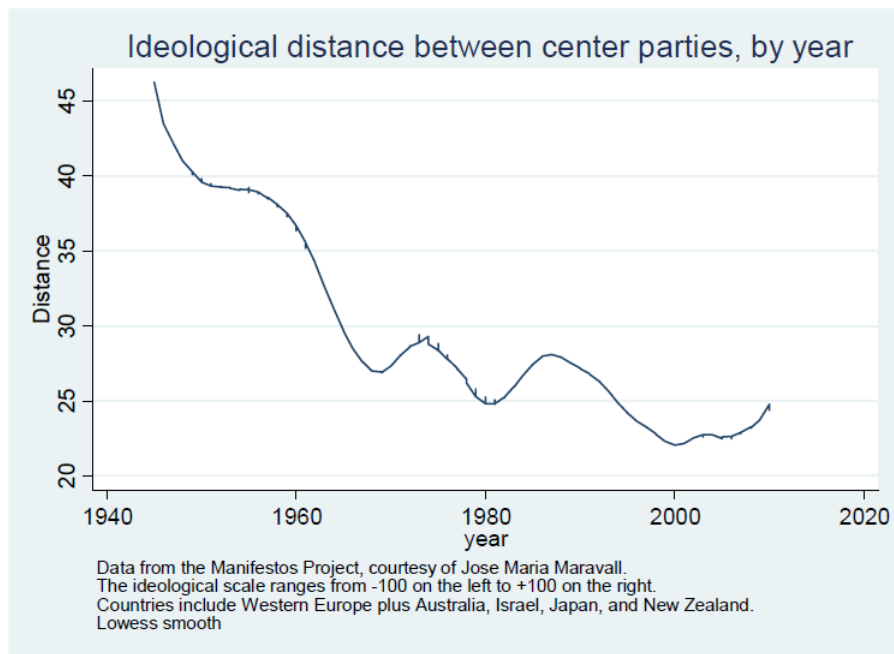


Figure 2: Ideological distance between center parties by year (Source: Przeworski, forthcoming)

In what follows, we first provide a theoretical discussion of the trade-off faced by advanced liberal democracies between input and output legitimacy by introducing a political version of Rodrik’s “globalization trilemma” (2012). We then introduce the building blocks of the model and proceed to study the equilibria of a workhorse version. Subsequently, we apply our equilibrium results to extrapolated measures of party-system

polarization and voter abstention. Finally, we offer some concluding remarks.

In an extension of this working paper, we also seek to test the empirical implications of our model by using data from the ParlGov dataset on European parties and party splits. Among others, we derive and test the following hypotheses: (i) lower levels of output (proxied by EU popularity) and input legitimacy (proxied by differentiated levels of EU membership and integration) should lead to higher levels of party-system polarization, party-system fragmentation (proxied by the effective number of parties), and voter turnout. (ii) Assuming that EU policy constraints are tighter on the left side of the ideological spectrum, then we should expect more party splits on the left than on the right.

## 2 Inputs, Outputs, and the Globalization Trilemma

In the current era, politics is no longer “business as usual” and that applies not just to the supply side of electoral competition and policy formation but also the demand side of partisanship and electoral behavior (Guiso et al., 2017). Recent electoral contests in Western Europe, Latin America, and the US showcase the “political limits of globalization” (Acemoglu and Yared, 2010). Avowedly, the key factor that has introduced “noise” and unexplained volatility into the post-war paradigm of “output legitimacy” in the context of liberal democracy has been the corrosive effect of globalization on national sovereignty and democratic politics (Przeworski, forthcoming).

Output legitimacy effectively pertains to the notion that a democratically elected government should “care for the common good”. As such it can potentially come at the expense of so-called input legitimacy, which amounts to a government’s need to “carry out the will of the people” (Scharpf, 1999). The two may be at odds when a government decides to pursue a policy that in its own assessment would produce the best functional outcome for society as a whole – even if the electorate would opt for a different policy direction –, resulting in a tension between efficiency and democracy.<sup>4</sup> Policy responses to

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<sup>4</sup>This trade-off between efficiency and democracy (see, e.g., Eichengreen and Leblang, 2008) was particularly evident in the recent British referendum debate between the Brexiteers’ insistence on democratic sovereignty outside of the EU and the Remainers’ emphasis on the sustained prosperity and economic

the recent financial crises highlighted the growing incongruence between the democratic functions of “representative” government (“by the people”) and those of “responsible” government (“for the people”). Executive dominance now seems to characterize the predominant current of politics in advanced democracies, whereby emphasis has come to lie on the so-called output legitimacy of democratic institutions. In contemporary democracies responsible (or output-oriented) government has taken prevalence over representative (or input-oriented) government (Mair, 2009), thus fueling the rise of populist parties that claim to still represent the “will of the people” but rarely deliver, as opposed to mainstream parties that take responsibility but no longer seem to voice their voters’ concerns (Caramani, 2017).

So, in terms of framing our theoretical argument, we take Dani Rodrik’s “globalization trilemma” (Rodrik, 2012) as our point of departure in order to demonstrate how the inescapable constraints of economic globalization and political integration shape the input-output trade-off and thereby affect the aggregate level of party-system polarization. Rodrik argues that there are inherent trade-offs in how we choose to organize our political decision-making structures in the face of economic globalization (Rodrik, 2012). The flattening logic of globalized competition for arbitrage opportunities, footloose capital, and minimal transaction costs renders economic integration, national sovereignty, and democracy simultaneously incompatible. Financially integrated and economically interdependent polities will either have to relinquish their national sovereignty or their democratic institutions; something has to give.

Figure 3 below applies the incontrovertible logic of this trilemma to the domestic political arena by interpreting the nature of politics associated with the pursuit of Rodrik’s three aforementioned goals of sociopolitical organization, namely, economic integration (i.e., *efficiency*), democratic politics (i.e., *equity*), and sovereign national statehood (i.e., *identity*). The horizontal axis of political contestation captures the traditional left-right spectrum of electoral competition where ideology, identity, and partisanship matter in the pursuit of lofty goals ranging from left-wing egalitarianism to right-wing nationalism. This dimension effectively constitutes the main source of input legitimacy of sovereign democratic systems. On one hand, equity politics emphasizes issues such as economic stability afforded by EU membership.



inequality, social justice, and democratic representation, while identity politics is mostly about the reification of the nation-state as the ultimate symbol of political and social self-identification and belonging. The clash between the various ideologies associated between these two types of politics left an indelible mark in the violent political history of the 20th century and gave rise to the traditional political cleavages still associated with established democratic party systems in the current era.

On the other hand, the vertical axis of efficiency politics captures the materialist orthogonal dimension of performance- or outcome- based electoral politics. Avowedly, the salience of this dimension tends to rise in direct proportion with economic globalization and the deepening of supranational coordination and integration. As incomes started to rise, living standards to improve, and middle classes to grow, voters increasingly held their elected representatives accountable less on the basis of their ideological rhetoric but more on the basis of socioeconomic outcomes achieved at the end of their tenure in office. It should, hence, come as no surprise that the shift in the study of electoral politics from unidimensional spatial models of Downsian competition to multidimensional models of valence competition and retrospective voting occurred during the Era of the Great Moderation, characterized by stable growth rates, smooth business cycles, global regimes, and integrated markets. The output legitimacy that emanated from a long period of prosperity and growth allowed national politicians to steadily craft a well-entrenched consensus over the desirable level of openness to global markets and integration within supranational governance structures, while at the same time leaving enough room for traditional left-right political vacillation within moderate levels of polarization.

As a country moves further up the triangle presented in Figure 3, the menu of feasible ideological inputs of equity and identity gets increasingly constrained by the exigencies of exposure to global markets for goods, services, capital, and labor. In other words, the pursuit of efficiency by means of economic integration and rule harmonization trumps popular demands for democratic institutions of regulation, stabilization, and social protection (part of the traditional agenda of the socialist left) and undermines ethnic homogeneity and national self-determination (part of the traditional agenda of the nationalist right). In addition, by joining international unions like the EU or the European Monetary Union (EMU), countries commit to formal policy constraints that truncate the domestic pol-

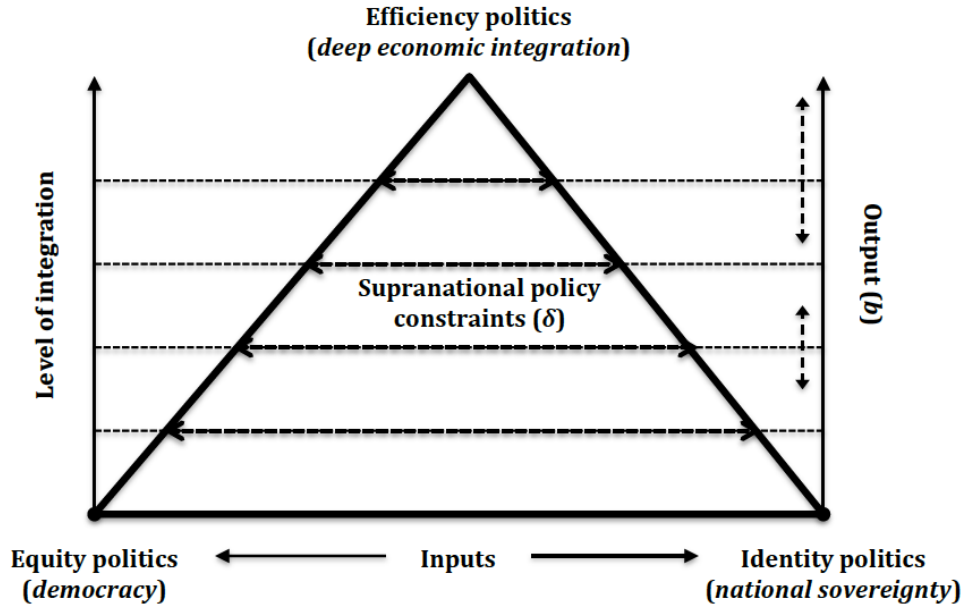


Figure 3: The political trilemma of globalization

icy space, limit what parties can credibly promise in elections and deliver in government and, thus, reduce their “room to maneuver” (Hellwig, 2016). For as long as this process remains embedded within a broader liberal democratic consensus, whereby the efficiency gains of openness are broadly shared among voters, then the enhanced output legitimacy of efficiency politics induces parties to advocate a feasible menu of policies within the constrained input space circumscribed by the given level of integration, albeit at the expense of unfettered democratic responsiveness.

As we proceed to demonstrate theoretically, however, there is a threshold point beyond which the overall level of output legitimacy of any given degree of supranational integration is not sufficient to compensate for the loss in input legitimacy and responsiveness, causing a democratic backlash in the form of increased party-system polarization and fragmentation. The implicit trade-off between inputs and outputs gets reassessed, thus giving rise to atavistic tendencies for left- and right- wing parties to revert to their ideological roots and core agendas of equity and identity respectively.<sup>5</sup> This is due to the

<sup>5</sup>This “true” between equity, efficiency, and identity has materialized in different forms during the

heightened pressure for popular representation by an increasingly disenfranchised part of their core electorate and the unwieldy nature of policy compromises necessary to maintain a country’s liberal orientation.

This “breaking point” may be brought about by stochastic shocks to the aggregate welfare benefits of integration (e.g., in the context of capital account liberalization and financial crises), excessive constraints on the core democratic functions and policy choices of a country, or both. Countries further integrated within global markets (mostly due to the small relative size of their domestic markets) and systems of governance (often due to the political spillovers generated by the unfettered flows of capital, people, and ideas) will be subject to more narrow constraints on their domestic sources of input legitimacy. However, higher levels of integration also imply higher exposure to exogenous macroeconomic shocks and risks (Kim, 2007), i.e., more noise in their political system’s overall level of output legitimacy. Therefore, countries further up the triangle in Figure 3 are more likely to move beyond the aforementioned breaking point and experience heightened political volatility and democratic instability in the form of increased party-system polarization and fragmentation.<sup>6</sup>

Moreover, we surmise that the level of ideological polarization and party-system fragmentation on the input dimension will affect the nature of electoral competition. At lower levels of integration (see Figure 3), where a national democratic polity is subject to much softer and wider supranational constraints, we expect the traditional left-right dimension of electoral politics to be more salient in terms of explaining electoral outcomes. On the other hand, as a political system comes under more strain as a result of the stifling trade-offs of globalization, i.e., farther up the triangle in Figure 3, the ensuing backlash towards electoral platforms of equity and identity politics – now effectively incompatible

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turbulent post-Crisis years of the 2010s, where left and right extremes have seemed to converge in terms of their anti-globalization rhetoric and join up against the moderate liberal center. Some glaring recent examples of this triadic nature of national democratic politics in a globalized environment include Sanders/Clinton/Trump in the US, Labor Brexiteers/Remainers/UKIP and Conservative Brexiters in the UK, the Euroskeptic No camp/Yes camp/Nationalist No camp in the 2015 Greek referendum, and most recently Melenchon/Macron/Le Pen in France.

<sup>6</sup>Note that in this paper we do not seek to explain why countries integrate further *per se*. We surmise that higher levels of economic and political integration come about as a result of pro-active policies of market liberalization, openness to trade, and the extraneous pressures of globalization (e.g., capital flows, immigration flows, environmental externalities, etc.).

with the country’s level of integration – will render the pro-/anti- globalization dimension of electoral competition much more salient. Since the rise in platform polarization may run counter to the policies imposed by the “golden straitjacket” of economic and political globalization, then the necessity of those constraints and the desirability of a country’s overall liberal orientation will be put into question, thereby further politicizing the pro-/anti- globalization axis (Kriesi, 2016). Therefore, even if policy outcomes and existing integration trends may not be severely affected by the rise in platform polarization, they become increasingly tenuous and fragile.

### 3 The Model

#### 3.1 The political environment

Consider a society with a unit mass of voters, indexed by  $i$ , distributed over a subset  $X$  of the real line  $\mathbb{R}$  according to some continuous and twice differentiable cumulative distribution function  $F(\cdot)$ . We consider a model of electoral competition with three initial parties, indexed by  $J \in \{L, C, R\}$ , competing with respect to two-dimensional political platforms  $\pi_J = (x_J, m_J)$ , where  $x_J \in X$  denotes a policy platform along the standard ideological left-right dimension and  $m_J \in \{0, 1\}$  denotes parties’ position with respect to membership in a major international organization (such as the EU). Parties’ index also denotes their general ideological orientation within the left-right policy spectrum.

Voters have symmetric, single-peaked preferences over the policy space  $X$  and also gain a common additive benefit of integration  $b > 0$  if they vote for a party that is in favor of international union membership, i.e.,  $m_J = 1$ .<sup>7</sup> One may think of  $b$  as a measure of the international union’s valence, popularity, or simply its output legitimacy in regard to net transfers and economic benefits for the country. Formally, when voter  $i$  votes for party  $J$ , her utility is  $U_J^i(x^i, \pi_J; b) = u(x_J, x^i) + m_J \times b$ , where  $u : X \times \{0, 1\} \rightarrow \mathbb{R}$  is a quasi-concave and twice continuously differentiable utility function,  $x^i$  is the voter’s ideal point in  $X$ ,

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<sup>7</sup>Note that in this benchmark model the perceived valence benefits  $b$  can only take strictly positive values because we assume that on aggregate our country is a net beneficiary from union membership and would thus not be willing to exit the union under any political configuration.

and  $m_J$  is an indicator function. We further assume that voters are naive insofar as they only evaluate policy packages at face value and do not have any prior information with which to assess whether party platforms are feasible or implementable. In other words, they cannot anticipate *ex post* policy payoffs and thus vote sincerely for their preferred party solely on the basis of its proposed two-dimensional policy platform  $\pi_J \in X \times \{0, 1\}$  regardless of post-election government and policy formation dynamics. The assumption of sincere voting is generally considered rather plausible and innocuous in the context of non-majoritarian multi-party democracies. Moreover, let  $i_{J,J'}(\pi_J, \pi_{J'}) : X^2 \times \{0, 1\}^2 \rightarrow X$  denote the threshold voter of measure zero who is indifferent between the policy platforms of any two parties. Finally, we assume probabilistic abstention insofar as voter  $i$  will end up casting a vote *if and only if*  $\max_j U_j^i(x_J, m_J) \geq U_{min}$ , where  $U_{min}$  is distributed according to a regular distribution function  $H : [U, \bar{U}] \rightarrow [0, 1]$ . In other words, aggregate turnout will depend on some random election-time factors, such as the weather, and the least enthusiastic (or most alienated) voters will be the ones least likely to vote.

We, further, assume that the ideological space of permissible policies is constrained by the extraneous rules of supranational integration and union membership. That is, any party that supports supranational integration, i.e.,  $m_J = 1$ , has to adjust its *ex post* (parliamentary) policy position to abide by the related supranational policy constraints stemming from union membership, i.e.,  $\hat{x}_J \in \bar{X} \subset X$ . We posit that the measure of the constraint policy space is a function of the depth of integration and the country's membership status (i.e., whether it has negotiated any opt-outs or derogations, or else – as has been the case of late – whether it has signed up to a bailout agreement with explicit policy conditionality). On the other hand, if a party opposes union membership, i.e.,  $m_J = 0$ , then its *ex post* implementable policies remain unconstrained, i.e.,  $\hat{x}_J \in X$ .

In terms of the commitment technology, we assume that *ex post*, i.e., once they enter into parliament, parties implement their proposed integration and ideological policy platforms as long as those are compatible and jointly feasible, i.e.,  $\hat{\pi}_J = \pi_J = (x_J, m_J)$  *if and only if either*  $m_J = 1$  and  $x_J \in \bar{X}$  *or*  $m_J = 0$ . If a party achieves parliamentary representation with a policy platform  $\pi_J$  that proves to be unimplementable (which may occur in what we call a populist equilibrium), i.e.,  $m_J = 1$  and  $x_J \notin \bar{X}$ , then it has to revise its left-right policy in line with the supranational policy constraints of its proposed

integration policy, i.e.,  $\hat{\pi}_J = (\hat{x}_J, 1)$  such that  $\hat{x}_J = \operatorname{argmax}_{x_J \in \bar{X}} V_J((x_J, 1), \pi_{-J})$ . In other words, we assume a perfect commitment technology only with regard to the dichotomous position on union membership, which takes precedence over any other policy promises.<sup>8</sup>

The latter assumption is predicated on the model’s simplified post-electoral government-formation environment, which reflects a stylized three-party version of a multi-party parliamentary democracy with proportional representation (where a party’s seat share reflects its relative vote share among cast votes and parties that have overcome the electoral threshold). Seats are allocated according to a proportional representation (PR) seat allocation rule  $s(v; \underline{v})$  with an electoral threshold  $\underline{v} \geq 0$ , whereby  $s_J = \frac{v_J}{\sum_{J' \text{ s.t. } v_{J'} \geq \underline{v}} v_{J'}}$  if  $v_J \geq \underline{v}$  and  $s_J = 0$  if  $v_J < \underline{v}$ . Unless a party has won more than half of the seats in parliament, in which case it can form a single-party government, it will have to enter into some government formation negotiations. We restrict the range of possible (coalition) government outcomes to a set of feasible ones  $\mathbb{G}$  consisting of parties that agree on the country’s international orientation, i.e.,  $\mathbb{G} = \{G : \sum_{J \in G} s_J > \frac{1}{2} \text{ and } m_J = m_{J'}, \forall J, J' \in G\}$ . In the case of single-party government ( $G = J$ ) formed by a party with a seat share over 50%, final government policy will reflect only that party’s electoral platform, i.e.,  $\omega_G = \hat{\pi}_J$  if and only if  $s_J > \frac{1}{2}$ . In the case of hung parliament, i.e.,  $s_J < \frac{1}{2}, \forall J$ , expected government policy is modeled according to the “parliamentary mean” model of consensual democracy (Merrill and Adams, 2007) insofar as the expected final policy outcome is a weighted average of government parties’ *ex post* ideological policy platforms, i.e.,  $\omega_G = \left( \sum_{J \in G} \frac{s_J}{\sum_{J \in G} s_J} \hat{x}_J, m_G \right)$ .<sup>9</sup> Effectively, we stylize the government formation process by assuming that government composition is uniquely determined by the profile of

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<sup>8</sup>Allowing for imperfect *ex post* commitment for both  $m_J$  and  $x_J$  would create great pressures on the factional cohesion of parties caught in the gray zone of populist politics. This could in fact explain the incidence of post-electoral (parliamentary) party splits as evidenced in the recent case of Greek government party SYRIZA and its rebellious anti-euro left-wing faction Left Platform, which formed a splinter parliamentary party by the name of Popular Unity.

<sup>9</sup>Other studies that employ the *parliamentary mean* model include De Sinopoli and Iannantuoni (2007), Llavador (2006), Matakos et al. (2013), and Ortuño-Ortín (1997). An alternative way of modeling PR elections is the so-called *dominant party* model, where each party  $J$  fully implements its policy with probability proportional to its seat share  $s_J$  as in Faravelli and Sanchez-Pages (2012), Iaryczower and Mattozzi (2013), and Merrill and Adams (2007). Merrill and Adams (2007) provide a comparison between those two models. We only note that (for a risk-neutral agent) our results would be identical if the dominant party model were applied instead. In expectation, the policy outcome would be the same.

parties' proposed integration policies ( $m$ ) as well as their respective seat shares ( $s$ ). In other words, we do not explicitly model parties' *ex post* decision to enter government as this would not affect their electoral strategies; note that the *ex post* policy positions that parties take in parliament  $\hat{\pi}_J$  may very well differ from implemented government policy  $\omega_G$ . As we will explain below, our model set-up always leads to a pro-membership government; therefore, all pro-membership parties will form part of that government and will thus have to adjust their parliamentary rhetoric *ex post* to abide by the supranational rules stemming from union membership.

Parties themselves consist of two factions with different objectives: the *Militants* and the *Opportunists* (as in de Mesquita and Friedenber, 2011; Ghosh and Tripathi, 2012; Roemer, 2001; Roemer and Van der Straeten, 2006). The Militant faction comprises the partisan ideologues of the party who seek to represent their *prospective* constituents in parliament as best they can as long as they manage to overcome an electoral threshold  $v \geq 0$ . In that case, we assume that the Militants receive a fixed payoff of 1 as well as a platform-dependent payoff depending on how representative they are of their constituents' preferences, which effectively amounts to their prospective constituents' aggregate *ex post* policy payoffs. If their party does not manage the electoral threshold, then the militant faction gets a payoff of 0. In formal terms, their objective function is as follows:

$$\begin{aligned}
EV_L(\pi_J, \pi_{-J}) &= Prob(v \geq \underline{v}) \times (1 + V_J(\pi_J, \pi_{-J}; v)) \\
&= Prob\left(\min\{i_{L,C}(\pi_L, \pi_C^*), \max U_L^{i-1}(U_{min}, \pi_L; b)\} \right. \\
&\quad \left. - \max\{\min X, \min U_L^{i-1}(U_{min}, \pi_L; b)\} \geq v\right) \\
&\quad \times \left(1 + \int_{\{i: U_J^i(\pi_J) \geq U_{J'}^i(\pi_{J'}), \forall J' \neq J\}} U_J^i(\hat{\pi}_J) dx^i\right) \tag{1}
\end{aligned}$$

Note that the aggregate constituent payoff is calculated over *ex post* policy  $\hat{\pi}_j$  (advocated in parliament), while the party constituency itself is endogenously determined by the entire profile of electoral policy platforms ( $\pi$ ).

On the other hand, the Opportunists only care about maximizing expected vote share  $Ev_J \in [0, 1]$  as this allows them maximal influence over the distribution of office perks and the formation of government policy. The expected vote share for party  $L$  can be derived as follows:

$$\begin{aligned}
Ev_L(x_L, 1; \pi_{-L}^*) &= \int_{U_{min}} \int_{x^i} \left( \min\{i_{L,C}(\pi_L, \pi_C^*), \max U_L^{i-1}(U_{min}, \pi_L; b)\} \right. \\
&\quad \left. - \max\left\{ \min X, \min U_L^{i-1}(U_{min}, \pi_L; b) \right\} \right) dF(x^i) dH(U_{min}) \quad (2)
\end{aligned}$$

In equilibrium, intra-party bargaining between these two factions will determine a party's policy platform taking those of the other two parties as given. Clearly, the more a party shifts towards catch-all vote-maximizing positions, the more dissatisfied the Militant faction will be with the party's more Opportunistic party leadership.

In terms of game structure, we consider a three-party spatial game of electoral competition that comprises the following three stages: (i) party factions of all three initial parties  $L$ ,  $C$ , and  $R$  decide whether to jointly propose a common electoral platform and remain under the same party banner or instead to split and form separate electoral parties. (ii) All electoral parties simultaneously announce their platforms  $\pi_J = (x_J, m_J)$ , which become public knowledge. (iii) The random minimum utility  $U_{min}$  materializes and those voters who choose not to abstain vote *sincerely* for the party whose stated policy platform maximizes their utility and *naively*, i.e., unaware of whether policy constraints bind or not. (iv) Vote shares are normalized over cast votes such that  $\sum_J \tilde{v}_J = 1$  and seats are allocated according to the proportional representation (PR) seat allocation rule  $s(v; \underline{v})$  described above. (v) Parties implement their *ex post* parliamentary policies  $(\hat{\pi}_J)_J$ , a government is formed (either single-party or a coalition between parties with the same integration policy depending on the configuration of seat shares). (vi) Finally, parties and voters receive their payoffs and final government policy is set at the weighted mean of government parties' parliamentary policies, i.e.,  $\omega_G = \left( \sum_{J \in G} \frac{s_J}{\sum_{J \in G} s_J} \hat{x}_J, m_G \right)$ .

In order to characterize the set of equilibria of this two-dimensional three-party game



of electoral competition with intra-party bargaining, we apply an extension of Roemer's (1999, 2001) *Party Unanimity Nash Equilibrium* concept by allowing for *Endogenously formed Party* constituencies (PUNEEP). We choose to apply this equilibrium concept as it allows us to find equilibria in pure strategies in a multi-dimensional setting (notoriously difficult to find in spatial models). Although they are known for their multiplicity (due to the fact that the space of permissible deviations is rather restricted), they generate very interesting insights into the behavior of our model. We provide a formal definition below:

**Definition 1** *A Party Unanimity Nash Equilibrium with Endogenous Parties (PUNEEP) for the three-party spatial model of electoral competition described above consists of:*

(a) *a partition of the set of types  $X = L|C|R$  ignoring sets of measure zero;*

(b) *a profile of policy platforms  $\pi^* = (\pi_L^*, \pi_C^*, \pi_R^*)$  such that:*

(i) *for given  $\pi_{-J}^*$  there is no policy platform  $\pi'_J \in X \times \{0, 1\}$  such that  $EV_J(\pi'_J, \pi_{-J}^*) \geq EV_J(\pi_J^*, \pi_{-J}^*)$  and  $Ev_J(\pi'_J, \pi_{-J}^*) \geq Ev_J(\pi_J^*, \pi_{-J}^*)$  for all  $J \in \{L, C, R\}$ , with at least one of these inequalities being strict, and*

(ii) *every member of party  $J$ 's electoral constituency prefers policy  $\pi_J^*$  to any other party's electoral platform, i.e.,  $x^i \in J \Leftrightarrow U_J^i(\pi_J^*) \geq U_J^i(\pi_{J'}^*)$  for any  $J' \neq J$ .*

The idea here is to use intra-party bargaining conflict in order to restrict the set of admissible deviations from any strategic profile of electoral policy platforms. For reasons of tractability, we focus our attention throughout most of the analysis to symmetric PUNEEP equilibria such that the left ( $L$ ) and right ( $R$ ) parties position themselves symmetrically around the center ( $C$ ) party at point 0. Thus, we can show that symmetric PUNEEP equilibria in pure strategies always exist despite the two-dimensional policy environment.

Later on, we will proceed with a further refinement of the equilibria based on intra-party bargaining protocols that will eliminate the manifold problem. We derive the Nash bargaining solutions over the set of Pareto efficient PUNE equilibria in order to allow for the possibility of party splits and electoral competition within a fragmented party system.

### 3.2 A workhorse version of the model

For the results presented in the section below, we operationalize the policy space as  $X = [-1, 1]$  and voters' ideal points as uniformly distributed in  $[-1, 1]$ , i.e.,  $x^i \sim U[-1, 1]$ . Voters' ideological preferences are captured by a tent-shaped absolute deviation utility function, i.e.,  $u(x_J, x^i) = -|x_J - x^i|$ . Moreover, let the minimum utility random factor be uniformly distributed as  $U_{min} \sim U[-1, 1]$ . Finally, we assume that policy constraints are symmetric around the center of the policy space  $X$ , i.e.,  $\bar{X} = [-\delta, +\delta]$ .<sup>10</sup> In order to eliminate implausible cases, we restrict the parameter range to  $b \in (0, 1]$  and  $\delta \in (0, 1]$ . These specifications of the workhorse model are made to facilitate the readability, tractability, and parsimony of our results.

For the most part we study *symmetric* PUNEPP equilibria in pure strategies  $(\pi_L^*, \pi_C^*, \pi_R^*)$ , where  $x_L^* \leq x_C^* \leq x_R^*$ ,  $-x_L^* = x_R^*$ , and  $m_L^* = m_R^*$ , which allows us to focus on the equilibrium strategy of one of the two extreme parties. Since in equilibrium the two extreme parties  $J = L, R$  will always position themselves symmetrically around the center point 0 of the policy space  $X$ , then the center party  $C$ 's prospective constituency size will be constant at  $v_C = \frac{x_R^* - x_L^*}{2}$  if  $m_R^* = m_L^* = 1$  and  $v_C = \frac{x_R^* + x_L^*}{4} + \frac{b}{2}$  if  $m_R^* = m_L^* = 0$ . Therefore, its only permissible ideological policy as part of a symmetric PUNEPP in pure strategies is  $x_C^* = 0$  as that is the ideological position that maximizes the aggregate payoff of its prospective constituency ( $V_C$ ). Moreover, since party  $C$ 's equilibrium ideological policy will always lie within the constraint space  $[-\delta, \delta]$ , then it is always a strictly undominated strategy for it to support membership in the international union, i.e.,  $m_C^* = 1$ .

Without loss of generality, we consider the equilibrium strategy of the Left party  $L$  for given  $\pi_C^*$  as specified above and a symmetric  $\pi_R^*$ . The goal is to identify the party's set of equilibrium electoral platforms  $\pi_L^*$  such that there are no other policy platforms that increase both its expected vote share and aggregate expected policy payoff. In light of the centrist party's equilibrium strategy, we have that the threshold left voter  $i_{L,C}(\pi_L, \pi_C^*)$  is  $\frac{x_L}{2}$  if  $m_L = 1$  and  $\frac{x_L - b}{2}$  if  $m_L = 0$ . Therefore, for any  $x_L \in [-1, 0)$ , the Left party's prospective constituency is  $[-1, i_{L,C}(\pi_L, \pi_C^*)]$  (and by symmetry  $[i_{C,R}(\pi_R, \pi_C^*), 1]$  for the Right party).

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<sup>10</sup>One of the extensions of the model will consider asymmetric constraints.

Applying the operationalization assumptions of the workhorse model to equation 2, party  $L$ 's expected vote share for either integration policy  $m_L = 0, 1$  is as follows:

$$\begin{aligned}
Ev_L(x_L, 1; \pi_{-L}^*) &= \int_{U_{min}} \frac{\min\{\frac{x_L}{2}, x_L + b - U_{min}\} - \max\{-1, x_L - b + U_{min}\}}{2} dU_{min} \\
&= \frac{1}{32} [-5x_L^2 + 4(b-1)x_L + 8b + 4] \tag{3}
\end{aligned}$$

$$\begin{aligned}
Ev_L(x_L, 0; \pi_{-L}^*) &= \int_{U_{min}} \frac{\min\{\frac{x_L-b}{2}, x_L - U_{min}\} - \max\{-1, x_L + U_{min}\}}{2} dU_{min} \\
&= \frac{1}{32} [-5x_L^2 - 2(b+2)x_L - b^2 - 4b + 4] \tag{4}
\end{aligned}$$

The pro-membership expected vote share  $Ev_L(x_L, 1; \pi_{-L}^*)$  is maximized at  $-\frac{2(1-b)}{5}$  and the anti-membership expected vote share  $Ev_L(x_L, 0; \pi_{-L}^*)$  is maximized at  $x_L^* = -\frac{b+2}{5}$ .<sup>11</sup> It is then straightforward to verify that, for the same ideological policy  $x_L$ , party  $L$ 's expected vote share is strictly lower when it chooses to oppose membership in the supranational union ( $m_L = 0$ ). In other words, for any proposed ideological policy  $x_L$ , the Opportunists will always favor a pro-membership integration policy as this will enhance the party's electoral standing by gaining ground on moderate parties.

Let us now consider  $L$ 's aggregate expected policy payoff for a given anti-membership integration policy ( $m_L = 0$ ) where the threshold voter is  $i_{L,C}(x_L, 0; \pi_C^*) = \frac{x_L-b}{2}$ . Note that for the party to have a strictly positive probability of representation, it has to be the case that  $x_L \in (-2 + b + 4v, -b)$ , i.e., not too close to either the left extreme or the center party  $C$ . This guarantees that the leftmost voter  $x^i = -1$  will want to vote for the anti-membership party (instead of the center one) and, therefore, that the party's prospective constituency is non-empty. That of course does not guarantee that some extreme voters will not feel so alienated by existing parties' proposed platforms that they may choose to abstain, i.e., they will only vote for a party that offers them a payoff higher than their reservation payoff of abstaining. Applying the operationalization assumptions

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<sup>11</sup>Note that the assumption of probabilistic abstention prevents Opportunists from converging all the way to the position of the center party ( $x_C^* = 0$ ).

of the workhorse model to equation 1, party  $L$ 's expected aggregate policy payoff becomes as follows:

$$\begin{aligned}
EV_L(x_L, 0; \pi_{-L}^*) &= Prob\left(\frac{\min\{\frac{x_L-b}{2}, x_L - U_{min}\} - \max\{-1, x_L + U_{min}\}}{2} \geq v\right) \\
&\times \left(1 + \int_{-1}^{\frac{x_L-b}{2}} -|x^i - x_L| dx^i\right) \\
&= \begin{cases} \frac{x_L-2v+2}{2} \times \left[1 - \frac{(x_L-b+2)^2}{32}\right], & \text{for } x_L \in [-1, -1+v) \\ \frac{1-v}{2} \times \left[1 - \frac{(x_L-b+2)^2}{32}\right], & \text{for } x_L \in [-1+v, -2v-b) \\ \frac{-x_L-b-4v+2}{4} \times \left[1 - \frac{(x_L-b+2)^2}{32}\right], & \text{for } x_L \in [-2v-b, -b) \end{cases} \quad (5)
\end{aligned}$$

This composite function is maximized at  $x_L^*(0) = -1 + v$ . To consider whether any anti-membership policy platform  $(x_L, 0)$  can be an equilibrium strategy, we also need that  $x_L < -\delta$ . This condition is rather intuitive as any electoral platform that consists of an anti-membership policy and an ideological policy that complies with the rules of membership, i.e.,  $x_L \in [-\delta, \delta]$ , is strictly dominated by a pro-membership policy platform  $(x_L, 1)$  as a result of the additive bonus of integration  $b > 0$ .

Applying the operationalization assumptions of the workhorse model to equation 1, we can also derive party  $L$ 's expected aggregate policy payoff for a pro-integration policy platform ( $m_L = 1$ ) as follows:

$$\begin{aligned}
EV_L(x_L, 1; \pi_{-L}^*) &= Prob\left(\frac{\min\{\frac{x_L}{2}, x_L + b - U_{min}\} - \max\{-1, x_L - b + U_{min}\}}{2} \geq \underline{v}\right) \\
&\times \left(1 + \int_{-1}^{\frac{x_L}{2}} (-|x^i - \hat{x}_L| + b) dx^i\right) \\
&= \begin{cases} \frac{x_L + b - 2v + 2}{2}, & \text{for } x_L \in [-1, -1 + v) \\ \frac{1 + b - v}{2}, & \text{for } x_L \in [-1 + v, -2v) \\ \frac{-x_L + 2b - 4v + 2}{4}, & \text{for } x_L \in [-2v, 0) \end{cases} \quad (6) \\
&\times \begin{cases} 1 + \frac{(b+\delta)(x_L+2)}{4} + \frac{(x_L+2)(x_L-2)}{16}, & \text{for } x_L \in [-1, \max\{-1, -2\delta\}) \\ 1 + \frac{b(x_L+2)}{4} - \frac{x_L^2 + 4\delta x_L - 8\delta(1-\delta) + 4}{16}, & \text{for } x_L \in [\max\{-1, -2\delta\}, \max\{-1, \min\{0, 2(1-2\delta)\}\}) \\ 1 + \frac{b(x_L+2)}{4} - \frac{(x_L+2)^2}{32}, & \text{for } x_L \in [\max\{-1, \min\{0, 2(1-2\delta)\}\}, 0) \end{cases}
\end{aligned}$$

### 3.3 Equilibrium analysis

In order to fully characterize the set of symmetric PUNE within the entire parameter space  $(\delta, b) \in (0, 1]^2$ , we need to check for potential deviations that leave both party factions weakly better off and at least one strictly better off. Assuming that there is no fallback option of going it alone, we look for consolidates party platforms that satisfy the equilibrium conditions of Definition 1. We consider three different types of symmetric PUNEPPs: (i) anti-membership, i.e.,  $m_L^* = 0$  and  $x_L^* \in X$ , (ii) pro-membership, i.e.,  $m_L^* = 1$  and  $x_L \in \bar{X}$ , and (iii) populist, i.e.,  $m_L^* = 1$  and  $x_L \notin \bar{X}$ .

(i) For any *anti-membership* policy platform to satisfy the equilibrium conditions of Definition 1, we need the following to hold:

$$\begin{aligned}
& \pi_L^{*anti} = (x_L^{*anti}, 0) \in PUNEEP \Leftrightarrow \\
& \left. \frac{\partial EV_L(x_L, 0; \pi_{-L}^*)}{\partial x_L} \right|_{x_L=x_L^{*anti}} \leq 0 \quad \& \quad \left. \frac{Ev_L(x_L, 0; \pi_{-L}^*)}{\partial x_L} \right|_{x_L=x_L^{*anti}} \geq 0 \quad \& \\
& EV_L(x_L^{*anti}, 0; \pi_{-L}^*) \geq EV_L(x_L^{*anti}, 1; \pi_{-L}^*) \quad \& \\
& \left( \nexists x'_L \neq x_L^{*anti} \text{ such that } EV_L(x'_L, 1; \pi_{-L}^*) \geq EV_L(x_L^{*anti}, 0; \pi_{-L}^*) \quad \& \right. \\
& \left. EV_L(x'_L, 1; \pi_{-L}^*) \geq EV_L(x_L^{*anti}, 0; \pi_{-L}^*) \right)
\end{aligned}$$

Based on the workhorse model Equations 3, 4, 5, and 6 derived above, it follows that, for  $x_L^{*anti}$  to be part of a polarized anti-membership PUNEEP, it has to lie within the constrained set  $[-1 + \underline{v}, \min\{-2\underline{v} - b, -\frac{b+2}{5}\})$ . These conditions imply that there is no other anti-membership ideological platform that leaves both factions at least as well off and one of them strictly better off while at the same time an equilibrium anti-membership platform cannot be susceptible to any Pareto superior deviation to a pro-membership policy platform. It would then suffice to compare average policy payoffs for any two anti-membership and pro-membership platforms such that the latter lead to a higher expected vote share for the Left party.

(ii) For any *pro-membership* policy platform to satisfy the equilibrium conditions of Definition 1, we need the following to hold:

$$\begin{aligned}
& \pi_L^{*pro} = (x_L^{*pro}, 1), x_L^{*pro} \in \bar{X} \in PUNEEP \Leftrightarrow \nexists x'_L \in [-1, 0) \neq x_L^{*pro} \text{ such that} \\
& \left( EV_L(x'_L, 1; \pi_{-L}^*) \geq EV_L(x_L^{*pro}, 1; \pi_{-L}^*) \quad \& \quad Ev_L(x'_L, 1; \pi_{-L}^*) \geq Ev_L(x_L^{*pro}, 1; \pi_{-L}^*) \right) \parallel \\
& \left( EV_L(x'_L, 0; \pi_{-L}^*) \geq EV_L(x_L^{*pro}, 1; \pi_{-L}^*) \quad \& \quad Ev_L(x'_L, 0; \pi_{-L}^*) \geq Ev_L(x_L^{*pro}, 1; \pi_{-L}^*) \right)
\end{aligned}$$

Based on the workhorse model Equations 3, 4, 5, and 6 derived above, it follows that,

for  $x_L^{*pro}$  to be part of a symmetric pro-membership PUNEED, it has to be the case that  $-\frac{2(1-b)}{5} \geq -\delta \Leftrightarrow b \geq 1 - \frac{5}{2}\delta$ . The leftmost bound of pro-membership equilibrium platforms is either the one that maximizes the Militants' objective function, which is then strictly decreasing for higher interior policies, or else the left boundary of the constraint policy set  $\min \bar{X} = -\delta$ . Moreover, in order to rule out non-degenerate equilibria where the center party is squeezed out of representation with certainty, we impose the condition that  $x_L^{*pro} < v$ . Clearly, any switch to an anti-membership policy platform with  $x'_L \in [-1, -\delta)$  and  $m'_L = 0$  is not an admissible deviation as this would lead to a lower vote share. Therefore, for any such  $\pi_L^{*pro}$ , there is no other pro-membership policy platform  $\pi'_L$  with  $x'_L \in [-1, -v)$  that leaves both factions weakly better off and at least one strictly better off.

(iii) For any *populist* policy platform to satisfy the equilibrium conditions of Definition 1, we need the following to hold:

$$\begin{aligned} \pi_L^{*pop} = (x_L^{*pop}, 1), x_L^{*pop} \notin \bar{X} \in PUNEED &\Leftrightarrow \nexists x'_L \in [-1, 0) \neq x_L^{*pop} \text{ such that} \\ &\left( EV_L(x'_L, 1; \pi_{-L}^*) \geq EV_L(x_L^{*pop}, 1; \pi_{-L}^*) \quad \& \quad Ev_L(x'_L, 1; \pi_{-L}^*) \geq Ev_L(x_L^{*pop}, 1; \pi_{-L}^*) \right) \parallel \\ &\left( EV_L(x_L^{*pop}, 0; \pi_{-L}^*) \geq EV_L(x_L^{*pop}, 1; \pi_{-L}^*) \quad \& \quad Ev_L(x_L^{*pop}, 0; \pi_{-L}^*) \geq Ev_L(x_L^{*pop}, 1; \pi_{-L}^*) \right) \parallel \\ &\left( EV_L(x'_L, 0; \pi_{-L}^*) \geq EV_L(x_L^{*pop}, 1; \pi_{-L}^*) \quad \& \quad Ev_L(x'_L, 0; \pi_{-L}^*) \geq Ev_L(x_L^{*pop}, 1; \pi_{-L}^*) \right) \end{aligned}$$

In order to complete the full characterization of the set of PUNEEDs in pure strategies, we also need to consider what we refer to as *populist* equilibrium strategies, i.e., inherently inconsistent and unimplementable policy platforms with  $m_L^{*pop} = 1$  and  $x_L^{*pop} < -\delta$ . Note that these can only occur in that part of the parameter space where the Militants' aggregate expected pro-membership policy payoff  $EV_L(x_L, 1; \pi_{-L}^*)$  is maximized outside of the constrained policy space  $\bar{X} = [-\delta, \delta]$ . Then, an electoral policy platform  $x_L^{*pro} \notin \bar{X}$  will constitute a populist PUNEED equilibrium as long as there is no equilibrium anti-membership policy platform that also generates a higher vote share.

The above fully characterizes the set of symmetric PUNEED equilibria in a two-dimensional  $(\delta, b)$  parameter space. Figure 4 maps them out for any  $(\delta, b) \in (0, 1]^2$ .

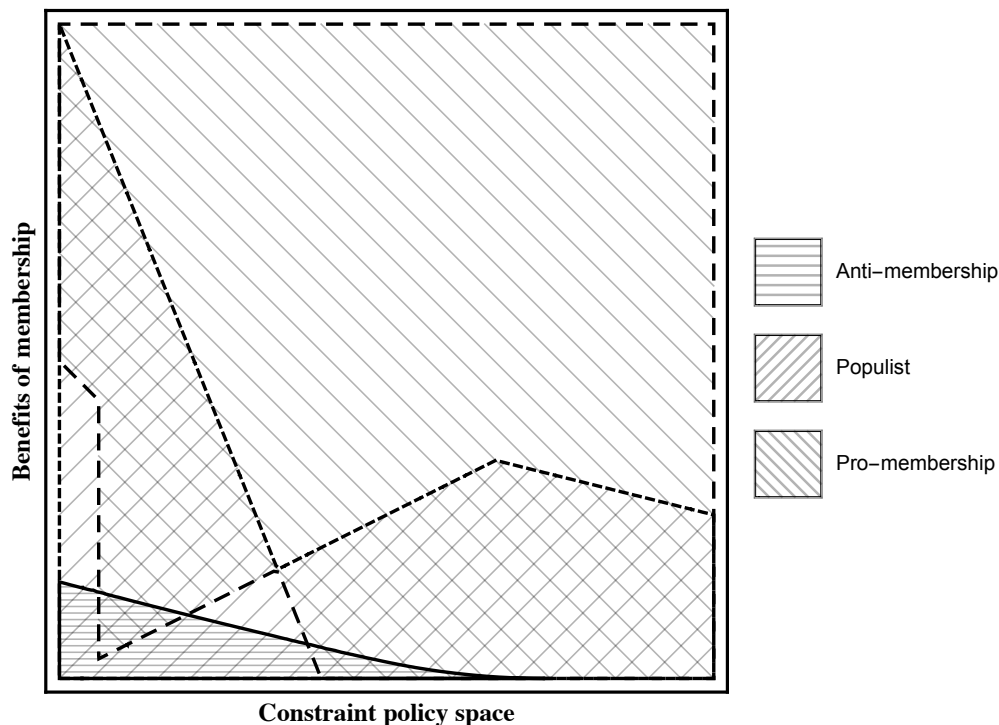


Figure 4: Symmetric party unanimity Nash equilibria with endogenous parties (SPUNEED) over  $(\delta, b) \in (0, 1]^2$  space

It is evident from the graph that the lower the input ( $\delta$ ) and output legitimacy ( $b$ ) of the international union, the more likely extreme parties are to adopt either populist or even anti-membership rhetoric. Note that we can have different types of equilibria (populist pro-membership and polarized anti-membership) for the same levels of  $\delta$  and  $b$ . This observation illustrates nicely how populist parties can masquerade as being pro-membership (e.g., in the case of the EU, as moderately Euroskeptic) while staying true to the ideology of their core constituents. In that sense, populist parties tends to gloss over deep intra-party divisions between factions and, therefore, may cause splits once these parties get into government and the inherent inconsistencies of their electoral programs



are revealed.<sup>12</sup> Viewed from our theoretical perspective, populist rhetoric is simply a compromise between different party factions with conflicting ideologies and objectives.

What are the implications of our model for the country’s integration policy outcome? Even though expected final government policy  $\omega$  doesn’t shift away from centrist pro-integration outcomes, we now proceed to show that for low enough benefits of integration national party systems become very fragile and prone to ideological polarization, fragmentation, and political instability with potentially long-term repercussions for the country’s international orientation.

### 3.4 Party splits and the Nash bargaining solution

We now proceed to refine the set of PUNEEPS by allowing for the possibility of a party split whereby the two factions have the option of contesting the election as separate parties. To do so, we apply the axiomatic Nash bargaining solution where electoral party-system fragmentation constitutes the disagreement outcome. We proceed to show that, for lower levels of input ( $\delta$ ) and output legitimacy ( $b$ ) of the international union, the disagreement payoffs of the fragmentation game start to bind and the set of consolidated Pareto efficient electoral platforms vanishes. Essentially, it is the anti-membership PUNEEPS that fail to survive this refinement since, for all  $(\delta, b) \in (0, 1]^2$ , the Opportunists always have an incentive to converge towards the center and adopt a pro-membership platform.

In light of the multiplicity of equilibria of the two-dimensional fragmentation game of multi-party electoral competition, we restrict the set of possible deviations of the splintering Left Militant faction to the left of the position of the Left Opportunist faction (symmetrically to the right for the Right party). We do so in order to derive a unique set of disagreement payoff for the intra-party bargaining process based on the set of mutual best responses of the two factions.

Solving for the unique equilibrium of the restricted fragmentation game of electoral competition, where the Left Militants maximize  $EV_{LM}(\pi_{LM}; \pi_{LO}^*)$  and the Left Oppor-

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<sup>12</sup>In our model, we assume that populist policies are always revealed to voters for what they are *ex post* as parties have to adjust their parliamentary policies to comply with the supranational rules of integration. An extension of the model could also allow for the possibility of “untested populism” in the post-electoral stage.

tunists maximize  $Ev_{LO}(\pi_{LO}; \pi_{LM}^*, \pi_C^*)$ , we find that  $\pi_{LM}^*(x_{LO}^*, 1) = (-1 + \vartheta, 0)$  is the unique best response of the Left Militant faction and  $\pi_{LO}^*(x_{LM}^*, 0) = \left(\frac{-1 + \vartheta - b}{2}, 1\right)$  is the unique best response of the Left Opportunist faction. In other words, the Militants will diverge to the left extreme up to the point where their probability of representation in parliament starts declining.

Hence, if either of the two disagreement payoffs binds for any consolidated party platform  $\pi_L$ , then the unique prediction is that of a party split where each of the splintering factions earns its Nash equilibrium payoffs from the fragmentation game. If, however, there is a consolidated platform that leaves both factions at least as well off and at least one of them strictly better off, then the unique Nash Bargaining Solution (NBS) of the intra-party bargaining game is the electoral platform that maximizes the following expression:

$$\begin{aligned} \pi_L^{NBS}(\delta, b) &= \operatorname{argmax}_{\pi_L \in [-1, -\vartheta] \times \{0, 1\}} \left( Ev_L(\pi_L; \pi_{-J}^*) - Ev_{LO} \left( \frac{-1 + \vartheta - b}{2}, 1; \pi_{LM}^*, \pi_C^* \right) \right) \\ &\times (Ev_L(\pi_L; \pi_{-J}^*) - Ev_{LM}(-1 + \vartheta, 0; \pi_{LO}^*)) \end{aligned} \quad (7)$$

Figure 5 illustrates the types of unique Nash bargaining solutions for the expanded game of intra-party bargaining with the possibility of (restricted) fragmentation. As it turns out, party splits occur – when the disagreement payoff of at least one of the two factions starts to bind – in the bottom-left corner of the square. In the remainder of the space, the economies of scale of a unified or consolidated party (Hortala-Vallve and Mueller, 2013) trump the potential benefits of going it alone. The  $(\delta, b)$  space of party consolidation is partitioned between unique populist and pro-integration NBS electoral platforms. Each of these types of equilibria essentially captures the *ex ante* bargaining power of either the *Militant* (in the case of populist platforms) or the *Opportunist* (in the case of pro-integration platforms) factions.

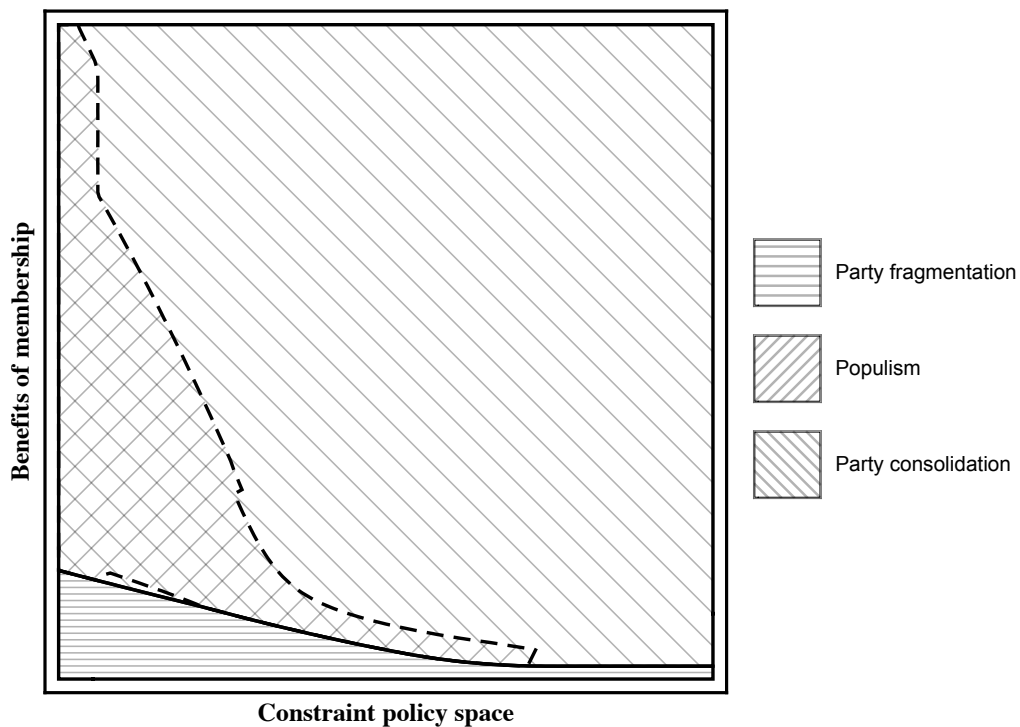


Figure 5: Nash bargaining solutions between party factions over the  $(\delta, b) \in (0, 1]^2$  space (allowing for restricted Militant faction deviations to the left of the Opportunist faction in a restricted fragmentation game of electoral competition)

### 3.5 Party-system polarization and voter abstention

Finally, we seek to extrapolate the level of party-system polarization and the expected level of abstention for different combinations of input ( $\delta$ ) and output ( $b$ ) legitimacy of the international union. To calculate the expected level of ideological polarization along the left-right axis, we apply the measure proposed by Stanig (2011) as follows:

$$Pol(\delta, b) = \frac{\sum_J Ev_J (\pi_J^{NBS}; \pi_{-J}^{NBS}) |x_J^{NBS}|}{|J| \sum_J Ev_J^2 (\pi_J^{NBS}; \pi_{-J}^{NBS})} \quad (8)$$

This measure generalizes for multi-party systems and satisfies a set of desirable properties by accounting for the effects of both ideological divergence and party-system fragmentation. Although Equation 8 measures ideological polarization at the electoral stage, we can also measure ideological polarization at the legislative stage by replacing  $x_J^{NBS}$  with the adjusted parliamentary policy platform  $\hat{x}_J^{NBS}$  as defined above.

Finally, we extrapolate the expected level of electoral abstention in the following way:

$$Abs(\delta, b) = 1 - \sum_J Ev_J (\pi_J^{NBS}, \pi_{-J}^{NBS}) \quad (9)$$

Figures 6 and 7 illustrate the corresponding levels of expected party-system polarization and voter abstention as a function of supranational *input* legitimacy  $\delta$  (or else the slackness of constraints) within a policy environment with *moderate* ( $b = 0.2$ ) (Figure 6) and *low* ( $b = 0.1$ ) (Figure 7) supranational *output* legitimacy. Figure 6 shows how tightening supranational policy constraints in the context of deepening integration leads to decreasing expected levels of party-system polarization and increasing expected levels of voter abstention. This captures the process of “forced” convergence by pro-membership parties towards the constrained policy space. As a result, voters feel increasingly alienated and disillusioned by the lack of credible alternatives and distinct choices.<sup>13</sup> Note, however, that for lower levels of union output legitimacy (Figure 7) there is a discontinuous increase in expected polarization and a discontinuous drop in expected voter abstention below a certain level of  $\tilde{\delta}(b)$  due to the ensuing party splits, the fragmentation of the party system, and the availability of more numerous and distinct choices; in other words,

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<sup>13</sup>That’s tantamount to the “There Is No Alternative” (TINA) argument.

there is a “breaking point” in terms of union input and output legitimacy beyond which a national party system becomes significantly more polarized as a result of supranational integration. We may thus safely posit that our extrapolated results closely mirror the empirical trends.

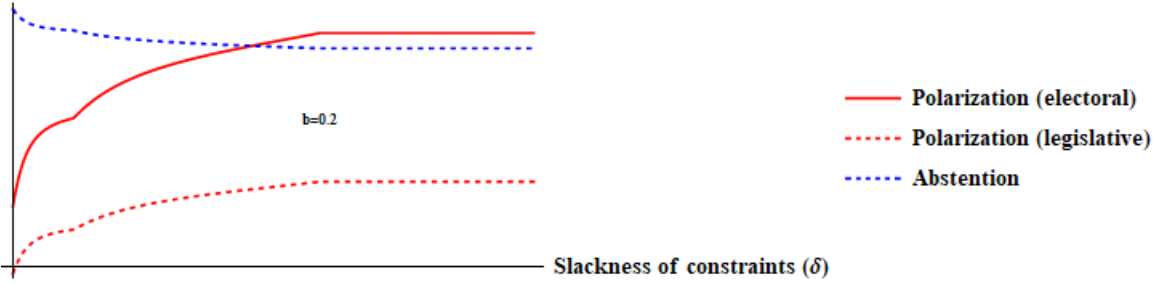


Figure 6: Expected party-system polarization and voter abstention within a union with moderate output legitimacy ( $b = 0.2$ )

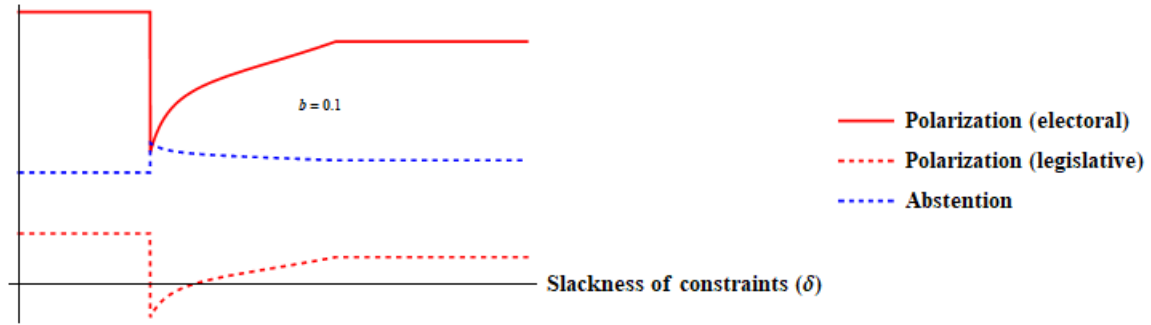


Figure 7: Expected party-system polarization and voter abstention within a union with low output legitimacy ( $b = 0.1$ )

## 4 Concluding Remarks

The Eurozone debt crisis marked the end of political stability and policy consensus in some European parliamentary democracies. Increasing economic interdependence and political integration in Europe has led to the erosion of well-entrenched national democratic institutions. In this paper, we argue that one of the principal manifestations of this

degenerative process is party-system polarization and fragmentation across the ideological spectrum within both the electoral and legislative arenas. We essentially theorize the relationship between tightening policy constraints stemming from EU membership and partisan polarization within the framework of a three-party game of electoral competition. We argue that, while binding policy constraints and rapid integration initially lead to increasing moderation and speed up ideological convergence across the spectrum, it can be the case that extreme constraints and policy targeting can have the opposite effect and might backfire in terms of extreme polarization.

For example, during the early stages of the European project, when the integration process centered around areas of “low politics” (energy, trade, single market, etc.), we expect a negative and significant effect on aggregate levels of political polarization. However, we also stipulate that this process of convergence was reversed during the later stages of European integration that were marked by the broadening and deepening of the EU’s scope of policy competences (Maastricht Treaty, EMU, Lisbon Treaty, European Stability Mechanism). Our findings have wide-ranging normative implications in terms of the political feasibility of the policy centralization process, the sequencing of economic and political integration, and the design of conditionality agreements with indebted member states.

The rise of anti-European extremist parties in Europe (e.g., the Front National in France, the Party for Freedom in the Netherlands, or the UK Independence Party) and recent developments in the politics of the indebted South are giving us a glimpse into the future. In fact, Greece provides one of the more characteristic examples of the degenerative effects of extreme conditionality and policy centralization on political stability and ideological moderation. The Greek political system has been strained beyond its breaking point by the exigencies of its international commitments. As a result of increasing fiscal and supply-side conditionality and complex policy interdependence, the dimensionality of electoral competition has dwindled. The scope for unilateral political action has shrunk to such an extent that political rhetoric has been greatly polarized around stark political dilemmas between pro- and anti- Europeanism, pro- and anti- austerity, populism and pragmatism, democracy and technocracy (Vasilopoulou et al., 2014). The fragmentation of the Greek party system and the electoral shift towards radical extremist parties (e.g.,

the extreme right-wing Golden Dawn party witnessed a meteoric rise in its vote share from less than 1% in 2009 to 7% in 2012) provides clear evidence of the destabilization of domestic politics in the context of deepening European integration.

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