

Endogenous Credible Commitment and Party Competition Over Redistribution Under Alternative Electoral Institutions

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Abstract

Democracies do not legally bind parties to their policy promises. Thus winning the power to set policy through elections requires making credible commitments to pivotal voters. This paper analyzes theoretically and empirically how the commitment problem affects partisan conflict over redistribution. A theoretical model shows that under majoritarian electoral rules parties' efforts to achieve endogenous commitment to policies preferred by the middle class leads to different behavior and outcomes than suggested by existing theories that assume commitment or rule out endogenous commitment. Counterintuitively, for example, left parties may respond to rising inequality by moving to the right. The theoretical analysis also suggests that the observed anti-left bias of majoritarian compared to proportional systems has an electoral component, emphasized by previous work, but also a positional component driven by endogenous commitment using citizen candidates. The empirical analysis tests implications of this logic using times-series cross-section data on party positions and by analyzing devolution in Great Britain as a natural experiment to compare party strategies in the same districts but under alternative electoral rules.

Democracies do not legally bind individual politicians or political parties to their policy promises (Manin, Przeworski and Stokes, 1999). Thus winning the power to control policy through elections requires making credible policy appeals to pivotal voters. Doing so is challenging for parties with strong ideological or organizational links to core voters or groups whose interests diverge from that of the pivotal voters. As has been clearly demonstrated by Alesina (1988), in the absence of exogenous enforcement politicians that care about policy, for intrinsic or instrumental reasons, face a time inconsistency problem. To win elections they want to commit to promises that, if elected, they have incentives to break. This may make them unelectable in the eyes of pivotal voters. Parties of the left have often faced the commitment problem. They emerged from the working class with an egalitarian agenda that promised (to the have-nots) or threatened (to the haves) the redistribution of income and wealth. Once they had embraced representative democracy as the means to reform, socialist and social democratic parties quickly realized the need to reach out to middle class voters who were pivotal in determining elections, though doing so proved difficult (Przeworski and Sprague, 1986). Failing to make credible appeals to the middle classes condemned the left to electoral defeat and little direct policy influence. The example of the British Labour Party in the 1980s and 1990s illustrates that the commitment problem has not disappeared as democracies in Europe and elsewhere have matured. How does the commitment problem affect party competition over redistribution? When and how do parties achieve endogenous commitment to policies preferred by pivotal voters? With what consequences for elections and redistribution? Do electoral systems influence parties' responses to the commitment problem? These questions are central to debates in the literature on inequality and redistribution in democracies as well as the theoretical and empirical literature on party competition. Despite significant advances, discussed below, existing research does not fully answer these questions. This paper begins to address this shortcoming by providing a new theory of endogenous commitment and new evidence based on a times-series cross-section

analysis of party positions and a natural experiment on party strategies under alternative electoral rules.

The problem of credible commitment in policymaking occupies a central place in modern political economy research. Among others, institutional reforms that introduce veto players as constraints on absolute rulers have been linked to good economic performance (North and Weingast, 1989; Stasavage, 2002). Delegating the power to set monetary policy to a conservative and independent central banker reduces the commitment problem faced by governments (Rogoff, 1985). Scholars also argue that elites facing redistributive demands under the threat of revolution are limited in their ability to make credible policy concession but that the introduction of democracy can serve as a commitment device (Acemoglu and Robinson, 2006). Accounting for the absence of external enforcement of campaign promises in democracies, the innovative and widely-cited theory of Iversen and Soskice (2006) demonstrates that lack of commitment in partisan conflict over redistribution can have profound consequences and explain why some democracies redistribute more than others.¹ This is one of the enduring puzzles in the literature, as simple economic explanations fail to explain the large variation in redistributive policies across advanced industrialized democracies (Alesina and Glaeser, 2004, pp. 55-76). The model of Iversen and Soskice (2006) compares the outcome of party competition over redistribution between majoritarian and proportional electoral systems when parties are unable to make binding promises. It considers a political economy with three groups (low-income, middle-income, high-income). Institutionally, proportional representation (PR) is characterized by coalition government between representative parties and majoritarian systems are characterized by competition between two leadership parties,

¹Many theories of party competition in the tradition of Downs (1957) implicitly or explicitly assume that electoral promises are binding.

with the winning party setting policy. In this setting, the middle income group is pivotal. The implications of these assumptions are clear-cut. If the left party wins the election in majoritarian systems it may renege on its promised moderate policy and instead impose a policy of high taxes and little benefits for everybody but the poor, making the middle class a net loser. Right parties may also renege, but the worst outcome for middle-class voters in this case are low taxes and no benefits. As a consequence, middle class voters in majoritarian systems tend to strategically support right parties, leading to relatively low levels of redistribution. This stands in contrast to PR. Here coalition government between a left and centrist party provides a credible mechanism due to mutual veto power that protects the left from soaking the middle class (consistent with Stasavage 2002; Tsebelis 2002) and elections tend to produce center-left coalitions resulting in high levels of redistribution. Thus, the model can explain the striking twin observation that governments are more left-leaning and redistribution is more pronounced under proportional than under majoritarian electoral institutions (Iversen and Soskice 2006; also see Funk and Gathmann, 2013; Persson and Tabellini 2003).²

Given the high stakes of the redistribution game it is puzzling, however, that parties competing under majoritarian rules systematically fail to solve the commitment problem in equilibrium. Left parties in particular, who otherwise have to endure significant policy losses, have clear incentives to devise a credible commitment mechanism. If successful, endogenous commitment may substantively change the redistributive game. To capture the

²Iversen and Soskice (2010) apply this logic to explain real exchange rates and competitiveness and Iversen and Soskice (2009) discuss its implication for inequality. Several other models analyze how electoral rules affect redistribution, though they do not aim to explain variation in government partisanship across institutions (e.g., see Persson and Tabellini 2000).

centripetal incentives of election competition, Iversen and Soskice (2006) assume that parties in majoritarian systems are leadership parties. As their analysis reveals, however, this is not sufficient to achieve commitment. They also point out that left parties may have particular incentives to find a credible commitment device, though they do not develop this argument. This paper builds on the foundational theory of Iversen and Soskice (2006) and extends farther the idea that parties have incentives to achieve endogenous commitment. The main theoretical intuition is that under some conditions parties will make costly investments to credibly appeal to pivotal middle-class voters. More specifically, parties can achieve endogenous commitment if they do not only choose the party leader but also select candidates for the legislature, as is the case in many democracies (Norris, 1997). By selecting a sufficient number of moderate candidates, parties can increase the probability that its legislators will not be tempted to pursue more extreme policies than promised before the election. For the left, endogenous commitment can be good politics because centrist policy outcomes entails more redistribution to the poor than the policies pursued by a right government. Recruiting moderate candidates is costly, however, so whether recruitment-based commitment is worthwhile depends on the behavior of competitors and features of the political economy. The next section develops a simple game theoretical model to clarify the logic of the argument and derive several novel implications, some of which are confronted with data in the empirical section. The model considers a majoritarian electoral systems as in Iversen and Soskice (2006) but with multiple districts and parties that decide which type of candidate to select in each district. The model shows that parties' strategic decision whether to commit to a centrist redistributive platform is endogenous to political competition and varies with income inequality and costs of recruiting moderates. The ability to use candidate selection as a commitment device affects electoral behavior, election outcomes and redistributive policy.

Endogenous commitment implies that left parties in majoritarian electoral systems need not suffer from an observable electoral bias. Rather, the existence of an electoral disadvantage

is conditional on context. In that sense, the result of Iversen and Soskice (2006, Proposition 1) is a special case. Another implications is that rising inequality may cause left parties to move to the right in majoritarian (but not in PR) systems. This appears consistent with casual observation, such as the right-ward move of ‘new’ Labour in Britain, though it does not follow from existing partisan or Downsian theories such as Hibbs (1977). The counter-intuitive prediction for majoritarian systems is driven by the left’s response to the commitment problem. In particular, as the rich become richer relative to everyone else, middle-income voters will be more willing to support the left - but only if the left’s commitment to protect middle class interests is credible. As higher top incomes imply more gains from redistribution for the poor, the left has more incentive to make costly investments in moderate candidates. The analysis also highlights that candidate selection in non-marginal districts is important for election outcomes. Parties making costly investments in non-marginal districts differs from the view that parties only do so in marginal districts (Galasso and Nannicini, 2011). Comparing redistribution in the majoritarian setting with PR recovers the main insight from Iversen and Soskice (2006) that, on average, there is less redistribution in majoritarian than in PR systems because the former induce less left government than the latter. Going beyond this point, modelling endogenous commitment unbundles the anti-left bias of majoritarian systems. It reveals that differences in redistribution and government partisanship can occur because left parties are (i) less likely to win election under majoritarian than PR electoral rules (as in Iversen and Soskice (2006)) or (ii) because left parties are credibly more centrist in majoritarian systems (endogenous commitment). Existing empirical studies do not distinguish these mechanisms (Döring and Manow, 2013; Funk and Gathmann, 2013; Iversen and Soskice, 2006).

The empirical section uses two distinct data sets to evaluate implications of the theory. First, a times-series cross-section analysis covering 16 affluent democracies between 1950 and 2010 finds that there is an institution-varying impact of income inequality of the position

of the mainstream left party. In line with the model, left parties in majoritarian systems move to the right in response to rising inequality whereas left parties in PR do not. This result also contributes to the empirical literature on determinants of party positions (e.g., Adams, Haupt and Stoll 2009; Ward, Ezrow and Dorussen 2011). With the exception of Pontusson and Rueda (2010), it has ignored the impact of inequality and they do not model the conditioning role of electoral institutions. The second part aims to shed some empirical light on the relevance of candidate selection as a commitment device. In particular, I analyze the creation of the new Scottish Parliament in Great Britain as a natural experiment using a novel data set including about 420 candidates. The institutional setting created by devolution enables me to compare the selection of candidates by the main center-left parties in the same districts but under alternative electoral rules. This research design accounts for unobserved district heterogeneity. Using smaller parties as a control group, it also captures possible changes in the median voter at large across electoral systems. The main finding is that, in line with the logic of endogenous commitment, Labour responded to the introduction of PR for the new Scottish parliament by nominating more leftist candidates.

The use of candidates as a commitment device builds on citizen-candidate models of electoral competition (e.g., Besley and Coate, 1997). One important difference of this paper is that parties strategically select candidates. Other commitment devices are theoretically available to parties. The development of reputation based on (infinitely) repeated elections is probably the most prominent mechanism in the literature (e.g., Alesina, 1988).³ A key

³Examples of other commitment devices include patronage (Keefer and Vlaicu, 2008) or party formation (Levy, 2004; Morelli, 2004). The latter approach is related but distinct. Levy (2004) assumes rather unrealistically that each party member has veto power and Morelli (2004) assumes that candidates are bound to their party's compromise position.

feature of candidate selection is that it does not require that voters or politicians have very long time horizons. A political advantage is that it can be used by opposition parties that do not have the opportunity to build reputation through policy. It also entails more flexibility than strict adherence to a particular promise. While one may conjecture that commitment devices are substitutes, the empirical findings are not easily explained by reputation.

Theoretical Model

It is common to argue that parties competing for the power to set policy in majoritarian electoral systems have strong centripetal incentives to take moderate positions (Calvert, 1985). Given the absence of external enforcement of policy promises, however, the difficulty faced by policy-motivated parties is to credibly commit to a redistributive platform tailored to pivotal groups of voters – middle-income voters in the context of redistributive politics. The model of Iversen and Soskice (2006) clearly highlights the importance of commitment problems in influencing the outcome of redistributive conflict. Building on it, this section proposes a simple model to analyze when and with what consequences parties competing under majoritarian rules make costly investments in moderate candidates to achieve endogenous commitment. The model considers a political economy with three economic groups, low-income (L), middle-income (M), and high-income (H), of equal size and indexed by J (also see Acemoglu and Robinson, 2006; Persson and Tabellini, 2000). Each group cares about its disposable income and political conflict is over the choice of a possibly group-specific tax rate and transfer payment.

Preferences and Redistributive Policy

The economic structure follows the five general assumptions of the model of Iversen and Soskice (2006). J 's indirect utility function is $V^J(p^J) = y^J + p^J$, where y^J is the exogenous

gross income and p^J is the net government transfer of J . Each group has a maximum taxable capacity \bar{T}^J that is less than its exogenous income, capturing incentive effects of taxation. Hence the net transfer to a group is constrained below: $p^J \geq -\bar{T}^J$. Taxable capacity increases in exogenous income, $0 = \bar{T}^L < \bar{T}^M < \bar{T}^H$, where the taxable capacity of the low-income group is normalized to zero. The total revenue available for redistribution is $\bar{T} \equiv \bar{T}^M + \bar{T}^H$. The budget is balanced, $\sum_J p^J = 0$. The final assumption is that net transfers are non-regressive, $p^L \geq p^M \geq p^H$. The policy setup is more general than the more common assumption of a linear income tax and a general lump sum payment. In sum, given these assumption the most preferred transfer policies for group J , denoted by $\hat{p}^J = (p_L^J, p_M^J, p_R^J)$, are as follows:

$$\begin{aligned}
\hat{p}^L &= (\bar{T}, -\bar{T}^M, -\bar{T}^H) \\
\hat{p}^M &= \left(\frac{\bar{T}^H}{2}, \frac{\bar{T}^H}{2}, -\bar{T}^H\right) \\
\hat{p}^H &= (0, 0, 0)
\end{aligned} \tag{1}$$

Accordingly, low-income citizens would most prefer to tax the middle- and high-income group at their full capacity and receive all the transfers. Middle-income citizens would tax the high-income group at their full capacity and keep as much to themselves as allowed by the non-regressivity of the tax system. High-income citizens prefer no income redistribution.

Parties, Candidates, and Institutions

Redistributive policy is made by elected politicians in parliament. Politicians are citizens and share the policy preferences of either low-income, middle-income, or high-income voters. Political parties organize teams of politicians to run for office and citizens vote for the party they believe will implement a policy they like. The election is held under a majoritarian electoral system with N single member-districts where the candidate with a plurality of

votes wins. In this institutional setting, commitment is especially problematic as there are no exogenous constraints on the legislative majority in parliament. As in Iversen and Soskice (2006), there are two parties that dominate political competition, a center-left party, **LM**, and a center-right party, **MH**. This assumption captures Duverger’s Law, according to which majoritarian electoral rules lead to the emergence of a two-party system (Cox, 1997; Duverger, 1954). **LM** consists of a majority faction of L politicians and a minority faction of M politicians. **MH** consists of a majority faction of H politicians and a minority faction of M politicians.

Parties select a candidate for each district. This means that the degree of commitment to a redistribute platform preferred by the pivotal middle-income group is endogenous to candidate selection. Selecting moderates comes at a cost as doing so requires conflict with party members that may care more about ideological purity than electability and because vetting candidates and attracting competitive ones is costly. Realistically, moreover, the true policy preferences of candidates are unknown to the majority party faction selecting the candidates as well as voters. But they have informative beliefs about each candidate’s preference type. Beliefs represent the information emerging during the typically long process of apprenticeship and scrutiny leading up to a nomination for national office. To analytically explore the strategic role of candidate selection, it is instructive to consider three heterogeneous districts (e.g., see Persson and Tabellini, 2000, ch. 8). In the marginal district, middle-income voters M are pivotal. There also is a district where L and H voters, respectively, are in the majority. I will refer to the latter as safe districts for **LM** and **MH** because their candidate wins for sure. For simplicity, assume that in the electoral stage each party $P \in \{\mathbf{LM}, \mathbf{MH}\}$ chooses between full moderation ($x_P = 1$), which entails nominating moderate candidate types in the marginal and the party’s safe district, and partial moderation, which entails nominating a moderate candidate type in the marginal but not their safe district. Full moderation entails an exogenous cost $c_P > 0$. Partial moderation is consistent with the majoritarian model of

Iversen and Soskice (2006), where parties are thought to select a moderate party leader. As parties may use mixed strategies, let σ_P denote the probability that party P chooses full moderation ($x_P = 1$). Beliefs about candidates preferences are as follows. For party **LM** (**MH**), a moderate candidate type is denoted by β_{LM} (β_{MH}) and a left-wing (right-wing) type is denoted by α_{LM} (α_{MH}), where β_{LM} (β_{MH}) candidate types are more likely to be M than L (H) preference types and α_{LM} (α_{MH}) candidate types are less likely to be M than L (H) types. In particular, I assume $Pr(M|\beta_{LM}) = Pr(M|\beta_{MH}) = Pr(L|\alpha_{LM}) = Pr(H|\alpha_{MH}) = \pi > 1/2$ and $Pr(L|\beta_{LM}) = Pr(H|\beta_{MH}) = Pr(M|\alpha_{LM}) = Pr(M|\alpha_{MH}) = 1 - \pi$.⁴

The party that wins a majority of seats in the election controls the legislative agenda and it selects a party leader to exercise this proposal power. Once a proposal is made, there are no exogenous restrictions on how legislators can vote. Members of parliament within the winning party select the parliamentary party leader. This occurs after uncertainty about politicians' preference types has been revealed. After the leadership selection, the party leader of partisan type J proposes a bill $b = (p_L, p_M, p_H)$. It becomes policy if a majority of all legislators support it, otherwise there is no redistribution.⁵

To summarize, the sequence of events is as follows:

⁴All that voters are required to know is whether a party's candidates are predominantly from its centrist or radical wing. Voters do not need know a lot about individual candidates in order for legislative recruitment to serve as a commitment device.

⁵The agenda-setting assumption captures the strong proposal powers of many parliamentary governments (Tsebelis, 2002). The leadership election by legislators is also consistent, for example, with the selection procedure that was in place throughout most of the twentieth century in the British Labour and the British Conservative party between 1967 and 1998.

1. Parties **LM** and **MH** simultaneously choose their candidate selection strategies, σ_{LM} and σ_{MH} , deciding whether to pursue costly moderation or not.
2. An election is held. In each district, the candidate with a plurality of votes wins.
3. All uncertainty is revealed. In particular, it becomes common knowledge whether elected members of parliament are of preference type L , M , or H .
4. The majority party in parliament selects the agenda setter. The agenda setter is drawn from the largest faction in the majority party. In case of a tie among the two factions, the setter is chosen at random from the majority party.
5. The agenda setter proposes a net transfer policy, $b = (p_L, p_M, p_H)$ subject to the economic feasibility constraints.
6. If a majority supports b^J , it becomes policy; else there is no redistribution.
7. Policies are implemented and payoffs are realized.

The equilibrium concept is subgame perfect Nash equilibrium. As usual, I exclude equilibria where individuals use weakly dominated strategies (politicians voting for policies that result in strictly lower payoffs as other politicians are doing so as well).

Equilibrium and Implications for Redistributive Politics

As illustrated by Figure 1, equilibrium outcomes of partisan competition over redistribution vary by income inequality and parties' cost of recruiting moderate candidates. A formal statement and proof are in Appendix S1 (see Proposition 1). First, suppose the difference in taxable income between middle-income and high-income citizens is relatively small or the cost of recruiting moderates is sufficiently high for both parties (region I in Figure 1). This means that either the middle-income voter prefers the center-right party even when

the center-left party makes more efforts to moderate (because commitment is never perfect and the structure of inequality makes the perils of left government more pronounced) or the center-left's cost of recruiting moderates are simply too high. As a consequence, neither party has an incentive to pursue a costly commitment strategy. Hence, the center-left party suffers from an observable electoral disadvantage and the policy outcome entails little redistribution to the poor in expectation. Second, a different political equilibrium emerges if the income difference between the middle and the top are sufficiently large and there are asymmetric recruitment cost with sufficiently low cost only for the center-left party (region II in Figure 1). In this scenario, the center-left party makes a greater effort to commit by recruiting moderates (including in some safe districts) than the center-right party and, as a consequence, has better electoral prospects. Redistribution is expected to be higher than in the previous case without costly commitment. Given the one-sided commitment, the center-left party does not suffer from an electoral disadvantage as it has credibly moved to the center. In other words, there is a positional but not an electoral anti-left bias of partisan competition under majoritarian institutions. Third, consider the scenario where income differences between the middle and the high-income groups are sufficiently large and recruitment cost are sufficiently low for both parties (region III in Figure 1). In this situation, the equilibrium is in mixed strategies where both parties choose a moderate candidate selection strategy with positive probability (but strictly less than one). Electoral outcomes are uncertain *ex ante* and there is no generic electoral disadvantage of the center-left party. Under some conditions the center-right party is more likely to win than the center-left party and under others the reverse is the case. Expected redistribution is higher than in the case without costly commitment but lower than in the case with asymmetric commitment by the left.

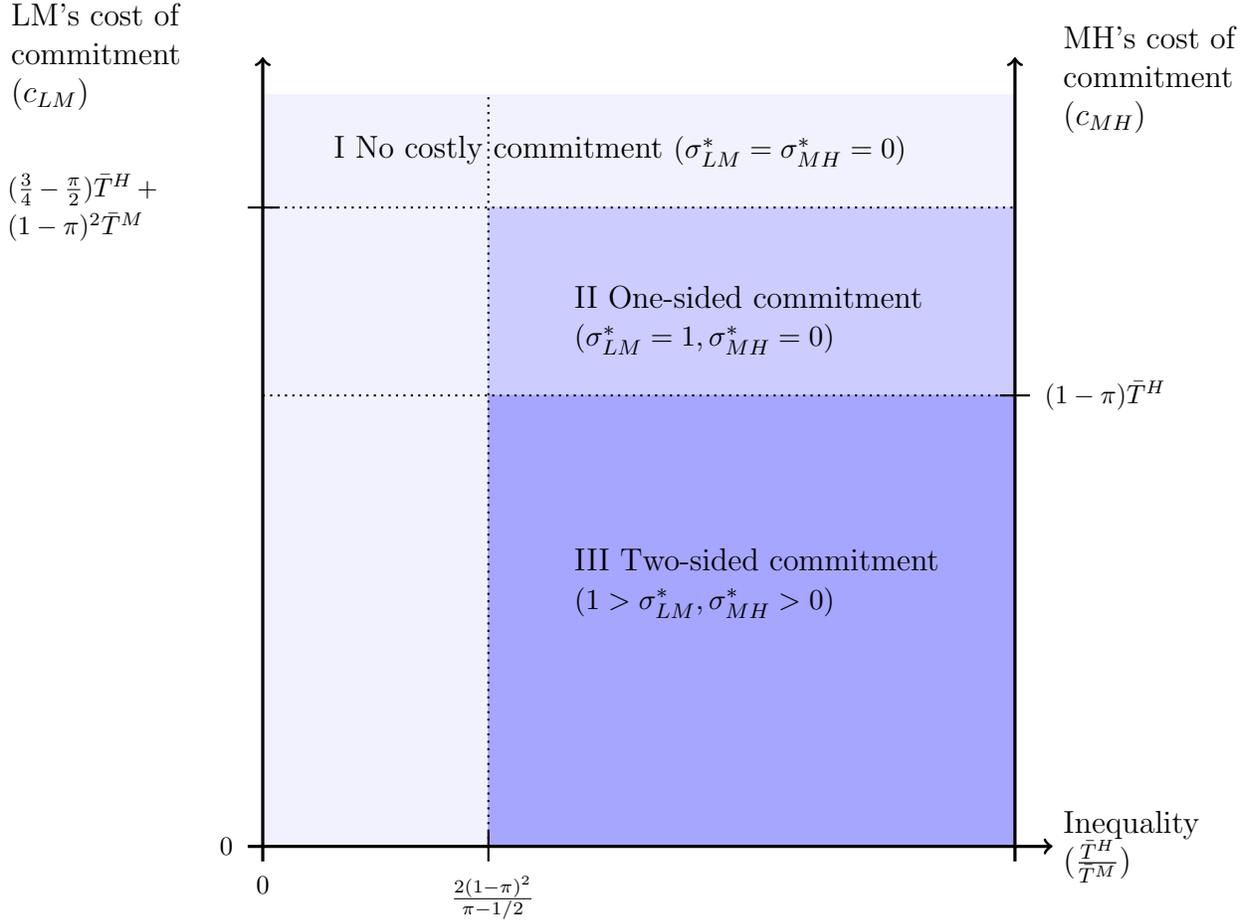


Figure 1: Equilibria in the majoritarian model. The figure shows how parties' electoral strategies vary by top income inequality (i.e., the ratio of taxable income of high and middle-income voters) and the cost of recruiting moderate candidates. The probability that the center-left **LM** (center-right **MH**) party pursues a costly strategy of recruiting middle-income types to commit to a moderate redistributive platform is denoted by σ_{LM} (σ_{MH}).

Effects of Endogenous Commitment

The theory has several novel implications. First, endogenous commitment implies that center-left parties need not suffer from an observable electoral disadvantage in majoritarian electoral systems. Several prominent theories in comparative politics argue that majoritarian institutions entail an electoral bias against the left. This means that even if there is a relatively balanced distribution of policy preferences, the electoral system induces electoral outcomes that favor the right. As discussed before, the model of Iversen and Soskice (2006) argues that, given the absence of credible commitment, strategic voting by the middle class favors the right as the least-bad alternative to a left government that may break its promises and make the middle class a net loser of the redistributive game.⁶ Hence, on average, center-left parties lose elections under majoritarianism (Iversen and Soskice, 2006, Proposition 1). Iversen and Soskice (2006, p. 170) point out that their analysis suggests that left parties may have incentives to find a credible commitment device. The model developed here captures and further explores that intuition. It shows that endogenous commitment using candidates as a commitment device implies that center-left parties may escape their electoral dilemma. This holds even if center-left parties are disadvantaged a priori by the absence of external commitment and policy constraints (i.e., non-regressivity). Furthermore, the existence of an electoral disadvantage is conditional on context. When income inequality between the middle and the top is sufficiently high and parties' recruitment costs are sufficiently low, center-left parties will have incentives to pursue a strategy of costly commitment by recruiting moderate candidates. As a consequence, they tend to be electorally competitive. On

⁶A related theory developed by Rodden (2012) is centered on political geography. Accordingly, given the persistent concentration of left supporters in urban and (former) mining areas, left parties almost inevitably suffer in the translation of votes into legislative seats.

the other hand, when income inequality between the middle and the top is low or parties' recruitment cost are sufficiently high, costly commitment is not an equilibrium strategy and center-left parties will systematically lose elections. This logic can account for why center-left parties in majoritarian systems may exhibit relatively long spells of electoral success as well as long spells in opposition, which does not follow straightforwardly from the theories discussed above or Downsian' models of party competition that assume commitment and imply (near-)convergence.

Second, an increase in the taxable income of the rich relative to the middle class increases the probability that the center-left party in majoritarian systems moves toward the center.⁷ The moderation effect seems counterintuitive as partisan and Downsian' models assuming commitment suggest the opposite. The textbook partisan approach (Hibbs, 1977) suggests that left parties will respond to rising inequality by moving toward the left, re-emphasizing egalitarian policies favored by their core constituencies. If middle class voters would benefit from higher taxes on the rich, then canonical models of party competition that assume commitment also suggest that all parties should respond to higher top inequality by moving to the left, without necessarily converging to the same position (Calvert, 1985). Given the commitment problem, however, the right-ward move follows rationally from the center-left's incentives to achieve endogenous commitment. An increase in the distance of middle to top incomes increases the willingness of the middle income group to support the center-left party. But this is conditional on the party's ability to appease middle class fear's of being soaked at the expense of the poor. With higher inequality between the rich and there merely well-off, the redistributive gains of a moderate strategy increase for the left, and so it will be more

⁷Probability refers to the larger set of parameters for which the center-lefty party pursues a strategy of costly moderation.

willing to invest in recruiting moderate candidates.

Third, what parties do in non-marginal districts matters for the outcome in marginal (or swing) districts. Indeed, parties may have incentives to nominate moderate candidates even in safe districts to achieve more commitment in marginal districts. This does not follow from standard political economy models of majoritarian systems in general (e.g., Persson and Tabellini, 2000) or models of costly candidate selection by parties in particular (Galasso and Nannicini, 2011), where parties tend to concentrate the nomination of costly candidates in marginal districts. The importance of candidate choice in non-marginal districts is driven by a form of strategic voting that is induced by the commitment problem: the vote choice of the pivotal voter depends on the overall candidate selection by the main parties.

Comparison with PR

The outcome of redistributive conflict under majoritarian institutions analyzed so far can also be compared to redistribution under PR. A clear benchmark is provided by the PR model in Iversen and Soskice (2006), which is based on the same general assumptions about citizen and politicians preferences. Key features of PR in their model are that there are group-based parties and, as no party can expect to win a majority, policy is determined through a process of coalition bargaining between parties. Crucially, coalition government implies that left parties in government are subjected to a veto by a coalition partner. This makes center-left coalition governments attractive to middle-income voters. Coalition government, put simply, results in endogenous commitment due to mutual vetoes (in line with Stasavage 2002; Tsebelis 2002). Comparing redistributive politics across the majoritarian and the PR system, the analysis concurs with that of Iversen and Soskice (2006) in that government partisanship is a key mechanism through which electoral rules affect economic policy. There tends to be an anti-left bias in majoritarian compared to proportional electoral rules that leads to lower redistribution (for a formal statement, see Proposition 2 in Appendix S2).

Extending their framework to allow for endogenous commitment highlights that the anti-left bias may take two distinct forms and is conditional on features of the political economy. The anti-left bias has a positional as well as an electoral component. Hence, observed differences in government partisanship and redistribution across electoral rules may arise because left parties competing under majoritarian rules are (i) less electorally successful compared to the left parties competing under PR (the mechanism emphasized by Iversen and Soskice 2006) or (ii) are credibly more centrist (reflecting endogenous commitment). Several studies using center of gravity measures of government partisanship have documented a robust difference in partisanship across electoral rules (Iversen and Soskice 2006; Döring and Manow 2013; also see Funk and Gathmann, 2013). Interpreting this observed difference as the effect of electoral bias most likely overstates the electoral component as it does not account for endogenous commitment, which in equilibrium entails a positional bias but not necessarily an electoral bias. Unbundling the bias is a task for further empirical study.

The comparison also implies that there should be observable differences in candidate selection across electoral rules. Holding other things equal, left parties have more incentives to nominate moderate candidates in majoritarian than in proportional electoral systems, where coalition government provides endogenous commitment. This implication directly highlights the commitment mechanism. By the same logic, the effect of income inequality on the position of the center-left party, discussed above for the majoritarian setting, should vary by electoral system. While an increase in inequality between the rich and the middle classes increases the incentives for the left to moderate under majoritarianism, this should not be the case under PR where coalition government alleviates the commitment problem.

Evidence

The empirical section confronts two novel implications of the theoretical model with evidence from two distinct data sets. First, a times-series cross-section analysis estimates the institution-varying impact of income inequality on the left-right position of the main left party in advanced industrial democracies. Second, the analysis turns to a novel data set on candidates to shed light on the commitment mechanism emphasized by the model.

Analysis of Party Positions

The first analysis focuses on how within-country changes in top income inequality affect party positions and whether this relationship depends on electoral rules, as suggested by the theory. The basic statistical specification is as follows:

$$Y_{it} = \alpha_i + \beta_1 TI_{it} + \beta_2 PR_{it} + \beta_3 TI_{it} \times PR_{it} + \beta_4 X_{it} + \epsilon_{it} \quad (2)$$

where Y_{it} is the economic left-right position of the main left party (where lower values indicate a more leftist position) in country i during election year t , α_i is a country specific intercept (capturing possibly unobserved time-invariant confounders), TI_{it} is a measure of top income inequality, PR_{it} is an indicator for proportional representation, X_{it} stands for various control variables, and ϵ_{it} is the error term. The interaction term $TI_{it} \times PR_{it}$ allows the impact of inequality to vary by electoral system. The prediction of the theory is that an increase in top income inequality leads the left to move to the right in majoritarian systems ($\beta_1 > 0$). Under PR, on the other hand, inequality does not lead to a right-ward move; in terms of coefficients, this means, first, that there is a significant negative interaction term ($\beta_3 < 0$) and that the marginal effect of inequality in PR systems is at least weakly negative ($\beta_1 + \beta_3 \leq 0$). This stands in contrast to the conventional view embodied by partisan or Downsian models of

party competition. It suggest that all parities should respond to higher top inequality by moving to the left. Pontusson and Rueda (2010) find that higher inequality, conditional on voter mobilization, is associated with more leftist manifestos. This qualifies the standard partisan view. Yet they do not consider the interactive effect of inequality and electoral institutions. Doing so provides a clear first test of the theoretical logic I have proposed.

The analysis covers 16 advanced industrial parliamentary democracies between 1950 and 2010 for which the inequality data are available: Australia, Canada, Denmark, France, Germany, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom. In line with the theory as well as the study of Pontusson and Rueda (2010), the focus is on the position of the main left party.⁸

Measurement

The dependent variable is measured using new estimates of the publicly stated economic left-right position based on party manifestos from Elff (2013), where larger values indicate a more rightist (i.e., less supportive of redistribution and state intervention) position. The positions were estimated by Elff (2013) using data coded by Comparative Manifesto Project (CMP, e.g., see Budge et al. 2001) for a large set of countries since World War II. As has been extensively described elsewhere (Budge et al., 2001), CMP has manually coded each quasi-sentence in a given electoral program into one of 56 policy categories. The left-right summary indicator provided by CMP, which is based on the relative frequency of sentences in left versus right policy categories, has been widely used in the literature on party positions and partisan effects on policy. Its time-coverage is unique and it correlates fairly highly with alternative measures (such as expert judgements) available for a subset of country-years. The measure

⁸See Appendix S2 for a list of the parties, sources for all variables, and descriptive statistics.

developed by Elff (2013) deals with important limitations of the CMP index.⁹ His scaling procedure, which is related to the estimation of ideal points in legislatures, disentangles policy positions from the relative frequency or salience of an issue. It also relaxes the assumption that all coding categories are a priori determined to be either left or right. Moreover, it captures the notion a party's current position is likely to be related to its previous position. The variables does not attempt to measure whether a party's stated position is perceived to be credible by voters. But it allows researchers to examine whether left parties make more or less leftist appeals in response to changing inequality.

To measure income inequality, I draw on the World Top Incomes Database painstakingly put together by economists using income tax records over the last decade (Atkinson and Piketty 2007; Atkinson and Piketty 2010; for an overview and thorough discussion of methodological issues, Atkinson, Piketty and Saez 2011). The database covers a much larger period than usual survey-based measures and it contains a measure that is close to the theoretical model. The model emphasizes a particular facet of inequality, namely, how much better the rich are doing compared to the middle classes. What matters, in other words, for the electoral incentives of left parties is shaped to an important degree by evolutions in the top of the income distribution. For this purpose, the database is especially well suited. Survey-based measures, by comparison, often have problems capturing the top of the income distribution due to top-coding and relatively small sample sizes. The inverted Pareto coefficient characterizing top incomes is the main measure of income inequality. Reflecting the empirical implication of the theoretical model, an increase in the coefficient captures an increase in taxable capacity of the very rich relative to the merely well-off. This means a fatter upper tail of the distribution (e.g., Atkinson, Piketty and Saez, 2011, pp. 13-15). The

⁹Research on measuring party positions is very active (e.g., see Elff 2013 and refs therein).

data are fairly homogenous within countries and researchers contributing to the database have made great efforts to harmonize them across countries as well. Including country fixed effects in the estimation absorbs possibly remaining country-specific variation in the measure. The variable has been rescaled as deviations from the overall mean to allow for an easier interpretation of the interactive specification.

Thanks to a cumulative research effort, classifying electoral rules has become a largely uncontroversial affair. Following Iversen and Soskice (2006), for each election the electoral system for the legislature (lower house under bicameralism) is coded as PR or majoritarian (missing years were updated).¹⁰ As is well-documented in the literature, most of the variation in electoral rules is cross-sectional, though there have been a handful of fundamental reforms.

The literature discusses several other variable that may affect income inequality, electoral rules as well as party positions. Country fixed effects account for unobservable time-invariant country heterogeneity. This is an important concern. For example, historical legacies, varieties of capitalist institutions, or cultural differences in the taste for inequality and redistribution may drive trends in economic inequality as well as party positions. The literature on the choice of electoral rules debates whether they are endogenous to redistributive politics.¹¹ To account for unobserved time effects, the analysis includes a linear time trend, period effects (1950-1972, 1973-1989, 1990-2010), and some models also allow for country-specific trends. The analysis also includes time-varying control variables whose omission may bias

¹⁰See Appendix S2 for details.

¹¹For instance, Boix (1999) emphasizes short-run calculations by old party elites, Alesina and Glaeser (2004) the power of organized labor, and Cusack, Iversen and Soskice (2007) the legacy of labor market institutions going back several centuries.

the estimation results. Income per capita captures difference in the capacity to redistribute and, according to some (Wagner’s Law), preferences for public spending. Voter turnout is often linked to the mobilization capacity of left parties as well as egalitarian policies (Pontusson and Rueda, 2010). Population size is include because large countries have been argued to impede the left’s ability to organize working class interests (Alesina and Glaeser, 2004). One common view in the literature is that economic globalization, which covaries with income inequality, increases demand for public spending. At the same time, it is held to constrain policy choices by inducing tax competition. Some studies have found that measures of globalization affect party positions (e.g., Ward, Ezrow and Dorussen 2011; but see Adams, Haupt and Stoll 2009). The measure used here is trade openness as a percentage of GDP. The percentage of population over 65 is a common proxy for the demand for social insurance. All time-varying right-hand side variables except electoral rules are measured as the average for the years from the last to the current election.

Results

The results from the basic specification are summarized in Table 1.¹² While all model include country fixed effects, additional control variables are added sequentially. Throughout, the main variables of theoretical interest, income inequality and its interaction with PR, are fairly precisely estimated and have the predicted sign. The positive coefficient on the inequality variable indicates that an increase in top income inequality is associated with a right-ward move of the main left party in majoritarian systems. The magnitude of the negative coefficient on the interaction term indicates that the impact of inequality is practically reversed

¹²Standard errors are clustered by country to allow for serial correlations. Some researchers prefer to model this using a lagged dependent variable. As shown in Appendix S2, doing so yields similar results.

in PR systems. These estimates are consistent with the theoretical expectations and are not easily accounted for by existing theories. Adding control variables and time effects does not change the results very much. The results are politically relevant. Model (4), which includes time-varying controls as well as country-specific time trends, suggests that a one standard deviation increase in top income inequality causes left parties in majoritarian settings to move to the right by about one standard deviation. The sum of the coefficients on inequality and the interaction term suggests that the marginal effect of inequality is negative (about -0.51) under PR, consistent with the traditional partisan view, though not significant at conventional levels ($p = 0.27$). What is clear is that left parties competing under PR do not move to the right in response to rising top inequality whereas left parties in majoritarian systems do.

The results are not sensitive to various alternative specifications (results are in Appendix S2). This includes using alternative measures of top income inequality (i.e., ratio of the income of the top 1 percent to the top 10 percent) and electoral systems (i.e., average district magnitude) (S2, Table 2). The sensitivity analysis also adds additional control variables (union density, EU integration, incumbency, existence of a left competitor) (S2, Table 3) and a lagged dependent variable (S2, Table 4). One remaining concern is that top income inequality is endogenous to redistributive politics in a way that is not captured by the fixed effects, controls, and time trends. Given the observational nature of the data, it is impossible to completely rule out, by design, time-varying country-specific confounders. To address this possibility, an additional analysis exploits plausibly exogenous variation in top income inequality based on the evolution on top inequality in the United States. The instrumental variable estimates confirm the main results from the basic panel analysis that, under majoritarian rules, increased top inequality causes left parties to move to the right (S2, Table 5).

Altogether, the macro-level results are consistent with a novel implication of the theo-

Table 1: Panel Estimates of the Conditional Impact of Top Income Inequality on the Economic Position of the Main Left Party in 16 Democracies 1950-2012

	(1)	(2)	(3)	(4)
Top Income Inequality (TI)	0.98** (0.38)	0.91** (0.31)	0.79** (0.37)	0.90** (0.36)
Proportional Representation (PR)	-0.01 (0.30)	-0.15 (0.10)	-0.16 (0.10)	-0.19 (0.14)
PR \times TI	-1.13** (0.52)	-1.21** (0.34)	-1.18** (0.36)	-1.41** (0.43)
Income per capita (in 1000 USD)		-0.03 (0.02)	-0.04 (0.02)	-0.05 (0.03)
Voter Turnout		-0.05 (0.49)	0.12 (0.44)	-0.53 (0.96)
Trade Openness		-0.02** (0.00)	-0.01** (0.00)	-0.02** (0.01)
Population Over 65 (%)		-0.02 (0.06)	-0.03 (0.05)	-0.04 (0.13)
Log of Population		-1.63** (0.29)	-1.54** (0.27)	-3.50 (2.52)
Time Trend (Year)		0.05** (0.01)	0.04** (0.01)	0.09** (0.04)
Country-specific time trend	No	No	No	Yes
Period indicators	No	No	Yes	No
Countries	16	16	16	16
Observations	228	228	228	228
Adjusted R^2	0.071	0.334	0.344	0.358

Standard errors in parentheses are clustered by country. The dependent variable is the left-right position of the main left party as estimated from manifestos by Elff (2013). All models include country fixed effects.

* $p < 0.10$, * $p < 0.05$ (two-tailed tests)

retical model and run counter to conventional views of partisan conflict over redistribution. The analysis does not examine what, if any, commitment devices parties employ to make their electoral announcements credible. This requires different data and is the subject of the next analysis.

Analysis of Candidate Selection

Trying to examine the candidate selection mechanism empirically faces challenges of data availability and the possible endogeneity of electoral systems. To at least partially address these issues, I follow scholars like Funk and Gathmann (2013) who explore within country variation in electoral institutions. In particular, I analyze devolution in Scotland as a natural experiment that enables us to compare the political profile candidates nominated by the three main center-left parties (Labour, Liberal Democrats, Scottish National Party) to compete in the same electoral districts under alternative electoral systems.¹³ Specifically, the analysis exploits the fact that the 1997 elections for the lower house of the British parliament (House of Commons) in Scotland and the 1999 election of the new subnational Scottish parliament were held in the same districts but under different electoral systems. The established majoritarian “first past the post” system was maintained for the House of Commons, while mixed-member proportional representation (MMP) was adopted for the unicameral Scottish parliament. This design holds constant cross-national differences that may shape candidate selection strategies. Importantly, it controls for observable and unobservable time-invariant district characteristics. By using smaller parties a control group for Labour, it also accounts for possible changes in the median voter at large or the median district.

¹³Together, these three parties won 81% of the Scottish vote in the 1997 Westminster election and 82% of the district vote in the 1999 Scottish election.

The Scottish parliament has the power to make laws in a wide range of policy areas, including the power to vary the income tax, and with a government responsible to parliament, mirroring the executive-legislative institutions in Westminster. The MMP system used to elect the 129 members of the Scottish parliament gives voters two votes, one for the familiar single-member district (“constituency”), where the candidate with a plurality of votes wins, and a second vote for a larger multi-member district (“region”) where voters choose between closed party lists. The second vote is used to allocate additional seats to parties that have received the least single-member districts seats relative to their total votes in the region, thereby increasing the proportionality in the translation of votes into seats. All but two of the 73 single-member districts for the Scottish parliament in 1999 were identical to the ones used for Westminster (in 1997). The analysis focus on the candidates nominated by the three parties in these 71 common districts (426 candidates in total; information for 13 is missing).¹⁴

Empirical Strategy

The logic of endogenous commitment implies that, on average, the profile of Labour candidates for the Scottish parliament should be more leftist than that of the Labour candidates competing for the British lower house in the same districts. This is because the incentives to achieve commitment for Labour is less pronounced in the election for the Scottish parliament. Its MMP system was widely expected to lead to a minority situation in which Labour, predicted to be the largest party, needed to compromise with at least one other party to form a government and make policy. This is precisely what happened after the 1999 election, when

¹⁴Appendix S3 provides further information on the research design, data sources, and additional results. For a comparison of legislative behavior in these two parliaments, see Dewan and Spirling (2011).

Labour formed a coalition government with the Liberal Democrats. This stands in contrast with elections for the House of Commons, in which the majoritarian electoral system has regularly produced single-party majority governments based on a plurality of votes. To clarify, the basic estimation equation can be written as follows:

$$C_{it} = \alpha_i + \beta_1 LAB_{it} + \beta_2 MMP_{it} + \beta_3 LAB_{it} \times MMP_{it} + \epsilon_{it} \quad (3)$$

where C_{it} is a measure of the ideological orientation (higher values indicating more left-wing views) of candidate i and election t (Westminster 1997 or Scottish Parliament 1999), LAB_{it} is an indicator for whether the candidate belongs to the Labour party, MMP_{it} is an indicator for the 1999 election using MMP, α_i is a district specific intercept, and ϵ_{it} an idiosyncratic error. The district-specific intercept captures observable and unobservable district characteristics. Given the short time span between the elections, this likely captures the district median voter.¹⁵ By including the two (at the time) smaller center-left parties (Liberal Democrats and Scottish National Party), the analysis controls for possible changes in selection strategies caused by possible changes in the median voters for the electorate at large. Suppose that the median voter in Scotland is to the left of the median voter in Britain and that, in contrast to the theory, the change in electoral systems does not affect the candidate selection strategy of Labour.¹⁶ If this is the case, then there would be a common shift in the profile of candidates across electoral systems and no differential effect for Labour

¹⁵Census data (available 1991 and 2001) do not provide over-time variation for the analysis.

¹⁶Survey evidence shows that, at the time, Scots were somewhat more supportive of policies to redistribute income, reduce poverty and the minimum wage than their English neighbors, though they had similar views on other issues (Brown et al., 1999, ch. 5).

(i.e., $\beta_3 = 0$). If, on the other hand, Labour differentially responds to the new institutional setting (for a given change of the median voter), then we should observe that $\beta_3 > 0$. This reflects that among the three parties only Labour had a real chance to win a majority of seats in Westminster. The other parties did not face the same commitment pressure in 1997 and hence less incentives to change their strategy during the 1999 election. In total, Labour can be expected to move to the left under MMP ($\beta_2 + \beta_3 > 0$).

Finding a good proxy for candidates' left-right orientation is tricky. Stated labor union membership is probably the best available one. Studies analyzing mass opinion surveys consistently show that union members are more supportive of redistribution and social insurance than non-members even when controlling for income and occupation. Historically, labor unions, especially those in countries with segmented unions, were often considered a constraint on the ability of left parties to credibly move toward the center (Przeworski and Sprague, 1986, pp. 119-125). This was widely held to be true for Labour in Britain during the 1980 and 1990s (Kitschelt 1994, pp. 249-252). 'New' Labour politicians portrayed unions as being part of 'old' Labour and unions were seen as a lobby within the party for the selection of leftist candidates. Unions were not enthusiastic in their support for Tony Blair during the 1994 leadership election and critical of several of his policies. During the 1999 election, a prominent conflict between the party leadership and union activist in the party concerned the use of public-private partnerships to finance new hospitals and schools. An added advantage is that union membership is not restricted to working class occupations, which are a small and shrinking part of the labor force. Many union members are teachers, social workers, and public sector employees.¹⁷

¹⁷Candidate surveys contain relevant items but do not allow researchers to identify candidates to match them to their district.

Given the use of a binary dependent variable and the inclusion of district fixed effects, equation 3 is estimated with a linear probability model (LPM) as well as the fixed effects logit (FEL) estimator (e.g., see Wooldridge, 2002, pp. 490-3). The advantage of the LPM is that it can easily incorporate district fixed effects and provides substantively meaningful estimates. Robust standard errors are calculated to deal with heteroskedasticity. The appeal of the FEL model is that it explicitly models the discrete nature of the dependent variable and can also account for unobserved district heterogeneity by conditioning on them. Two drawbacks are that it drops districts for which there is no change in the outcome variable across elections and it does not allow the calculation of marginal effects or first differences.

Results

The estimation results are displayed in Table 2. Model (1) does not include district fixed effects and thus provides a description of the data. The regression intercept corresponds to the relative frequency of union members among the Liberal Democrats and Scottish National Party in Westminster (14%). Unsurprisingly, Labour's historical and organizational ties to unions, membership is considerably higher among Labour candidates for Westminster (by about 37%). The coefficient on the MMP indicator shows that union-membership hardly varies across electoral systems for the non-Labour parties. The interaction term indicates that Labour, relative to the other parties, has significantly increased (by about 19%) the share of union candidates under the more proportional electoral rules in place for the Scottish parliament. Those findings hold when district fixed effects are added in Model (2). The coefficients from the FEL estimator (Model (3)) convey the same qualitative pattern. Thus, controlling for district specific effects and possible changes in the median voter, the estimates provide a picture that is in line with theoretical expectations. Relative to its competitors, the change from majoritarian to proportional electoral rules has prompted Labour to significantly increase its share of candidates with a union background. Given the more

Table 2: Effect of Electoral Rules on Candidate Selection in Scotland

	(1)	(2)	(3)
	LPM	LPM	FEL
Labour	0.37** (0.07)	0.37** (0.06)	2.15** (0.40)
Mixed Member PR (MMP)	-0.05 (0.04)	-0.05 (0.04)	-0.45 (0.38)
Labour \times MMP	0.19** (0.09)	0.18** (0.09)	1.09** (0.55)
Constant	0.14** (0.03)	0.37** (0.18)	
Observations	413	413	333
Adjusted R^2	0.236	0.295	
Pseudo R^2			0.374

Robust standard errors in parentheses. The dependent variable is an indicator for union membership.

Models (1) and (2) are linear probability models and (2) includes district fixed effects.

Model (3) is a fixed effects logit model.

* $p < 0.10$, * $p < 0.05$ (two-tailed tests)

conservative estimate in Model (2), the relative increase (measured by the coefficient on the interaction term, β_2) is about 18%. Also accounting for the negative (though insignificant) effect on the constituent MMP term, the total increase ($\beta_2 + \beta_3$) for Labour is 13% ($p = 0.08$). There is no evidence that the Liberal Democrats or the Scottish National Party have significantly changed their candidate selection strategy across electoral systems. Thus, the analysis provides evidence consistent with the commitment mechanism proposed by the theory. Labour's candidate selection strategy was more responsive than that of its smaller competitors to the change in electoral rules brought about by devolution in Scotland. Despite countervailing incentives to maintain a unified centrist brand, the Labour party selected more left-leaning candidates in the proportional than the majoritarian system.

Concluding Remarks

This paper has provided a new theoretical perspective and brought new evidence to bear on the question of how partisan conflict over redistribution plays out in representative democracies. The main theoretical innovation is to consider how parties' efforts to solve the commitment problem, which is especially acute in majoritarian systems, influences party strategies, election outcomes, and policy. This has led to several new testable implications, for example, concerning the institution-varying responsiveness of party positions to income inequality. Using two different data sets, the empirical analysis has found evidence consistent with two key implications of the theoretical logic. While this exhausts the scope of a single paper, additional implications of the theory merit testing. One further empirical task, for example, is to try to unbundle the differences in government partisanship observed across electoral institutions into its positional and electoral component.

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