

# Privatization in Europe: Systemic Left-Wing Strength, Power Resources, and Productive Efficiency

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## Abstract

I present a theoretical account of the politics of privatization that predicts left-wing support for the policy is conditional on the long-run strength of left-wing parties in a political system. In marked contrast to predictions derived from a traditional interest group approach, my claim is that a stronger systemic position will make it *more* likely that left-wing parties will engage in privatization programmes that are likely to be at least partially detrimental to traditionally left-leaning interest groups. At root, left-wing parties face a trade-off between protecting the basis of their electoral strength and enhancing macroeconomic performance. The balance of this trade-off varies based on the prevailing level of left-wing strength. A two-stage tobit approach is used where the first stage estimates systemic left-wing strength and the second employs this estimate as an explanatory variable in models of privatization effort. Results from 14 Western European countries over the period 1980–2000 lend support to the theoretical claims.

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# 1 Introduction

Privatization, “broadly defined as the deliberate sale by a government of state-owned enterprises (SOEs) or assets to private economic agents” (Megginson and Netter, 2001, 321) is a phenomenon that has swept much of the world in the past 30 years. The process has been particularly striking across the so-called ‘developed democracies’, which have seen a post-war consensus regarding the benefits of state ownership erode sharply (Boix, 1997; Clifton, Comin and Diaz Fuentes, 2006). Between 1977 and 2004, privatization revenues across 11 West European countries totalled around \$380 billion<sup>1</sup>. Beyond this, Zohlnhöfer and Obinger (2006, 30) cite OECD data suggesting that “total privatization proceeds in more than 150 countries amounted to \$937 billion”.

These figures, alone, show that privatization is a large and important political phenomenon that merits scholarly research in and of itself. The major theoretical point that I make here, however, goes beyond the confines of privatization politics. My claim, which finds empirical support, is that left-wing parties act strategically in the pursuit of their preferred societal outcomes and that, in doing so, they consider their long-run electoral strength compared to right-wing parties. In contrast to conventional wisdom regarding left-wing policy choices in competitive electoral systems, I present a theory that predicts that left-wing parties are more likely to pursue apparently right-wing policies — i.e. privatization — where they are *stronger*. Far from left-wing privatization programmes as the result of weak left-wing parties pandering to the Right, or to a Downsian median voter, such policy choices can be seen as positive ones that only become available when the future electoral threat of the Right is low.

At root, I claim that left-wing parties face a trade-off between, on the one hand, protecting their traditional allies and sources of electoral strength (unions) and, on the other hand, enhancing macroeconomic performance. The balance of this trade-off varies based on the prevailing systemic strength of left-wing parties. When the systemic strength of left-wing parties is high, the marginal costs to disempowering (public sector) unions is lower, making the macroeconomic benefits of privatization more likely to outweigh them.

Several other scholars have analysed political issues surrounding privatization, but there has been disagreement over whether left-wing parties are causally related to lower levels of privatization. Boix (1997), Zohlnhöfer and Obinger (2006), and Zohlnhofer, Obinger and Wolf (2008) find statistically significant negative effects while Bortolotti, Fantini and Siniscalco (2003), Schneider, Fink and Tenbucken (2005), and Schneider and Häge (2008) find no effects. I argue that the empirical literature has failed to come to a firm conclusion regarding the effect of left-partisanship on privatization because it has failed to differentiate between left-

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<sup>1</sup>Author’s calculation based on data provided by *Privatization Barometer*. Included countries are: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Sweden, and the UK.

wing parties in different contexts. Those scholars who have explored the effect of left-wing parties have effectively estimated parameters that are averages for the effect of parties that are both pro and against privatization. In this light, it is unsurprising that the estimated effects are often small and/or insignificantly different from zero.

The literature also suffers from some methodological short-comings. In employing country-governments rather than country-years as the unit of observation, Boix (1997) unnecessarily throws away information. The studies by Zohlnhöfer and Obinger (2006) and Zohlnhofer, Obinger and Wolf (2008) use only cross-sectional data and thus severely limit the conclusions that can be drawn from their results.

There has been some work, both theoretical and empirical, that studied the tactical and strategic logics underpinning privatization programmes. At the heuristic level, Feigenbaum and Henig (1994) proposed a three-state typology of the underlying reasoning for privatizations with ‘pragmatic’ privatizations essentially technocratic in nature, ‘tactical’ privatizations explicitly political,<sup>2</sup> and ‘systemic’ privatization programmes “intended to reshape the entire society by fundamentally altering economic and political institutions and by transforming economic and political interests” (Feigenbaum and Henig, 1994, 192). While this typology is attractive in the abstract, it provides very little in the way of predictive theoretical traction.

Perotti (1995) proposed a theory of “credible privatization” in which governments may be either “committed” to the policy or “populist” and therefore unable to refrain from *ex post* policy actions that redistribute away from privatized companies and their shareholders. In his framework, partial privatization of companies and deliberate under-pricing<sup>3</sup> provides a way for governments to signal their commitment not to engage in subsequent redistribution. The “committed” and “populist” types can plausibly be seen to map onto right- and left-wing parties, respectively. Biais and Perotti (2002) offer a theory in which right-wing governments are seen to use privatizations as a way of coopting an otherwise left-leaning middle class. By earmarking shares for members of that class and under-pricing — i.e. subsidising — share issue prices, middle class voters come to have their economic interests more closely aligned with the rest of the right-wing constituency. They will have more to fear from a left-wing government that is perceived to be unfriendly to private business. Jones et al. (1999) find empirical support for these theoretical accounts.

Despite this theoretical work, the extant literature has notable theoretical and empirical short-comings in its treatment of partisan influences over privatization. For these reasons, a re-analysis of the phenomenon is a desirable endeavour — one which I pursue in the following sections.

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<sup>2</sup>They “are advocated to achieve the short-term political goals of particular parties, politicians, or interest groups”.

<sup>3</sup>In a purely economic sense.

## 2 Theoretical Preliminaries

The theory presented here rests largely on two empirical supports. First, that privatization has, or at least has been seen to have, non-trivial economic benefits in terms of increased productivity. Second, these benefits are very often at the cost of dismantling portions of organized labour that are traditionally supportive of left-wing parties. Before proceeding with the details of how these two stylised facts can lead to predictions as to when (left-wing) parties will seek to privatize, I begin by briefly surveying the literature supporting these two claims.

### 2.1 Economic Benefits from Privatization

In reviewing the empirical literature, I focus mainly on those studies relating to ‘developed democracies’ as it is these countries that will form the focus of the subsequent theoretical and empirical claims.<sup>4</sup>

Papers by Boardman and Vining (1989) and Vining and Boardman (1992) provided early empirical support to the notion that ownership matters to the efficiency of firms. Analysing samples of large firms from around the world and within Canada, they find that SOEs and mixed enterprises (MEs) are both less efficient and less profitable than the privately owned firms for which they have data.

Ehrlich et al. (1994) study the performance of airlines across countries. Using panel data, they are able to estimate both short- and long-run effects from state ownership. Their findings support the view that private ownership enhances productivity, but only in the long-run. In the light of subsequent research that failed to find effects from privatization over short-run periods, this finding is telling.

D’Souza and Megginson (1999) analyse a sample of 85 companies spread across industrialised and non-industrialised countries from 1990 to 1996. Assessing profitability, output, operating efficiency, and dividend payments, they find statistically significant increases in all for post-privatization firms. This pattern is broadly supported in all sub-sample partitions representing competitive versus non-competitive firms, ‘control’ versus ‘revenue’ privatizations,<sup>5</sup> firms from industrialised versus non-industrialised countries, and firms that did or did not experience two types of management change post-privatization.

Dewenter and Malatesta (2001) adopt empirical approaches of both the cross-sectional sort pioneered by Boardman and Vining (1989) and the time-series sort akin to Ehrlich et al. (1994). Their findings from the former approach are that privatized firms do perform better.

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<sup>4</sup>There is, however, a voluminous privatization literature outside of these countries. If anything, the findings are even more favourable to the claim that privatization improves efficiency with support found in ‘transition economies’ (Frydman et al., 1999; Harper, 2002) and ‘developing economies’ (Majumdar, 1998; Bartel and Harrison, 2005; Boubakri, Cosset and Guedhami, 2005).

<sup>5</sup>The latter being where governments sell shares but retain control of firms.

However, when employing the time-series approach, some of those performance gains appear to have been realised in the years *before* the actual privatization occurred. They conclude that, while private firms appear more profitable, the evidence that the act of privatization improves performance is far weaker. Nonetheless, these findings far from *disprove* that the privatization process improves performance. Given subsequent research, pre-privatization reorganisation and the introduction of greater competition that often accompanied such programmes are likely to have been important causes of these efficiency improvements. Indeed, this is precisely the conclusion of González-Páramo and Cos (2005), who study a panel of Spanish manufacturing firms for the period 1983–1996. They find that both private ownership and competition have positive effects on firm performance, although the result for private ownership may be conditional on the level of competition within the market place.

In addition to the positive findings with respect to private ownership and privatization, there have also been some negative results. Studying Spanish privatizations, Cabeza García and Gómez Ansón (2007) find little evidence of effects on efficiency and the like. This appears in marked contrast to the findings in González-Páramo and Cos (2005), although the discrepancy may well be explained by the lack of control for competition. This interpretation accords with the view of Alexandre and Charreaux (2004) regarding French privatizations.

Using a novel data set of firms that were nationalised in the USA as a result of ‘enemy’ ownership during World War II, Kole and Mulherin (1997) find no effect from government ownership. Despite the plausibly exogenous nature of the nationalization decision, the authors themselves acknowledge that it is difficult to generalise their findings due to the limited number of cases that they study. Their limited degrees of freedom also prohibits them from studying the importance of market competition to the issue of ownership.

In conclusion, there appears to be fairly strong evidence that privatization yields efficiency increases in firm performance, although this likely to be conditional on the competitiveness of the market within which firms operate — a finding that Vickers and Yarrow (1991, 113) perceived from their early survey of the literature. Those studies that fail to find effects from privatization are also the ones that fail to control for increased competition (resulting from privatization) as a source of broader benefits.

## 2.2 Labour ‘Costs’ from Privatization

With respect to the effect of privatization on labour, there are, again, theoretical and empirical reasons to believe that it will be negative for those employed in privatized firms.

A common theme in the theoretical literature is that politicians will tend to have a greater concern for employment levels than is economically efficient. Notably, several authors touch on the idea that this tendency may vary across governments. That is, partisanship should count. Pint (1991) analyses a principal–agent model in a monopolistic setup. She focuses on

information asymmetry between a firm manager (agent) and either a government minister or shareholders (principals). Her model shows that the optimal design of contracts for the manager leads to a relatively lower capital-labour ratio with a government principal than with private shareholders in that role.

Boycko, Shleifer and Vishny (1996) share the view that governments care about employment. They claim that privatization increases economic efficiency as it makes it more costly for a government to induce inefficiently high employment levels in a firm. Plausibly, this claim is founded on the idea that it is politically easier for a politician to forgo potential profits from a nationalised firm than it is to raise taxes and then directly subsidise a private firm.

Finally, Robinson and Torvik (2005) and Henisz and Zelner (2006) make theoretical claims regarding the construction of ‘white elephants’ that are socially inefficient, but politically useful. The claims stem from the idea that particular constituencies will gain employment to operate these ‘white elephants’. As such, the theories can be seen as claims as to overly large employment when investment decisions are controlled by a government.

There is a large body of empirical literature concerned with the effects of privatization on employment. Again, I focus on those studies that have analysed ‘developed’ democracies, despite numerous findings as to the negative effect of privatization on employment in other contexts.<sup>6</sup>

Based on the theoretical work discussed above, and on the body of empirical findings that private ownership and privatization increase firm efficiency, it is unsurprising that the pattern of empirical results with respect to privatization’s effect on employment is fairly consistently negative — albeit coming from a less voluminous literature.

Commensurate with their rather equivocal findings for the effect of privatization on firm efficiency in France, Alexandre and Charreaux (2004) find only tentative evidence that the process has led to labour reductions. However, the efficiency findings by Dewenter and Malatesta (2001) are not matched when they analyse the labour effect. There, they *do* find that privatization reduces labour input in a significant way. Likewise, D’Souza and Megginson (1999) find that labour decreases significantly, albeit only in industrialised countries. Finally, in their study of the Spanish case, González-Páramo and Cos (2005) provide evidence that employment falls post-privatization.

### **2.3 Disincentives for Left-Wing Parties to Privatize**

Given the general empirical regularity of employment costs from privatization, it is a short step to see why left-wing parties would perceive a disincentive to engaging in the process of SOE sell-offs. As already noted above, the theoretical economics literature has somewhat

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<sup>6</sup>For evidence for the post-communist transition economies, see Barberis et al. (1996) and Frydman et al. (1999). For ‘developing’ countries, see La Porta and Lopez-De-Silanes (1999) and Belser and Rama (2001).

tangentially addressed the idea that different types of government may have different preferences over employment levels (Pint, 1991; Boycko, Shleifer and Vishny, 1996). More political science oriented theories lend strength to this idea.

First, Hibbs (1977) claimed that left-wing parties tend to represent those sections of a society that earn their income disproportionately from labour. As such, unemployment is a particularly pernicious social problem, as perceived from the Left, as it cuts markedly into total income for those who have few other sources of financial support. In that light, the sort of redundancies that are part and parcel of privatization programmes are likely to exert discomfort on the sort of wage earners that form the core of left-wing support. Economic theory suggests that this should be a largely short-run effect, however, as the efficiency benefits of the economic restructuring filter back into macroeconomic gains.

Second, a line of research has suggested that the sector in which an individual is employed has consequences for the political parties that they tend to support. Blais, Blake and Dion (1990) and Knutsen (2005) present theory and evidence that public sector employment leads citizens to prefer more left-wing parties as these are perceived as more likely to provide increased financial resources (for wages). In this case, privatization should cost left-wing parties votes as it will tend to sever this wage-maximising connection with previous supporters.

Third, ‘power resource’ theory claims that left-wing parties perform better electorally when they benefit from the support of organised labour (Stephens, 1979; Korpi and Shalev, 1979; Cameron, 1984). Greater union density and coordination provides for greater financial and human resources with which to perform political campaigns. More advertisements. More street-level campaigning. Better information on the electorate. Stronger unions may also help to increase turnout, which tends to be lower amongst lower income groups, and as such shifts the median *voter* to the left. If the power resources of organised labour are a boon for left-wing political parties, then privatization should be even more distasteful to them. Initial redundancies from privatized firms will clearly reduce the strength of unions that represented those former employees. Even if they maintain their membership, fewer will be in work and therefore in a position to contribute to the financial viability of the unions.

But the down-side may be even greater than that. Union density is markedly higher in the public sector than it is in the private sector — a pattern that holds across nearly all developed democracies. Freeman (1986) passed an early commentary on how “unionism [... came] to the public sector” by noting the rise of public sector unionism in the USA over the post war era to the early 1980s. Also focusing on the USA, Farber (2005) presents data suggesting that since the mid 1970s, when both public and private sector union density stood at around 25%, the two sectors have diverged dramatically. By 2004, the private sector figure had shrunk to only around 8% while the public sector figure had swollen to around 35%. Draper (2000) presents evidence that this trend is far from particular to the USA. His data shows that across 12 OECD countries, while aggregate union density figures have fallen in

most countries between the 1970s and the 1990s, the proportion of union membership being composed of public sector workers has risen — markedly so in several cases. Taking a snapshot of public and private union density figures for a similar selection of countries at the end of the 1990s, Blanchflower (2007, 6) shows that the difference between the two figures was of the order of 30 percentage points for most countries, and notably more for several. The evidence suggests, then, that while private sector unionism has been on the decline across most of the OECD countries (Ebbinghaus and Visser, 1999; Visser, 2006), public sector unionism has, in both relative and absolute terms, been thriving. To the extent that this difference between public and private sector unionisation can be taken to be causal,<sup>7</sup> it appears that the public sector offers a particularly conducive environment to labour organisation. As such, the shift of large sections of the workforce into the private sector is likely to herald a reduction in the organising capacity of the union movement, in aggregate.

Privatization, then, is a recipe for the reduction of left-wing power resources — certainly as a result of a reduced strength of unions as workers are made redundant and, plausibly, as a result of more challenging organising environments for unions in the private sector. In that light, it is far from surprising that the trend towards privatization that has been witnessed across the ‘developed’ world has coincided with notable falls in union density.

### 3 A Theory of Conditional Partisanship Over Privatization

Based on the preceding discussion, right-wing parties should be expected to pursue privatization for two reasons: to maximise macroeconomic efficiency (and so to receive the electoral benefits that this brings), and to minimise the power resources of the Left. The issue is more nuanced when viewed from the perspective of left-wing parties. In their case, they must trade-off the benefits of privatization against the costs to their power resources. Within this theoretical framework, then, the left-wing decision over whether to privatize becomes dependent on whether the costs or the benefits are greater. In this section, I develop a theoretical account of when each situation is more likely based on how electorally-reliant a left-wing party is on union-derived power resources.

Consider two political parties, indexed by  $i \in \{L, R\}$ , in electoral competition to control the government such that  $g \in \{L, R\}$  denotes the governing party. They have utility functions that are simply equal to the probability of their own electoral success,

$$U(i) = P(g_{t+1} = i | g_t = i) , \tag{1}$$

where  $P(g_{t+1} = i | g_t = i)$  denotes the probability of the government in period  $t + 1$  being party  $i$  *conditional* on the government in the current period ( $t$ ) being party  $i$ .<sup>8</sup> A utility

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<sup>7</sup>I am not aware of any work that tests specifically for a causal effect of sector on unionization.

<sup>8</sup>The probability is modelled in this way so as to account for electoral success being an increasing function

function of this form need not be seen as a strict claim that parties are *purely* office seekers. It is also compatible with the notion that they seek office for instrumental means — so that they can pursue a range of policies that benefit them and their constituencies.

There is a large literature studying the determinants of electoral success in democracies. Perhaps the most frequent finding is that better macroeconomic performance provides an electoral boost for whichever governing parties are held to be responsible for it (e.g. Nannestad and Paldam, 1994; Hibbs, 2000; Lewis-Beck and Paldam, 2000; Lewis-Beck and Stegmaier, 2003). As noted above, the power resources theory has also consistently found empirical support (e.g. Korpi and Shalev, 1979; Korpi, 1983; Cameron, 1984; Esping-Andersen, 1985; Huber and Stephens, 2001; Korpi, 2006). However, there are also other theoretical reasons to believe that left- or right-wing parties may be privileged in electoral competition.

Based on these theoretical underpinnings, I take the probability of left-wing electoral success to be a function of two conceptual variables: systemic left-wing strength ( $\Lambda$ ) and the strength of the economy ( $\gamma$ ). Specifically,

$$P(g_{t+1} = L | g_t = L) = f(\alpha \cdot \Lambda(\lambda, X) + (1 - \alpha) \cdot \gamma) , \quad (2)$$

where  $\Lambda$  is taken to be a function of  $\lambda$ , which denotes left-wing power resources derived from labour union strength, and  $X$ , which denotes the vector of other variables expected to influence systemic relative left-wing strength. Furthermore,  $f(\cdot)$  is assumed to be a monotonically increasing function and the parameter  $\alpha \in [0, 1]$  captures the relative importance of the two variables on  $P(g_{t+1} = L | g_t = L)$ .

At this stage, I make the important claim that  $\Lambda(\lambda, X)$  is concave in both of its parameters such that there are diminishing marginal returns to both parameters as either parameter increases — i.e. that the cross partial derivatives are both negative. The intuition here is that systemic left-wing strength, whatever its sources, has a natural upper limit due to the presence of party competition. As a bias in favour of left-wing parties grows larger, it forces a competitive policy response from right-wing parties to counteract it. The implication of this is that, as the level of systemic left-wing strength derived from the vector  $X$  increases, left-wing parties actually become *less* reliant on union-derived electoral power resources ( $\lambda$ ). More precisely, the marginal benefits (costs) of increasing (decreasing)  $\lambda$  become smaller when left-wing strength is derived from  $X$ . This is important as it implies a different type of relationship between left-wing parties and unions is likely, dependent upon the prevailing values of the elements of  $X$ . I turn to this below.

Of course, an equivalent expression can be presented for right-wing electoral success. In

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of economic success for *both* left- and right-wing parties. It also eases the subsequent application of the theory to data as predictions are explicitly for what each party will do when they are in power — which is the only ‘state of the world’ observed.

this case, left-wing power resources are clearly a drag on right-wing electoral prospects. This could be modelled in any number of ways, but one simple specification is given by,

$$P(g_{t+1} = R | g_t = R) = f(\alpha \cdot (1 - \Lambda(\lambda, X)) + (1 - \alpha) \cdot \gamma) , \quad (3)$$

where a normalization such that  $\Lambda(\cdot) \in [0, 1]$  has been imposed.

What determines the level of  $\lambda$  and  $\gamma$ , respectively? I claim that they are both functions of the size of the state-owned enterprise (SOE) sector and denote this conceptual variable by  $s$  — implying  $\lambda = \lambda(s)$  and  $\gamma = \gamma(s)$ .<sup>9</sup> Furthermore, the functions are such that,

$$\frac{d\lambda(s)}{ds} > 0 \quad (4)$$

$$\frac{d\gamma(s)}{ds} < 0 . \quad (5)$$

That is, an increase in  $s$  increases left-wing power resources, but decreases economic performance. Both of these assumptions are based on the theoretical and empirical work discussed in *Section 2.1* and *Section 2.2*. (2) can now be written as,

$$P(g = L) = f[\alpha \cdot \Lambda(\lambda(s), X) + (1 - \alpha) \cdot \gamma(s)] . \quad (6)$$

The size of the SOE sector,  $s$ , is a variable that the government has the power to change — by privatization or nationalization. The question is, then, whether left-wing and right-wing parties, respectively, will wish to increase, decrease, or maintain the level of  $s$ . Differentiating  $U(R)$  with respect to  $s$  brings this decision into focus for right-wing parties:

$$\frac{\partial U(R)}{\partial s} = f'(\cdot) \left[ -\alpha \cdot \Lambda'(\cdot) \frac{d\lambda(s)}{ds} + (1 - \alpha) \cdot \frac{d\gamma(s)}{ds} \right] . \quad (7)$$

By assumption, both  $f'(\cdot)$  and  $\Lambda'(\cdot)$  are unambiguously positive, while the final term in parentheses is unambiguously negative. Clearly, then, right-wing parties will always prefer privatization — that is, a reduction in  $s$ . It allows them to achieve greater economic performance *and* to reduce the power resources of the Left.

The decision for left-wing parties is rather more nuanced:

$$\frac{\partial U(L)}{\partial s} = f'(\cdot) \left[ \alpha \cdot \Lambda(\cdot)' \frac{d\lambda(s)}{ds} + (1 - \alpha) \cdot \frac{d\gamma(s)}{ds} \right] . \quad (8)$$

When does (8) imply that a left-wing party would favour a privatization programme? The question boils down to the relationship between the two terms within parentheses. From (8), the condition for a left-wing party to wish to engage in a privatization programme is

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<sup>9</sup>Abusing notation somewhat by converting variable names into function names.

given by,

$$\frac{(1 - \alpha)}{\alpha} \cdot \frac{d\gamma(s)}{ds} > -\Lambda(\cdot)' \frac{d\lambda(s)}{ds}. \quad (9)$$

Both sides of this inequality are unambiguously positive.<sup>10</sup> The decision for left-wing parties over privatization can now be seen to be related to the marginal costs of such a policy in terms of their systemic strength. As  $\Lambda'(\cdot)$  is decreasing in both of its parameters, it becomes clear that privatization is more likely to be preferable to left-wing parties when systemic strength is drawn more from the vector  $X$ . It is this prediction that I take to data.<sup>11</sup>

## 4 Empirical Evidence

In order to test the hypothesis that partisanship over the decision to privatize is conditional on the prevailing level of systemic left-wing strength ( $\Lambda$ ), it is necessary to derive a measure of this conceptual variable. As no such variable is available ‘off the shelf’, my empirical strategy is first to estimate  $\Lambda$  and then to utilize this estimate in models of the determinants of privatization effort — where I explicitly test the conditional partisanship hypothesis.

### 4.1 Estimating Systemic Left-Wing Strength

The approach I take to estimating systemic left-wing strength is to model an observable measure of left-wing strength as a function of the vector  $X$ , and then recover the predicted values from those estimates as a proxy for  $\Lambda$ . The observable measure of left-wing strength that I employ is one that is common to much of the partisanship literature: the share of cabinet seats held by left-wing parties (*Left*). I use this measure rather than, say, share of votes or share of seats in parliament because I explicitly wish to model left-wing *governmental* (or executive) strength. While votes and legislative seats are instrumentally useful in the pursuit of political power, the parliamentary systems operating in Western Europe tend to accord greater power to those parties that form the government. Modeling cabinet seats held by left-wing parties therefore comes closest to modeling their political power.

At this stage, it may be argued that *Left* could be employed directly as a proxy for  $\Lambda$ . This would be wrong as the short-term (observed) variability of *Left* is very much higher than the (unobserved) variability of  $\Lambda$ . The former varies from year to year as elections occur or governing coalitions adjust, often with shifts from 0 to 100. These short-run dynamics dominate the measure and make it unsuitable as a proxy for  $\Lambda$ .

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<sup>10</sup>Because  $\Lambda(\cdot) > 0$  and  $\frac{d\lambda(s)}{ds} < 0$ .

<sup>11</sup>Trivially, it is clear that the decision to privatize also depends on the value of  $\alpha$ . It may be plausible to endogenise  $\alpha$  to a degree, say, by making it dependent on prevailing economic strength. That is, the importance of left-wing systemic strength may become relatively lower when left-wing parties preside over an exceedingly strong economy. For now, though, I assume that  $\alpha$  is fixed exogenously and focus on  $\Lambda'(\cdot)$ .

Another characteristic of the *Left* variable is that it is constrained to be in the range 0 to 100 — parties cannot hold more than all cabinet seats or less than none. But the conceptual variable that I seek to recover need not be so constrained. That is, a left-wing party may hold 0 cabinet seats because its systemic strength accords directly with this level of seats *or* because the systemic strength is so low that it accords with an even lower number of cabinet seats — a state of the world that we obviously cannot observe. Analogous examples apply at the level of complete control of cabinet seats by left-wing parties: they could be just strong enough to win the seats or so overwhelmingly strong that they would have one many more if it were possible. Consideration of these outcomes leads to the adoption of a tobit model in which there is a latent variable of interest (*Left\**) and *Left* is its censored-but-observed realisation. Thus,

$$Left = \begin{cases} 0 & \text{if } Left^* < 0; \\ 100 & \text{if } Left^* > 100; \\ \Lambda & \text{otherwise.} \end{cases} \quad (10)$$

Now, taking *Left\** to be a linear function of  $\lambda$  and  $X$  leads to a familiar tobit regression of the following form:

$$Left = \begin{cases} 0 & \text{if } \lambda\omega + X\Omega' + \epsilon < 0; \\ 100 & \text{if } \lambda\omega + X\Omega' + \epsilon > 100; \\ \lambda\omega + X\Omega' + \epsilon & \text{otherwise,} \end{cases} \quad (11)$$

where  $\omega$  is the (estimated) coefficient on  $\lambda$ ,  $\Omega'$  is the (estimated) vector of coefficients on the other variables,  $X$ , and  $\epsilon \sim N(0, \sigma^2)$  is an error term.

Finally, I generate my estimate of systemic left-wing strength as,

$$\hat{\Lambda} = \lambda\hat{\omega} + X\hat{\Omega}' . \quad (12)$$

As a practical matter, estimation of (11) is somewhat problematic as the annual nature of *Left* will almost certainly induce autocorrelation in the error term,  $\epsilon$ . In this situation, parameter estimates ( $\hat{\omega}$  and  $\hat{\Omega}$ ) from a tobit model will be consistent (Robinson, 1982), but standard errors will be too small. While it is the point estimates that are used to generate  $\hat{\Lambda}$ , the overly-optimistic standard errors pose a concern as I will go on to take account of the uncertainty in this estimated value when I model the privatization decision.

It may be contended that this problem could be resolved by employing a lagged dependent variable (LDV) as a means of soaking up the autocorrelation. However, as Achen (2000) has shown in the context of a standard linear model, doing so purely for the reason of preventing the estimation nuisance and where there are no theoretical reasons for the LDV

can lead to a far greater problem.<sup>12</sup> That is, where both errors and explanatory variables are autocorrelated, inclusion of the LDV biases parameter estimates of the main explanatory variables down, leading to incorrect inferences as to their importance. Being slow-moving structural variables, the degree of autocorrelation in  $X$  is extremely high, implying that the issue Achen identifies would be particularly damaging. Thus, I reject that LDV approach and, noting the absence of a tobit model implementation that can handle an AR1 process, use a standard tobit model.

Finally, I follow the suggestion of Bartels (2008) in employing both the country mean (e.g.  $\overline{EmpInd}_i$ ) and the within-country deviation from the mean (e.g.  $EmpInd^W = EmpInd_{i,t} - \overline{EmpInd}_i$ ) of each explanatory variable, where  $i$  indexes countries and  $t$  indexes time, together with country-level random effects. This is to allow for the estimation of separate effects of each variable between and across countries and so should improve model fit.

#### 4.1.1 Determinants of Systemic Left-Wing Strength

In modeling systemic left-wing strength, the theory above distinguishes between two types of variables: left-wing power resources ( $\lambda$ ) and those others that were grouped together in the  $X$  vector. To capture  $\lambda$ , I employ union density ( $UDen$ ) in my empirical model. However, this is a contentious measure of union strength as it fails to capture the degree to which the labour movement is internally organised. More hierarchical union movements may be expected to be better at efficiently directing their political influence, rather than fighting internal battles amongst themselves. To capture this aspect of union strength, I also employ a proxy for union centralization ( $UCentralization$ ) which captures the degree to which the primary union confederation can block wage bargaining agreements to which it is opposed.<sup>13</sup>

With respect to the variables that fall within the  $X$  vector, a number of candidates can be discerned in the literature. Iversen and Soskice (2006) argue that majoritarian electoral systems have an inherent bias against left-wing parties as the middle class fear giving unconstrained power to a left-wing party that may turn out to be dominated by those sections of the Left that wish to ‘soak’ both the rich and the middle classes. By contrast, under proportional electoral systems, the middle class will tend to have their own party representation and thus not face such a risk as their party can always withdraw support from a centre-left coalition government if necessary. From this theory, we should expect that as electoral proportionality ( $PR$ ) rises,<sup>14</sup> then so does left-wing electoral strength.

<sup>12</sup>One objection here may be that there are theoretical reasons to think that holding power in the last period does imply control over whether a party will be in power in the current period. Discretion over policies — which in turn have an effect on popularity — may be one mechanism. Discretion over the timing of an election may be another. This objection is valid on one level. However, I argue that the ‘cure’ of employing the LDV is far worse than the disease as it swamps all variation in the dependent variable and leaves almost nothing to be explained by the underlying systemic determinants of left-wing strength.

<sup>13</sup>The data is taken from Golden, Wallerstein and Lange (2007), and augmented by Duane Swank.

<sup>14</sup>Measured as electoral *disproportionality* using the Gallagher (1991) index.

Taking a more class-based approach, there is a long (generally Marxist) tradition of treating left-wing electoral success as being determined by the size and strength of the ‘working class’ (e.g. Korpi, 1983; Esping-Andersen, 1985). Such scholars treat industrial workers as being of particular importance due to their perceived position of economic oppression and scope for great class consciousness. From this line of work, we should expect that a larger percentage of the workforce engaged in industrial production ( $EmpInd$ ) would be of benefit to left-wing parties.

An alternative interpretation of the relationship between industrial employment and left-wing success is also possible, though; one in which the relationship is non-linear and possibly even ‘U-shaped’. That is, right-wing constituencies may come to fear the strength of industrial labour to an extent that leads them to form a more cohesive electoral coalition, themselves. Under this theory, medium levels of industrial employment may be the worst case for the Left in that they are strong enough to scare the Right, but not strong enough to overcome them. Low levels of industrial employment creates less right-wing fear, but necessarily implies lower levels of electoral benefit for left-wing parties. Only at high levels of industrial employment would the Left be strong enough to benefit from such class-based advantages. Such a theory implies a quadratic empirical specification in explaining left-wing strength ( $EmpInd^2$ ).

Yet another hypothesis that can be derived from similar roots relates to the interaction between industrial workers and agricultural workers ( $EmpAgr$ ). Scholars such as Esping-Andersen (1985) have emphasised the importance of the coalition that occurred between the two groups in several Scandinavian countries, and which formed the basis of Social Democratic electoral success. While it is far from certain that such a coalition would necessarily occur purely by virtue of the size of each group, one way to get at aspects of such a relationship empirically is to utilize the interaction of the two variables ( $EmpInd \cdot EmpAgr$ ).

Demographic variables of a different nature may also contribute to left-wing electoral success. As consumers of the type of welfare and public services that left-wing parties are traditionally associated with, higher proportions of a population who are children ( $PC15$ ) or elderly ( $PC65$ ) may be associated with higher incidence of left-wing government.

What all of these theoretical approaches have in common is that they constitute claims regarding the *systemic* relative strength of left- and right-wing parties, as opposed to more transient or policy-related effects. The distinction is important as the claim that I will make below rests on the idea that parties make policy choices based on long-run strategic considerations, not *just* ephemeral and contingent events.

#### 4.1.2 Results

The results for estimating the model of systemic determinants of left-wing strength described above are presented in *Table 4.1.2*. While they are potentially of substantive interest in their

Table 1: Tobit estimation of the systemic determinants of left-wing cabinet seats ( $Left_{i,t}$ ) across countries.

	(1)	
	b	t
$Left_{i,t}$		
$\overline{PR}_i$	0.457	0.300
$\overline{PR}_{i,t}^W$	-3.880***	-3.106
$\overline{PC15}_i$	92.98	0.210
$\overline{PC15}_{i,t}^W$	438.0*	1.958
$\overline{PC65}_i$	17.24***	3.257
$\overline{PC65}_{i,t}^W$	3.140	0.789
$\overline{ImpExp}_i$	-0.776***	-2.939
$\overline{ImpExp}_{i,t-1}^W$	0.376	0.982
$\overline{UDen}_i$	1.167***	3.047
$\overline{UDen}_{i,t-1}^W$	-0.765	-1.569
$\overline{EmpAgr}_i$	-3993.3***	-3.357
$\overline{EmpAgr}_{i,t-1}^W$	20.77	0.0417
$\overline{EmpInd}_i$	-13584.3***	-5.173
$\overline{EmpInd}_{i,t}^W$	-913.5**	-2.107
$\overline{EmpAgr}_i \cdot \overline{EmpInd}_i$	14334.7***	3.535
$(\overline{EmpAgr}_{i,t} \cdot \overline{EmpInd}_{i,t})^W$	-806.9	-0.563
$\overline{EmpInd}_i^2$	17947.1***	4.727
$\overline{EmpInd}_{i,t}^{2,W}$	1403.4**	2.030
$\overline{UCentralization}_i$	-4.120	-0.228
$\overline{UCentralization}_{i,t-1}^W$	-6.470	-0.297

Notes: Maximum likelihood estimates with Z-statistics in parentheses calculated from country-clustered standard errors. \*, \*\*, and \*\*\* denote p-values of 0.1, 0.05, and 0.01, respectively.

own right, I do not dwell on them here as the primary objective of the paper is to test a theory of partisan policy-making with respect to privatization. I shall simply note that the hypotheses regarding the influences of electoral disproportionality (within countries), union density (across countries), and the various functions of the employment sector demographics all find support in the data.

To provide a clearer overview of how the estimates displayed in *Table 4.1.2* translate into estimates of  $\Lambda_{i,t}$ , *Figure 1* plots the observed values of  $Left_{i,t}$  and the derived values of  $\hat{\Lambda}_{i,t}$  for the 13 countries for which data is available for the privatization models. Broadly, the values of  $\hat{\Lambda}_{i,t}$  appear reasonable. It starts low in France, when the Left struggled against the strength of the Gaullist Right, and then rises just before and during the 1980s, when the Left had their first presidential breakthrough. It is very high in Sweden, where the SAP is renowned as one of the strongest left-wing parties in the world. It is very low in Ireland, where neither of the two main parties that have dominated governments is considered to be left-wing.

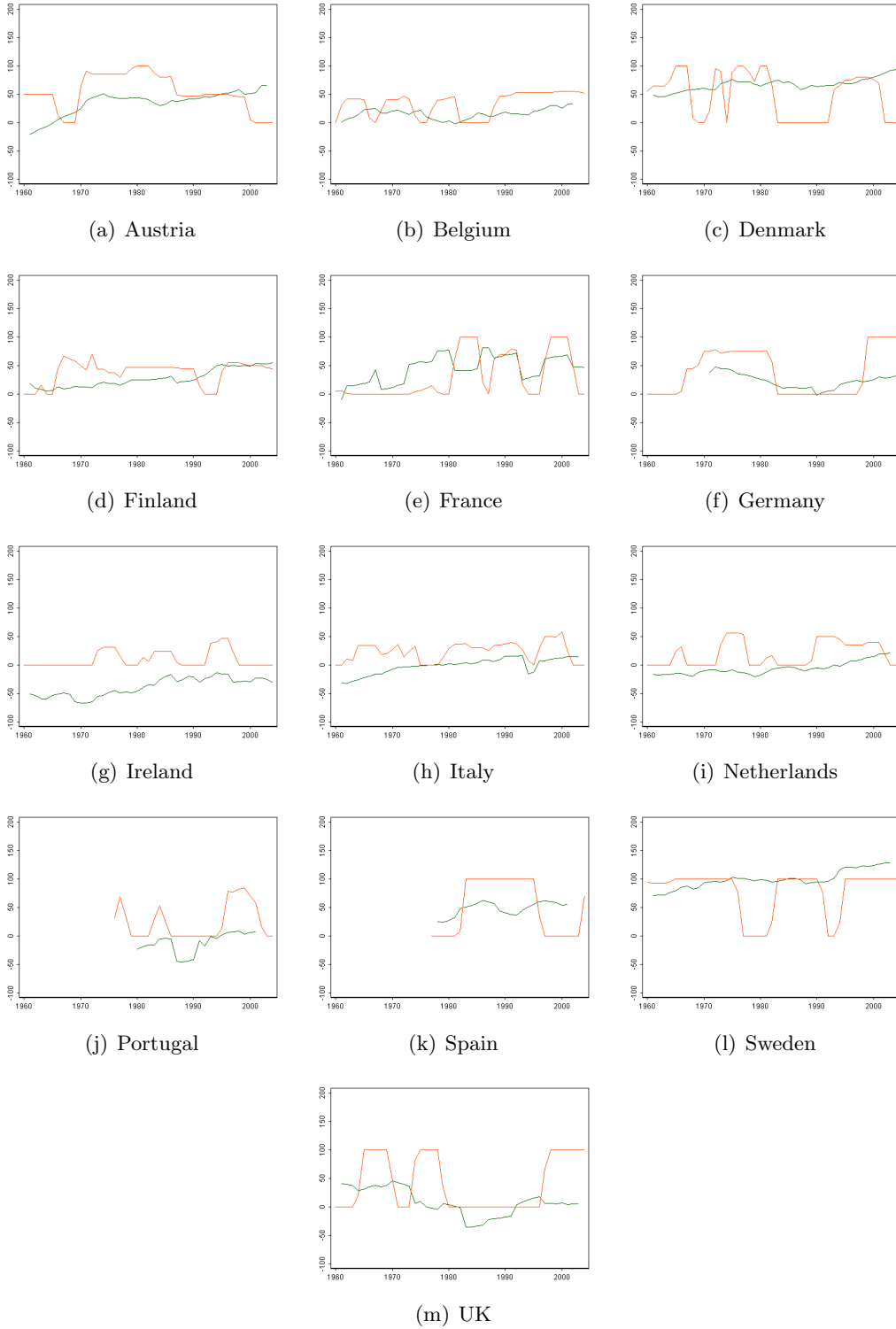


Figure 1:  $Left_{i,t}$  and  $\hat{\Lambda}_{i,t}$  for the period 1960–2005.

## 4.2 The Privatization Decision

### 4.2.1 The Dependent Variable

My dependent variable in all estimated models is the annual per capita privatization revenues for a country ( $PrivRevPC_{i,t}$ ). This measure should be considered one of ‘privatization effort’ in that it directly controls for country size, thus avoiding the problem of large privatizations in large countries dominating the analysis. The data is drawn from the *Privatization Barometer* database<sup>15</sup> and includes all sales of SOEs during the sample period. These sales may take the form of public offerings on stock exchanges or direct sales to existing private enterprises. The data includes partial sales where only a fraction of the equity in an SOE is privatized. In these instances of partial sales, the year in which the revenue is raised is the year for which it is recorded. Privatization revenues are denominated in (constant) \$US for all countries.

### 4.2.2 Explanatory Variables

The theory advanced above implies the inclusion of two variables, together with their interaction. Being a story about partisanship, I include the share of cabinet seats held by left-wing parties ( $Left_{i,t}$ ) using data from Armingeon et al. (2007). As set out in *Section 4.1*, I then employ the estimated measure of system left-wing strength ( $\hat{\Lambda}_{i,t}$ ), together with the partisanship interaction ( $Left_{i,t} \cdot \hat{\Lambda}_{i,t}$ ). To be clear, the expectation is of a positive and statistically significant interaction effect.

Some justification of this model is in order as interacting  $Left$  with a component of itself ( $\hat{\Lambda}$ ) may lead to questions as to what each variable is picking up in the model. Thus, a reasonable question would be, ‘After  $\hat{\Lambda}$  has been controlled for, what does  $Left$  capture?’. This can be shown algebraically with the following example model,

$$y = \beta_0 + \beta_1 Left_{i,t} + \beta_2 \hat{\Lambda}_{i,t} + \beta_3 Left_{i,t} \hat{\Lambda}_{i,t} + u_{i,t} . \quad (13)$$

Now, substituting  $Left_{i,t} = \hat{\Lambda}_{i,t} + \delta_{i,t}$  — where  $\delta_{i,t}$  captures the short-run fluctuations of partisanship around the long-run strength — into (13) yields,

$$y = \beta_0 + \beta_1 (\hat{\Lambda}_{i,t} + \delta_{i,t}) + \beta_2 \hat{\Lambda}_{i,t} + \beta_3 (\hat{\Lambda}_{i,t} + \delta_{i,t}) \hat{\Lambda}_{i,t} + u_{i,t} . \quad (14)$$

Now, the conditional influence of partisanship (i.e.  $Left$ ) on  $y$  can be calculated by differentiating  $y$  with respect to the partisanship measure. But which partisanship measure is appropriate —  $(\hat{\Lambda}_{i,t} + \delta_{i,t})$  or  $\delta_{i,t}$ ? In fact, they are equivalent in this respect as:

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<sup>15</sup><http://www.privatizationbarometer.com/>

$$\frac{\partial y}{\partial \delta} = \frac{\partial y}{\partial (\hat{\Lambda} + \delta)} = \beta_1 + \beta_3 \hat{\Lambda}_{i,t} . \quad (15)$$

From this analysis, we can see that *Left* captures the short-term fluctuations of left-wing strength around its long-run, systemic, value. So, while  $\hat{\Lambda}$  may be low, a left-wing party may, nonetheless, come to hold many cabinet seats for (probably) a short period due to particular circumstances in a country or political system. In essence, *Left* remains the true variable capturing partisanship as it remains the measure of left-wing power at a given point in time. While correlated with *Left* (by construction),  $\hat{\Lambda}$  explicitly excludes these short-run fluctuations.

Of course, there is reason to believe that a number of other factors will have played an important role in determining how privatization has developed across countries. Most of those indicated below are drawn from the previous work in this area, although the use of others are innovations to this paper. The controls can be usefully divided into three broad categories: economic, contextual, and political.<sup>16</sup>

Taking the economic factors first, unemployment is an obvious variable to control for, albeit one ignored by the literature so far. From the theoretical stance of this paper, there are reasons to suspect both positive and negative effects on privatization effort. On the one hand, higher unemployment indicates a worse performing economy, and thus one, perhaps, more in need of the productivity increases associated with privatization. On the other hand, higher unemployment may make privatization less politically desirable as the process may well lead to even higher unemployment levels as public-sector labour is shed. Thus, I employ the control,  $Unemployment_{i,t-1}$ , without firm predictions as to the sign of its coefficient.

Public finances have been held to be relevant to privatization decisions. A poor financial situation, in the form of high public debt (Bortolotti, Fantini and Siniscalco, 2003) levels and/or high budget deficits (Zohlnhöfer and Obinger, 2006), can potentially be rectified by the revenues of a privatization programme. Thus, I employ the  $PublicDebt_{i,t-1}$  and  $PublicDeficit_{i,t-1}$  variables.

Economic controls are lagged by one period so as to avoid picking up any potential effect that privatization may have had on them.

In addition to these economic controls, there are also plausible non-economic contextual variables that have been considered to impinge upon a government's desire and/or ability to engage in privatization. Zohlnhofer, Obinger and Wolf (2008, 116) present data suggesting that there have been shifts in party positions when comparing the 1980s to the 1990s. That is, some kind of secular trend in favour of privatization across countries and parties. In order to capture this possible development, I employ a count variable simply equal to the year of each observation ( $Year_t$ ).

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<sup>16</sup>Full details of sources are given below in 3.

Clifton, Comin and Diaz Fuentes (2006) argue that the European Union has had a significant impact; leading member countries to privatize in order to comply with ‘single market’ provisions and increased cross-border competition. In this light, they place great weight on the ratification of the Maastricht Treaty. To assess the importance of this, I include a dummy variable ( $Maastricht_{i,t}$ ) equal to 1 after 1993, and 0 before.<sup>17</sup>

In terms of a government’s ability to privatize, Bortolotti, Fantini and Siniscalco (2003) suggest that a “deep and liquid stock market” is an important consideration. As large portions of privatization programmes across many countries have been pursued by public offerings on stock markets, the capacity of those markets to provide the required capital is likely to have been an important constraining consideration for governments. To control for this, I employ a variable corresponding to the total stock market capitalization within a country, per capita ( $StockMktCapPC_{t-1}$ ). The measure is per capita so as to avoid the issue of larger countries having larger stock market capitalizations, but correspondingly larger capital requirements for their privatization programmes. As with the economic controls, the variable is lagged to avoid it being spuriously correlated with the dependent variable.

Finally, Boix (1997) suggests that legislatively weaker governments will be less able to pursue privatization programmes as the chance of them being blocked from doing so would be higher. In order to control for this, I employ the  $Checks_{i,t}$  variable constructed by Keefer and Stasavage (2003). This is a composite index capturing the number of checks on government in a political system, and varies by country-year. It takes into account institutional factors, such as bicameralism and presidentialism, as well as partisan factors, such as the distance of governing coalition members from each other (and non-coalition members) in left-right policy terms.

### 4.2.3 Modeling Techniques and Issues

One innovation for this paper is to employ a different estimation technique to the existing privatization literature. There are several reasons for this, mostly relating to differences in data structure and resultant units of observation. Zohlnhöfer and Obinger (2006) and Zohlnhofer, Obinger and Wolf (2008) are purely cross-sectional studies, pooling data for each country across a period of around 10 years, and thus constraining the size of their sample to around 20. Based on this data, models were estimated with OLS.

Employing more data, Boix (1997) uses country-governments as his unit of analysis as opposed to just countries. This leaves him with around 50 observations. He then estimates two types of model: one for the volume of privatization revenues (by OLS) and one for a more subjective measure of what he terms “policies towards state-owned companies”, which amounts to an ordered variable capturing essentially the same information as the interval

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<sup>17</sup>While signed in December 1991, the treaty entered into force in November 1993.

variable.<sup>18</sup> With an ordered dependent variable, Boix then estimates these latter models as ordered probits.

The data employed by Bortolotti, Fantini and Siniscalco (2003) is commensurate with that in this paper — i.e. taking country-years as the unit of observation. Their approach is to utilize a two-stage empirical analysis by first estimating the probability of privatization occurring in a given country-year (using a probit model), and then estimating the determinants of the level of privatization revenues in those country-years that did experience privatization (by OLS). This approach is problematic, however, as by estimating a simple probit model in the first stage, Bortolotti, Fantini and Siniscalco (2003) effectively throw out data by treating small and large privatizations as identical.

To avoid this problem, I estimate a tobit model which accounts for the censored nature of the dependent variable in a single model. Doing so takes account of the fact that a value of 0 for the  $PrivRevPC_{i,t}$  variable can correspond to a government being only very marginally against privatization and one being overwhelmingly against it — i.e. the censored nature of the variable.

Nonetheless, there are some difficulties with this estimation approach. It would be highly desirable to employ a variable capturing the size of the SOE sector available for privatization as low privatization levels are hardly news if there is nothing to privatize. Thus, the preferred equation to be estimated would be,

$$PrivRev_{i,t} = \beta_0 + \beta_1 SOE_{i,t-1} + \beta \mathbf{Z} + \epsilon_{i,t} , \quad (16)$$

where  $SOE_{i,t-1}$  is the lagged size of the SOE sector for each country and  $\beta \mathbf{Z}$  denotes vectors of other parameters and variables. The problem is that there is no reliable TSCS data for variable  $SOE_{i,t-1}$ . Noting that the current size of the SOE sector in a country depends on the ‘initial’ size of it and the amount that has be privatized already:<sup>19</sup>

$$SOE_{i,t} \approx SOE_{i,0} - \sum_{\tau=0}^t PrivRev_{i,\tau} , \quad (17)$$

and denoting  $\sum_{\tau=0}^t PrivRev_{i,\tau}$  as  $CumPrivRev_{i,t-1}$ , this can then be substituted into (16) to yield,<sup>20</sup>

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<sup>18</sup>In addition to privatization revenues, some information on nationalizations is also included in this latter approach.

<sup>19</sup>The relationship expressed in (17) is only approximate as  $PrivRev$  is only an approximation of the ‘true’ size of the SOE sector that is privatized in a given year. There is some variability on the valuation placed on privatized enterprises based on market conditions and other stochastic factors.

<sup>20</sup>Lagging (17).

$$PrivRev_{i,t} = \beta_0 + \beta_1 (SOE_0 - CumPrivRev_{i,t-1}) + \beta \mathbf{Z} + \epsilon_{i,t} . \quad (18)$$

This form has lower data requirements but not quite low enough as there is, again, no reliable data on the size of the SOE sector, even for an early point in time, that is commensurate with *PrivRev*. To avoid this problem, I estimate a model of the form:

$$PrivRev_{i,t} = \beta_0 + \alpha_i - \beta_1 CumPrivRev_{i,t-1} + \beta \mathbf{Z} + \epsilon_{i,t} , \quad (19)$$

where  $\alpha_i$  denotes country-specific intercepts, which have replaced the initial *SOE* levels. This model is not perfect as these intercepts are likely to pick up other time invariant factors that affect privatization revenues. Given the data constraints, such a compromise is necessary.

However, the tobit model, being estimated by maximum likelihood, suffers from the ‘incidental parameters problem’ first highlighted by Neyman and Scott (1948). The result is that the use of fixed effects in tobit models yields inconsistent parameter estimates.<sup>21</sup> Random effects specifications do not suffer from this problem and accords with the modeling approach advocated by Bartels (2008). Thus, again, I employ the Bartels specification giving within and between estimation of variable effects and estimate the intercepts as random effects.

#### 4.2.4 Accounting for Uncertainty

An important concern when estimating this model of how the privatization decision varies with the prevailing level of systemic left-wing strength ( $\Lambda$ ) is that the variable that is actually employed ( $\hat{\Lambda}$ ) inherently contains error as a result of the process by which it was estimated. So, while the point estimate for  $\hat{\Lambda}$  is valuable, the actual value of the underlying variable that it proxies will fall somewhere within the sampling distribution of  $\hat{\Lambda}$ , and this should be accounted for when attempting to draw inferences about how partisanship regarding privatization varies with  $\Lambda$ .

I handle this issue in a way outlined by Armstrong, Duch and Bakker (2007).<sup>22</sup> The approach essentially treats the estimated distribution of  $\hat{\Lambda}$  similar to a Bayesian posterior by repeatedly sampling from  $\hat{\Lambda} \sim N(\widehat{\Lambda}^m, \sigma_{\Lambda}^2)$ , where  $\widehat{\Lambda}^m$  is the mean (point estimate) of  $\hat{\Lambda}$  and  $\widehat{\sigma}_{\Lambda}$  is the estimated standard error. The privatization model is then re-estimated for each draw of  $\widehat{\Lambda}^m$ , yielding a distribution of parameter estimates for the second stage model that includes the uncertainty surrounding  $\hat{\Lambda}$ .

<sup>21</sup>For a recent discussion of the issue, see Greene (2004b) and Greene (2004a).

<sup>22</sup>I am also grateful to Andrew Martin for suggesting an approach like this to me.

Table 2: Tobit estimation of the determinants of privatization ( $PrivRevPC_{i,t}$ ) across countries.

	(2)	
	b	t
$PrivRevPC_{i,t}$		
$CumulativePrivRevPC_{i,t-1}$	-0.177***	-4.720
$Unemployment_i$	-0.000106	-0.686
$Unemployment_{i,t-1}^W$	0.0000958	1.515
$PublicDebt_i$	-0.0000163	-0.966
$PublicDebt_{i,t-1}^W$	0.0000174	1.548
$PublicDeficit_i$	0.000202	0.641
$PublicDeficit_{i,t-1}^W$	0.0000263	0.603
$StockMktCapPC_i$	-0.0000205	-0.265
$StockMktCapPC_{i,t-1}^W$	0.0000570***	3.372
$Maastricht_{i,t}$	0.0000968	0.241
$Year_t$	0.000199***	4.381
$Checks_i$	-0.000837***	-2.947
$Checks_{i,t}^W$	0.000239***	3.172
$Left_{i,t}$	-0.0000116**	-2.468
$\hat{\Lambda}_{i,t-1}$	-0.0000115*	-1.804
$Left_{i,t} \cdot \hat{\Lambda}_{i,t-1}$	0.000000192**	2.299

Notes: Maximum likelihood estimates with Z-statistics in parentheses.  
\*, \*\*, and \*\*\* denote p-values of 0.1, 0.05, and 0.01, respectively.

#### 4.2.5 Results

The results for estimating the model of privatization effort are presented in *Table 4.2.5*.

First, the parameter estimate for  $CumPrivRevPC$  is negative, as expected. In the light of the discussion above regarding the theoretical reason for including the variable, this is reassuring. There is support for the claim that higher levels of privatization in the past reduce privatization in any given period. It appears that the variable is indeed controlling for the remaining size of the SOE sector. If it were to pick up some kind of serial correlation in which more privatization-prone countries were to consistently privatize more, the parameter would be expected to be positive.

Taking the economic control variables first,  $Unemployment$  appears to have little effect on privatization effort between countries, and the evidence is weak within countries, too. Given the ambiguous theoretical predictions, this is unsurprising. A similar finding is present for  $PublicDebt$ , where there is only weak support for the view that governments used privatization revenues as a way to pay down accumulated debts. Furthermore, there is no evidence that  $PublicDeficit$  has any effect, which may be unsurprising given the unsustainability of a strategy of funding budget deficits through asset sales.

The model provides strong evidence that higher levels of  $StockMktCapPC$  lead to higher levels of privatization effort. This is in accordance with the findings of Bortolotti, Fantini

and Siniscalco (2003). However, it is not possible to distinguish between two possible interpretations of the positive coefficient. Bortolotti, Fantini and Siniscalco (2003) emphasise the enabling nature of “deep and liquid stock markets” in that they allow governments to tap into capital markets more readily, especially when related to extremely large enterprises such as utility monopolies. An alternative (but not mutually exclusive) hypothesis would be that the presence of “deep and liquid stock markets” implies the presence of powerful financial actors capable of lobbying governments for more privatization business. It would be interesting to attempt to disentangle these two channels of causality.

Moving on to the contextual controls, the estimate for *Year* suggests that there was a secular trend in favour of privatization through the period. To even the lay observer, this is hardly likely to be surprising. More interesting is that, in the presence of *Year*, the *Maastricht* dummy is statistically insignificant. This may not be conclusive evidence against the impact of the EU on privatization policies across member states, but it surely casts some doubt on the thesis.

Interestingly, the estimated effects of *Checks* between and within countries are strongly statistically significant, but oppositely signed. The model suggests that, between country increases in *Checks* are associated with lower privatization effort — which accords with the argument made by Boix (1997) — but that within country increases are associated with increases in privatization effort. This result warrants more investigation.

On the evidence relevant to the theoretical claim of this paper, the findings are supportive. *Figure 2* plots the estimated interaction effects between *Left* and the  $\hat{\Lambda}$ , together with the 95% confidence interval. As expected, the sign of this effect is positive, indicating that more left-wing governments privatize more readily where their systemic strength is higher. It should be noted that the uncertainty surrounding the point estimate of the interaction effect is relatively large, meaning that conventional statistical significance is only reached near the sample extremes for  $\hat{\Lambda}$ . That the confidence interval is wide is unsurprising, though. Uncertainty from the estimate of  $\hat{\Lambda}$ , which is fairly large, is incorporated directly into the estimate of the interaction effect. As such, the lack of observational data for one of the key explanatory variables,  $\Lambda$ , should be considered the root cause of larger confidence interval. An alternative interpretation of the results, then, is that the interaction effect appears to be strong given that it survives the estimated nature of  $\hat{\Lambda}$ .

The conditional effects also reveal another aspect of the politics of privatization. While left-wing governments with low levels of systemic strength are significantly less likely to privatize to the same degree as a right-wing government in the same context, a left-wing government at high levels of systemic strength is estimated to be *more* likely to privatize than a right-wing government — albeit not quite to a statistically significant level. This may appear to be puzzling at first glance, but one resolution to this finding is that left-wing governments are better able to navigate and/or suppress the largely left-of-centre interest

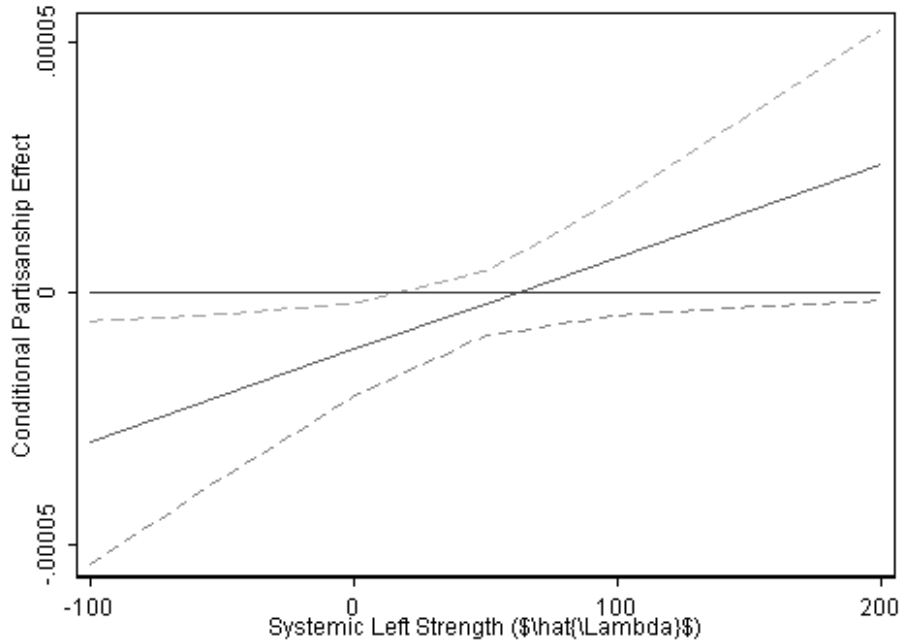


Figure 2: Partisanship effect on privatization, conditional on  $\hat{\Lambda}$ , estimated from Model (2); 95% confidence intervals shown.

group pressure that is likely to come out against privatization. For example, a left-wing government advocating privatization may be able to claim more credibly that the policy is in the ‘national interest’ and not simply an attempt to destroy a component of left-wing power resources — what some have termed a ‘Nixon goes to China’ effect (Cukierman and Tommasi, 1998; Cowen and Sutter, 1998).

## 5 Discussion

How do the findings in this paper sit with earlier, more country-specific studies? Rather well.

In Austria — a country with historically strong left-wing parliamentary presence — the mid-1980s saw both the Socialist Party (SPÖ) and the conservative People’s Party (ÖVP) embrace privatization, as well as broader deregulatory policies. Indeed, Meth-Cohn and Müller (1994) describe the shift by the SPÖ finance minister, Franz Vranitzky as a “quantum leap into supply-side economic policies”, and one for which “criticism within his party was relatively moderate” (Meth-Cohn and Müller, 1994, 166). Furthermore, they argue that (Meth-Cohn and Müller, 1994, 166),

the SPÖ accepted that the state is not an optimal owner. A minister cannot run a firm in the same way as a private owner; under such a situation the enterprise

belongs *de facto* to the management and the workers' council, and beyond that to local and regional politicians and the unions.

In the UK, the flip side of the argument regarding left-wing preferences for strong unions where the political parties themselves are weaker can be seen. The Thatcherite revolution of the 1980s has been explicitly associated with attempts by the Conservatives to reduce the power of public sector unions. Having witnessed the militant miners bring down Edward Heath's government in the early 1970s, the Tories were eager to ensure that such a situation in which a union could hold the country by the "jugular vein" could not reoccur (Steel and Heald, 1982, 341). That view became all the more prescient towards the latter end of the 1980s, after a raft of trade union legislation had also been passed and Thatcher had won her famous battle with the National Union of Mineworkers (Mitchell, 1987; Gamble, 1988).

In Sweden, the aspect of the theory emphasising left-wing incentives for state ownership becomes all the more stark. Pontusson (1989, 129) notes that,

Sweden represents something of a paradox. In no other West European country has a reformist working-class party (or any other type of left party) held government office for so long; yet public ownership of industrial/commercial enterprise is quite limited by comparative standards.

This is suggestive that the logic associating the need for public ownership with the acquisition of left-wing power resources may have relevance for the earlier period, before privatization. Lane (1994, 181) writes that, on nationalization, the "Social Democrats took an early pragmatic stand-point to this basic problem of Marxist ideology". On this basis, a fruitful line of future research would be to investigate the reasons for this earlier rejection of standard left-wing thought. Based on the theory and evidence presented in this paper, the strength of the Social Democrats, even in the absence of a large state-owned enterprise sector, is a plausible explanation.

## 6 Conclusion

Several conclusions can be drawn from this, the first of which must be that the traditional understanding of privatization as an inherently right-wing policy is rather wide of the mark. Left-wing parties have engaged in privatization programmes at least as large as those of the right-wing oppositions in several European countries. To dismiss such activities as capitulation to the Right seems to miss the point. On the basis of the evidence presented here, we can fairly reliably predict where left-wing parties will embrace privatization, and those predictions are not based on where we expect the Left to cave in to right-wing pressure — far from it. Privatization is an economic policy that has the capacity to 'raise all boats' —

at least in the medium term — but the political costs of it are felt differentially by left-wing parties across countries. It is for this reason that the degree of partisan conflict on the issue varies.

The theory and evidence advanced in this paper also suggests a reassessment of which actors are the relevant agents within ‘developed’ political economies. Prominent schools of thought ascribe agency to interest groups on the one hand or ‘the median voter’ on the other. This paper responds to these traditions with a more careful theorising of the incentives faced by political parties and goes on to find evidence to support the view that they are important agents in their own right. They appear to be more than simple vehicles for the interests of either interest groups or the median voter. Instead, they mediate influences from such quarters, and do so in a strategic way.

In addition to this contribution to our understanding of political agency, this paper leads to some obvious questions regarding the nature of the SOE sectors across different countries in the pre-privatization era. An obvious line for further research is to understand why countries that are traditionally thought of as being bastions of left-wing political strength appear to have pursued notably different industrial strategies during the twentieth century than their more right-wing cousins. Why did the Nordic and Benelux countries, as well as Germany, reject nationalization as a tool of industrial policy while their Anglo-Saxon and Mediterranean neighbours developed large-scale state-owned enterprise sectors? Why, where it was strongest, did the Left reject what many see as one of the core tenets of left-wing ideological thought? The kernel of an explanation for this has already been outlined above, but more detailed research to assess the applicability of the argument to this early period would be extremely valuable.

## 7 An Alternative Theory of Conditional Partisanship

In this section, I present an alternative theory that also leads to a prediction of partisanship with respect to the decision to privatize being conditional on the prevailing level of systemic left-wing strength ( $\Lambda$ ).

Again, consider two political parties, indexed by  $i \in \{L, R\}$ , in electoral competition to control the government ( $g$ ) such that  $g \in \{L, R\}$  denotes the governing party. They have utility functions that are weighted averages of the macroeconomic success of the country ( $\gamma$ ) and their own electoral success:

$$U(i) = \rho\gamma + (1 - \rho)P(g_{t+1} = i | g_t = i) , \quad (20)$$

The logic here is that parties derive *some* direct level utility from the national economy being able to provide more consumption to its citizens; in a sense, there is a degree of altruism.

While the second component of their utility is derived from electoral success, this need not be seen as a strict claim that parties are *purely* office seekers. The assumption is compatible with the notion that they seek office for purely instrumental means — i.e. so that they can pursue a range of policies that benefit them and their constituencies.

Substituting the probability of electoral for either party given by (6) and then differentiating with respect to  $s$ , the condition for right-wing parties to privatize is given by,

$$\frac{\partial U(R)}{\partial s} = \rho \frac{d\gamma(s)}{ds} + (1 - \rho) f'(\cdot) \left[ -\alpha \cdot \frac{d\lambda(s)}{ds} + (1 - \alpha) \cdot \frac{d\gamma(s)}{ds} \right] > 0 . \quad (21)$$

By assumption,  $f'(\cdot)$  is unambiguously positive, while the final term in parentheses is unambiguously negative. Clearly, then, right-wing parties will always prefer privatization — that is, a reduction in  $s$ . It allows them to achieve greater economic performance *and* to reduce the power resources of the Left.

Once again, the decision for left-wing parties is rather more complicated. The relevant condition being given by,

$$\frac{\partial U(L)}{\partial s} = \rho \frac{d\gamma(s)}{ds} + (1 - \rho) f'(\cdot) \left[ \alpha \cdot \frac{d\lambda(s)}{ds} + (1 - \alpha) \cdot \frac{d\gamma(s)}{ds} \right] > 0 . \quad (22)$$

When does (22) imply that a left-wing party would favour a privatization programme? The question boils down to the relationship between the two terms within parentheses. From (22), the condition for a left-wing party to wish to engage in a privatization programme is given by,

$$\frac{d\gamma(s)}{ds} \left[ \frac{\rho}{1 - \rho} \frac{1}{f'(\cdot)} + \alpha - 1 \right] > \alpha \frac{d\lambda(s)}{ds} . \quad (23)$$

Obviously, this condition depends on the values of the exogenous parameters,  $\alpha$  and  $\rho$ . However, the more interesting finding is that it also depends on  $f'(\cdot)$ . By assumption, this derivative is decreasing in its argument, which implies it is decreasing in  $\Lambda(s)$ . This shows that the RHS of inequality (23) is unambiguously increasing in  $\Lambda$ , making the condition for left-wing parties to privatize more likely to hold at higher levels of systemic left-wing strength.

## 8 Summary of Variables

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Table 3: Summary of variables.

Variable	Description	Suggested By	Source
<b>Dependent Variable</b>			
$PrivRevPC_{i,t}$	Privatization revenues per capita (in \$ US).		Privatization Barometer
<b>Economic Variables</b>			
$Unemployment_{i,t-1}$	Unemployment rate in the previous year.	Armingeon et al. (2007)	Armingeon et al. (2007)
$PublicDebt_{i,t-1}$	Public debt as a percentage of GDP in the previous year.	Bortolotti, Fantini and Siniscalco (2003)	Armingeon et al. (2007)
$PublicDeficit_{i,t-1}$	Public budget deficit as a percentage of GDP in the previous year.	Zohlnhöfer and Obinger (2006)	Armingeon et al. (2007)
<b>Contextual Variables</b>			
$Maastricht$	A dummy variable equal to 1 after 1993.	Clifton, Comin and Diaz Fuentes (2006)	
$StockMktCapPC_{i,t-1}$	Total stock market capitalization per capita in the previous year.	Bortolotti, Fantini and Siniscalco (2003)	Global Financial Data
<b>Political Variables</b>			
$LeftGovt_{i,t}$	Percentage of cabinet seats held by a left-wing party.	Boix (1997)	Armingeon et al. (2007)
$Checks_{i,t}$	A composite index capturing the number of checks on government in a political system.	Keefer and Stasavage (2003)	Keefer and Stasavage (2003)