The Political Economy of Policy Reform: Redistributive promises and transfers to special interests*

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August 2016
Revised

Abstract

An enduring question in political economy is why "efficiency-improving" economic policies are so often politically difficult to adopt. This paper examines, specifically, how the presence of special interest groups on the one hand, and limited taxation capacity on the part of the state on the other, affects the sorts of redistributive policies that are necessary to win support for reform from potential losers of that reform. Voters recognize that the government, in compensating losers, has an incentive to misuse this redistributive mechanism to disproportionately steer compensation towards its supporters, or to other special interest groups. Our analysis suggests that this is particularly damaging in countries with low state capacity, where popular support for the adoption of efficiency-enhancing reforms is likely to be the lowest in any case. We include some suggestive evidence for this.

Keywords: Political Economy, Reform, Special interests, Redistribution, Compensation, State Capacity.

JEL classification: D72, D78, D04, P11, P16, P26, H23.

*For many helpful comments, we are grateful to Panos Hatzipanayotou, Arye Hillman, Christos Kotsogiannis, Natasha Miaouli, Sharun Mukand, Apostolis Philippopoulos, Carlos Scartascini, and conference participants at the June 2015 conference on Public Policy and Public Sector Reforms at Delphi. Jain thanks the Keynes Fund and Majumdar thanks SSHRC for financial support. All remaining errors are our own.

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1 Introduction

Why is economic policy reform so politically difficult to implement? More generally, why is good economics not necessarily also good politics? To paraphrase Rodrik (1996) somewhat: If the purpose of reform is to improve the lives of the majority of the population, why is that policy opposed by a significant proportion of the population? One answer is that even an economically efficient policy reform – one in which the aggregate gains are greater than the losses, so that the 'national pie' expands – affects individuals in a 'non-neutral' way. In other words, the impact on different individuals is different, and the prospective 'losers' from that reform might reasonably be expected to block the reform.

But if the losers are strong enough, or numerous enough, to block an efficient reform, why then can the prospective 'winners' not promise to compensate the prospective losers, or why can governments not make such redistributive promises on their behalf? The importance of compensation, or other methods to ease the adjustment of workers, is thus key to understanding political support or opposition to the adoption of reforms. A number of papers (Acemoglu, 2003, Jain and Mukand, 2003) have argued that the credibility of redistributive promises made by the government plays an important role in the political calculus of reforms. However, there has been much less discussion of the influence of interest groups, and other politically well-organized groups, in channelling compensatory resources towards themselves, and the resulting consequences for public opinion towards reforms. In this paper, we study the effect of special interest groups on the adoption and consequences of reforms. When do special interest groups affect redistributive policy? How does the presence of special interest groups affect political support for the adoption of efficiency-improving reforms? In particular, how do these forces play out in the specific context of a reform of the public sector that entails the displacement of a significant number of workers, and a great deal of attendant uncertainty about their future wages?

The idea that government transfers are frequently steered to politically well-organized groups finds widespread support in the empirical evidence. To take two examples: In France, Gray (2001) finds that displaced industrial workers were treated differentially in the allocation of categorical adjustment assistance benefits, with the differentiation being based on political and economic characteristics of the affected groups, especially the ability of those groups to organize themselves. In Papua New Guinea, Hasnain, Keefer and Menzies (2014) show that those communities that were able to act collectively and had more active members were better able to garner federal funding.[1] Further, the influence of special interest groups can be exercised in a number of ways, such as public protests and civic unrest (Passarelli and Tabellini (2013)). Our theoretical model reflects these well-established findings by incorporating special interest groups who are likely to have disproportionate influence on the

[1] We discuss similar evidence from a number of studies in our review of the literature in Section 2, below.

government in receiving compensation for their losses, if any, from reform.

However, even if the government has no credibility problems in its promises of redistributive compensation, its ability to actually deliver on those promises might still be suspect in the eyes of voters. For instance, as Jain and Majumdar (2016) suggest, governments may simply lack the administrative or 'state capacity' to accurately identify winners and losers, which constrains their ability to implement the *ex post* redistribution necessary to win *ex ante* passage of the reform under consideration. As the burgeoning literature on state capacity has pointed out, there is considerable variation in the administrative and fiscal ability of different governments, and further, that state capacity 'matters' (Acemoglu, Garcia-Jimeno and Robinson, 2015). How does government capacity affect its ability to implement efficiency-enhancing reforms, especially when its decision-making might be biased toward policies that benefit 'special interest groups'? As the foregoing discussion suggests, there is a less than straightforward relationship between public support for reform, on the one hand, and the capacity of governments to realize efficiency gains from the reform, on the other. Hence the positive question of the various factors affecting that relationship is still an open one, and is especially important in the case of reforms which affect large numbers of workers, such as reforms of the public sector.

In this paper, we take another step in that direction, by constructing and analyzing a simple model of the political economy of policy choice that combines both these elements: government decision-making can be skewed towards special interests, and the scope of its actions might be constrained by its (lack of) state capacity. We use this model to study how the exercising of influence by particular groups affects the attitude of the population towards a public sector reform, in which economic activity is re-directed away from the (possibly lower-productivity) public sector towards the (possibly higher-productivity) private sector as a result of a change in government policy. Of course, workers will be affected as a result of this reform, with those able to make the transition to the growing private sector gaining from the reform, and others losing. Our modelling set-up also incorporates the feature that, while taxation of the winners, and redistribution of the resulting revenues to compensate the losers, is an important element of any reform, the state in most (developing) countries has only an imperfect capacity to do so, as emphasized by Besley and Persson (2009, 2011) and Besley, Ilzetzki and Persson (2013). This could be related to the (in)efficiency of the tax and legal system in the country and also to the degree of administrative efficiency or corruption in identifying income gains and losses that occur due to a change in policy.[2] We model this in a simple manner by assuming that the state is only able to tax post-reform income

[2]It has often been argued that it is precisely these sorts of informational problems that lead developing countries to realize much of their tax revenues from easy-to-observe (but socially inefficient) trade taxes rather than from more efficient, albeit harder to collect, taxes on income. For a discussion, see Besley and Persson (2013).

gains up to a certain extent. Countries with better state capacity are able to implement these tax-and-redistribute programs to a greater extent as compared to those with low state capacity.

Our results suggest that even though special interests have the ability to influence compensatory transfers, they are likely to be effective only in countries with low state capacity. When state capacity is high, the government is able to provide compensation to all, including the special interest group, thereby removing any incentive on its part to organize itself politically. On the related question of majority political support for adoption of the reform, we find that the presence of special interests negatively affects popular support, but only in countries with very limited state capacity. Where the government has limited capacity to tax the winners, the ability of the special interest group to influence governmental decision making means that it is able to enjoy a major share of the limited tax revenues, and there is very little left for the rest of the losers from the reform. Voters who are unaffiliated with the special interest group anticipate that governments might disproportionately compensate special interests *ex post*, and are therefore likely to be reluctant to vote *ex ante* in favor of even a reforms-and-redistribution program, even when those reforms are likely to increase overall national income. Looking at reforms in privatisation in twenty transition economies in Europe over the period 1994-99, we find suggestive evidence in favour of our basic result that economies with higher state capacity have made greater progress in the implementation of public sector reforms. This might be due to the role played by special interests: indeed, we find that political activism on the part of the workforce is also lower in countries with higher state capacity. On the other hand, countries with larger special interest groups have had more difficulty in bringing about reforms in the public sector (see also Asatryan, Heinemann and Pitlik (2016)).

Extensions of our basic model suggest that the presence of a special interest group in a low state-capacity economy can be particularly damaging for building support for reforms where the fractions of winners and losers from the reform are likely to be equally split. In such circumstances, the special interest group is likely to play an influential role in building the post-reform majority coalition, and it is thus likely to enjoy a dominant position in determining the compensatory mechanism.

This paper is clearly also related to the literature on the politics of reform in developing countries (see Rodrik (1996, 2006) for surveys, and Kanbur (2003) for a discussion of compensation in particular). Among different mechanisms that have been analyzed, Fernandez and Rodrik (1991) focus on individual-specific uncertainty and how that can create a bias against welfare-enhancing economic reforms, while Alesina and Drazen (1991) use the politics of 'wars of attrition' as a rationale for costly delay in the adoption of reforms. Other channels that may inhibit or delay reform have been investigated by several papers (e.g. Majumdar and Mukand, 2004, Jain and Majumdar, 2016), while questions of continuation or reversal of

support for reforms have been studied in Veldkamp (2009) and Jain, Majumdar and Mukand (2014).[3] There is also a related, but quite distinct, literature on reform, dubbed the "crisis-induces-reform hypothesis" (Drazen and Grilli, 1993). For recent discussions, and evidence for this hypothesis, see Wiese (2014), Agnello et al. (2015), and especially Asatryan, Heinemann and Pitlik (2016). The focus of our model is not so much on the proximate causes of the reform, be they fiscal or economic, but rather on the political exigencies that shape its adoption. What is distinctive about our analysis here is that we consider the interaction of the political power of the special interest group with the state's imperfect capacity to tax and redistribute. Accordingly, our paper is also related to the recent literature on state capacity, initiated by Besley and Persson (2011, especially chapter 7).

The rest of the paper is organized as follows. In the next section, we briefly describe the related literature, focusing specifically on the evidence regarding the political economy of government transfers to special interests. In Section 3, we present a model of public sector reform in an environment where workers are uncertain about the precise effect of that reform on them. Section 3.1 describes the basic framework, and Section 3.2 solves the model to consider the policy equilibria that might arise. Section 3.3 provides some suggestive evidence in support of the basic results of the model. In Section 4, we extend the model in a number of different directions, to consider different types of uncertainty: in Section 4.1, with voters who are heterogeneous in their likelihood of emerging as winners from the reform; in Section 4.2, where the likelihood of emerging as winners or losers differs between the special interest group and the rest of the population; and third, in Section 4.3, when there is uncertainty about the proportion of winners from the reform itself. Section 4.4 establishes robustness of the results of the basic model in a more explicit model of lobbying and electoral politics. Section 5 concludes.

2 Review: the political economy of government transfers

The model in the next section builds on several intersecting lines of research available in the literature. Here we offer a brief and selective summary of the different strands that we interweave in this paper. As the evidence from a number of papers suggests, government transfers are frequently steered to (politically) favored groups. This favoritism can be displayed in inter-governmental transfers - for instance, from the central or federal government to local governments or municipalities, based on the respective political affiliations of the governments on either side of the transaction. Perhaps more pertinently, similar sorts of political motivations appear to characterize the operation of many government transfer programs to

[3]This paper can also be related, perhaps more distantly, to the political economy literature that argues that voters' (rational) ignorance about particular projects influences the set of projects (or reforms) that is adopted by the government, or by society as a whole (Coate and Morris (1995), Jain (2007)).

individuals. Finally, there is some evidence on the political economy of transfers to displaced workers in particular - for example, in the process of adjustment to trade liberalization. We describe each of these below.

First, there is considerable evidence of what might be broadly described as politically motivated targeting of inter-governmental transfers, from a number of countries around the world. For instance, Brollo and Nannicini (2012) find that Brazilian municipalities whose mayor is politically aligned with the party or coalition of the federal president receive significantly higher discretionary transfers, by as much as a third, for infrastructure development. At the same time, the federal government especially penalizes those municipalities whose mayors belong to the opposition coalition and had been elected by a narrow majority, thereby 'tying their hands' for the next election. Similarly, Arulampalam et al. (2009) argue that the discretionary transfers that the central government in India is required to make to state governments show clear evidence of political opportunism. In particular, 'swing states' where the incumbent government is aligned with the ruling party at the centre are especially likely to receive larger transfers, by as much as a sixth. Khemani (2007) offers confirmatory evidence that while centrally determined transfers are skewed in this manner, the constitutionally mandated delegation of some transfers to an independent agency (the Finance Commission) serves to constrain the partisan impact of centre-state transfers in India. However, attempts to limit the discretionary allocations are not without difficulties: the adoption of formula-based mechanisms for allocating transfers across local governments in Senegal has had only limited success (Caldeira, 2012). Echoing the results of Banful (2011a) for Ghana, Caldeira also finds that political considerations, and a pattern of tactical redistribution that targets swing *communes*, are still evident in the distribution of central resources. Perhaps more tellingly, Litschig (2012) reports that even on a non-discretionary revenue-sharing program between the Brazilian central and local governments, which was based on local population estimates, the allocation formula was manipulated in order to target particular municipalities for political ends. The extensive literature cited in Khemani (2007) and Caldeira (2012) suggests that these are not isolated cases.[4]

Nor is this phenomenon limited to developing countries. In western Europe alone, similar evidence of the effect of partisan alignment and political representation can be found: in Spain, in the allocation of grants from upper-tier governments to municipalities (Solé-Ollé and Sorribas-Navarro, 2008) and in the bailout funding received by debt-affected regional gov-

[4]More generally, Scartascini and Tommasi (2012) provide a theoretical framework to suggest that the effects of constitutional rules on policy outcomes (such as public spending) depend critically on the extent to which political forces play out through formal political channels. This process, which they label as 'institutionalization', to distinguish it from the existence of institutions *per se*, is found to be significant and important: Caruso, Scartascini and Tommasi's (2015) cross-country analysis suggests that institutions do matter, but only in high-institutionalization countries, and are insignificant in low-institutionalization countries.

ernments (Sorribas-Navarro, 2011); in Portuguese centre-municipalities transfers (Migueis, 2013); in Italy (Padovano, 2012); in geographical variation in Belgian social security and income tax transfers, even though those transfers are largely formula-based (Jennes and Persyn, 2015); in the state of Hesse in Germany, where, although left-wing governments and right-wing governments appear to be following different strategies, both display partisan favoritism in intergovernmental transfers (Baskaran and Hessami, 2014); and indeed, even at the level of the European Union, where the nationality of the EU (agricultural) commissioners has a large effect on the share of the share of the EU budget that is allocated to the commissioners' country of origin (Gehring and Schneider, 2015).

Second, a similar picture can be drawn from the evidence on politically motivated transfers to interest groups. To take just a few examples: Schady (2000) argues that although the expenditures under the Peruvian Social Fund (FONCODES) did serve the program's stated objective of redistributing to populations in the poorest provinces, these expenditures also rose significantly before national elections, and were targeted to maximize their political benefit. Brollo, Kaufmann and La Ferrara (2015) study the enforcement of rules on school attendance governing a large Brazilian conditional cash transfer program, and find evidence of political manipulation of the enforcement of rules, especially close to elections. Similarly, Camacho and Conover (2011) find evidence that local politicians in Colombia strategically timed the household surveys, and manipulated the poverty score index of surveyed households, which determined the eligibility of those households for targeted social welfare programs. They estimate that the cost of these manipulations was as much as 7 percent of the health and social security budget. Banful (2011b) reports that voucher allocations in Ghana's subsidized fertilizer program were politically targeted to particular districts based on election results. This targeting can be quite strategic: Khemani (2004) finds evidence from Indian elections that policies were manipulated to target special interest groups, possibly in return for campaign support, rather than to try and sway larger masses of voters with populist spending sprees. The importance of group organization is also emphasized by Banerjee and Somanathan (2007), who find that a rapid expansion in Indian rural infrastructure especially benefited those historically disadvantaged social groups that were better able to mobilize themselves politically, relative to the others. Consistent with this, in Papua New Guinea, Hasnain, Keefer and Menzies (2014) argue that although clientelistic behavior survived even after changes in the process of allocation of infrastructure funding, which were intended to reduce political discretion by making transfers directly to local wards, nevertheless, those communities that were able to act collectively and had more active members were better able to garner infrastructure funding. More generally, Shi and Svensson (2006) find strong evidence for political budget cycles in their analysis of a large panel data set of 85 countries over a 21-year period. Interestingly, they argue that these political budget cycles are significantly larger, and statistically more robust, in countries with a smaller share of informed voters in

the electorate.

Third, there is a smaller literature on the political economy of compensation of displaced workers. While there has been long-standing recognition of the importance of compensation programs such as trade adjustment assistance to compensate displaced workers, (Brander and Spencer, 1994), there has been less consensus on the form that this compensation should take, and indeed on whether workers displaced by trade integration or liberalization should receive special assistance over and above the level that other unemployed workers receive (see the discussion in Magee, 2003, and Davidson and Matusz, 2006). In part, and perhaps most germane to our model here, this has reflected concerns that political factors might result in different displaced workers being treated differently (Magee, 2001). Indeed, some of the criticism of the Clinton administration around the passage of the North American Free Trade Agreement (NAFTA) was that trade adjustment assistance for displaced workers was inefficiently targeted and often granted to workers who had been displaced for reasons other than trade liberalization (see, for example, Richards (1997), and Bohannon and Flowers (1998)). In the case of France, Gray (2001) argues forcefully that displaced industrial workers were treated differentially in the allocation of categorical adjustment assistance benefits, with the differentiation being based on political and economic characteristics of the affected groups, especially the ability of those groups to organize Olsonian collective action in pressing their demands.

In constructing our model of reform under uncertainty, we seek to incorporate these elements in the simplest possible way. We construct a model of public sector reform in which displaced workers can be compensated by redistributive transfers from the gains of the winners of the reform. Workers are not all identical - some may be described as special interests, who are politically important in ways that we describe below, perhaps because they have been able to overcome their collective action problem and organize to defend their interests. Hence they may be treated quite differently from the large mass of (displaced) workers. We turn next to describing the model.

3 A model of reform with uncertainty

Almost all reforms create some winners and some losers, and reforms targeted at the public sector are no exception. Even if the proposed reform has the potential to result in gains for the overall economy, if voters are uncertain about how they personally will be affected by it, their support for or against the adoption of such a reform may depend on their expectations of compensation in case they turn out to be losers. Inevitably, the politics in the post-reform phase can play a crucial role in determining compensation. How does the presence of a well-organized special interest group, such as a trade union or other workers' group, affect the politics of post-reform compensation, and consequently its adoption in the first place? The

model that we develop aims to capture these interactions in a simple framework.

3.1 Model structure

Consider an economy comprised of a unit mass of citizen-workers, each of whom inelastically supplies one unit of labor, which is the only privately-provided factor of production. The simplicity of this assumption allows us to abstract away from labor supply decisions, and to focus attention on the distributional consequences of the reform.[5] Workers can be employed in one of two sectors: the A sector, or the B sector, which can be thought of as the public sector and the private sector respectively.[6] In each sector, productivity and labor wages depend on government policy, say through its impact on the level of competitiveness in the sector or in the form of some infrastructure or other support, which can differ across sectors. Suppose that, other things being equal, the B sector would be more productive than the A sector, so that under the same policy regime, one unit of labor would contribute more to national income in the B sector than in the A sector.

Consider a government contemplating a reform, which we can think of as a change in government policy that corrects some pre-existing distortion, so that economic activity is re-oriented away from the (relatively less productive) A sector towards the (relatively higher-productivity) B sector.[7] This reform, and the accompanying re-allocation of resources, will result in the movement of at least some workers from the A sector to the B sector. Workers who are able to make the move see higher wages, and thus emerge as 'winners' from the reform, while those workers who remain in the A sector end up as 'losers', due to a fall in their wages. Let g and l denote the amount of 'gain' and 'loss' for each of the winners and

[5]While the size of the public sector, and hence any associated policy reform, is determined by a number of factors (such as the degree of fiscal decentralization and the ideology of the government (Baskaran, 2011)), nevertheless the available evidence strongly supports the idea that public firms are more labor intensive than their private counterparts (see, for example, De Borger (1995)). Hence, in what follows, the focus of our model of public sector reform is on its impact on labor.

[6]This also allows for the possibility that both sectors produce the same composite good. More generally, following Fernadez and Rodrik (1991), one can alternatively think of these sectors as the 'import-competing' sector and the 'export sector' respectively, so that the model could instead have been applied to a reform of trade liberalization which affects the relative prices of output in these sectors.

[7]We have chosen to take a deliberately agnostic approach on the precise nature of the public sector reform that is being implemented. Thus the model could be applied, with a little modification, to other reforms – for example, a change in government policy such as an opening up of a sector to private firms, encouraging exports etc. For a more detailed description of a two-sector model similar to this one, see Jain and Mukand (2003). An equivalent alternative formulation, which we do not explore here, would be to follow the motivation in Economides, Philippopoulos and Vassilatos (2014) and model the public sector as being productively less efficient than the private sector. In that case, a potentially Pareto-improving reform might take the form of a transition to cost-minimizing private provision of some service or good that allows the government to achieve efficiency savings, accompanied with a redistributive program to compensate displaced workers from the public sector.

losers respectively. However, a key feature is that workers face *individual-specific uncertainty*: before the reform is implemented, the specific identities of the winners-to-be are not known. As Fernandez and Rodrik (1991) argue, there can be a number of reasons for this individual-specific uncertainty, in an environment where a large-scale reform creates a great deal of change. For example, the relocation or retraining costs of changing sectors might vary across workers, perhaps because of differences in individual aptitudes for the new jobs that are created, and these costs may not be apparent *ex ante*. For analytical simplicity, we assume that each worker initially in the A sector has the same probability λ of emerging a winner (and $1-\lambda$ of being a loser) from the reform. Further, given the unit mass of workers, the proportion of 'winners', λ, is thus common knowledge.[8]

To sharpen the focus of the analysis, we restrict attention to the consideration of those reforms that are efficiency-enhancing, i.e., the overall expected gain to society is positive. Hence we make the following assumption:

$$\lambda g - (1-\lambda) l \geq 0 \qquad \text{'Efficiency-enhancing'} \tag{1}$$

Hence from an individual perspective, each citizen expects on average to gain from implementing the reform. How does the presence of special interests affect this calculus?

Special interests: We assume that not all workers are 'equal' (Gray 1995, 2002). Specifically, there are some 'special interest' voters, who have political influence disproportionate to their actual numbers. What makes these 'special interests' so special? It could be because this group is well (enough) organized, say due to a common kinship or ethnicity or ideology, which makes their support crucial for any government in holding office or re-election. Here, we abstract away from a discussion of the specific reasons for this political influence in favor of a more general framework. We assume that these workers, who form a fraction s of the total electorate, share a common interest; in particular, this entire group is either a winner from the reform with probability λ or a loser (with probability $1-\lambda$). They thus have the same probability of being winners or losers as the rest of the population. This is to maintain symmetry in the model and simplify the analysis.[9] Perhaps the most widely-cited examples of such special interests in many countries are trade unions among public sector workers (see Eggert and Sorensen (2008), and section 3.3 below, for more discussion on this). Apart from having common interests, these workers also tend to have little turnover, which makes organizing trade unions among such groups relatively easy.

We assume that this group is not large enough to completely dominate, i.e. we assume that $0 < s < \frac{1}{2}$. However, this group is crucial to the reelection of the government and

[8] In the following section, we successively relax various assumptions in this baseline model, to extend the model along a number of dimensions. We describe this at the beginning of section 4.

[9] As we show in an extension of the model in section 4.2, assuming a different probability of success, or a different initial wage for the special interest group, does not change the basic conclusions of the model.

thus holds disproportionate sway over the government's decision making in the compensation phase. We assume that in the case that this special interest group is a loser from the reform, they can successfully demand compensation from the government to make up for their loss in wages due to the reform. It could be because this group is well enough organized that they can launch public protests or other forms of political hold-up to get their demands for just compensation realized by the government ahead of any other losers.[10] Thus the special interest group is activated only when its interests are threatened. In part, this reflects the widespread acknowledgment that even special interests find it costly to mobilize, but such mobilization is easier when its members suffer losses, rather than when they gain (albeit less than others).[11] Passarelli and Tabellini (2013), borrowing elements from regret theory, develop a model of emotionally-driven political unrest where individuals join in costly protests when they feel unfairly treated relative to an (endogenously derived) reference utility level. Our assumption here can be thought of as a reduced-form version of their framework, in which the special interest group becomes active when its members suffer a loss relative to the current status quo of wages w. As will become clear, what matters for our model is that, in the case that the special interest group stands to lose from a reform, their demands for compensation take precedence over other workers, so that the government will compensate them for their losses before it compensates other workers.

State capacity and redistributive compensation: For efficiency-enhancing (potentially Pareto-improving) reforms to be actually Pareto-improving, there is obviously a need for the state to be able to redistribute from the winners to the losers. Thus, after the results of the reform become known, the government chooses a tax-redistribution vector (t, r) where t denotes the tax and r denotes the transfers to individual workers. We make the standard assumptions that this tax-transfer vector (i) must be non-regressive in the sense that, *ex post*, the winners cannot be made worse off than the losers, and (ii) must also be budget-balancing.

Hence, while the government's choice is dictated by the usual electoral pressures exerted by the median voter, it is also subject to the influence exerted by the special interest group. As mentioned above, if the special interest group is a loser from the reform, we assume that it can bring sufficient pressure on the government to compensate its losses first, before extending any compensation to the other (unorganized) losers. We make the following assumption to ensure that losers are in the majority and thus, in straight-forward electoral politics, the median voter is a loser and can ensure compensation from the winners: $\lambda < \frac{1}{2}$.

However, as has been pointed out in influential work by Besley and Persson (2009, 2011), there are wide institutional differences across countries in the capacity of the state to tax and

[10]For example, it is often argued that the computerization of bank records in India was slowed by many years because of fears of job displacement, and consequent resistance from the large body of unionized public sector bank employees. See also the extensive discussion in Passarelli and Tabellini (2013).

[11]In lemma 1, below, we derive a specific condition for when a special interest group will mobilize and become active.

redistribute. We model this in a simple way by assuming that the maximal (proportional) tax-rate that the government can implement is given by $\tau \leq 1$. The parameter τ denotes the maximal capacity of the state to enforce taxes, and may be related to the degree of administrative competence, both on the part of the tax authorities and the judiciary, and more generally to the extent that individuals can avoid paying the full extent of their taxes. Countries with a higher level of τ are thus better at collecting taxes.

Timing of moves: We can summarize the timing of moves by the various players in this two-stage model as follows. In the first stage of the game, workers/voters vote on whether or not to enact the reform. If the reform is launched, then new wages are realized, and winners and losers revealed. If the reform is not launched, then wages stay as they were; the *status quo* is maintained. In the second stage, after (new) wages are realized, the government decides on the tax and transfer scheme, taking its political and state capacity constraints as given.

We are now in a position to ask the question: under what circumstances is such a reform, that is efficiency-enhancing, likely to win public support for its adoption in the first place? Is it possible (and, if so, under what conditions) that such a reform, which appears an obvious candidate for passage when the government can tax winners and redistribute to compensate losers, might not garner the level of political support needed to win passage? How does the presence of special interests, in an environment with limited state capacity, affect the politics of reform?

3.2 Equilibrium

We solve the model backwards, starting with the tax-transfer scheme following the realization of winners and losers.

Consider first the case where the special interest group is a winner. The total proportion of winners in the population is now given by the sum of the special interest group, and those among the unaffiliated workers who emerge as winners, $s + \lambda(1 - s)$. In this case, the government does not face any particular political pressure from the special interests, and since the losers are in a majority, it thus implements the maximal amount of redistribution it is capable of, given its state capacity and the non-regressivity constraint. If it chooses a tax-rate t on the winners, the total revenues collected will be $tg[s + \lambda(1 - s)]$, which it distributes to the losers. Thus, the *ex post* income change in for each loser will be $-l + \frac{tg[s+\lambda(1-s)]}{(1-\lambda)(1-s)}$. To satisfy the non-regressivity constraint, we need that this should not be any greater than the *ex post* income of the winners. Hence the government will choose the maximal feasible tax

rate $t = \tau$ if the following condition is satisfied:

$$(1-\tau)g \geq -l + \tau g[\frac{1}{(1-\lambda)(1-s)} - 1] \tag{2}$$
$$\text{i.e. if } \tau \leq (1-\lambda)(1-s)(g+l)/g \equiv \tau_H$$

If this condition does not hold, then the government sets a tax rate t to equate the *ex post* income of the winners and the losers i.e. $(1-t)g = -l + tg[\frac{1}{(1-\lambda)(1-s)} - 1] \Rightarrow t = (1-\lambda)(1-s)(g+l)/g$. Thus the model has the attractive feature that although there is a state capacity constraint on the maximal amount of taxes that the government can levy, it does not automatically translate into a constraint on policy. It is a binding constraint only at relatively low levels i.e. for τ below τ_H. Above this level, taxes are determined through the political process, so that when losers are in the majority, they can enforce enough compensation to equate their incomes with that of the winners. Thus for τ above τ_H, state capacity plays no constraining role.

Consider next the more interesting case where the special interest group is a loser. In this case, they use their political clout to ensure that they are compensated enough so that, *ex post*, there is no decline in their income. Again, given some tax rate t on the winners, if the tax revenues are equally distributed across all the losers, including the special interests, their *ex post* charge in income will be $-l + \frac{tg[s+\lambda(1-s)]}{(1-\lambda)(1-s)}$. If this is positive, then the special interests consider that they have received fair enough compensation and do not launch protests or undertake other active means to demand more compensation from the government. On the other hand, if even at the maximal possible tax rate τ, this is negative, we can derive a condition for when the special interests actively involve themselves in the political process to force the government to direct more compensation towards them. This is captured in the following lemma.

Lemma 1 *If* $\tau < \frac{l}{g}\frac{(1-\lambda)(1-s)}{1-(1-\lambda)(1-s)} \equiv \widehat{\tau}$*, then a loser special interest group will actively attempt to influence post-reform politics.*

The lemma thus establishes that although there may exist special interest groups in all countries, they play an active role in post-reform politics only in countries with a low enough state capacity. The intuition for the result is fairly straightforward: in countries with high (enough) state capacity, the state can guarantee enough compensation to the losing group. This obviates the need for pressure groups to engage in costly protests and to pressure the government to force through more compensation for itself.

When τ is lower than the cutoff $\widehat{\tau}$, the special interest group engages in active protests to compel the government to ensure that it receives enough compensation l so that it does not lose out from the reforms. As a result, the remaining losers get a lower share of the tax revenues, namely $\frac{tg\lambda(1-s)-sl}{(1-\lambda)(1-s)}$ (when this is positive), where the numerator represents the

difference between the tax revenue collected from (unaffiliated) winners, and the compensation paid to affiliated losers. This is the amount available for redistribution among the $(1-\lambda)(1-s)$ unaffiliated losers.[12] The question then is, anticipating this level of compensation, when is there enough public support for adopting the reform in the first place? This is answered in the following proposition.

Proposition 1 *For $\tau < \widehat{\tau}$, the reform will be adopted when the following condition holds:*

$$\lambda g - (1-\lambda)l - s\lambda g(1-\tau) \geq 0 \tag{3}$$

Proof. In evaluating the expected benefits from the reform, an unaffiliated individual anticipates that the probability of his emerging as a winner is λ. For low enough values of state capacity, he will be taxed at the maximal rate τ, meaning his ex post gain will be $(1-\tau)g$ in this case.

If he is a loser, his expected degree of compensation depends on whether the special interest group is a winner or a loser. If they are winners, then this individual receives $\frac{1-(1-\lambda)(1-s)}{(1-\lambda)(1-s)}\tau g$ in compensation. If they are losers, then after compensating the special interests with an amount sl for their losses, the remaining revenues (if any) are distributed among the rest of the losers, meaning that the ex post income of each unaffiliated individual is $-l + \max\{\frac{\tau g\lambda(1-s)-sl}{(1-\lambda)(1-s)}, 0\}$.

Hence, looking at the expected gains from the reform, each individual decides to support its adoption only if this expected gain is positive, which is given by:

$$\lambda(1-\tau)g + (1-\lambda)[-l + \lambda\frac{1-(1-\lambda)(1-s)}{(1-\lambda)(1-s)}\tau g + (1-\lambda)\max\{\frac{\tau g\lambda(1-s)-sl}{(1-\lambda)(1-s)}, 0\}] \geq 0$$

And since $\tau g\lambda(1-s) \geq sl$, this condition can now be rewritten as (3). ■

The proposition thus establishes the precise conditions under which there will be political support for an efficiency-enhancing reform. While the first two terms on the left-hand side of the second-last line in the proof give the expected gains to society from reform, as before, the third and fourth terms capture the individual degree of compensation for unaffiliated losers. When the special interest workers are winners (the third term), this compensation comes from the tax revenue that is collected from all winners. In the case where the special interest workers are losers (the fourth term), it is the tax revenue collected from unaffiliated winners minus the compensation paid to the affiliated losers. A comparison of (3) in the proposition with the efficiency condition (1) highlights the main distortions at play in the adoption of reforms when state capacity is limited and the presence of special interests affects

[12] In what follows, we make the simplifying assumption that τ is high enough that at least the special interests can be compensated for their loss, i.e., that $tg\lambda(1-s)$, the amount collected from the winners, exceeds sl, the compensation paid to the affiliated losers.

post-reform redistribution. It is this 'policy distortion' which leads to cases where the reform would improve overall welfare if adopted, but nevertheless may not gain enough political support for adoption in the first place. The magnitude of this distortion is captured by the additional (negative) term, $s\lambda g(1-\tau)$, which is a function of the interaction between state capacity and special interest politics, as represented by the respective parameters s and τ. If either $s = 0$ (i.e. there are no special interests) or τ is close to 1 (i.e. state capacity is very high), then condition (3) for political adoption of reforms becomes the same as the efficiency condition (1) and there is no policy inefficiency.

The model thus shows that while special interests might exist in all countries, they can be a particular impediment to the adoption of reforms in countries with low state capacity. The reason for this lies in the fact that in such economies, the government's ability at collecting tax revenues from the winners is already low. If in addition, the exigencies of politics mean that special interests are able to ensure a disproportionate share of these already limited revenues as compensation for their losses, then the other losers will receive very little as a consequence. Anticipating this, unaffiliated voters are much more reluctant to support the adoption of reforms in the first place. On the other hand, in countries with high state capacity, the government is able to collect enough tax revenues from the winners that it is sufficient to compensate both the special interests as well as other losers. In that case, the presence of special interests does not overturn the political support for efficiency enhancing reforms.

Analyzing condition (3), the extent of the inefficiency increases with the size of the special interest group s, as would be expected. Perhaps less obviously, the condition also implies that more unequal reforms are more likely to run into problems in finding *ex ante* political support. This can be seen by considering the effect of a mean-preserving spread, which increases both the size of the gains λg as well as the losses $(1-\lambda)l$, holding the expected gain $\lambda g - (1-\lambda)l$ constant. In that case, the negative term $s\lambda g(1-\tau)$ in the above expression becomes larger, meaning that condition (3) for the adoption of the reform is harder to satisfy. Hence, inequality-increasing reforms, in which gains and losses are relatively large, in countries with low state capacity and a significant presence of special interests in politics, are least likely to be adopted, even if they have the potential of improving the country's overall welfare.

Further, this inefficiency, which depends on the size of the third term, $s\lambda g(1-\tau)$, is also increasing in λ, so long as τ is below $\widehat{\tau}$ (which in turn depends on λ). The intuition for this is that the unaffiliated workers are, in a sense, the residual claimants from the reform; in the state when the special interest group is a loser, the unaffiliated winners compensate them for their losses, while if the special interest group is a winner, the unaffiliated workers receive τsg from them. Thus, in this latter case, which happens with probability λ, the only part of the additional income generated by the reform that the unaffiliated workers do not receive is $sg(1-\tau)$. As λ rises, this rises, and hence the degree of inefficiency rises too.

It could also be that the size of the special interest group may be related to the level of state capacity, or other underlying institutions.[13] However, having s as a function of τ would not affect the equilibrium as such, only that the third term in condition (3) would become $s(\tau)\lambda g(1-\tau)$. Thus inefficiency in the adoption of reforms depends on how $s(\tau)\lambda g(1-\tau)$ changes with τ. If s decreases with τ (meaning that special interest groups are smaller in countries with greater state capacity), then $s(\tau)\lambda g(1-\tau)$ declines with τ, which implies that the degree of inefficiency is likely to be lower when the capacity of the state τ is greater.

One might ask why the special interest group does not force the government to adopt the reform in the first place. After all, they either gain from it or, even if they emerge as losers from the reform, their political influence ensures that they will be compensated enough that their net income does not decrease. Thus they should prefer the reform to be adopted in the first place. However, at the beginning of the first stage, the special interest group does not constitute a majority, and the rest of the population is all alike and thus each unaffiliated worker does the same calculation, as given in condition (3). Hence they either all vote for the reform or against it, and since the unaffiliated workers are in a majority, the special interest group is unable to carry the vote. However, after the gains and losses have been realized, the population is more divided, with $(1-\lambda)$ fraction of the unaffiliated workers as losers and a fraction λ as winners. In such a divided situation, the relatively homogeneous special interest group is likely to have much more political influence, as has been modelled above. We consider this intuition a bit more formally in an extension of the basic model in section 4.3, and in section 4.4 with an explicit model of lobbying and electoral politics.

Another point that is perhaps worth noting is that we have assumed no distortion in the transfers made to the special interest group. Presumably, to make these transfers separately from the compensation offered to losers from the reform in general, these will have to directed in some "non-transparent" manner to the group. As argued by Coate and Morris (1995), such transfers are usually distortionary in nature. Incorporating such additional distortions would only make these transfers more costly, and thus would only worsen the inefficiency in the adoption of reforms highlighted above.

3.3 Some suggestive evidence

Lemma 1 and Proposition 1 above imply that political activism by the special interest group is likely to be lower in countries with higher state capacity, and that welfare-enhancing reforms are more likely to be adopted in countries when state capacity τ is high and the proportion of the workforce constituting the special interest group s is low. Unfortunately, direct tests of these hypotheses are not straightforward: for example, concurrent across-country data on all of these aspects (e.g., a similar set of reforms in a similar time period,

[13] We are grateful to a referee for this suggestion. See also the discussion in section 3.3.

data on state capacity, public sector employment and unionisation) is hard to come by. However, we can bring some indirect evidence to bear on these questions, which we examine in this section.[14] The European Bank for Reconstruction and Development (EBRD) in its *Transition Report 1999* reports on reforms in twenty-six transition economies in Europe over the period 1994-1999.[15] They construct transition indicators to measure the progress of reforms across these countries, which ranges from 1 (little progress) to 4 (substantial progress). These are grouped into reforms on "enterprises" (meaning large-scale privatisation, small-scale privatisation, and governance and enterprise restructuring), "markets and trade" and "financial institutions". We use the average on the indicators for "enterprises" as an indicator of the extent of successful adoption of reforms in the public sector in these countries over the period 1994-1999. We call this the "privatisation index".

The report also constructs a governance index (ranging from a low of 0 to a high of 3) using various indicators on the performance of the state, namely on "microeconomic governance", "macroeconomic governance", "physical infrastructure" and "law and order". Although not perfect, in the context of our model, this can perhaps be considered as a proxy for the state's administrative capacity. Figure 1 shows a scatter plot of the relation between this governance index (which is available for twenty countries) and the privatisation index described above. As the positively sloped best-fit line (correlation of 0.34) suggests, progress on reform of the public sector appears to be positively related with higher state capacity.

Next, we relate the same privatisation index (our proxy for public sector reform) to a measure of the strength of special interests. Ideally, to get a measure of the political activism of the special interest group workers, one would like data on the fraction of the public sector workforce that is unionised. While the ICTWSS data base contains extensive data on trade unions, wage setting, state intervention and social pacts in 51 countries between 1960 and 2014,[16] unfortunately, data on unionisation of public sector employees for the transition countries covered in the EBRD report during the period 1994-1999 is not available. Hence we use data on union density of the overall workforce instead. Even this data is not available consistently for all the countries in this time period. Hence we use data for the year closest to 1994, which is the starting point of the reform period under consideration. Looking at the relation between union density (which is available for eleven of the transition countries in this time period) and the privatisation index, one finds that a higher degree of union density is negatively associated with progress on public sector reform. Figure 2 shows the plot, with a negative trendline (correlation coefficient of -0.42).

An alternative measure of the strength of political activism by organized workers would

[14] For a more detailed empirical analysis of closely related questions, see Asatryan, Heinemann and Pitlik (2016), who find that public adminstration reforms face stronger resistance where there are strong entrenched interests, proxied by the size of the bureaucracy.

[15] Details about all the data sets used in this section can be found in the Appendix.

[16] We are grateful to an anonymous referee for pointing us to this data set.

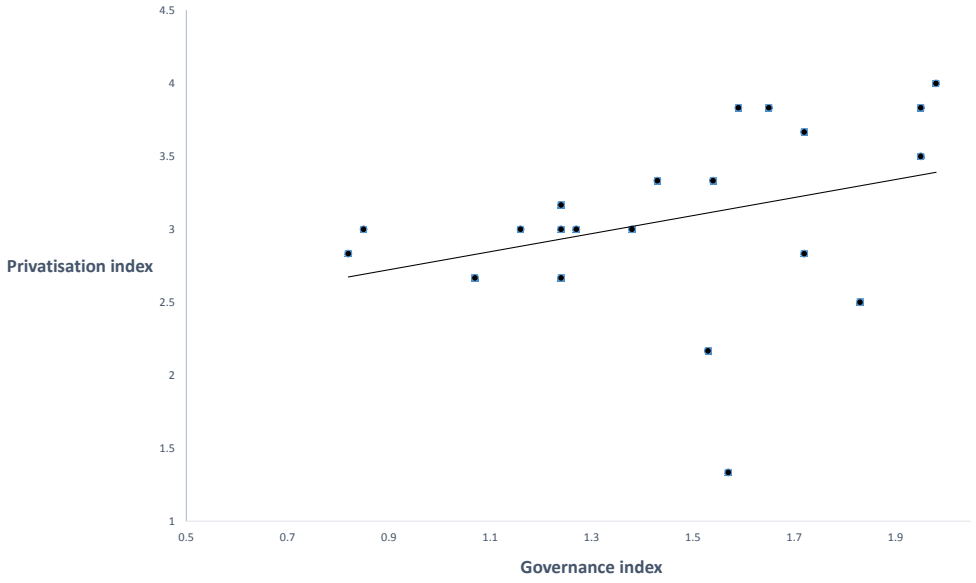

Figure 1: State capacity and Public sector reform

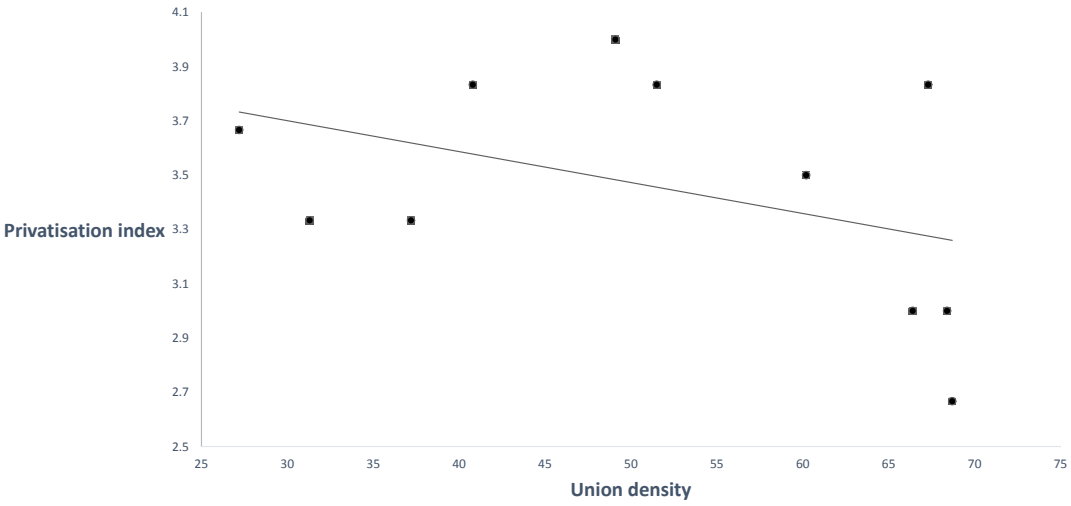

Figure 2: Political activism and Public sector reform

be to consider the share of public sector employment. Since data on public sector employment is not available in the EBRD report, we use data from LABORSTA, a database maintained by the International Labor Organization, to construct the share of public sector employment in these countries at the beginning of the reform period. For fifteen of the above countries, the earliest point for which this data was available was 1995. Note that the EBRD report tracks reforms over the period 1994-1999; thus 1995 is sufficiently early on in this period that the immediate effect of the reforms on public sector employment is likely to be small at that point. In Figure 3 (in the Appendix), we look at the relationship between the proportion of the workforce in the public sector and the privatisation index, and find that higher initial employment in the public sector is negatively associated with the progress of public sector reform, paralleling the results presented in Figure 2.

Finally, recall that Lemma 1 suggests that there should be lower levels of political activism by organized workers in countries with higher state capacity. Again, using the measure of union density (from the ICTWSS dataset) as our proxy for the political activism of the workforce, and the governance index (from the EBRD report) as a measure of state capacity, the plot in Figure 4 (in the Appendix) shows a negative association between the two, suggesting that greater state capacity might negatively affect the political activism of the workforce.

While we are naturally hesitant to put too much weight on these simple associations, this analysis of public sector reform from transition countries in Europe over the period 1994-1999 suggests that the data is at least consistent with the predictions from our baseline model.

4 Extensions and Robustness of results

In this section, we establish the robustness of the results in the baseline model above, by successively relaxing different assumptions to extend the model along various dimensions.[17] In section 4.1, we relax the assumption that all workers have the same expectation from the reform, and allow for heterogeneity across different groups of workers in the effect of the reform on them. Section 4.2 allows for the possibility that workers in the special interest group differ from the rest of the population not just in their political clout, but also in their initial wage as well as the probability of emerging as winners from the reform. Section 4.3 allows for uncertainty about the proportion of winners λ from the reform itself. Finally, Section 4.4 embeds the basic model in a more detailed model with lobbying and electoral politics, and establishes the robustness of the basic results in this richer environment.

[17] We are grateful to two anonymous referees, whose many suggestions inspired much of the analysis in this section.

4.1 Individual specific uncertainty and political support for reform

We have so far assumed that all workers have the same probability λ of being a winner and $1-\lambda$ of being a loser. But as has been argued in the influential Fernandez and Rodrik (1991) paper, the particular form of individual-specific uncertainty can matter greatly in determining political support for or against reform. In this section, we consider a modification of our basic model, so that now a fraction γ of the population know for sure that they will gain from the reform – for example, these might be workers who are already employed in the (growing) private sector, whose wages will increase. For the rest of the population, the situation is as before: each unaffiliated individual has probability λ of being a winner, and the fraction of workers s who constitute the special interest group also have probability λ of gaining from the reform.

The reform is efficiency-enhancing, analogous to the earlier condition, when the overall expected gains from it are positive. This is given by the condition:

$$\gamma g + (1-\gamma)(\lambda g - (1-\lambda)l) \geq 0 \tag{4}$$

Consider the case where $\gamma < \frac{1}{2}$ so that the workers with uncertain outcomes from the reform are in a majority. Then in the absence of any tax and *ex post* redistribution, the majority would vote against adoption of an efficiency-enhancing reform if their personal expected gains from it were negative:

$$\lambda g - (1-\lambda)l < 0$$

This is essentially the argument of Fernandez and Rodrik (1991), for why overall welfare-improving reforms may not be adopted. As pointed out by Jain and Mukand (2003), the conclusion depends crucially on the assumption of no *ex post* redistribution.

Let us now consider the issue in the context of our model, where a special interest group of size s has disproportionate influence during the redistribution phase to ensure that they always get compensated for any losses from the reform. The rest of the model is as before, with a tax and redistribution scheme decided on after the realization of the winners and losers from the reform.

Much of the analysis is as before. In the case where the special interest group is a winner, the maximal tax rate of $t = \tau$ is imposed on the winners and the revenues are equally distributed among the losers so as to equalize post-redistribution incomes as much as possible. When the special interest group is a loser, then they demand disproportionate compensation only when the state capacity is too low to compensate all losers, i.e., when τ is below a threshold given by $\widehat{\widehat{\tau}} = \frac{l}{g}\frac{s+(1-\gamma-s)(1-\lambda)}{1-[s+(1-\gamma-s)(1-\lambda)]}$. This cutoff value $\widehat{\widehat{\tau}}$ is increasing in γ and λ, and decreasing in s. In other words, if there is an increase in the fraction of sure-shot winners, γ, or in λ, the probability of being a winner, then the range of state capacity τ over which the special interest group is politically active diminishes. On the other hand, the larger is the special interest group s, the greater the range of τ over which that group is active.

As before, we compute the expected income of the $(1-\gamma-s)$ proportion of workers who are unaffiliated with the special interest, and who are not assured winners, to determine the condition under which they support adoption of the reform in the first place. This is given in the proposition below.

Proposition 2 *With a fraction γ of the population knowing for sure that they will win from the reform, the condition for adoption of the reform when $1-\gamma-s > \frac{1}{2}$ and $\tau < \widehat{\widehat{\tau}}$ is given by:*

$$(1-\gamma)(\lambda g - (1-\lambda)l) + \tau\gamma g - s\lambda g(1-\tau) \geq 0 \tag{5}$$

To analyze this condition, we first consider the case where there are no special interests i.e. $s = 0$ and the state has perfect capacity for taxation i.e. $\tau = 1$. In this case the above condition becomes the same as that for efficiency-enhancing reforms, equation (4) above, meaning that all efficient reforms get adopted. This special case mirrors the main result from Jain and Mukand (2003).

However, when either state capacity is not perfect, or there exists a special interest group, there may be policy inefficiency in the sense that many welfare-improving reforms do not find political support and are thus not adopted. Again as before, the greatest inefficiency occurs in the case when state capacity is low (i.e. τ is far from 1) and the size of the special interest group s is significant. Thus the incorporation of different forms of individual-specific uncertainty does not change the basic conclusion of the paper, that the presence of special interests can negatively affect political support for the adoption of welfare enhancing reforms, particularly in countries with low state capacity. The additional insight here is that as the fraction of sure-shot winners γ rises, the importance of better state capacity τ is enhanced, as can be seen from the above inequality. For such reforms, low state capacity adds to the burden introduced by the presence of special interests and is likely to further jeopardize their passage.

4.2 Differences in wages and in the probability of winning

So far we have assumed that workers in the special interest group, and those outside it, have the same probabilities of "winning" from the reform, viz. λ. However, different reforms could have different impacts on unaffiliated workers, and on special interest groups, i.e. in the context of our model, λ could be different between the two groups. Similarly, in many contexts, the initial wage of workers in the special interest group might differ from that of the rest of the population. (See, for example, the survey by Bender (1998)). In this section, we consider a modification of our basic model where the initial wages, as well as the probability of winning from the reform, differ between the two groups of workers.[18] More specifically we

[18]We are grateful to an anonymous referee for raising these points.

assume that the initial wage for the special interest group is w_s and the probability of gaining from the reform is given by λ_s, while the corresponding values for private sector workers and for unaffiliated workers are given by w_o and λ_o respectively, with $w_s > w_o$. The rest of the model is the same as before.

The reform is efficiency-enhancing when the overall expected gains from it are positive. Analogous to (1), this is now given by the condition:

$$s[\lambda_s g - (1-\lambda_s)l] + (1-s)[\lambda_o g - (1-\lambda_o)l] \geq 0 \tag{6}$$

Incorporating politics, in the event that the special interest group is a loser from the reform, the maximal tax rate of τ is imposed on the winners and this tax revenue of $\tau(1-s)\lambda_o(w_o+g)$ is distributed among the losers. As before, if $-l + \frac{\tau(1-s)\lambda_o(w_o+g)}{s+(1-s)(1-\lambda_o)} < 0$, the special interest group will actively seek to influence the politics of redistribution. This translates into the condition that if state capacity τ is below a threshold, i.e., if $\tau < \frac{l}{w_o+g}\frac{s+(1-\lambda_0)(1-s)}{\lambda_o(1-s)} \equiv \widetilde{\tau}$, then the special interest will actively lobby to ensure that they can at least regain their losses from the reform. As a result, when the state capacity τ is below $\widetilde{\tau}$, in the event that the special interest group is a loser from the reform, the unaffiliated workers who are losers will receive $\max\{\frac{\tau(1-s)\lambda_o(w_o+g)-sl}{(1-s)(1-\lambda_o)}, 0\}$ in compensation. On the other hand, when the special interest group gains from the reform, the losers among the unaffiliated group receive $\frac{\tau[(1-s)\lambda_o(w_o+g)+s(w_s+g)]}{(1-s)(1-\lambda_o)}$ in compensation, since the tax revenues from all the winners are redistributed among them.

Now, taking the two cases together, one can establish a condition analogous to (3) under which there will be *ex ante* popular support for adoption of the reform. When $\tau < \widetilde{\tau}$, this is given by:

$$s[\lambda_s g - (1-\lambda_s)l] + (1-s)[\lambda_o g - (1-\lambda_o)l] - s\lambda_s[g(1-\tau) - \tau w_s] \geq 0$$

While the first two terms here capture the overall expected gain to society from the reform, the last term is the result of the politics of redistribution. This term is negative when $w_s < (1-\tau)(w_s+g)$, which is that the after-tax income of the special interest group when it is a winner from the reform is higher than the status-quo. Thus it is naturally satisfied. Comparing this with the condition (6) for efficiency, one can see that because of the political considerations embodied in the negative third term in the above condition, there may be efficiency-enhancing reforms that are not adopted. Thus the result here is very similar to that established for the basic model in Proposition 1, with the inefficiency primarily stemming from the fact that the special interest group is able to extract higher compensation from the government than the unaffiliated worker. Additionally one can see here that the degree of inefficiency is lessened when the initial wage w_s of the special interest group is high. This is due to the fact that as w_s increases, greater compensation can flow from the special interest group to the unaffiliated losers in the event that the former group is a winner, which has the

effect of increasing *ex ante* popular support for adoption of the reform among the unaffiliated workers.

4.3 Reform uncertainty and political power of the special interest group

In the model so far, we have taken the political influence of the special interest group as given. Furthermore, we have taken the probability of being a winner, or equivalently, the fraction of winners λ as fixed. In this extension of the basic model, we incorporate *ex ante* uncertainty about the overall effects of reform. Apart from the fact that such uncertainty is inherent in nearly all instances of reform, it also helps throw light on the circumstances under which the special interest group is likely to wield political influence.

Consider a modification of the basic model in which all unaffiliated workers still have the same probability λ of being a winner, but λ can take one of three values λ_L, λ_M and λ_H with

$$\lambda_L < 1 - \frac{1}{2(1-s)},\ \lambda_M \in (1 - \frac{1}{2(1-s)}, \frac{1}{2(1-s)}),\ \lambda_H > \frac{1}{2(1-s)}.$$

The particular value of λ is only realized after the reform is adopted, and determines the probability of being a winner. *Ex ante*, it is only known that λ_L can occur with probability p_L, λ_M with probability p_M and λ_H with probability p_H. Denoting the mean value of λ by $\overline{\lambda} = p_L\lambda_L + p_M\lambda_M + p_H\lambda_H$, the analogous condition for efficiency-enhancing reform here is:

$$\overline{\lambda}g - (1-\overline{\lambda})l \geq 0 \tag{7}$$

Again the special interest group, of size s, emerges as a winner (or loser) with probability λ (or $1-\lambda$, respectively). After the realization of winners and losers, the government decides on the tax and redistribution scheme as before, subject to the previous constraints of non-regressivity, budget balance and state capacity τ.

Suppose the realized λ is λ_H. In this case, the fraction of winners among the population not affiliated with the special interest group is λ_H, meaning that their measure in the population is $\lambda_H(1-s) > \frac{1}{2}$ (the last inequality is implied by the assumption made about λ_H above). Thus, they can form a majority in the population by themselves, without any additional support from the special interest group. In this case they will implement their preferred outcome of no taxes i.e. $t = 0$ and will set zero compensation for the losers.

At the other extreme, if the realized value of λ is λ_L, then there is a measure $(1-\lambda_L)(1-s)$ of losers among the unaffiliated group. Again by the assumptions above, this exceeds $\frac{1}{2}$, and thus this majority group will implement its own preferred scheme of maximal possible taxes $t = \tau$ on the winners, redistributing the resulting revenue among all the losers. Thus, in either of these two cases, the special interest group has no clout in the post-reform politics.

However, when the realized value of λ is λ_M, the measure of winners in the unaffiliated group $\lambda_M(1-s)$ is not enough to form a majority on its own. Neither does the measure

of unaffiliated losers $(1-\lambda_M)(1-s)$ exceed $\frac{1}{2}$. It is in this case that the support of the special interest group of measure s is enough to tip the balance, which gives them influence in the political process. When the special interest group is a winner, it will clearly join forces with the $\lambda_M(1-s)$ other winners to form a majority and avoid paying taxes on their winnings. On the other hand, when the special interest group is a loser, while their affiliation is clearly with the losers, they can offer support only in return for being compensated first from the $\tau g\lambda_M(1-s)$ collected as tax revenues. The unaffiliated losers, anticipating this, would be willing to accept this exchange so long as they stand to gain from this i.e. when $\tau g\lambda_M(1-s) > sl$.

Now, taking the cases together, one can establish a condition analogous to (3) under which there will be *ex ante* popular support for adoption of the reform. This is given in the proposition below, along with a summary of the discussion above.

Proposition 3 *When $\lambda = \lambda_H$ is realized, then the tax-rate set is $t = 0$, while if $\lambda = \lambda_L$ is realized, then the tax-rate set is $t = \tau$. The special interest group has political influence in neither of these two cases. However, if $\lambda = \lambda_M$ is realized, then the tax-rate set is $t = 0$ if the special interest group is a winner while the tax-rate set is $t = \tau$ if the special interest group is a loser.*

The condition for adoption of the reform here is given by:

$$\overline{\lambda}g - (1-\overline{\lambda})l - p_M\frac{sl}{1-s}(1-\lambda_M) + p_L\frac{s^2\lambda_L\tau g}{(1-s)[s+(1-\lambda_L)(1-s)]} \geq 0 \tag{8}$$

Proof. When $\lambda = \lambda_H$, the winners gain g and the losers lose l, with no compensation offered. In this case, the ex-ante expected income from an individual's perspective is $\lambda_H g - (1-\lambda_H)l$.

When $\lambda = \lambda_L$, the collected maximal tax-revenue $[\lambda_L(1-s)+s]\tau g$ (when the public sector group of workers is a winner) or $\lambda_L(1-s)\tau g$ (when the public sector group are losers) is distributed among the losers. In this case, the ex-ante expected income from an individual perspective is given by:

$$\begin{aligned}
&\lambda_L(1-\tau)g + (1-\lambda_L)\{-l + \lambda_L\frac{[\lambda_L(1-s)+s]\tau g}{(1-\lambda_L)(1-s)} + (1-\lambda_L)\frac{\lambda_L(1-s)\tau g}{(1-\lambda_L)(1-s)+s}\} \\
&= \lambda_L g - (1-\lambda_L)l + \lambda_L\tau g\{-1 + \frac{[\lambda_L(1-s)+s][(1-\lambda_L)(1-s)+s] + (1-\lambda_L)^2(1-s)^2}{(1-s)[s+(1-\lambda_L)(1-s)]}\} \\
&= \lambda_L g - (1-\lambda_L)l + \frac{s^2\lambda_L\tau g}{(1-s)[s+(1-\lambda_L)(1-s)]}
\end{aligned}$$

Finally, when $\lambda = \lambda_M$, if the public sector group of workers is a winner, then no compensation is offered, while if that group is a loser, winners are taxed at the maximum possible rate of τ, $\tau g\lambda_M(1-s)$ collected as tax revenues and distributed among the losers, with the special interest group being wholly compensated for its losses in exchange for political support. Thus

in this case, the ex-ante expected income from an unaffiliated individual's perspective is given by:

$$\lambda_M\{\lambda_M g + (1-\lambda_M)(1-\tau)g\} + (1-\lambda_M)\{-l + \lambda_M.0 + (1-\lambda_M)\frac{\lambda_M(1-s)\tau g - sl}{(1-\lambda_M)(1-s)}\}$$

$$= \lambda_M g - (1-\lambda_M)l - \frac{(1-\lambda_M)sl}{1-s}$$

Now, combining the three cases, the ex-ante expected income from an unaffiliated individual's perspective from the reform going forward at the first stage is given by:

$$p_H\{\lambda_H g - (1-\lambda_H)l\} + p_M\{\lambda_M g - (1-\lambda_M)l - \frac{(1-\lambda_M)sl}{1-s}\}$$
$$+ p_L\{\lambda_L g - (1-\lambda_L)l + \frac{s^2\lambda_L\tau g}{(1-s)[s+(1-\lambda_L)(1-s)]}\}$$
$$= \overline{\lambda}g - (1-\overline{\lambda})l - p_M\frac{sl}{1-s}(1-\lambda_M) + p_L\frac{s^2\lambda_L\tau g}{(1-s)[s+(1-\lambda_L)(1-s)]}$$

Such an individual will support the reform only if this is non-negative, which is condition (8). ■

Comparing (8) with the efficiency-enhancing reform condition (7) above, again we can observe that there are distortions in the political adoption of efficiency-enhancing reforms, due to the two additional terms on the left-hand side of the inequality. These two terms are related to the presence of the special interests and their role in the politics of the tax-redistribution process. Both terms would disappear in the absence of a special interest group i.e. if $s = 0$. It is straightforward to check that, taken together, these terms are negative and increasing in s. Hence the nature of the policy inefficiency is in the same vein as before i.e. not all efficiency-enhancing reforms find political support for their adoption. Further, as the level of state capacity τ increases, the left hand side of the inequality rises, and thus the degree of possible inefficiency falls.

This extension of the basic model highlights the fact that if the performance of the reforms was relatively predictable, so that they had either a very good chance of being successful or being unsuccessful i.e. if p_H and/or p_L were high, then special interests would have very little influence in the political process and consequently would not find prominence in the *ex ante* calculations of support for or against adoption of the reform. It is precisely in the intermediate case of reform uncertainty, i.e. when p_M is high, that the presence of special interests plays an important role in the political support for their adoption, and more so when the level of state capacity is not very high.

4.4 Reform and redistribution in an explicit model of politics and lobbying

We have so far modeled political influence in reduced form, in a sense without explicitly considering how the lobbying efforts of the special interest group might affect electoral politics

and the choice of policy. In this extension of the basic model, we consider these issues in a probabilistic voting model, together with lobbying by the special interest group, based on a slightly modified version of Eggert and Sorensen (2008).[19]

Suppose there are two political parties, L and R, competing for office in each stage of the game. Each party chooses a policy, which in the first stage consists of whether or not to go ahead with the reform, and in the second stage consists of a tax and redistribution policy. Let U_i^P denote the expected (economic) utility of individual i if party P is elected and implements its announced policy. In our model, $i = s$ denotes an individual belonging to the special interest group, while $i = o$ denotes an unaffiliated worker. Suppose a fraction $1 - \beta$ of the population makes its electoral choice between the parties based on economic considerations alone i.e. such an individual will vote for party L only if $U_i^L > U_i^R$; otherwise, he votes for party R.

The remaining workers are 'influencable', in the sense that each such individual will vote for party L only if

$$U_i^L > U_i^R + \rho_i + \widetilde{w}$$

where ρ_i is an individual ideological bias in favour of party R and is distributed uniformly on the interval $[-\frac{1}{2\psi}, \frac{1}{2\psi}]$, and $\widetilde{w}$ is a general (stochastic) ideological preference for party R and is assumed to be given by

$$\widetilde{w} = w + h(Z_R - Z_L).$$

Here w is a stochastic term which is assumed to be distributed uniformly on the interval $[-\frac{1}{2\psi}, \frac{1}{2\psi}]$, and Z_P denotes the special interest group's lobbying effort on behalf of party P, with $h > 0$ signifying the effect of such lobbying on individual voters' preferences, and thereby on their electoral decisions. Thus, for this group of influencable voters, greater lobbying on behalf of a particular party is more likely to sway their votes in favour of that party.

For simplicity, the special interest group is assumed to be organized as a lobby. The lobbies choose their lobbying efforts, Z_L and Z_R, to maximize the following objective function:

$$p_L U_s^L + p_R U_s^R - \frac{1}{2}(Z_L^2 + Z_R^2) \tag{9}$$

where p_j is the probability that party j wins the election. Whichever party secures more than half the votes wins.

The timing of the game in each stage is the following. At the start of the first stage, the parties simultaneously announce their policies with regard to the adoption (or not) of the reform. The lobby chooses its campaign efforts, the stochastic voter preferences are subsequently realized, elections are held and the pre-announced policy of the winning party

[19] A more detailed motivation and description of that model, and derivation of the equilibrium, can be found in Eggert and Sorensen (2008). We are grateful to an anonymous referee for this suggestion.

is implemented. Similarly, at the beginning of the second stage, the winners and losers from the reform (if adopted) are realized, the winning party implements its tax-and-redistribution policies (if the reform was adopted), and elections are held again.

To analyze the various possible equilibria that might emerge, we begin with the following observations. If the uninfluencable voters constitute the majority, then their preference will completely determine the equilibrium policy choice of the two parties. On the other hand, if the uninfluencable voters are not in a majority, each party will aim to attract the votes of the influencable voters. In this case, the campaign efforts on their behalf by the special interest group plays a crucial role. Thus each party will aim to attract Z_i by skewing its policy somewhat in favour of the special interest group.[20]

Given the announced policies by the two parties and the campaign efforts of the lobby, the probability of party L winning the election is given by $p_L =$

$$(1-\beta)(1-s)[U_o^L - U_o^R] + \psi[s(U_s^L - U_s^R) + \beta(1-s)(U_o^L - U_o^R) + \{s+\beta(1-s)\}sh(Z_L - Z_R)]$$

Given this probability function, the lobby chooses Z_L and Z_R to maximize (9), yielding $Z_L - Z_R = \{s+\beta(1-s)\}sh\psi(U_s^L - U_s^R)$. Thus, in equilibrium, the probability of party L winning, given a set of announced policies, is given by $p_L =$

$$(1-\beta)(1-s)[U_o^L - U_o^R] + \psi[s(1+\{s+\beta(1-s)\}s\psi h^2)(U_s^L - U_s^R) + \beta(1-s)(U_o^L - U_o^R)] \tag{10}$$

An analogous expression gives the probability of winning for party R. Each party chooses its policy to maximize this probability given the policy choice of the other party.

Political equilibrium in the second stage: Consider the second stage of the game, where the winners and losers from the reform have been realized. Each party chooses a tax and redistribution policy (subject to the state capacity constraint) to maximize its chances of electoral victory. Consider first the case when the special interest group is a loser from the reform. In this case, if party L chooses a tax-rate t and a degree of redistribution r for each member of the special interest group, then $p_L =$

$$\begin{aligned}
&\lambda(1-s)\{1-\beta+\beta\psi\}[(1-t)g - U_{ow}^R] \\
&+(1-\lambda)(1-s)\{1-\beta+\beta\psi\}[-l + \frac{t\lambda(1-s)-sr}{(1-\lambda)(1-s)} - U_{ol}^R] \\
&+\psi s(1+\{s+\beta(1-s)\}s\psi h^2)(-l+r-U_s^R)
\end{aligned}$$

The first term captures the utility from the policy for the unaffiliated winners versus that offered to them by the other party, U_{ow}^R. The second term does the same for the unaffiliated

[20]For reasons of space, we omit detailed derivations, which essentially follow the derivations of Eggert and Sorensen (2008), and instead focus on the new elements of reform adoption, and ex post redistribution, here. Details are available on request from the authors.

losers, while the third term captures the difference in utility (and its impact on the overall voting) for the special interest group. Optimizing this over r, it is easy to see that party L will set r as high as possible (and in equilibrium so too will party R) if $\psi(1+\{s+\beta(1-s)\}s\psi h^2) > 1-\beta+\beta\psi$ i.e. if the impact of the special interest group's lobbying on votes outweighs the impact of a lower utility for the losers from the reform. This inequality can be rewritten as $\{s+\beta(1-s)\}s\psi^2h^2 > (1-\beta)(1-\psi)$, which always holds if for example $\psi > 1$. Thus in this case, the political power of the special interest group is enough to ensure that they secure the maximal possible redistribution i.e. both parties set $sr = t\lambda(1-s)$. On the flip side, the unaffiliated losers receive no compensation at all. Hence, as in the basic model in Section 3, where it was assumed that the special interest group could lobby the government to compensate it first for its losses, a similar outcome results in this more elaborate model of lobbying and voting.

As for the policy with respect to the tax rate, an analogous argument shows that if $\psi > 1$, both parties will choose the maximal possible tax rate of τ. These calculations are all based on the assumption that no group of uninfluencable voters can form a majority on their own i.e. $(1-\beta)(1-\lambda)(1-s) < \frac{1}{2}$. If this is violated, then the parties will target only this group, by shifting redistribution away from the special interest group to the unaffiliated losers.

In the residual case where the special interest group emerges as winners from the reform, again by a logic very similar to the one above, it can be shown that in this case the possibility of lobbying by the winning special interest group will lead to both parties setting $t = 0$ in equilibrium, resulting in no compensation for the losers among the unaffiliated workers.

Political equilibrium in the first stage: Having considered the political equilibrium of the game after the winners and losers have been realized from the reform, we now go back to the first stage of the game, where each party chooses whether or not to propose adoption of the reform in question. In the equilibrium in the second stage (with $\psi > 1$), the losers among the unaffiliated workers receive no compensation, due to the political power of the special interest lobby. On the other hand, the special interest group can force compensation from the winners if they lose, and no redistribution if they are winners. Thus they always gain from the reform. The question is whether they can use their political power to ensure that the reform is adopted in the first stage. We explore this question here.

In this case too, the probability of winning for party L is given by (10), where the policy choice for each party is whether to (i) reject the reform, resulting in the status quo utility of (normalized) 0, or (ii) adopt the reform resulting in expected utility $U_o^P = \lambda[\lambda g + (1-\lambda)(1-\tau)g] + (1-\lambda)[-l]$ for the unaffiliated workers, and $U_s^P = \lambda g + (1-\lambda)[-l + \frac{\tau\lambda(1-s)}{s}]$ for the workers in the special interest group. Inputting these into (10) yields $p_L =$

$$(1-s)(1-\beta+\beta\psi)[\lambda g - (1-\lambda)l - \lambda(1-\lambda)\tau g - U_o^R] +$$
$$\psi s(1+\{s+\beta(1-s)\}s\psi h^2)[(\lambda g - (1-\lambda)l + \frac{\tau\lambda(1-\lambda)(1-s)}{s}) - U_s^R]$$

If $\lambda g - (1-\lambda)l - \lambda(1-\lambda)\tau g < 0$, then the unaffiliated workers lose from adoption of the reform even if the net gain to society $\lambda g - (1-\lambda)l$ is positive. Thus if $(1-s)(1-\beta) > \frac{1}{2}$, then the uninfluencable voters among the unaffiliated workers form the majority and catering to them, in equilibrium both parties will choose not to adopt the reform.

Hence in the case where $(1-s)(1-\beta) > \frac{1}{2}$, but $(1-\lambda)(1-\beta)(1-s) < \frac{1}{2}$ we have, as in the previous sub-section, that although the special interest group wields influence in the second period by securing special redistribution for itself, their political power in the first period is limited and they will not be able to force adoption of the reform through the political process. In this case, the reform will only be adopted if $\lambda g - (1-\lambda)l - \lambda(1-\lambda)\tau g > 0$ i.e. when the expected gain to the unaffiliated workers is positive, even taking into account their lack of political power in the second stage and the consequent transfer of compensation to the special interest group. The intuition in this case is similar to the political model studied in the previous sub-section. In the second stage of the game, the unaffiliated workers are split into two groups with opposing interests, the winners and the losers from the reform; hence the special interest group can wield greater influence in such a divided polity. On the other hand, in the first stage of the game, the unaffiliated workers are all identical and their interests are aligned; thus the special interest group has much more difficulty in distorting policy to its own benefit.

To complete analysis of the equilibrium, when $(1-\lambda)(1-\beta)(1-s) > \frac{1}{2}$ (implying that $(1-s)(1-\beta) > \frac{1}{2}$ as well), the special interest group has no influence in either stage of the game and in this case, the reform is adopted only when it is socially efficient i.e. if $\lambda g - (1-\lambda)l > 0$.

The last case is when $(1-s)(1-\beta) < \frac{1}{2}$. Here since $(1-\lambda)(1-\beta)(1-s) < \frac{1}{2}$, the special interest group certainly can use its influence in the second period to direct compensation towards its members. Whether they can influence both political parties to adopt the reform at the first stage depends on whether the following expression is positive or not:

$$[(1-s)(1-\beta+\beta\psi) + \psi s(1+\{s+\beta(1-s)\}s\psi h^2][\lambda g - (1-\lambda)l] +$$
$$[(1-\beta)(\psi-1)\{s+\beta(1-s)\}s\psi^2 h^2]\tau\lambda(1-\lambda)(1-s)g$$

For $\psi > 1$ this expression is positive, implying that the reform is adopted in such a case; in general it depends on the intricate interplay between the influence of lobbying on politics as captured through the parameters ψ and h, and the welfare implications for the majority in terms of the gross gains $\lambda g - (1-\lambda)l$ and the expected level of transfers $\tau\lambda(1-\lambda)(1-s)g$.

More generally, this explicit modeling of politics and lobbying helps solidify the intuition that there is a wide range of cases, i.e. when $(1-\lambda)(1-\beta)(1-s) < \frac{1}{2} < (1-\beta)(1-s)$, where the special interest group has little influence on the decision to adopt the reform, due to the monolithic preferences of the unaffiliated group in the first stage. However, divided preferences in the *ex post* (second) stage allows the special interest to influence the politics of

redistribution. And it is precisely the anticipation, of this subsequent exercising of political influence by the special interest, that can cause the majority to decide not to adopt the welfare-enhancing reforms in the first place.

5 Conclusion

In this paper, we build a simple model to study the political adoption of a reform where individuals' outcomes are uncertain, in an environment with a special interest group and limited capacity on the part of the government to tax and redistribute between the winners and the losers. We show that even though special interests have the ability to influence compensatory transfers, they do so effectively only in countries with low state capacity. The presence of a well-organized special interest group negatively affects popular support for adoption of the reform in the first place, but its effectiveness is conditional on (limited) state capacity. Looking at reforms in privatisation in twenty transition economies in Europe over the period 1994-99, we find suggestive evidence in favour of our basic result that economies with higher state capacity have made greater progress in implementation of reforms.[21] On the other hand, countries with larger special interest groups have had more difficulty in bringing about reforms in the public sector. Political activism on the part of the workforce is also lower in countries with better state capacity. The analysis also shows that the presence of a special interest group in a low state-capacity economy can be particularly damaging for building support for reforms where the fractions of winners and losers from the reform are likely to be equally split, or where the gains and losses are very unequal.

More generally, the model presented here considers the interaction between two facets of an economy. One is its 'state capacity', which (following the literature) reflects the fiscal ability of the state – specifically, in our model, the administrative ability to tax and redistribute. Second, to coin a phrase, is an economy's 'civic capacity', which we can interpret as the ability of a society to prevent disproportionate (and perhaps distortionary) transfers to those particular groups in society which have the ability to be politically influential. The interaction between these two dimensions leads to interesting implications for which societies are better able to adopt policies that are likely to benefit them overall. Of course, we have modeled these two dimensions in a particularly simple manner. Investigating how state capacity or civic capacity itself may be affected by the process of reform is an interesting avenue for future research.

[21] In that sense, our results also parallel the overall empirical findings of Franco Chuaire, Scartascini and Tommasi (2015), who argue that the much-studied relationship between openness and the size of government should take account of the fact that this relationship might be mediated by the capabilities of states. Indeed, they argue, their findings confirm that the relationship between openness and government size is conditional on state capabilities.

References

1. Acemoglu, Daron (2003), "Why Not a Political Coase Theorem? Social Conflict, Commitment and Politics", *Journal of Comparative Economics*, 31:620-52.

2. Acemoglu, Daron, Garcia-Jimeno, Camilo and Robinson, James (2015), "The Role of State Capacity in Economic Development", *The Political Economist*, Spring 2015, pp. 7-9.

3. Agnello, Luca, Castro, Vitor, Jalles, João Tovar and Sousa, Ricardo M. (2015), "What determines the likelihood of structural reforms?", *European Journal of Political Economy*, 37:129–145.

4. Alesina, Alberto & Drazen, Allan (1991), "Why are Stabilizations Delayed?" *American Economic Review*, 81:1170-88.

5. Arulampalam, Wiji, Dasgupta, Saugato, Dhillon, Amrita and Dutta, Bhaskar (2009), 'Electoral Goals and Center-State Transfers: A Theoretical Model and Empirical Evidence from India', *Journal of Development Economics*, 88(1): 103–19.

6. Asatryan, Zareh, Heinemann, Friedrich and Pitlik, Hans (2016), "Reforming the Public Administration: The Role of Crisis and the Power of Bureaucracy", *European Journal of Political Economy*, forthcoming.

7. Banerjee, Abhijit and Somanathan, Rohini (2007), "The political economy of public goods: Some evidence from India", *Journal of Development Economics*, 82:287–314.

8. Banful, Afua Branoah (2011a) "Do Formula-based Intergovernmental Transfer Mechanisms Eliminate Politically Motivated Targeting? Evidence from Ghana", *Journal of Development Economics*, 96(2): 380-390.

9. Banful, Afua Branoah (2011b) "Old Problems in the New Solutions? Politically Motivated Allocation of Program Benefits and the "New" Fertilizer Subsidies", *World Development*, 39(7):1166–1176.

10. Baskaran, Thushyanthan (2011), "Fiscal decentralization, ideology, and the size of the public sector", *European Journal of Political Economy*, 27:485–506.

11. Baskaran, Thushyanthan and Hessami, Zohal (2014), "Political Alignment and Intergovernmental Transfers in Parliamentary Systems: Evidence from Germany", University of Konstanz, Department of Economics, Working Paper 2014-17.

12. Bender, Keith A. (1998), "The central government-private sector wage differential", *Journal of Economic Surveys* 12: 177-220.

13. Besley, Timothy, Ilzetzki, Ethan, and Persson, Torsten (2013), "Weak States and Steady States: The Dynamics of Fiscal Capacity", *American Economic Journal: Macroeconomics,* 5(4):205-235.

14. Besley, Timothy and Persson, Torsten (2011), *Pillars of Prosperity: The Political Economics of Development Clusters*, Princeton University Press.

15. Besley, Timothy and Persson, Torsten (2009), "The Origins of State Capacity: Property Rights, Taxation and Politics", *American Economic Review* 99(4): 1218-44.

16. Besley, Timothy and Persson, Torsten (2013), "Taxation and Development", in A.J. Auerbach, R. Chetty, M. Feldstein & E. Saez (Eds.) *Handbook of Public Economics vol. 5* (pp. 51 - 110); Elsevier.

17. Bohannon, Cecil E. and Flowers, Marilyn (1998), "The Unintended Consequences of Trade Adjustment Assistance", *Cato Journal*, 18:1, pp. 65-74.

18. Brander, James A. and Spencer, Barbara J. (1994); "Trade Adjustment Assistance: Welfare and Incentive Effects of Payments to Displaced Workers", *Journal of International Economics*, v 36, no. 3-4.

19. Brollo, Fernanda, Kaufmann, Katja and La Ferrara, Eliana (2015), "The Political Economy of Enforcing Conditional Welfare Programs: Evidence from Brazil", *working paper.*

20. Brollo, Fernanda and Nannicini, Tommaso (2012), "Tying Your Enemy's Hands in Close Races: The Politics of Federal Transfers in Brazil", *American Political Science Review*, 106:742-761

21. Caldeira, Emilie (2012), "Does the System of Allocation of Intergovernmental Transfers in Senegal Eliminate Politically Motivated Targeting?", *Journal of African Economies*, 21(2):167–191.

22. Camacho, Adriana and Conover, Emily (2011), "Manipulation of Social Program Eligibility", *American Economic Journal: Economic Policy*, 3:2, pp. 41-65.

23. Caruso, Germán, Scartascini, Carlos and Tommasi, Mariano (2015), "Are we all playing the same game? The economic effects of constitutions depend on the degree of institutionalization", *European Journal of Political Economy*, 38:212-228.

24. Coate, Stephen and Morris, Stephen (1995), "On the Form of Transfers to Special Interests", *Journal of Political Economy*, vol. 103, no. 6.

25. Davidson, Carl and Matusz, Steven J. (2006), "Trade liberalization and compensation", *International Economic Review*, 47:3, pp. 723-747.

26. De Borger, Bruno (1995), "The behavior of public enterprises offering a quasi-public good", *European Journal of Political Economy*, 11:265-290.

27. Dixit, Avinash and Londregan, John (1995); "Redistributive Politics and Economic Efficiency", *American Political Science Review*, 89(4):856-866.

28. Drazen, Allan and Grilli, Vittorio (1993), "The benefit of crises for economic reforms", *American Economic Review*, 83(3): 598–607.

29. Economides, George, Philippopoulos, Apostolis and Vassilatos,Vangelis (2014); "Public, or private, providers of public goods? A dynamic general equilibrium study", *European Journal of Political Economy*, 36:303–327.

30. Eggert, Wolfgang and Sorensen, Peter B. (2008), "The Effects of Tax Competition when Politicians create rents to buy Political Support", *Journal of Public Economics* 92: 1142-63.

31. European Bank for Reconstruction and Development (EBRD) (1999); *Transition Report 1999*. London: EBRD.

32. Fernandez, Raquel and Rodrik, Dani (1991); "Resistance to Reform: Status Quo Bias in the Presence of Individual-Specific Uncertainty", *American Economic Review,* 81(5):1146-55.

33. Franco Chuaire, Maria, Scartascini, Carlos, and Tommasi, Mariano (2015), "State Capacity and the Quality of Policies: Revisiting the Relationship between Openness and Government Size", *working paper*.

34. Gehring, Kai and Schneider, Stephan A. (2015), "Towards the Greater Good? EU Commissioners' Nationality and Budget Allocation in the European Union", Discussion Paper no. 596, Dept of Economics, Univ of Heidelberg.

35. Gray, David M. (1995), "All displaced workers are not created equal: The political economy of worker adjustment assistance in France", *Public Choice*, 85:313-333.

36. Gray, David M. (1995), "An application of the 'insider–outsider' hypothesis: categorical adjustment assistance programs in France", *European Journal of Political Economy*, 17:139-156.

37. Hasnain, Zahid, Keefer, Philip and Menzies, Nicholas (2014), "Formal Rules, Clientelism, and the Allocation of Project Funds across Villages in Papua New Guinea", in Verena Fritz, Brian Levy, and Rachel Ort (Editors), *Problem-Driven Political Economy Analysis*; The World Bank, Washington DC.

38. Jain, Sanjay (2007),"Project Assistance versus Budget Support: An Incentive-Theoretic Analysis of Aid Conditionality", *Review of World Economics*, 143 (4): 694-719.

39. Jain, Sanjay and Mukand, Sharun W. (2003); "Redistributive Promises and the Adoption of Economic Reform", *American Economic Review*, vol. 93, no. 1.

40. Jain, Sanjay, Sumon Majumdar and Mukand, Sharun W. (2014); "Walk the Line: Conflict, State Capacity and the Political Dynamics of Reform", *Journal of Development Economics*, vol. 111(1): 150 - 166.

41. Jain, Sanjay and Majumdar, Sumon (2016), "State Capacity, Redistributive Compensation, and the Political Economy of Economic Policy Reform", *International Review of Economics and Finance,* 42: 462–473.

42. Jennes, Geert and Persyn, Damiaan (2015), "The effect of political representation on the geographic distribution of income: Evidence using Belgian data", *European Journal of Political Economy*, 37:178-194.

43. Kanbur, Ravi (2003), "Development Economics and the Compensation Principle", *International Social Science Journal*, 55(1):27-35.

44. Khemani, Stuti (2004), "Political Cycles in a Developing Economy: Effect of Elections in the Indian States", *Journal of Development Economics*, 73(1): 125-54.

45. Khemani, Stuti (2007), "Does delegation of fiscal policy to an independent agency make a difference? Evidence from intergovernmental transfers in India", *Journal of Development Economics*, 82:464–484.

46. Litschig, Stefan (2012), "Are rules-based government programs shielded from special-interest politics? Evidence from revenue-sharing transfers in Brazil", *Journal of Public Economics*, 96:1047–1060.

47. Magee, Christopher (2001), "Administered protection for workers: an analysis of the trade adjustment assistance program", *Journal of International Economics*, 53: 105-25.

48. Magee, Christopher (2003), "Endogenous tariffs and trade adjustment assistance", *Journal of International Economics*, 60:203-222.

49. Majumdar, Sumon and Mukand, Sharun W. (2004), "Policy Gambles", *American Economic Review*, 94(4):1207-22.

50. Migueis, Marco (2013), "The Effect of Political Alignment on Transfers to Portuguese Municipalities", *Economics and Politics*, 25(1):110-33.

51. Padovano, Fabio (2012), "The drivers of interregional policy choices: Evidence from Italy", *European Journal of Political Economy*, 28:324–40.

52. Passarelli, Francesco and Tabellini, Guido (2013), "Emotions and Political Unrest", *working paper*.

53. Richards, B. (1997), "Shaky Numbers: Layoffs not Related to NAFTA can Trigger Special Help Anyway", *The Wall Street Journal*, 30 June 1997, A1, A9.

54. Rodrik, Dani (1996), "Understanding Economic Policy Reform", *Journal of Economic Literature,* v. XXXIV, no. 1, pp. 9-41.

55. Rodrik, Dani (2006), "Goodbye Washington Consensus, Hello Washington Confusion? A Review of the World Bank's Economic Growth in the 1990s: Learning from a Decade of Reform", *Journal of Economic Literature*, 44:973-987.

56. Scartascini, Carlos and Tommasi, Mariano (2012), "The Making of Policy: Institutionalized or Not?', *American Journal of Political Science*, 56:4, pp. 787–801.

57. Schady, Norbert R. (2000), "The political economy of expenditures by the Peruvian Social Fund (FONCODES), 1991–95", *American Political Science Review*, 94(2):289–304.

58. Shi, Min and Svensson, Jakob (2006), "Political budget cycles: Do they differ across countries and why?", *Journal of Public Economics*, 90:1367-1389.

59. Solé-Ollé, Albert and Sorribas-Navarro, Pilar (2008), "The effects of partisan alignment on the allocation of intergovernmental transfers. Differences in differences estimates for Spain", *Journal of Public Economics*, 92(12):2302–2319.

60. Sorribas-Navarro, Pilar (2011), "Bailouts in a fiscal federal system: Evidence from Spain", *European Journal of Political Economy*, 27:154–170.

61. Veldkamp, Laura (2009), "Learning About Reform: Time-Varying Support for Structural Adjustment", *International Review of Economics and Finance,* 18(2):192-206.

62. Visser, Jelle (2015), ICTWSS Data base, version 5.0. Amsterdam: Amsterdam Institute for Advanced Labour Studies AIAS. October 2015. www.uva-aias.net/208

63. Wiese, Rasmus (2014), "What triggers reforms in OECD countries? Improved reform measurement and evidence from the healthcare sector", *European Journal of Political Economy*, 34:332–352.

6 Appendix: Data and analysis for Section 3.3

The EBRD report (1999) contains data on reforms in the following countries: Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, FYR Macedonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Poland, Romania, Russian Federation, Slovak Republic, Slovenia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan. The reform index on "large-scale privatisation" ranges from a minimum of 1 in Belarus to a maximum of 4 in the Czech Republic, Estonia, Hungary and the Slovak Republic. For "small-scale privatisation", it ranges from a minimum of 2 in Belarus, Bosnia and Herzegovina and Turkmenistan to a maximum of 4+ in Croatia, the Czech Republic, Estonia, Hungary, Lithuania, Poland, the Slovak Republic and Slovenia. For "governance and enterprise restructuring", the index ranges from a minimum of 1 in Belarus to a maximum of 3+ in Hungary. We take the average of these three indices as the "privatisation index".

Data on the governance index is available in the EBRD (1999) report for the following countries: Armenia, Azerbaijan, Belarus, Bulgaria, Croatia, Czech Republic, Estonia, FYR Macedonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Lithuania, Moldova, Poland, Romania, Russian Federation, Slovak Republic, Slovenia, Ukraine and Uzbekistan. The quality of governance index ranges from a minimum of 0.82 in Moldova to a maximum of 1.98 in Hungary.

Data on union density is obtained from the ICTWSS (Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts) data base (Visser (2015)) for the following countries: Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Lithuania, Poland, Romania, Russian Federation, Slovak Republic and Slovenia. Since this data is not available consistently for all the countries in this time period, we use the data for the year closest to 1994, which is the starting point of the reform period under consideration. It ranges from a minimum of 27.2% in Poland to a maximum of 68.7% in Romania.

Data on the share of total employment in the public sector is computed from LABORSTA for the year 1995. It is available for the following countries: Armenia, Azerbaijan, Belarus, Croatia, Estonia, Hungary, Kazakhstan, Kyrgyzstan, Lithuania, Moldova, Poland, Romania, Slovak Republic, Slovenia and Ukraine. It ranges from a minimum of 22% in Hungary to a maximum of 60% in Belarus.

Figure 3 considers the relationship between the proportion of public sector employment and progress on reform of the public sector, and shows the scatter plot with a negative trendline (correlation of -0.7).

Figure 4 considers the relationship between the governance index (our proxy for state capacity), and union density (our proxy for the political activism of special interest group workers), and shows the scatter plot with a correlation of -0.4.

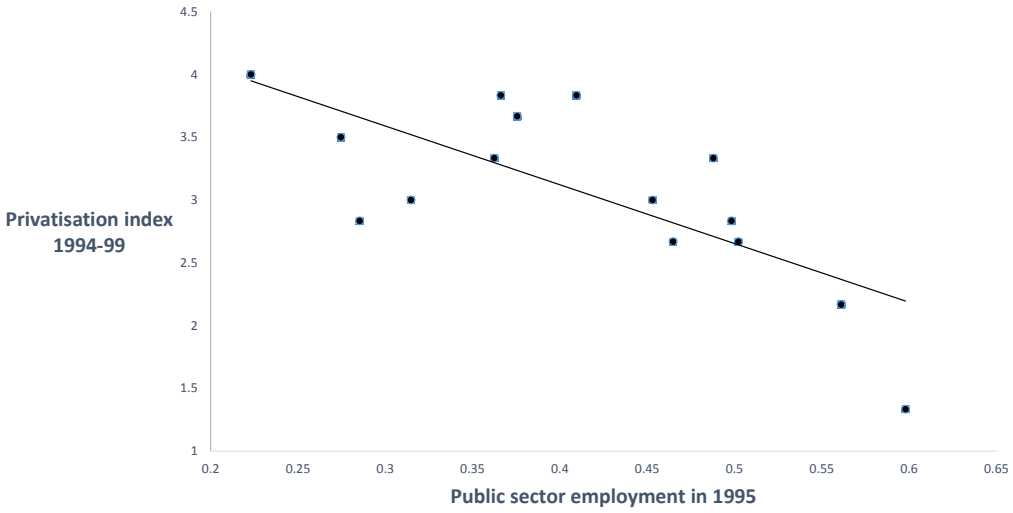

Figure 3: Public sector employment and Public sector reform

Figure 4: State capacity and Political activism