

A cross-national comparative study of the policy effects of referendums

by Karin Gilland Lutz and Simon Hug
University of Zurich



A cross-national comparative study of the policy effects of referendums*

Karin Gilland Lutz[†] and Simon Hug[‡]
CIS, IPZ, Universität Zürich

Paper prepared for presentation at the
Annual Meeting of the American Political Science Association
Philadelphia, August 31 - September 3, 2006

August 16, 2006

Abstract

With the adoption of new constitutions in Eastern and Central Europe containing numerous provisions allowing for referendums, cross-national comparative work on the policy effects of referendums across the European continent have become possible. This allows us to close an important gap in the literature on referendums, namely to assess the consequences of these institutions at the national level. More precisely, we wish to assess whether the well-documented policy effects at the subnational level (e.g., in the United States or Switzerland) carry over to the national level. Some of these subnational studies support the theoretically derived implication that the possibility of referendums leads to policies more closely reflecting the voters' wishes. The present paper provides empirical tests of this, but contrary to other empirical studies so far, proposes a comparative analysis at the national level. For several policies in the domain of labor regulation we show that the presence of institutions allowing for referendums reduces the difference between policy outcomes and the voters' wishes as assessed in surveys. We carry out these tests on the basis of several datasets covering a range of mainly Western countries, and rely on a diverse set of methodologies to assess policy outcomes.

* The financial support of the Swiss National Science Foundation (Grant No. 100012-108179) is gratefully acknowledged.

[†] Institut für Politikwissenschaft; Universität Zürich; Hirschengraben 56; 8001 Zürich; Switzerland; phone +41 (0)44 634 50 28; fax: +41 (0)44 634 50 98; email: gilland-lutz@pwi.unizh.ch

[‡] Institut für Politikwissenschaft; Universität Zürich; Hirschengraben 56; 8001 Zürich; Switzerland; phone +41 (0)44 634 50 90/1; fax: +41 (0)44 634 50 98; email: simon.hug@access.unizh.ch

1 Introduction

Much systematic empirical research attempts to demonstrate the effects institutions allowing for referendums¹ have on policy outcomes. These studies have almost exclusively focused, however, on the subnational level in countries having much variation in the institutions allowing citizens to vote directly on policy issues, namely Switzerland and the United States.² Comparative work at the cross-national level has been hampered, so far, by the very few and quite diverse countries having referendum institutions. So it hardly surprises that few if any systematic comparative studies exist that assess what kind of policy consequences the presence of referendum institutions has.

The present paper, taking advantage of the fact that many newly democratized countries in Central and Eastern Europe introduced provisions for referendums in their constitutions, proposes a comparative empirical study of the effects of referendums on policy outcomes. The policy areas we consider relate mostly to the regulation of labor, since a comparative dataset created by Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004) provides very detailed information for 85 countries. In our empirical assessment of the policy effects of referendums we use as starting point the widely found implication from theoretical models on referendums, which suggests that policy outcomes should reflect more strongly the voters' preferences if the latter can vote directly on policies. This suggests that empirically testing this implication requires information on the voters' preferences, which we obtain from aggregated survey responses.³ In addition, and unfortunately often neglected, a test of the theoretically derived implication for the effect of referendums can only be carried out in a simple linear regression framework under some very restrictive assumptions. Hence, we rely on an empirical model proposed by Matsusaka (2001) and Hug (2001), which can be estimated by a switching regression. The results obtained with this estimator suggests that for some policy areas having provisions allowing for referendums biases policy outcomes toward the voters' preferences. For some policies this ef-

¹Following Butler and Ranney (1994*a*, 1) we use the term "referendum" to designate all decision-making processes which involve citizens voting on actual policies.

²Some research is also carried out at the subnational level in other countries like Germany (e.g., Weixner, 2006) or the Soviet and Post-Soviet states (e.g., Walker, 2003).

³We rely here, as discussed below, on cross-national survey instruments, ensuring that the same question formulation was used and the samples were drawn in a similar way.

fect is weak, and only in some exceptional cases do we find empirical evidence contradicting strongly the theoretically implied effect of referendums.

In the next section we start by briefly discussing the literature dealing with the policy effects of referendums. We also highlight the main theoretical insights coming from this literature. In section three we discuss the general studies on labor regulation and more in detail the study by Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004), from which we draw most of our information on the policy outcomes we wish to explain. Section four starts with a discussion of the empirical model we wish to estimate and our preferred estimator, before we present the empirical results for roughly ten policy outcomes. In section five we discuss our results and, as conclusion, offer some general remarks on our future research steps.

2 Policy effects of referendums

Most authors concur that the presence of institutions allowing for referendums affects policy outcomes.⁴ Still debated, however, is the question how policy outcomes are affected. This debate is quite likely strongest in the United States. Critiques of direct legislation (e.g., Schrag, 1998; Smith, 1998; Broder, 2000; Haskell, 2001; Sabato, Ernst and Larson, 2001) emphasize the influence of rich interest groups on referendum results, which they judge as being problematic. Advocates of direct legislation (e.g., Kirchgässner, Feld and Savioz, 1999; Waters, 2001; Matsusaka, 2004), on the other hand, point to beneficial effects of referendums. The most vocal proponents and adversaries of referendums rely, however, hardly on the results from systematic analyses in their arguments.

Almost all of the systematic work on the policy effects of referendums has focused on the subnational level (Lupia and Matsusaka, 2004) and dealt with economic issues. Starting with the pioneering work of Pommerehne (1978) studying expenditures at the municipal level,⁵ many authors have studied the effect of referendums in the United States at the state and local level, and in Switzer-

⁴Cronin (1989, 232) may be one of the few remaining authors challenging this view.

⁵While Pommerehne's (1978) study is the first systematic empirical study on the effect of referendums, Key and Crouch (1939) offer many key insights on this topic, especially the all too often forgotten difference between direct and indirect effects, also already alluded to by Rappard (1912).

land at the cantonal and municipal level.⁶ This literature essentially compares various policy outcomes in the economic realm like debt levels, GDP growth, tax levels, etc., between entities allowing for referendums and entities not allowing for referendums, while controlling for other factors. Many studies come to the conclusion that referendums have positive effects. Government spending, debt levels and taxes are lower, GDP growth is higher, etc. (Kirchgässner, Feld and Savioz, 1999; Feld and Matsusaka, 2003; Matsusaka, 2004; Funk and Gathmann, 2006).⁷ Some studies, however, fail to find an effect (e.g., Besley and Case, 2003) or an effect which goes against the commonly held wisdom (e.g., Camobreco, 1998).

Beside the economic realm, some isolated studies have focused on a more direct link between referendums and policies in other domains. Gerber (1996) shows for laws on the death penalty and parental notification of teenage abortions that in states of the US with referendums the adopted laws reflect more closely the preferences of the states' voters.⁸ Similar results appear in Gerber and Hug's (1999) work on minority rights, while results questioning this general conclusion appear in Lascher, Hagen and Rochlin (1996) and Camobreco (1998).⁹ For Switzerland Vatter and Rüeßli (2003) show that the extent of referendums affects health policies at the cantonal level in Switzerland, while Armingeon, Bertozzi and Bonoli (2004) find similar effects for welfare policies. Fischer (2005) finds effects of direct democracy on redistribution (see also Feld, Fischer and Kirchgässner, 2003), on educational achievement, and crime rates, among other policy areas.

Thus, at the subnational level quite strong evidence is present suggesting that referendums affect policy outcomes. Very little, however, is known whether these effects can also be found at the national level.¹⁰ In addition, most of the empiri-

⁶Kirchgässner, Feld and Savioz (1999), Lupia and Matsusaka (2004) and Matsusaka (2004) provide excellent surveys of this literature.

⁷Interesting to note is that Funk and Gathmann (2006), employing a different estimation approach find a much reduced effect on government spending. In addition, according to their result, the reduced spending at the cantonal level in Switzerland due to direct democracy is compensated by increased spending at the local level in cantons with strong institutions for referendums.

⁸Gerber (1999) discusses these results in a broader context while Hug (2004) shows more fine-grained institutional effects for these policies.

⁹As Matsusaka (2001) and Hug (2001) demonstrate, however, these results are largely due to a misspecified empirical model.

¹⁰Kleinewefers (1997) criticizes authors generalizing their results from the subnational to the

cal results discussed above are obtained by estimating a simple linear regression model with a dichotomous indicator for the presence of such institutions. As Funk and Gathmann (2006) nicely argue, provided that the citizens' preferences, which are likely to relate to the policy outcome, are different in cantons or states with and without institutions allowing for referendums, estimating the effect of referendums in such a manner yields biased estimates. Hence, this clearly pleads for integrating measures for the voters' preferences. In addition, however, the empirical model to be estimated should also reflect more precisely the theoretically implied relationship. Almost all theoretical models dealing with the policy effects of referendums (e.g., Steunenberg, 1992; Gerber, 1999; Moser, 1996; Matsusaka and McCarty, 2001; Hug and Tsebelis, 2002; Hug, 2004; Kessler, 2005) come to the conclusion that allowing voters to vote under certain rules directly on policies should lead to outcomes more closely reflecting the voters' wishes. Only the models of Matsusaka and McCarty (2001), Matsusaka and McCarty (2001) and Kessler (2005) suggest that under specific assumptions voters might be worse off if referendums are possible.

These theoretical implications are rarely directly and correctly tested as Matsusaka (2001) convincingly argues. For policy outcomes that are measured dichotomously, the empirical models used in Gerber (1996), Gerber and Hug (1999) and Hug (2004) allow for directly testing the theoretically implied effect. Models with a linear specification and a simple dichotomous indicator for referendums yield under almost all circumstances biased estimates as Matsusaka (2001), Hug (2001), and Funk and Gathmann (2006) argue, and Hug (2001) demonstrates in Monte Carlo simulations.¹¹ Hence, strictly speaking only the results obtained by Gerber (1996, 1999), Gerber and Hug (1999), Hug (2001, 2004) can demonstrate directly that in many policy areas the presence of institutions allowing for referendums reduces the difference between voter preferences and policy outcomes.¹²

Such systematic tests, however, have not been carried out at the national level so far. While some cross-national comparative work on referendums exists

national level without any empirical basis. Similarly doubtful about this practice are Kiewiet and Szakaly (1996, 64) for the United States: '[t]here are many reasons to be cautious in making inferences about the federal government on the basis of data from state and local governments.'

¹¹Even though Funk and Gathmann (2006) are aware of the problem, their empirical strategy only works under very restrictive assumptions, as we will discuss below.

¹²Matsusaka (2004), after estimating a simple linear regression model with a dichotomous indicator for referendums for two time periods, namely the interwar period and the 1990s, attempts to explain the differences with extraneous information to overcome these limitations.

(e.g., Butler and Ranney, 1994*b*; Suksi, 1993; Möckli, 1994; Hamon, 1995; Gallagher and Uleri, 1996; Setälä, 1999; Papadopoulos, 1998; Qvortrup, 2002) few of these studies directly assess the policy consequences of these institutions cross-nationally. Some authors engage in comparative case studies (e.g., Möckli, 1994; Setälä, 1999; Papadopoulos, 1998; Qvortrup, 2002), but the obtained results do not have the same sharpness and generality as those obtained from the systematic studies at the subnational level.¹³ Hence, the policy effects of referendums at the national level is still an uncharted research territory.

3 Studying policy effects in labor regulation

Although this paper examines the specific effect of direct democracy on policy outcomes in labor regulations, by no means does our focus exclude other influential factors that also shape policy outcomes. That there are significant differences in policy outcomes even between countries that might be considered relatively similar to one another (OECD countries, EU members, etc.) is clear; in this vein, Ebbinghaus and Manow (2001, 1) commented in 2001 that “[A]lthough there are pressures toward convergence due to economic internationalisation and socioeconomic changes, cross-national diversity both in economic and social policy still dominates the political landscape.” The question is rather what determines these differences? The relevant literature singles out a number of variables at the theoretical level and attempts to assess the role they play under specific circumstances.

Let us first of all take a look at the main characterization of differences in policy output in the area of labor regulation and social welfare more generally. Esping-Andersen’s (1990) introduced the idea of three (theoretical) worlds of welfare, one liberal, one conservative and one social democrat. Each involves a specific relationship between the state and the economy, in more detail: the level of de commodification, the kind of social stratification and the mix of public and private protection are key to determining what kind of welfare state a particular country might have (Esping-Andersen, 1990, 21-23). A liberal welfare state has a low level of de commodification and tends to extend relatively low,

¹³Some systematic studies exist in the context of studies on referendums on European integration, like for instance the work by Schneider and Weitsman (1996), Christin and Hug (2002), and Hug (2002).

flat-rate benefits to all citizens and seeks not to disturb market mechanisms. A conservative welfare state focuses on employees (rather than citizens), who are entitled to benefits on the basis of contributions. This type of welfare state is characterized by mid-level decommodification. Social-democrat welfare states, in contrast, have high levels of decommodification and provide extensive benefits and public services to all citizens.

A country is part of the liberal, conservative or social democrat world of welfare depending on the principles and ideas underpinning its social protection system as well as the relative distribution of power between competing political forces and the particular historical contingencies that determined the establishment of the state, historically.

In a study of 85 countries, using data from 1997, Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004) examine three theories of labor regulation, each of which seeks to explain why a specific country pursues particular policies in this domain of politics: (1) The efficiency theory holds that institutions - such as a labor regulation regime - adjust so that they are as efficient as possible in terms of serving the needs, preferences, etc. that characterize a society at any given point in time; (2) the political power theory argues that institutions are shaped by those in power to their own benefit, at the detriment of those they represent; (3) the legal theory embodies the idea that institutions, again, in this case the labor regulation regime, are shaped above all by the legal institutions under which they come into being.

The latter theory wins most empirical support in the work of these authors, and thus merits some more detail here. A distinction is made between the common law (e.g., England and its historical colonies, such as Ireland, USA, Canada, Australia, India, and South and East Asia, East Africa and the Caribbean), French civil law (which is to be found in Spain, Portugal, Italy, Belgium, Holland, North and West Africa, all of Latin America, as well as in France), as well as socialist law (within the zone of previous Soviet influence), German legal code (parts of Germanic Western Europe, Japan, Korea, Taiwan) and the Scandinavian legal tradition (Sweden, Norway, Denmark, Finland). Each of these legal traditions has a specific way of regulating conflict in society, and, the argument goes, this extends also to the realm of labor regulations. The greatest distinction is made between common law on the one hand and civil and socialist law on

the other hand: 'Common law countries tend to rely more on markets and contracts, and civil law (and socialist) countries on regulation (and state ownership)' (Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer, 2004, 1345).

On this basis, then, the existence of differing levels of regulation, the differing levels of protection (against redundancy, in case of illness or accidents, in case of childbirth, against exploitation of various types) should be explained. As Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004, 1340) write: "In broad terms, common and civil law traditions utilize different strategies for dealing with market failure: the former relying on contract and private litigation, the latter on direct supervision of markets by the government."

Elsewhere, too, one can find an echo of the role played by legal systems, but this is not necessarily explicit. Bonoli (2003) analyses state-society relations as well as the role of ideology in the historical development of social insurance policies in France, Germany and the UK, and remarks that the UK (the "home" of common law) lets "market forces allocate resources, and correct[s] the most undesirable outcomes *ex post facto*" (Bonoli, 2003, 1027) - exactly the kind of feature of a common-law country that Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004) found so compelling. Bonoli also identifies current-day effects of the social-historical ethos of France and Germany, France being a country with a tradition of state intervention in the economy and social matters, "social protection in postwar France has been an area dominated by the state" (Bonoli, 2003, 1019), which again reflects the findings of Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004), who emphasize France's character as a civil law country, implying an expectation of state regulation. Germany, in turn, is a less homogeneous state than France and its federal structure (including its historical determinants) makes policy output less centralized. To that can be added the fact that actors other than the state, namely guilds and other interest groups, were more influential and over time a process of 'self-regulation by market actors in the context of a market economy' (2003: 1020) became established. But in his article, Bonoli focuses more explicitly on state-society relations, as does Esping-Andersen (1990) (as already indicated).

Bonoli's (2003, 1037) relatively heavy stress on path dependency ("ideological influences at key historical moments") is not shared by Huber, Ragin and Stephens (1993) or Huber and Stephens (2001), who do not dismiss its significance

but seem to put the stress on political actors' ability to make choices 'now' that are independent of previous choices. Nevertheless, these authors, too, accept the weight of history on the present (referred to as "structural limitation" (Huber and Stephens, 2001, 29) in their work). Substantively, their argument is that the relative influence of social democracy and Christian democracy on policy-making is the foremost determinant of labor regulation policy output (see also for more on the importance of left-party domination Korpi, 1983; Stephens, 1979; Shalev, 2001): "the greater the dominance of social democratic ideology within the labor movement and in the social consciousness of wage and salary earners, the greater the power and labor vis--vis capital and the more redistributive the policy outcomes" (Shalev, 2001, 26-27) they explain with respect to social democracy. The difference between social and Christian democracy in this context is that Christian democracy is associated primarily with transfer payments to workers (exposing non-employed individuals to far greater social risks than employed ones) and social democracy with redistribution less focused on workers and more on citizens, which, the authors argue, refines the hitherto understanding of the roles these types of political parties in forming policy outcomes (and here they clearly draw on the work of Esping-Andersen (1990), see also Van Kersbergen (1995)).

Huber, Ragin and Stephens (1993) also consider what they term state or constitutional structures, meaning the institutions regulating conflict in a country. Of particular interest in the current paper are not the policy-making activities of bureaucrats, the effects of past policy, political parties (which have already been discussed above), or the state's bureaucratic capacity, all of which are considered state structures by the three authors, but the degree of state centralization. They write that "[T]hose features of constitutions that make it difficult to reach and implement decisions on the basis of narrow majorities - and that, conversely, let minority interests obstruct legislation - will impede far-reaching reforms in social policy, especially reforms that might benefit the underprivileged majority. [A]spects of constitutional structure that disperse political power and offer multiple points of influence on the making and implementation of policy are inimical to welfare state expansion" (Huber, Ragin and Stephens, 1993, 722). Since the present paper is concerned with the policy effects of direct-democratic institutions, which create additional points of influence, the most obvious point to take

from this citation is that direct democracy is expected to have a restraining effect on policy - countries with 'more' direct democracy should have "less" generous welfare systems. Theoretically, however, one must of course also allow for the possibility that direct democracy can have the opposite effect: people might want and vote for more services. Indeed, in a later publication Huber and Stephens (2001, 2) acknowledge this with reference to the USA and Switzerland, where welfare cuts were more difficult to implement than in the centralized UK and Denmark.¹⁴

A final factor to be considered here is that to be able to have any redistributive policies, there must be some goods to redistribute. The literature is naturally not blind to this reality. Maybe somewhat surprisingly, measures of wealth such as gross domestic product per capita or gross national product per capita do not attract especially much attention in empirical analyses. Huber and Stephens (2001, 40) write of their analysis that "[T]he level of affluence of a society facilitates welfare expansion," and Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004) also include a wealth measure in their analysis (as an aside: their country selection notably contains countries with extremely different levels of wealth). Moreover, rising unemployment and ageing populations also lead to a higher demand on the welfare state, as do increasing levels of women's participation in the labor force, given that these women are less able to fulfil their hitherto roles as care givers and private-sphere unpaid labor in general. (We will only consider some of these factors in the present paper, and include the rest in more developed versions of it).

4 Policy effects in labor regulation

Most of our measures for policy outcomes come from Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer's (2004) dataset. For many of these policies we were able to find in at least one cross-national survey like the ISSP, the ESS, the European or World Values Surveys, or the Eurobarometer, a question which measures more or less closely the preferences in this policy area. The policy

¹⁴A similarly changing effect more specifically for referendums is discussed in Matsusaka (2004).

indicators we are looking at in the empirical analysis are the following:¹⁵

- *Labor union power (index_col_barg13)* “Union power as average of 7 variables: 1, employees have right to join union, 2, employees have right to collective bargaining, 3, employees have right to bargain with unions, 4, are collective contracts extended to third parties by law, 5, does law allow closed shops, 6, workers/unions have right to appoint members to Board of Directors, 7, are workers’ councils mandated by law. (0-1)” (Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer, 2004)
- *Old age, disability and death benefits (index_old_202)* “Measures the level of benefits (old age, disability, death) as the average of four variables: 1, difference retirement age/life expectancy, 2, number of months contributions or employment required for retirement, 3, covered by the net old-age cash-benefit pension (0-1) Social security system covers risk of sickness (0-1)” (Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer, 2004)
- *Procedural difficulties (proc_99b)* “Log of number of steps required to start a business” (Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer, 2004).
- *Social security for risk of sickness (index_sick2)* “Social security system covers risk of sickness (0-1) Measures level of benefit (sickness) as average of: 1, number of months of contributions required to qualify for benefit, 2, waiting period for receiving benefit, 4, (0-1)” (Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer, 2004)
- *Unemployment covered by social security (unem_cont_n)* “Social security system covers risk of unemployment (0-1)” (Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer, 2004)
- *Unemployment benefits (index_unem2)* “Measure of benefit (unemployment) as average of: 1, number of months of contributions required to qualify for

¹⁵With the exception of the last four, all indicators are take on values in the 0-1 interval. We also considered a series of dichotomous policy indicators provided in Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer’s (2004) dataset. Obviously, the empirical model for such dependent variables has to be different, and it proved that for many of the policies, some of the legal origin variables perfectly predicted some outcomes. For this reason we refrained from employing these indicators here.

benefit, 2, waiting period for receiving benefit, 4, (0-1)” (Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer, 2004)

- *Social security benefits (index_socseca)* “Measures social security benefits as average of: old age, disability and death benefits, sickness and health benefits, unemployment benefits (0-1)” (Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer, 2004)

- *Maternity leave (maternityn2)* Measures amount of time off with 100

Maternity leave (days) Number of days of maternity leave (Mutual Information System on Social Protection in the Member States of the EU (MISSOC), 1999)

Maternity leave (timemoney) Time \times (Mutual Information System on Social Protection in the Member States of the EU (MISSOC), 1999)

Maternity leave (WS0) Scores from Wordscores (Laver, Benoit and Garry, 2003) analysis of maternity leave regulations (short excerpts) (Blanpain, 1986-)

Maternity leave (WS1) Scores from Wordscores (Laver, Benoit and Garry, 2003) analysis of maternity leave regulations (long excerpts) (Blanpain, 1986-)

In a first set of models, we start by estimating in a simple linear regression the effect of each chosen preference variable (i.e., the public opinion variables) on the policy outcome. Then, in a second model, we include a dummy for the presence of institutions allowing for referendums.¹⁶ This second simple model implies that policy is biased in the same direction in all countries allowing for referendums. While this empirical specification is widespread both Hug (2001) and Matsusaka (2001) show that they do not allow for direct tests of whether referendums bias policy toward the voters’ preferences and that the estimated coefficient for the referendum indicator is potentially biased toward 0. Several scholars attempt to circumvent this problem by adding in addition an interaction effect between the preference variable and the referendum dummy in a linear

¹⁶We use referendum indicator the information provided in Hug and Tsebelis (2002). As country with institutions allowing for referendums were coded the countries having either a required referendum or one triggered by an actor that is not a veto player. We provide a list of countries with their referendum institutions in the appendix.

regression (e.g., Lascher, Hagen and Rochlin, 1996; Camobreco, 1998; Funk and Gathmann, 2006).¹⁷ But as Matsusaka (2001) nicely illustrates, such an empirical strategy hardly ever works.¹⁸

Based on Matsusaka’s (2001) suggestions Hug (2001) proposes a switching regression model which allows for a direct test of whether under particular institutional arrangements policy is biased toward the voters’ preferences. The basic implication of the theoretical models is specified in the following equation:

$$|PO_i - X_{m_i}| = f(X_i) \tag{1}$$

where PO_i is a measure of a particular policy adopted in entity i , X_{m_i} is the median voter’s preferred policy in this area, and X_i indicates whether referendums are possible in entity i . If the voters’ preferences could be measured without error on the same scale as the policy outcome PO_i , equation 1 could be estimated directly.¹⁹ In almost all empirical situations the voters’ preferences are measured, however, on the one hand with error and second through proxies and thus not on the same scale as the policy outcome PO_i . Hence, X_{m_i} must be estimated as a function of these proxy variables according to the following equation, where P_i are a set of proxies for the voter preferences:

$$X_{m_i} = g(P_i) \tag{2}$$

If we assume that the function f in equation 1 is linear, Hug (2001) demonstrates that all the parameters of interest can be estimated in a switching regression model with endogenous switching. Given that both in equation 1 and 2 error terms are attached, three variance-covariance terms must be estimated.²⁰ The

¹⁷It has to be noted here that the practice to use an interaction effect between a preference measure and a referendum indicator in a logit or probit model is a perfectly defensible practice and allows for tests of the theoretical derived implication (see for instance Gerber, 1996; Gerber and Hug, 1999; Hug, 2004).

¹⁸This problem is closely related to the appropriate measurement of the “representativeness” and “responsiveness” of legislators (e.g., Achen, 1977; Bartels, 1991).

¹⁹Again, the literature on representativeness and responsiveness is illustrative. Representativeness would be assured if the slope estimate would be close to 1 and the intercept 0. Responsiveness requires, however, only a close correlation between voter preferences and those of their representatives.

²⁰Hug (2001) discusses this derivation in much more detail, provides evidence from Monte Carlo simulations that this estimator performs well and illustrates its performance in a reanaly-

switching regression model derived from equations 1 and 2 under the assumption of linear relationships looks as follows:

$$\begin{aligned}
 &\text{if } PO_i - X_{m_i} > 0 \\
 &\quad PO_i = P_i\beta + X_i\gamma + \epsilon_i + \theta_i \\
 &\text{if } PO_i - X_{m_i} \leq 0 \\
 &\quad PO_i = P_i\beta - X_i\gamma + \epsilon_i - \theta_i
 \end{aligned} \tag{3}$$

Thus, negative estimated values for γ (the coefficient for the referendum indicator) would suggest that policies match more closely voter preferences in states with referendums. We thus estimate this third, more appropriate, model which allows the effect of referendums to depend on voter preferences. In a second set of models we then resort to the explanatory variables favoured by Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004), namely GNP per capita (logged, 1997), legal origin, and political variables related to the composition of government and union density.²¹ After providing replications of Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer's (2004) models for the various subsets of countries we consider, we introduce our preference variables and referendum indicator.²²

4.1 *Labor union power (index_col_barg13)*

Our first analyses focus on the way in which trade unions are involved in the regulation of labor. Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer's (2004) additive index covers different aspects of union involvement and relates quite directly to the preference measure we draw from the question asked in the International Social Survey Program (ISSP) (1999) of 1996:²³

sis of the data used by Lascher, Hagen and Rochlin (1996) and finds substantively radically different results.

²¹Since for this later variable Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004) failed to find information for Slovenia, this case is systematically excluded in all analyses with control variables. Since this leads to a reduction of the number of cases, we reestimated all the previous models with this smaller set of countries.

²²Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004) treat the political explanatory variables slightly different, by combining them selectively with the other explanatory variable. We partly follow this strategy and add the political controls one after the other to the model containing all the other controls and being estimated with a switching regression.

²³In the appendix we provide the values of the average response and the standard deviation for this and all the other preference measures we use in this paper.

Do you think trade unions in this country have too much or too little power? (1 Far too much power - 5 Far too little power). (International Social Survey Program (ISSP), 1999)

Given the wording of the question we would expect that in countries where the citizens' average response is rather high,²⁴ that our dependent variable should also be higher. Not surprisingly, we find such a positive effect of our preference measure even though it fails to be statistically significant (table 1). The same also holds for the effect of our referendum dummy, which obtains a positive coefficient, but far from a statistically significant one. These results hold up even if we estimate this basic model as a switching regression or for a smaller subset of countries for which we have information for the explanatory variables favored by Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004). When we consider the effects of these independent variables we find considerable effects for legal origin. More precisely, compared to the common law countries especially the countries with a French, German or Scandinavian legal origin have much stronger involvement of trade unions in the regulation of labor.

²⁴We use as indicator for the voters' preferences the average response, even though the theoretical models would suggest using the median value. Given the ordinal scales on which voters respond to survey questions, the average response is, however, preferable.

These results, together with the statistically non-significant effect of the log of GNP per capita, are much in line with those obtained by Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004, 1366).²⁵ When adding in addition our preference variable and our dummy for referendums we find negative effects in the simple regression model. At the same time some of the coefficients for the legal origin are increased. Quite clearly, these sets of variables are related to each other, and legal origin (provided the dichotomous indicators only measure this) are causally prior to the preferences over union power. These negative effects for our main variables persist, even when we control for political variables, first for the percent of time between 1928 and 1995 when government was controlled by leftist or centrist parties, then the same percentage calculated for the time period 1975 to 1995, and finally union density, the main effects hardly differ. While we find the expected negative effect for the referendum dummy in the switching regression model in some specifications, the associated standard errors are too large to draw any substantive conclusions.

4.2 Old age, disability and death benefits (index_old_202)

Our results are more encouraging for our next policy outcome, namely the type of benefits a country provides in case of old age, disability and death. For this policy we can resort to two preference variable. The first stems from the 2004 European Social Survey and comes from the responses to the following question:

Using this card, how much do you agree or disagree with each of these statements?...Society would be better off if everyone just looked after themselves (1 Agree strongly - 5 Disagree strongly)

We would expect that countries with a higher mean response to this question should also have a more developed social security system for old age, disability and in the case of death. The results reported in table 2 confirm this. In almost all models, countries with higher values on this preference measure provide more benefits, and this effect is clearly statistically significant.

²⁵The only exception is that in our subset of countries socialist legal tradition does not effect labor union power. Obviously, this has to do with the fact that the number of countries of this legal origin is much smaller in our subset of countries than in the subset analyzed by Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004).

Table 2: Explaining old age, disability and death benefits^a

variable	b	b	b	b	b	b	b	b	b	b	b	b	b
	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)
preferences	0.173	0.181	0.181	0.212	0.214	0.147	0.015	-0.045	0.168	0.168	0.168	0.158	0.158
(schevts)	(0.056)	(0.058)	(0.052)	(0.068)	(0.070)	(0.049)	(0.050)	(0.161)	(0.179)	(0.179)	(0.179)	(0.172)	(0.172)
ln GNP per capita						0.058	-0.087	-0.250	0.113	0.113	0.113	0.105	0.105
legal origin, social						-0.016	(0.104)	(0.065)	(0.072)	(0.069)	(0.069)	(0.069)	(0.069)
french						(0.199)	(0.199)	(0.173)	(0.190)	(0.182)	(0.182)	(0.182)	(0.182)
german						0.000	0.030	-0.102	0.030	0.073	0.073	0.073	0.073
scandinavian						(0.106)	(0.078)	(0.047)	(0.160)	(0.190)	(0.190)	(0.182)	(0.182)
government left/center						0.023	-0.006	-0.122	0.150	-0.046	0.024	0.024	0.024
1928-1995						(0.112)	(0.086)	(0.056)	(0.171)	(0.190)	(0.190)	(0.182)	(0.182)
government left/center						0.162	0.141	0.276	0.060	0.309	0.309	0.309	0.309
1975-1995						(0.106)	(0.080)	(0.038)	(0.139)	(0.190)	(0.190)	(0.182)	(0.182)
union density													
constant	0.024	-0.024	3.096	-0.126	-0.145	0.793	6.575	8.291	3.929	3.929	3.929	-0.335	-0.335
referc	(0.201)	(0.216)	(0.202)	(0.251)	(0.262)	(1.041)	(0.870)	(0.170)	(0.189)	(0.189)	(0.189)	(0.182)	(0.182)
constant		(0.039)	(0.051)		(0.058)		0.019	0.133	0.014	0.014	0.013	0.013	0.013
$\sigma_\epsilon^2 + \sigma_\theta^2 + 2\sigma_{\epsilon,\theta}$		(0.056)	(0.207)			(0.038)	(0.035)	(0.160)	(0.191)	(0.182)	(0.182)	(0.182)	(0.182)
$\sigma_\epsilon^2 + \sigma_\theta^2 - 2\sigma_{\epsilon,\theta}$			1.880				0.138	0.058	0.098	1.088	1.088	1.088	1.088
σ_ϵ^2			(0.009)				(0.047)	(0.171)	(0.189)	(0.181)	(0.181)	(0.181)	(0.181)
see			(0.003)				0.003	-0.000	3.355	3.355	3.355	3.355	3.355
log-likelihood			-0.003				(0.004)	(0.000)	(0.190)	(0.182)	(0.182)	(0.182)	(0.182)
n	15	15	(0.258)	14	14	14	0.001	0.005	0.001	0.001	0.001	0.001	0.001
	0.105	0.107	(0.123)	0.105	0.108	0.089	(0.000)	(0.157)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
			(0.259)				0.000	0.000	0.000	0.000	0.000	0.000	0.000
							(0.127)	(0.140)	(0.190)	(0.190)	(0.190)	(0.182)	(0.182)
							27.407	34.118	27.744	27.744	27.744	30.280	30.280
							14	14	14	14	14	14	14

^aThe countries considered in this analysis are the following: Belgium, Czech Republic, Denmark, Finland, Germany, Greece, Norway, Poland, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

When we introduce a simple dummy for the effect of referendums, we find a positive though statistically not significant effect. This also holds if we estimate the effect of referendums in the switching regression model. For the variables proposed by Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004, 1367) we find slightly different results. While they find a statistically significant positive effect for the log of GNP per capita, we find a negative, though statistically insignificant effect. On the other hand none of the legal origin variables has a statistically significant effect, with the coefficient for scandinavian origin almost reaching a standard level of significance as in Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004, 1367). These results fail to change once we introduce our preference measure and the referendum dummy as additional independent variables. Also the effect of these two variables does not change compared to the previous models. When we estimate this basic model (without additional political variables) in a switching regression, however, we find a much strengthened, statistically significant negative effect for referendums, as we would expect according to theoretical models. This gives credence to the argument that the effect of referendums cannot always be detected in a simple linear regression model with a dichotomous indicator for the presence of referendums. When we introduce the other political variables, this effect for the referendum indicator disappears, however. Hence, this lacking robustness of the effect of referendums requires further investigation.

In part a dataset covering a broader set of countries, namely the European Values Study Group and Association (2006) survey of 1999, allows us to do this in part. In this survey the following question allows us again to construct a preference measure to explain the benefits in old age etc.:

Now I'd like you to tell me your views on various issues. How would you place your views on this scale?: 1 Individuals should take more responsibility for providing for themselves - 10 The state should take more responsibility to ensure that everyone is provided for.(European Values Study Group and Association, 2006)

While this question is slightly more specific than the one we previously used, it is not directly related to benefits in old age etc. Nevertheless, given the way the variable is coded, we would expect a negative effect for this preference variable on old age benefits.

Table 3: Explaining old age, disability and death benefits^a

variable	b	b	b	b	b	b	b	b	b	b	b	b	b
	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)
preferences	-0.035	-0.033	-0.033	-0.033	-0.031	0.004	0.004	0.0225	-0.0265	0.0049	-0.0143		
(e037mnev)	(0.024)	(0.025)	(0.180)	(0.025)	(0.026)	(0.024)	(0.020)	(0.0252)	(0.0939)	(0.0485)	(0.0059)		
ln GNP per capita						-0.046	-0.046	-0.0353	-0.0363	-0.0281	-0.0385		
legal origin, social						(0.033)	(0.039)	(0.0187)	(0.0513)	(0.0242)	(0.133)		
french						-0.255	-0.254	-0.2924	-0.2686	-0.3179	-0.2639		
german						(0.081)	(0.075)	(0.0917)	(0.1342)	(0.1239)	(0.0287)		
scandinavian						-0.048	-0.047	0.0441	-0.0468	0.0209	0.0453		
government left/center						(0.049)	(0.052)	(0.1339)	(0.1374)	(0.1302)	(0.0195)		
1928-1995						-0.039	-0.034	-0.0618	-0.076	-0.0727	-0.073		
government left/center						(0.071)	(0.079)	(0.1197)	(0.1353)	(0.1335)	(0.0246)		
1975-1995						0.131	0.136	0.1183	0.203	0.0784	0.0904		
union density						(0.062)	(0.070)	(0.1222)	(0.1354)	(0.1353)	(0.0266)		
constant	0.811	0.809	-1.573	0.801	0.800	1.125	6.817	5.9228	6.1876	5.9184	0.0718		
referc	(0.128)	(0.131)	(0.186)	(0.134)	(0.136)	(0.452)	(0.268)	(0.1346)	(0.1347)	(0.1325)	(0.0292)		
constant						-0.005	0.005	-0.0317	-0.0353	-0.027	-0.0428		
$\sigma_\epsilon + \sigma_\theta^2 + 2\sigma_{\epsilon,\theta}$						(0.039)	(0.032)	(0.1275)	(0.1275)	(0.1243)	(0.0117)		
$\sigma_\epsilon^2 + \sigma_\theta^2 - 2\sigma_{\epsilon,\theta}$							0.692	0.0982	0.1014	0.0886	0.0978		
σ_ϵ							(0.241)	(0.0503)	(0.1035)	(0.0774)	(0.0111)		
							5.840	-0.0004	-0.0014	0.0004	-0.0004		
							(0.051)	(0.0006)	(0.0029)	(0.0004)	(0.0001)		
							9.214	-0.0037	0.0009	-0.0028	0.0032		
							(0.186)	(0.001)	(0.0058)	(0.0041)	(0.0015)		
							2.150	0	0	0	0		
							(0.186)	(0.1352)	(0.1353)	(0.1332)	(0.1546)		
see	0.116	0.118	22.291	0.118	0.121	0.088	33.078	54.678	54.606	56.327	58.490		
log-likelihood	29	29	29	28	28	28	28	28	28	28	28		
n													

^aThe countries considered in this analysis are the following: Belgium, Canada, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Latvia, Lithuania, Netherla, Poland, Portugal, Romania, Russia, Slovak Republic, Spain, Sweden, Turkey, Ukraine, United Kingdom, and the United States.

The results reported in table 3 support this contention. In almost all models the coefficient for this preference variable is negative and almost reaches statistical significance. For our referendum dichotomous indicator we find a small negative coefficient, even when we introduce as controls the variables proposed by Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004) or resort to a switching regression model. For the control variables we find again different results with no substantive effect of GNP per capita, and a surprisingly negative and statistically significant coefficient for the socialist legal origins, while Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004, 1367) had found a positive though statistically not significant coefficient. Quite clearly, our subset of countries is quite different from the whole set used by these authors in this regard.

When we estimate the switching regression model with these control variables we find quite encouraging results. First, and foremost, the estimated coefficient for the referendum variable is systematically negative. This implies that the old age benefits correspond more closely to the voters' wishes in countries that allow for referendums than in the other countries. This effect reaches statistical significance when either we do not control for other political variables or only for union density. When we control for the percentage of time when government was controlled by left or centrist governments between 1928 and 1995 the negative effect for the referendum variable persists, but fails to reach statistical significance.

4.3 Procedural difficulties (proc_99b)

Our next policy area also provides some support for our theoretical contention, is, however, a bit more removed from labor regulation. Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004) also collected information on how difficult it is to set up a new business. Given that this measure is clearly related to government regulation of business, we linked this policy outcome with a preference measure based on responses to the following question from the International Social Survey Program (ISSP) (1999) of 1996:

Here are some things the government might do for the economy. Please show which actions are in favour of and which you are against?...Less government regulation of business (1 Strongly in favour - 5 Strongly against).(International Social Survey Program (ISSP), 1999)

Given the wording of the question we would expect a positive relationship between this preference measure and the log number of steps to set up a business. Again, our results are largely consistent with this expectation as table 4 illustrates. When we add our referendum indicator we obtain a positive though statistically not significant coefficient. Interestingly enough, when we estimate this same simple model as a switching regression we find a negative coefficient for the referendum variable, which is in line with our theoretical expectations. The associated standard error, however, is so large, that this effect can hardly be distinguished from no effect whatsoever. The same negative, though statistically not significant effect for referendums also appears when we exclude Slovenia from our analyses (since a control variable has a missing value).

For the explanatory variables favored by Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004) we find quite substantive effects for the legal origin variables.²⁶ Compared to common law countries all other countries, and especially those with socialist, French or German legal origin, make setting up a business much more cumbersome. These effects persist when we introduce our preference measure and the referendum variable. For the former we fail to obtain a statistically significant effect, while for the latter the negative effect almost reaches statistical significance. This same negative effect persists for most of the switching regressions, fails, however, to reach statistical significance.

²⁶Since Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004) do not use this variable as dependent variable, we cannot compare our results with theirs.

4.4 *Social security for risk of sickness (index_sick2)*

Turning to the question whether the social security system covers the risk of sickness, we resort to a question posed in the European Values Study Group and Association (2006) of 1999 to measure preferences:

Now I'd like you to tell me your views on various issues. How would you place your views on this scale?: 1 Individuals should take more responsibility for providing for themselves - 10 The state should take more responsibility to ensure that everyone is provided for. (European Values Study Group and Association, 2006)

Since this is the same measure as used above to explain old age benefits, we can note again that the measure is at best a proxy for the citizens' preferences. Nevertheless we would again expect a positive relationship, which we indeed also find empirically (Table 5). The effect of preferences even reaches statistical significance in some specifications. But given that our interest focuses more on the effect of provisions allowing for referendums, we note that estimated in simple linear regressions we systematically find a positive effect. This suggests that controlling for preferences, in countries with referendums coverage for sickness is more developed. However, when we estimate this simple model in a switching regression, we find that the effect actually pushed policy closer to the voters' preferences. Interestingly enough this effect disappears once we drop (because of missing data) Slovenia from the countries considered.

For the variables proposed by Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004, 1367) we hardly find results corresponding with those obtained by these authors. While they find strong positive effects for GNP per capita and the legal origins variables, we only find a comparable effect for countries with Scandinavian legal origin. These countries appear to have much broader coverage for the risk of sickness in their social security system. These results persist even when we introduce our preference measure and the referendum indicator. The former, as noted, maintains its positive effect while the later also remains positive but much reduced to the previous analysis.

Table 5: Explaining Social security for risk of sickness^a

variable	b	(s.e.)	b	(s.e.)	b	(s.e.)	b	(s.e.)	b	(s.e.)	b	(s.e.)	b	(s.e.)
constant	0.563 (0.134)	0.574 (0.131)	12.807 (0.202)	0.557 (0.140)	0.562 (0.137)	0.118 (0.169)	1.261 (0.451)	0.733 (0.587)	4.297 (0.280)	9.469 (0.581)	5.258 (0.281)	6.072 (0.481)		
preferences (e037rnnv)	0.042 (0.025)	0.083 (0.025)	0.034 (0.027)	0.044 (0.026)	0.036 (0.026)	0.036 (0.025)		0.042 (0.031)	0.042 (0.027)	0.025 (0.017)	0.036 (0.027)	0.042 (0.027)		
ln GNP per capita							-0.053 (0.045)	-0.022 (0.044)	-0.022 (0.044)	-0.020 (0.013)	-0.010 (0.043)	-0.022 (0.042)		
legal origin, social							0.012 (0.111)	0.040 (0.113)	0.040 (0.096)	-7.521 (1.030)	-0.002 (0.104)	0.037 (0.095)		
french							-0.036 (0.067)	-0.037 (0.067)	-0.037 (0.057)	0.006 (0.057)	-0.035 (0.058)	-0.035 (0.057)		
german							-0.005 (0.096)	0.023 (0.102)	0.023 (0.085)	0.038 (0.115)	0.001 (0.087)	0.020 (0.089)		
scandinavian							0.167 (0.084)	0.178 (0.091)	0.178 (0.077)	0.072 (0.083)	0.130 (0.089)	0.164 (0.094)		
government left/center 1928-1995										0.222 (0.112)			0.120 (0.111)	
government left/center 1975-1995														
union density														
constant	0.563 (0.134)	0.574 (0.131)	12.807 (0.202)	0.557 (0.140)	0.562 (0.137)	0.118 (0.169)	1.261 (0.451)	0.733 (0.587)	4.297 (0.280)	9.469 (0.581)	5.258 (0.281)	6.072 (0.481)		
referc								0.071 (0.047)	0.021 (0.042)	-0.074 (0.041)	0.022 (0.042)	-0.021 (0.043)		
constant								5.444 (0.152)	1.436 (0.297)	3.787 (0.522)	0.348 (0.081)	0.348 (0.081)		
$\sigma_\epsilon^2 + \sigma_\theta^2 + 2\sigma_{\epsilon,\theta}$								8.781 (0.186)	0.013 (0.004)	-0.006 (0.003)	0.009 (0.003)	8.505 (0.189)		
$\sigma_\epsilon^2 + \sigma_\theta^2 - 2\sigma_{\epsilon,\theta}$								0.013 (0.003)	0.108 (0.189)	-0.008 (0.003)	0.063 (0.189)	-0.009 (0.003)		
σ_ϵ^2								-2.045 (0.192)	0.000 (0.189)	-0.010 (0.186)	0.000 (0.189)	0.000 (0.001)		
see	0.122	0.119	22.158	0.124	0.121	20.993	0.114	0.114	25.776	28.954	26.414	25.811		
log-likelihood	29	29	29	28	28	28	28	28	28	28	28	28		
n														

^aThe countries considered in this analysis are the following: Austria, Belgium, Canada, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Latvia, Lithuania, Netherlands, Poland, Portugal, Romania, Russian Federation, Slovak Republic, (Slovenia), Spain, Sweden, Turkey, Ukraine, United Kingdom, United States.

These disappointing results persists even when we estimate our model with a switching regression. Only when we control for the government composition between 1928 and 1995 do we find the expected negative coefficient for our referendum variable. This effect, which almost reaches statistical significance, suggests that in countries with referendums coverage against the risk of sickness corresponds more closely to the voters' wishes. When controlling for government composition in more recent times (1975-1995) or union density, this effect disappears. These models, as the values for the likelihood function show, however, are much worse fits. Hence, the expected effect for referendums seems to be a more robust finding.

4.5 *Unemployment covered by social security (unem_cont_n)*

When turning to unemployment policies we have two policy indicators and two preference measure. Given our initial empirical explorations, we paired them in the way they appear here. First we look at the extent to which unemployment is covered by social security. We relate this policy measure with a preference measured based on the following survey question from the (International Social Survey Program (ISSP), 1999) of 1996:

On the whole, do you think it should or should not be the government's responsibility to: Provide a decent standard of living for the unemployed (1 Definitely should be - 4 Definitely should not be).
(International Social Survey Program (ISSP), 1999)

Quite clearly we would expect a negative relationship between the average response by citizens and the extent of coverage of unemployment by social security. As table 6 shows, for most specifications of the empirical model this is also the case. The effect, however, never reaches statistical significance. The same is unfortunately also true for our referendum indicator, independent of the control variables employed or the estimating method. Only in the two last specifications do we find the expected negative coefficients, but they are small compared to their standard errors. Also for the variables proposed by Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004, 1367) we only find weak results. Contrary

to these authors' general gist of results²⁷ we find a negative effect for GNP per capita and socialist legal origin.

²⁷Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004) do not employ this variable as dependent variable as such, but it is part of the unemployment benefits indicator to which we turn to below.

Table 6: Explaining unemployment covered by social security ^a

variable	b	(s.e.)	b	(s.e.)	b	(s.e.)	b	(s.e.)	b	(s.e.)	b	(s.e.)	b	(s.e.)	b	(s.e.)
preferences	-0.076	(0.065)	-0.055	(0.066)	-0.079	(0.069)	-0.058	(0.076)	-0.058	(0.068)	-0.173	(0.093)	-0.174	(0.107)	-0.168	(0.171)
In GNP per capita																
legal origin, social																
french																
german																
scandinavian																
government left/center																
1928-1995																
government left/center																
1975-1995																
union density																
constant	1.074	(0.134)	1.017	(0.160)	1.932	(0.184)	1.023	(0.166)	2.039	(0.227)	2.651	(0.182)	2.599	(1.199)	6.403	(0.211)
referc			0.030	(0.045)	0.030	(0.042)	0.033	(0.047)	0.033	(0.043)	0.033	(0.051)	0.033	(0.037)	0.035	(0.038)
bo			4.085	(0.170)	4.085	(0.233)	3.985	(0.233)	3.985	(0.233)	1.052	(0.398)	1.052	(0.211)	0.881	(0.511)
$\sigma_\epsilon^2 + \sigma_\theta^2 + 2\sigma_{\epsilon,\theta}$			-0.007	(0.002)	-0.007	(0.002)	-0.007	(0.002)	-0.007	(0.002)	-0.007	(0.002)	-0.007	(0.002)	-0.006	(0.202)
$\sigma_\epsilon^2 + \sigma_\theta^2 - 2\sigma_{\epsilon,\theta}$			0.003	(0.224)	0.003	(0.224)	0.032	(0.229)	0.032	(0.229)	0.032	(0.229)	0.032	(0.229)	-0.081	(0.004)
σ_ϵ^2			0.001	(0.224)	0.001	(0.224)	0.001	(0.229)	0.001	(0.229)	0.001	(0.229)	0.001	(0.229)	0.002	(0.002)
see	0.089	(0.090)	0.090	(0.224)	0.091	(0.224)	0.092	(0.229)	0.094	(0.229)	0.094	(0.229)	0.100	(0.229)	0.002	(0.202)
log-likelihood	20	20	21.406	20	19.904	19	19.904	19	22.000	19	22.437	19	22.265	19	24.543	19
n																

^aThe countries considered in this analysis are the following: Australia, Canada, Czech Republic, France, Germany, Hungary, Ireland, Israel, Italy, Latvia, New Zealand, Norway, Poland, Russian Federation, Spain, Sweden, Switzerland, United Kingdom, United States.

4.6 *Unemployment benefits (index_unem2)*

These rather disappointing results are slightly put into perspective when we turn to an analysis focusing on a more general measure of unemployment benefits. For this policy indicator we resort for our preference measure to the following question from the Eurobarometer 56.1 of 2001:

Please say how much you agree or disagree with each of the following statements?...The government should provide a decent standard of living for the unemployed (1 Strongly agree - 5 Strongly disagree)(Christensen, 2004)

We would again expect a negative effect for this variable on the unemployment benefits. As the results reported in table 4.6 show, this is also largely the case. In almost all specifications we find a negative coefficient which almost reaches statistical significance. We also find systematically negative, though statistically not significant, coefficients for our referendum indicator. And this independent of the control variables or the chosen estimating technique. But while the interpretation from the results of simple linear regression is that in referendum countries unemployment benefits are lower, the results from the switching regression model suggest that the benefits follow more closely the voters' preferences. For the economic, legal and political variables from Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004, 1367) we find no significant effect whatsoever.²⁸

²⁸For the set of countries considered here we had to drop the variable for socialist legal origin, since none of the countries covered by the Eurobarometer survey have socialist legal origins.

Table 7: Explaining unemployment benefits^a

variable	b	(s.e.)	b	(s.e.)	b	(s.e.)	b	(s.e.)	b	(s.e.)	b	(s.e.)						
c0	0.926	(0.106)	1.910	(0.141)	0.926	(0.110)	0.928	(0.110)	1.927	(0.198)	5.984	(0.630)	5.410	(0.424)	6.408	(0.221)	5.356	(2.899)
V272 MEA	-0.064	(0.049)	-0.062	(0.045)	-0.064	(0.049)	-0.062	(0.051)	-0.062	(0.046)	0.018	(0.074)	0.019	(0.073)	0.017	(0.070)	0.012	(0.070)
ln GNP per capita											-0.078	(0.075)	-0.078	(0.075)	-0.083	(0.065)	-0.074	(0.065)
french											-0.000	(0.058)	-0.006	(0.050)	-0.003	(0.050)	-0.013	(0.050)
german											-0.039	(0.075)	-0.046	(0.068)	-0.040	(0.068)	-0.045	(0.068)
scandinavian											0.049	(0.070)	0.060	(0.067)	0.102	(0.068)	0.075	(0.070)
government left/center 1928-1995											0.065	(0.085)	0.060	(0.085)	0.123	(0.123)	0.075	(0.070)
government left/center 1975-1995											-0.000	(0.169)	-0.006	(0.169)	-0.014	(0.221)	-0.014	(0.221)
union density																		
bo			4.018	(0.146)					4.001	(0.228)			0.557	(0.087)	1.092	(0.301)	1.176	(2.959)
referc			-0.014	(0.037)			-0.014	(0.037)					-0.025	(0.045)	-0.025	(0.024)	-0.022	(0.031)
$\sigma_\epsilon^2 + \sigma_\theta^2 + 2\sigma_{\epsilon,\theta}$			-0.004	(0.001)			-0.004	(0.001)					0.003	(0.001)	0.003	(0.002)	0.003	(0.001)
$\sigma_\epsilon^2 + \sigma_\theta^2 - 2\sigma_{\epsilon,\theta}$			0.003	(0.187)			0.003	(0.187)					-0.251	(0.267)	0.312	(0.206)	0.049	(0.281)
σ_ϵ^2			0.001	(0.187)			0.001	(0.187)					0.006	(0.023)	-0.002	(0.042)	-0.000	(12.745)
see	0.066	(0.068)	19.401	(0.187)	0.066	(0.068)	19.401	(0.187)	0.071	(0.079)	20.475	(0.071)	20.475	(0.071)	20.494	(0.071)	20.558	(0.071)
log-likelihood	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
n	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14

^aThe countries considered in this analysis are the following: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, Spain, Sweden, United Kingdom.

4.7 *Social security benefits (index_socseca)*

Turning to social security benefits we use as preference measure aggregated responses to the following question from the European Values Study Group and Association (2006) of 1999:

In order to be considered “just”, what should a society provide? Please tell me for each statement if it is important or unimportant to you. 1 means very important, 5 means not important at all: Guaranteeing that basic needs are met for all, in terms of food, housing, clothes, education, health.(European Values Study Group and Association, 2006)

Clearly we would expect a positive relationship between the average response per country and the extent of social security benefits provided in a country. Table 8 supports our intuition, since the effect of this variable is positive in almost all specification, but fails to reach statistical significance. When we consider the effect of referendums, we only find vanishingly small effects combined with rather large standard errors. However, with the exception of the first and fourth switching regression model, we always find negative coefficients, as expected by theory.

For the control variables that we take from Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004) we find no significant effect except for union density. This is contrary to Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer’s (2004, 1367) results, who report strong effects for legal origin and GDP per capita, though the positive effect of union density also appears in their results (Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer, 2004, 1369).

4.8 *Maternity leave (maternityn2)*

For our final policy to consider, namely maternity leave, we have a series of different measures, but only one preference indicator. This indicator is based on the following question asked in the International Social Survey Program (ISSP) (2004) of 2002.

To what extent do you agree or disagree? .Women should receive paid maternity leave when they have a baby (1 Strongly agree - 5 Strongly disagree) (International Social Survey Program (ISSP), 2004)

As indicators for our policy outcome we have a measure from Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004) corresponding to the “amount of time off with 100% of salary” and which varies between 0 and 12. From the Mutual Information System on Social Protection in the Member States of the EU (MIS-SOC) (1999) we have two alternative measures for a subset of countries, namely the number of days of maternity leave and the financial benefits in terms of “time \times money.” In addition to these three “hard measures” we also analyzed with the help of the Wordscores automated text-analysis shorter and longer excerpts from the laws specifying the rules for maternity leave.²⁹ These scores should give us potentially more fine-grained variation than the three other measures.³⁰ The Wordscores technique, developed by Laver, Benoit and Garry (2003), allows for computerized text analyses. The Wordscores software analyzes texts on the basis of other, preselected (by the researcher) texts, and estimates how different or similar the texts are to the preselected texts on the basis of the relative frequency of words appearing in the texts. Typically, one would preselect two texts known or thought to be ‘extreme’ in some way, say the manifesto of a very right-wing party and one of a very left-wing party, and assign if possible scores stemming from other sources (e.g., values from expert surveys). The analysis would subsequently give other manifestoes values in relation to these scores, depending on how similar/different they are to the preselected texts. For our analysis we used the laws from Switzerland and Sweden as reference texts and gave them the two most extreme scores, with Switzerland a low score and Sweden a high one.

Consequently, we would expect that our preference measure exerts a negative influence on all these policy indicators. This pattern is also clearly visible

²⁹These laws were collected from Blanpain (1986-).

³⁰The results of these text-analysis are reported in the appendix.

in the tables 9 (time off with 100 % of salary), 10 (wordscores short excerpt), 11 (wordscores long excerpt), 12 (number of days maternity leave), and 13 (time of \times money). In many of these analyses we also find the expected negative relationship between the presence of referendum institutions and the “distance” to the voters’ preferred policy. A major exception to this appears in table 12 which reports the results for the number of days maternity leave. For this policy measure our results suggest that in countries with referendums the number of days of maternity leave is further away from what the voters want than in countries not allowing for referendums.

A possible explanation to this disappointing result is the case of Switzerland, with the lowest possible number of maternity leave, namely 0. In addition, Switzerland has well developed referendum institutions and regarding maternity leave Swiss voters are also conservative: only three countries, namely Australia, Netherlands, and New Zealand have higher (more conservative) scores while the remaining 20 all countries have lower scores on our preference measure. Interestingly enough, however, Switzerland introduced already in 1945 in a referendum a provision mandating the government to create paid maternity leave into the Swiss constitution in 1945. But only on July 1, 2005 (after a total of four direct-democratic votes, the first three of which failed) was this aspiration concretely turned into policy (14 weeks paid leave with 80 per cent of one’s salary, capped at SFr.172 per day). In other words, our measure of number of days of maternity leave reflects the situation before 2005, when the situation for employed women having children was notably grim, by West European standards: it was up to each employer to determine whether and how much to pay out in case an employee had a child. The law simply stated that a woman could not be forced to work for the eight weeks immediately following childbirth, but her employer was not forced to pay out a salary for the entire eight weeks. But even though omitting Switzerland from the analysis reduces the effect of the referendum indicator in the model reported in table 12, the effect in the switching regression models remains positive.³¹

³¹Given that this suggests additional robustness tests, we refrain from reporting these preliminary results.

Table 9: Explaining maternity leave policy (maternity 2)^a

variable	b	b	b	b	b	b	b	b	b	b	b	b	b	b
	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)
preferences	-2.108	-2.062	-2.062	-2.177	-2.111	-2.111	-0.108	-0.942	-0.408	-0.825	-0.783			
(v27 mean)	(1.128)	(1.143)	(1.016)	(1.161)	(1.183)	(1.044)	(1.391)	(0.500)	(0.455)	(0.414)	(0.377)			
ln GNP per capita							-1.138	-2.936	-0.197	-3.370	-2.787			
legal origin, social							(1.709)	(0.769)	(0.580)	(0.730)	(0.604)			
french							1.986	1.757	0.792	1.993	1.888			
german							(3.237)	(1.216)	(1.183)	(1.161)	(1.057)			
scandinavian							1.692	2.869	1.976	3.026	3.067			
government left/center							(1.388)	(0.589)	(0.463)	(0.458)	(0.429)			
1928-1995							3.320	3.880	2.961	10.320	9.460			
government left/center							(1.681)	(1.023)	(0.582)	(0.987)	(0.866)			
1975-1995							1.982	2.271	2.468	3.226	1.161			
union density							(1.515)	(0.675)	(0.589)	(0.711)	(0.827)			
constant	6.905	7.128	8.016	7.062	7.209	8.136	13.378	34.575	11.960	39.027	2.655			
referc	(1.931)	(1.978)	(0.864)	(2.001)	(2.045)	(0.884)	(17.226)	(7.319)	(5.589)	(7.050)	(1.238)			
constant							(0.830)	(0.354)	(0.341)	(0.340)	(0.342)			
$\sigma_\epsilon^2 + \sigma_\theta^2 + 2\sigma_{\epsilon,\theta}$							4.112	4.074	3.006	3.157	3.193			
$\sigma_\epsilon^2 + \sigma_\theta^2 - 2\sigma_{\epsilon,\theta}$							(0.864)	(0.828)	(0.363)	(0.312)	(0.309)			
σ_ϵ^2							4.335	4.507	5.542	0.442	0.366			
see							(1.209)	(1.260)	(5.439)	(0.177)	(0.143)			
log-likelihood	2.201	2.226	-51.656	2.243	2.277	-49.951	0.223	-26.643	-24.599	-25.456	-24.877			
n			24	23	23	23	23	23	23	23	23			

^aThe countries covered in this analysis are the following: Australia Austria, Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, Israel, Latvia, Netherlands, New Zealand, Norway, Poland, Portugal, Russian Federation, Slovak Republic, (Slovenia), Spain, Sweden, Switzerland, United Kingdom, United States.

Table 10: Explaining maternity leave policy (ws0)^a

variable	b	b	b	b	b	b	b	b	b
	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)
preferences	1.666	2.484	2.400	1.371	3.766	2.844	3.763		
(v27 mean)	(1.883)	(2.304)	(3.854)	(1.729)	(2.015)	(2.317)	(2.374)		
ln GNP per capita			-0.404	-2.28	-1.289	-2.482	-2.116		
			(1.601)	(1.038)	(1.128)	(1.186)	(1.099)		
legal origin, social			-3.543	9.303	1.817	-1.417	-2.076		
			(2.723)	(1.852)	(2.917)	(2.206)	(1.980)		
french			-0.407	-0.244	0.953	1.077	1.055		
			(1.188)	(3.063)	(0.841)	(0.908)	(1.125)		
german			-0.002	-0.026	0.419	0.725	-0.096		
			(1.351)	(1.443)	(0.814)	(1.044)	(0.841)		
scandinavian			1.91	14.436	5.287	3.817	1.734		
			(1.256)	(1.522)	(1.466)	(1.331)	(1.110)		
government left/center									
1928-1995									
government left/center									
1975-1995									
union density									
constant	7.997	9.005	27.113	24.469	16.017	12.572	2.697		
	(2.992)	(3.437)	(17.941)	(9.646)	(12.011)	(6.136)	(1.714)		
referc			2.584	-0.668	-0.419	-0.156	0.542		
			(0.871)	(0.445)	(0.538)	(0.665)	(0.600)		
constant			14.587	6.51	1.53	17.937	1.138		
			(1.488)	(1.426)	(0.663)	(4.878)	(0.538)		
$\sigma_\epsilon^2 + 2\sigma_\theta + 2\sigma_{\epsilon,\theta}$			1.465	-0.777	0.618	0.696	-0.001		
			(0.564)	(0.363)	(0.212)	(0.269)	(0.235)		
$\sigma_\epsilon^2 + \sigma_\theta^2 - 2\sigma_{\epsilon,\theta}$			0.674	-0.7	0.008	-0.171	0.711		
			(0.19)	(0.393)	(0.205)	(0.104)	(0.261)		
σ_ϵ^2			-0.059	0	0	-0.076	0.000		
			(0.19)	(0.168)	(0)	(-0.017)	(0.000)		
see	1.332	1.366	1.24	1.387					
log-likelihood			-22.539	-17.787	-16.49	-17.328	-17.479		
n	14	14	14	14	14	14	14		

^aThe countries covered in this analysis are the following: Austria, Belgium, Czech Republic Denmark, Finland, Germany, Greece, Norway, Poland, Portugal, Spain, Sweden, Switzerland, and United Kingdom.

Table 12: Explaining maternity leave policy (days)^a

variable	b	(s.e.)	b	(s.e.)	b	(s.e.)	b	(s.e.)	b	(s.e.)	b	(s.e.)	b	(s.e.)
preferences (√27 mean)	-57.566 (95.741)	-56.847 (97.645)	-54.284 (28.522)	-68.813 (99.304)	-65.999 (102.172)	-54.920 (32.022)	65.122 (113.922)	21.452 (37.336)	20.052 (36.336)	22.292 (17.818)	22.292 (17.818)	22.292 (17.818)	48.310 (49.240)	48.310 (49.240)
ln GNP per capita							-15.320 (79.274)	-68.471 (31.275)	-53.931 (41.452)	-20.304 (17.126)	-20.304 (17.126)	-20.304 (17.126)	-60.846 (43.096)	-60.846 (43.096)
legal origin, social							-33.180 (154.065)	-104.800 (180.355)	-83.767 (104.226)	-108.690 (33.345)	-108.690 (33.345)	-108.690 (33.345)	-39.049 (66.604)	-39.049 (66.604)
french							-41.525 (73.802)	-59.767 (79.979)	-65.000 (27.657)	-62.397 (13.753)	-62.397 (13.753)	-62.397 (13.753)	-95.517 (51.337)	-95.517 (51.337)
german							-76.932 (85.560)	-50.997 (94.059)	-46.421 (29.246)	-45.050 (30.487)	-45.050 (30.487)	-45.050 (30.487)	-163.666 (49.443)	-163.666 (49.443)
scandinavian							151.577 (79.833)	183.256 (94.282)	67.622 (34.377)	74.485 (16.303)	74.485 (16.303)	74.485 (16.303)	100.972 (58.315)	100.972 (58.315)
government left/center 1928-1995														
government left/center 1975-1995														
union density														
constant	251.531 (155.740)	266.585 (160.673)	334.665 (50.746)	273.579 (162.749)	281.240 (167.960)	335.817 (55.016)	745.699 (959.543)	812.876 (279.572)	767.522 (375.389)	384.002 (156.241)	384.002 (156.241)	384.002 (156.241)	92.663 (72.638)	92.663 (72.638)
refere							-32.416 (52.299)	46.041 (17.129)	45.810 (18.869)	74.140 (17.128)	74.140 (17.128)	74.140 (17.128)	63.024 (21.536)	63.024 (21.536)
constant							98.176 (21.437)	98.176 (22.159)	98.176 (22.159)	68.703 (17.440)	68.703 (17.440)	68.703 (17.440)	53.649 (18.122)	53.649 (18.122)
$\sigma_c^2 + \sigma_\theta^2 + 2\sigma_{\epsilon,\theta}$							5376.124 (4503.026)	5376.124 (4503.026)	5396.767 (4553.474)	1151.043 (1203.188)	1151.043 (1203.188)	1151.043 (1203.188)	1468.878 (2719.725)	1468.878 (2719.725)
$\sigma_c^2 + \sigma_\theta^2 - 2\sigma_{\epsilon,\theta}$							1164.132 (369.714)	1164.132 (369.714)	1244.899 (494.084)	736.795 (253.016)	736.795 (253.016)	736.795 (253.016)	876.158 (420.313)	876.158 (420.313)
σ_c^2							0.002 (0.009)	0.002 (0.009)	0.000 (0.103)	0.000 (0.108)	0.000 (0.108)	0.000 (0.108)	0.000 (0.110)	0.000 (0.110)
see	108.780	110.936		110.933	113.939		84.731	89.193		-80.527	-80.527	-80.527	-82.489	-82.489
log-likelihood	18	18	18	17	17	17	17	17	17	17	17	17	17	17
n														

^aThe countries covered in this analysis are the following: Austria, Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, Latvia, Netherlands, Norway, Poland, Portugal, (Slovenia), Spain, Sweden, Switzerland, and United Kingdom.

5 Conclusion

What conclusions may be drawn in light of the preceding analyses? Our sense is that although the results in general are not contrary to our hypothesis that direct-democratic institutions improve the fit between policy output and public preferences, they could also have been stronger in certain places.

First of all, a difference in performance for our referendum variable across different policy areas is notable. For instance, we found relatively “good” results with regard to old age, disability and death benefits (section 4.2) and less encouraging ones for labor union power (section 4.1). Developing a theoretical explanation to these variations is one aspect of future work on this paper, as is the possibility that the explanation to these variations has to do with the data rather than anything else. Concerning the data, the ‘fit’ between policy output variable and public opinion variable is one issue, as is the quality of these two types of indicators per se. To continue on a data theme, the procedure of estimating several different models for each policy area yields the result that variables that were not significant in one model might be so in another, with the upshot that one has to choose which model to believe. Our choice is clearly the switching regressions, for reason explained earlier in the paper (section 4). However, not even this model always shows the expected effect, that is, that referendums institutions influence policy output, and that our measures of public opinion influence policy output in particular ways (either positively or negatively, depending from case to case on how the specific variables are constructed).

Secondly, we have relied on public opinion data as preference measures, but some the questions were quite loosely related to the policies studied. Consequently, better preference measures or data on policy outcomes for which we have more closely corresponding survey questions could improve our empirical analyses. Relatedly, we could also assess whether our decision to use the average instead of the median response affects our results.

A third point concerns our referendum indicator. Since it simply codes whether a country has particular types of institutions, it might be that referendums cannot be used in a particular country for a particular policy area. This calls for a more fine-grained referendum indicator, which should be policy specific. Related to this is the fact that in some countries referendums have been available already for a long time (e.g. Switzerland) while other countries have in-

troduced provisions in their constitution only recently. It is likely that the effect of referendums depends on this element.³² When considering the timing of the introduction of provisions allowing for referendums very naturally the question of endogeneity appears. More precisely, we need to assess whether these institutions were introduced to achieve certain policy effects. If this is the case our estimates of the causal effect of referendums reported in this paper would be obviously biased.

In conclusion, thus, we consider the results presented in this paper sufficiently encouraging to merit further analysis. As this section has indicated, there are several different paths to pursue regarding the theoretical development (why might the expected effects occur in some policy areas but not in others) as well as the related data adjustments regarding key variables.

³²We believe, however, that the frequency of referendum use, once controlling for the ease with which referendums can be triggered and the length of time since they can be used, should not affect the policy effects. Such effects would be very difficult to bring into synch with the theoretical models on which our analysis relies.

Appendix

Table 14 reports the results of our text analysis according to Wordscores (Laver, Benoit and Garry, 2003) of laws regulating maternity leave as taken from Blanpain (1986-). In table 15 we list the whole set of countries for which we were able to find some information on policy preferences from surveys and policy outcomes. In addition it contains the information on the available referendum institutions according to Hug and Tsebelis (2002). In table 16 we give the information on the preference measures we generated by aggregating individual responses to survey questions to the national level.³³ Given that all other variables stem from Botero, Djankov, Porta, Lopez-De-Silanes and Shleifer (2004), who provided detailed descriptive statistics, we refrain from providing such details here.

Table 14: Wordscores results based on excerpts of maternity leave policies

country	short excerpts (ws0)	long excerpts (ws1)
	score (s.e.) total words	score (s.e.) total words
	total words scored	total words scored
Austria	5.469 (0.277) 255 142	5.175 (0.16) 641 449
Belgium	5.4662 (0.202) 482 304	6.214 (0.086) 1849 1286
Bulgaria	5.512 (0.28) 255 166	5.317 (0.127) 983 701
Czech Republic	4.926 (0.211) 528 336	5.162 (0.101) 1715 1219
Denmark	5.586 (0.141) 858 544	5.819 (0.08) 2108 1512
Fed Rep Germany	5.628 (0.338)	5.484 (0.193)

³³In doing this we use where appropriate the weights provided in the datasets and where necessary create our own weights to combine datasets from national subparts (e.g., East and West Germany, Northern Ireland and United Kingdom etc.)

<i>continued</i>	short excerpts (ws0)	long excerpts (ws1)
	score	score
	(s.e.)	(s.e.)
country	total words	total words
	total words scored	total words scored
	195	436
	112	307
Finland	5.485 (0.185)	5.927 (0.115)
	605	1102
	374	804
France	5.416 (0.212)	5.788 (0.107)
	412	1222
	272	866
Great Britain	5.023 (0.213)	5.271 (0.182)
	491	545
	263	344
Greece	4.536 (0.19)	4.96 (0.153)
	544	690
	319	465
Hungary	5.444 (0.292)	5.356 (0.099)
	250	1667
	163	1145
Ireland	5.633 (0.252)	6.133 (0.128)
	400	965
	239	628
Italy	5.165 (0.231)	5.587 (0.178)
	377	520
	225	358
Poland	5.65 (0.195)	5.579 (0.107)
	540	1411
	331	987
Portugal	5.472 (0.371)	5.416 (0.202)
	160	375
	102	261
Slovakia	5.018 (0.286)	5.4951 (0.179)
	267	510
	169	366
Spain	5.431 (0.326)	5.501 (0.259)
	165	214
	116	170
Sweden	8.301	7.865

<i>continued</i>	short excerpts (ws0)	long excerpts (ws1)
	score	score
	(s.e.)	(s.e.)
	total words	total words
country	total words scored	total words scored
	(0.156)	(0.089)
	254	834
	254	834
Switzerland	1.699	2.135
	(0.167)	(0.115)
	179	431
	179	431

Table 16: Preference measures

	v33mniss	schevts	e037mnev	v21mniss	v41mniss	v272_mea
	mean	mean	mean	mean	mean	mean
	(s.d.)	(s.d.)	(s.d.)	(s.d.)	(s.d.)	(s.d.)
Australia	2.462 (0.916)	.	.	2.484 (0.989)	2.304 (0.693)	2.755 (1.260)
Austria	.	3.453 (1.153)	4.005 (2.567)	.	.	1.819 (1.024)
Belgium	.	3.298 (1.206)	5.126 (2.694)	.	.	.
Canada	2.269 (0.903)	.	4.863 (2.562)	2.588 (1.045)	2.271 (0.831)	.
Croatia	.	.	5.193 (3.173)	.	.	.
Czech Republic	3.664 (0.875)	3.712 (1.076)	4.895 (2.565)	2.696 (1.021)	2.646 (0.913)	1.438 (0.805)
Denmark	.	3.915 (0.856)	4.391 (2.148)	.	.	1.405 (0.909)
Finland	.	3.793 (0.896)	4.573 (2.456)	.	.	1.455 (0.700)
France	2.898 (1.095)	.	3.991 (2.511)	2.191 (1.124)	1.904 (0.827)	1.630 (0.922)
Germany	3.000 (0.890)	4.014 (0.853)	4.230 (2.484)	2.510 (1.137)	1.953 (0.700)	1.698 (0.770)
Greece	.	4.048 (1.053)	5.627 (2.581)	.	.	.
Hungary	3.904 (0.903)	.	6.087 (2.839)	2.577 (1.049)	2.300 (0.838)	1.215 (0.486)
Ireland	2.682 (0.926)	.	4.540 (2.540)	2.480 (0.988)	1.700 (0.668)	1.860 (0.645)
Israel	2.860 (0.990)	.	7.466 (1.991)	2.320 (1.170)	2.200 (1.070)	1.330 (0.566)
Italy	2.450 (1.261)	.	5.628 (2.675)	2.499 (1.074)	2.039 (0.910)	.
Latvia	4.285 (0.816)	.	6.675 (2.665)	2.737 (1.144)	1.831 (0.842)	1.300 (0.498)
Lithuania	.	.	5.418	.	.	.

<i>continued</i>	v33mniss	scbevts	e037mnev	v21mniss	v41mniss	v272_mea
	mean	mean	mean	mean	mean	mean
	(s.d.)	(s.d.)	(s.d.)	(s.d.)	(s.d.)	(s.d.)
Netherlands	.	.	(2.830)	.	.	.
	.	.	4.675	.	.	2.405
	.	.	(2.111)	.	.	(1.085)
New Zealand	3.088	.	.	2.437	2.317	2.612
	(0.833)	.	.	(0.939)	(0.856)	(1.293)
Norway	2.830	2.991	.	2.643	1.676	1.687
	(0.827)	(1.035)	.	(0.927)	(0.640)	(0.741)
Poland	2.800	2.755	5.729	2.682	1.923	1.674
	(0.971)	(1.064)	(2.617)	(1.069)	(0.780)	(0.673)
Portugal	.	3.822	4.828	.	.	1.343
	.	(1.117)	(2.727)	.	.	(0.533)
Romania	.	.	4.820	.	.	.
	.	.	(3.234)	.	.	.
Russian Federation	4.390	.	5.780	2.778	1.859	. 1.279
	(0.836)	.	(2.905)	(1.181)	(0.848)	(0.470)
Slovak Republic	.	.	6.371	.	.	. 1.354
	.	.	(2.611)	.	.	(0.748)
Slovenia	3.860	2.540	6.536	2.379	1.744	1.403
	(0.932)	(1.049)	(2.655)	(1.064)	(0.781)	(0.567)
Spain	2.992	3.744	6.379	2.819	1.482	1.540
	(1.058)	(1.041)	(2.505)	(1.108)	(0.652)	(0.626)
Sweden	2.914	4.379	4.244	2.627	1.735	1.606
	(1.044)	(0.641)	(2.227)	(0.985)	(0.694)	(0.737)
Switzerland	3.383	3.614	.	2.543	2.237	1.863
	(0.787)	(1.071)	.	(1.039)	(0.662)	(0.786)
Turkey	.	.	6.315	.	.	.
	.	.	(3.267)	.	.	.
Ukraine	.	.	6.126	.	.	.
	.	.	(2.998)	.	.	.
United Kingdom	3.014	3.794	4.521	2.667	1.991	1.542
	(0.871)	(0.885)	(2.467)	(0.877)	(0.837)	(0.672)
United States	2.575	.	4.312	2.551	2.587	1.737
	(0.995)	.	(2.697)	(1.021)	(0.940)	(0.923)

Table 15: List of countries and referendum institutions^a

country	required	vp referendum	popular veto	pop initiative
Australia	1	0	0	0
Austria	1	1	1	0
Belgium	0	0	0	0
Canada	0	0	0	0
Croatia	1	1	1	0
Czech Republic	0	0	0	0
Denmark	1	0	1	0
Finland	0	0	0	0
France	0	1	0	0
Germany	0	0	0	0
Greece	0	1	0	0
Hungary	0	1	0	0
Ireland	1	0	1	0
Israel	0	0	0	0
Italy	0	0	1	0
Latvia	1	0	1	1
Lithuania	1	1	1	1
Netherlands	0	0	0	0
New Zealand	0	0	0	0
Norway	0	0	0	0
Poland	0	1	1	0
Portugal	0	0	0	0
Romania	1	1	0	0
Russian Federation	0	1	0	0
Slovak Republic	1	1	0	0
Slovenia	0	1	1	1
Spain	1	0	0	0
Sweden	0	0	1	0
Switzerland	1	1	1	1
Turkey	0	0	1	0
Ukraine	1	1	0	1
United Kingdom	0	0	0	0
United States	0	0	0	0

^aSource: Hug and Tsebelis (2002). While the Czech constitution provides for a required referendum in Article 62, it only applies to the decision to accede to the European Union.

References

- Achen, Christopher H. 1977. "Measuring Representation: Perils of the Correlation Coefficient." *American Journal of Political Science* 21(4):805–815.
- Armingeon, Klaus, Fabio Bertozzi and Giuliano Bonoli. 2004. "Swiss Worlds of Welfare." *West European Politics* 27(1):20–44.
- Bartels, Larry M. 1991. "Constituency Opinion and Congressional Policy Making: The Reagan Defense Buildup." *American Political Science Review* 85(2 June):457–474.
- Besley, Timothy and Anne Case. 2003. "Political Institutions and Policy Choices: Evidence from the United States." *Journal of Economic Literature* 41(1):7–74.
- Blanpain, Roger, ed. 1986-. *International Encyclopaedia for Labour Law and Industrial Relations. Legislations*. Kluwer.
- Bonoli, Giuliano. 2003. "Social Policy Through Labor Markets: Understanding National Differences in the Provision of Economic Security to Wage Earners." *Comparative Political Studies* 36(9):1007–1030.
- Botero, Juan, Simeon Djankov, Rafael La Porta, Florencio C. Lopez-De-Silanes and Andrei Shleifer. 2004. "The Regulation of Labor." *The Quarterly Journal of Economics* 119(4):1339–1382.
- Broder, David S. 2000. *Democracy Derailed. Initiative Campaigns and the Power of Money*. New York: James H. Silberman Book/Harcourt.
- Butler, David and Austin Ranney. 1994a. Practice. In *Referendums Around the World*, ed. David Butler and Austin Ranney. London: MacMillan pp. 1–10.
- Butler, David and Austin Ranney, eds. 1994b. *Referendums Around the World*. London: MacMillan.
- Camobreco, John F. 1998. "Preferences, Fiscal Policies, and the Initiative Process." *Journal of Politics* 60(AUG 3):819–829.
- Christensen, Thomas. 2004. "EUROBAROMETER 56.1: SOCIAL EXCLUSION AND MODERNIZATION OF PENSION SYSTEMS, SEPTEMBER-OCTOBER 2001 [Computer File]. ICPSR03475-V2." Brussels: European Opinion Research Group EEIG [producer], 2001. Cologne, Germany: Zentralarchiv für Empirische Sozialforschung/Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributors], 2004.
- Christin, Thomas and Simon Hug. 2002. "Referendums and Citizen Support for European Integration." *Comparative Political Studies* 35(5):586–618.
- Cronin, Thomas E. 1989. *Direct Democracy. The Politics of Initiative, Referendum and Recall*. Cambridge: Harvard University Press.
- Ebbinghaus, Bernhard and Philip Manow, eds. 2001. *Comparing Welfare Capitalism Social Policy and Political Economy in Europe, Japan and the USA*. London / New York: Routledge.

- Esping-Andersen, Gosta. 1990. *The Three Worlds of Welfare Capitalism*. Cambridge: Polity Press.
- European Values Study Group and World Values Survey Association. 2006. "EUROPEAN AND WORLD VALUES SURVEYS FOUR-WAVE INTEGRATED DATA FILE, 1981-2004, V.20060423, 2006. Aggregate File." Producers: Análisis Sociológicos Económicos y Políticos (ASEP) and JD Systems (JDS), Madrid, Spain/Tilburg University, Tilburg, The Netherlands. Data Files Suppliers: Analisis Sociologicos Economicos y Politicos (ASEP) and JD Systems (JDS), Madrid, Spain/Tillburg University, Tillburg, The Netherlands/ Zentralarchiv fur Empirische Sozialforschung (ZA), Cologne, Germany:) Aggregate File Distributors: Análisis Sociológicos Económicos y Políticos (ASEP) and JD Systems (JDS), Madrid, Spain/Tillburg University, Tilburg, The Netherlands/Zentralarchiv fur Empirische Sozialforschung (ZA) Cologne, Germany.
- Feld, Lars P. and John G. Matsusaka. 2003. "Budget Referendums and Government Spending: Evidence from Swiss Cantons." *Journal of Public Economics* 87:2703–2724.
- Feld, Lars P., Justina A.V. Fischer and Gebhard Kirchgässner. 2003. "The Effect of Direct Democracy on Income Redistribution: Evidence for Switzerland." Prepared for presentation at the annual meeting of the Swiss Political Science Association, Bern November 2003.
- Fischer, Justina A.V. 2005. *The Impact of Direct Democracy on Society*. Bamberg: Difo-Druck GmbH.
- Funk, Patricia and Christina Gathmann. 2006. "Estimating the Effect of Direct Democracy on Policy Outcomes: Preferences Matter!" Paper presented at the annual meeting of the Midwest Political Science Association, Palmer House Hilton, Chicago, Illinois.
- Gallagher, Michael and Pier Vincenzo Uleri, eds. 1996. *The Referendum Experience in Europe*. London: MacMillan.
- Gerber, Elisabeth R. 1996. "Legislative Response to the Threat of Popular Initiatives." *American Journal of Political Science* 40(1):99–128.
- Gerber, Elisabeth R. 1999. *The Populist Paradox: Interest Group Influence and the Promise of Direct Legislation*. Princeton: Princeton University Press.
- Gerber, Elisabeth R. and Simon Hug. 1999. *Minority Rights and Direct Legislation. Theory, Methods, and Evidence*. La Jolla: Department of Political Science, University of California, San Diego.
- Hamon, Francis. 1995. *Le référendum. Etude comparative*. Paris: Librairie générale de droit et de jurisprudence.
- Haskell, John. 2001. *Direct Democracy or Representative Government? Dispelling the Populist Myth*. Boulder: Westview.

- Huber, Evelyne, Charles Ragin and John D. Stephens. 1993. "Social Democracy, Christian Democracy, Constitutional Structure, and the Welfare State." *American Journal of Sociology* 99(3):711–749.
- Huber, Evelyne and John D. Stephens. 2001. *Development and Crisis of the Welfare State: Parties and Policies in Global Markets*. Chicago: University of Chicago Press.
- Hug, Simon. 2001. "Policy Consequences of Direct Legislation in the States. Theory, Empirical Models and Evidence." Paper prepared for presentation at the Annual Meeting of the Public Choice Society, San Antonio, March 9-12.
- Hug, Simon. 2002. *Voices of Europe. Citizens, Referendums and European Integration*. Lanham, Md.: Rowman & Littlefield.
- Hug, Simon. 2004. "Occurrence and Policy Consequences of Referendums. A Theoretical Model and Empirical Evidence." *Journal of Theoretical Politics* 16(3):321–356.
- Hug, Simon and George Tsebelis. 2002. "Veto Players and Referendums around the World." *Journal of Theoretical Politics* 14(4 (October)):465–516.
- International Social Survey Program (ISSP). 1999. "INTERNATIONAL SOCIAL SURVEY PROGRAM: ROLE OF GOVERNMENT III, 1996 [Computer File]." Cologne, Germany: Zentralarchiv fuer Empirische Sozialforschung [producer], 1999. Cologne, Germany: Zentralarchiv fuer Empirische Sozialforschung/Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributors], 1999.
- International Social Survey Program (ISSP). 2004. "INTERNATIONAL SOCIAL SURVEY PROGRAM: FAMILY AND CHANGING GENDER ROLES III, 2002 [Computer File]. ICPSR Version." Cologne, Germany: Zentralarchiv fuer Empirische Sozialforschung [producer], 2004. Cologne, Germany: Zentralarchiv fuer Empirische Sozialforschung/Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributors], 2004.
- Kessler, Anke. 2005. "Representative versus Direct Democracy: The Role of Informational Asymmetries." *Public Choice* 122(1-2):9.38.
- Key, V. O. Jr. and Winston W. Crouch. 1939. *The Initiative and the Referendum in California*. Berkeley: University of California Press.
- Kiewiet, D. Roderick and Kristin Szakaly. 1996. "Constitutional Limitations on Borrowing: An Analysis of State Bonded Indebtedness." *Journal of Law, Economics and Organization* 12(1):62–97.
- Kirchgässner, Gebhard, Lars P. Feld and Marcel R. Savioz. 1999. *Die direkte Demokratie der Schweiz: Modern, erfolgreich, entwicklungs- und exportfähig*. Basel: Helbing und Lichtenhahn.
- Kleinewefers, Henner. 1997. Die direkten Volksrechte in der Schweiz aus ökonomischer Sicht. In *Wieviel direkte Demokratie verträgt die Schweiz?*, ed. Silvio Borner and Hans Rentsch. Chur: Verlag Rüegger pp. 61–92.

- Korpi, Walter. 1983. *The Democratic Class Struggle*. London: Routledge & Kegan Paul.
- Lascher, Edward L., Michael G. Hagen and Steven A. Rochlin. 1996. "Gun Behind the Door - Ballot Initiatives, State Policies and Public Opinion." *Journal of Politics* 58(3):760–775.
- Laver, Michael, Kenneth Benoit and John Garry. 2003. "Extracting Policy Positions from Political Texts Using Words as Data." *American Political Science Review* 97(2):311–331.
- Lupia, Arthur and John G. Matsusaka. 2004. "Direct Democracy: New Approaches to Old Questions." *Annual Review of Political Science* 7:463–482.
- Matsusaka, John G. 2001. "Problems with a Methodology Used to Test Whether Policy Is More or Less Responsive to Public Opinion in States with Voter Initiatives." *Journal of Politics* 63(4):1250–1256.
- Matsusaka, John G. 2004. *For the Many or the Few. How the Initiative Process Changes American Government*. Chicago: Chicago University Press.
- Matsusaka, John G. and Nolan M. McCarty. 2001. "Political Resource Allocation: The Benefits and Costs of Voter Initiatives." *Journal of Law, Economics, & Organization* 17(2 October):413–448.
- Möckli, Silvano. 1994. *Direkte Demokratie. Ein internationaler Vergleich*. Bern: Haupt.
- Moser, Peter. 1996. "Why is Swiss Politics so Stable?" *Zeitschrift für Volkswirtschaft und Statistik* 132(1):31–60.
- Mutual Information System on Social Protection in the Member States of the EU (MISSOC). 1999. "Mutual Information System on Social Protection in the Member States of the EU." http://ec.europa.eu/employment_social/soc-prot/missoc99/english/f_tab.htm.
- Papadopoulos, Yannis. 1998. *Démocratie directe*. Paris: Economica.
- Pommerehne, Werner W. 1978. "Institutional Approaches to Public Expenditure: Empirical Evidence from Swiss Municipalities." *Journal of Public Economics* 9:255–280.
- Qvortrup, Mads. 2002. *A Comparative Study of Referendums: Government by the People*. Manchester: Manchester University Press.
- Rappard, William E. 1912. "The Initiative, Referendum and Recall in Switzerland." *American Political Science Review* 6(3):345–366.
- Sabato, Larry J., Howard R. Ernst and Bruce A. Larson, eds. 2001. *Dangerous Democracy?: The Battle over Ballot Initiatives in America*. Lanham: Rowman & Littlefield.
- Schneider, Gerald and Patricia A. Weitsman. 1996. "The Punishment Trap: Integration Referendums As Popularity Contests." *Comparative Political Studies* 28(4):582–607.

- Schrag, Peter. 1998. *Paradise Lost: California's Experience, America's Future*. New York: New Press.
- Setälä, Maija. 1999. *Referendums and Democratic Government*. London: Macmillan.
- Shalev, Michael. 2001. The Politics of Elective Affinities. In *Comparing Welfare Capitalism Social Policy and Political Economy in Europe, Japan and the USA*, ed. Bernhard Ebbinghaus and Philip Manow. London / New York: Routledge.
- Smith, Daniel A. 1998. *Tax Crusaders and the Politics of Direct Democracy*. New York: Routledge.
- Stephens, John D. 1979. *The Transition from Capitalism to Socialism*. London: Macmillan.
- Steunenberg, Bernard. 1992. "Referendum, Initiative, and Veto Power." *Kyklos* 45(4):501–529.
- Suksi, Markku. 1993. *Bringing in the People: A Comparison of Constitutional Forms and Practices of the Referendum*. Dordrecht: Martinus Nijhoff.
- Van Kersbergen, Kees. 1995. *Social Capitalism*. London: Routledge.
- Vatter, Adrian and Christian Rüefli. 2003. "Do Political Factors Matter for Health Care Expenditure? A Comparative Study of Swiss Cantons." *Journal of Public Policy* 23(3):325–347.
- Walker, Mark Clarence. 2003. *The Strategic Use of Referendums*. New York: Palgrave.
- Waters, Dane M., ed. 2001. *The Battle Over Citizen Lawmaking*. Durham: Carolina Academic Press.
- Weixner, Bäbel Martina. 2006. "Direkte Demokratie in den Bundesländern." *Aus Politik und Zeitgeschichte* 10:18–24.