How minorities fare under referendums.

A cross-national study*

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Abstract
The way in which minorities and civil rights fare when referendums can be used has preoccupied scholars for a long time. Empirical studies, so far, have tried to deal with this research question at the subnational level by comparing either referendum or policy outcomes across subnational units. These units are, however, often constrained by the national level of government. Hence, to understand the full effect of referendums on minority policies and civil rights, cross-national comparisons are required. Relying on game-theoretic models we thus test the proposition that also the area of minority policies the effect of referendums depends on the voters’ preferences. We test this proposition with national-level information on preferences and institutions as well as policy outcomes in the area of minority policies. The set of countries used for the empirical analysis spans the whole globe.

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1. Introduction

How minorities fare in representative democracies that allow for referendums on particular policies has occupied scholars and politicians for some considerable time. Researchers have attempted to address this issue both from a theoretical perspective and also in empirical research. Conclusive results, both at the theoretical an empirical level, are, however, still elusive. Most empirical work focuses on the subnational level, mostly in the United States and Switzerland, or deals with a single country. Comparative work on this issue in a cross-contrary perspective is, however, largely absent.\(^1\)

The present paper wishes to address this research gap. Drawing on the insights from positive theoretical work, we propose hypotheses that we test on the basis of data dealing with various minority-related policies. While we find for several policies the expected effect, namely that institutional provisions bias policies towards the voters’ preferences, this result is not paramount. Further research needs to address the issue under what circumstances the expected effects appear, and when they fail to appear.

The paper proceeds as follows. In the next section we discuss briefly the theoretical debate, both from a normative and positive viewpoint, concerning minorities under referendums. As the positive theoretical work suggests particular problems in assessing the effects of referendums on minorities specifically and any policy outcome in general, we discuss these empirical problems in section three. In section four, we present the empirical strategies that we deploy to assess the effect of referendums on minorities cross-nationally. Section five, after introducing our data, presents our empirical results, while section six concludes by sketching out a research agenda.

2. Minorities and referendums in theory

Whether minorities might fare worse in representative democracies when referendums are possible has not only preoccupied empirically oriented researchers but also scholars working from a theoretical perspective.\(^2\) Theorists working from both a normative and a positive perspective have attempted to shed light on this important question of democratic theory.

At least since Barber (1984) has touted participatory democracy as a normative ideal\(^3\) interest in deliberative democracy related to referendums has increased (see for an

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\(^1\) See Blume, Müller and Voigt (2009 (forthcoming)) for one of the single exceptions.

\(^2\) This part draws heavily on Hug (2009).

\(^3\) In this context authors often also refer approvingly to Pateman’s (1970) work, without noting that this author has a very nuanced, at some instances critical, position regarding participatory democracy.
overview Chambers 2003). In several studies Bruno Frey with several co-authors (e.g. Frey and Kirchgässner 1993; Bohnet and Frey 1994; Frey 1996) argues that campaigns on referendums create conditions approaching those of a discursive ideal. Baumann & Kliemt (1993) criticize specifically Frey & Kirchgässner (1993) by arguing that especially also for Habermas (1992) real deliberation is most likely only possible in parliaments with repeated interactions among the protagonists. Even more critical is Chambers (2001) who argues that deliberation, also in the realm of referendum campaigns, is undermined if at the end of the process a majority decision looms (see also Sanders 1997).

Based on these normative elements it appears difficult to assess how referendums might affect the position of minorities in societies. If the deliberative element really were to strengthen in direct democratic decisions, then minorities should be better protected through direct democratic instruments than through the representative process. But given that already the premise of this claim is heavily disputed, normative political theory seems to be of little help for the question how minorities in contexts with direct democratic instruments might be treated. In the positive political theory, the problem of minority protection under direct democracy goes back at least to the ‘Federalist Papers’ by Hamilton, Jay und Madison (1787). They have argued that direct democratic decisions by majority rule might have a problematic effect on the rights of minorities, resulting in a majority deciding in its own interest, which might include the violation of the rights of a minority. More precisely, the “volonté générale“ does not always need to be equal to the opinion of the majority. Given that the protection of civil rights and minority rights is an important element of any democratic state, they can be better protected by a system of checks and balances than through direct legislation through the citizens.

3. Empirical problems of the study of direct democracy
The fears of such a tyranny of a majority have been reflected in a vast empirical literature dealing with the effect of direct democratic institutions on minority rights and civil rights. Minority issues have taken an important place in the study of the usage of direct democratic institutions and of their effect. The impact of direct democracy has been analysed namely for the rights of same-sex couples (Haider-Markel and Meier 1996; Gerber and Hug 2002; Donovan et al. 2008; Bowler et al. 2006; Donovan and Bowler 1998, 1997; Gamble 1997; Haider-Markel and Lindaman 2007; Nicholson-Crotty 2006; Matsusaka 2007), abortion rights (Bowler and Donovan 2004; Matsusaka 2007) or parental notification requirements for teenage abortions (Gerber 1996, 1999; Matsusaka 2007), “English-only” laws, prescribing English as the only language to be used for state
action in US states (Gamble 1997; Gerber and Hug 2002; Matsusaka 2007) or English as only language in schools (Bowler et al. 2006), affirmative action for racial or ethnic minorities (Gerber and Hug 2002; Bowler et al. 2006), recognition of religious minorities (Christmann 2008), citizenship rights (Helbling and Kriesi 2004; Bolliger 2004), death penalty (Gerber 1999; Hug 2004), anti-discrimination laws for job discrimination (Matsusaka 2007), housing and accommodation, school desegregation policy, AIDS policies (Gamble 1997), or same-sex marriage (Matsusaka 2007). Hajnal et al. (2002) and Frey and Goette (1998) look at a broad set of minority-relevant referendums.

So far, the comparative empirical research on the effects of direct democracy on minority rights has concentrated mainly on two countries that practice referendums particularly frequently: In Switzerland, direct democracy is practiced at all levels of government (see for instance Helbling and Kriesi (2004) for a comparison at the municipal level, Frey and Goette (1998) for a study of national and municipal referendums, or Christmann (2008) for the cantonal level). In the US, the effect of direct democracy has been investigated comparing direct democratic and non-direct democratic states (see Gamble 1997; Donovan and Bowler 1998; Hajnal et al. 2002, and many others).

The debate in the US has been fuelled by Gamble's (1997) study, which reported that ballot propositions (referendums and initiatives) that would increase civil rights of minorities are most frequently rejected at the polls. Investigating direct democratic votes on issues that are sensitive to different minority groups, she finds that in 78% of the cases, the result is little favourable of the majority. But her conclusion that direct democracy most often results in a tyranny of the majority has soon been nuanced and contested. Donovan and Bowler (1998) show that a tyranny of a majority is most likely in small communities. Namely, direct legislation that would strengthen the rights of homosexual minorities is most often being rejected in referendum votes in states with small populations. In large states, however, gay rights seem not to suffer strongly under direct democracy. These results are contested, however, by Haider-Markel and Lindaman (2007), who show that after including additional variables, the hypothesis about liberal outcomes in large states can be dismissed.

Hajnal and colleagues (2002) do not directly contradict this result. Indeed, analysing the individual voters' preferences and vote outcomes in California, they report that members of ethnic or racial minorities mostly belong to the losers of referendums that directly target minority rights (Hajnal et al. 2002). However, in many of the votes on minority rights, parts of the minority voters as well report to have voted for positions that
are classified as anti-minority. Further, Hajnal and his co-authors show that the same minorities belong very often also to the winners of direct democracy in other issues, including issues that they consider as very important. Even if members of ethnic and racial minorities do not belong to the winners of referendums as often as members of the dominant ethnic group, the tyranny of the majority seems thus to be reduced only to a few questions when the minority-majority relations become directly an issue.

While these results focus on the US, the same can not be said for Switzerland, where a look at 64 minority-relevant referendums at the national level and the city-level reveals that outcomes of direct democracy are not particularly hostile towards minorities (Frey and Goette 1998). In a replication, Vatter and Danaci (2008) find that the effect needs to be more nuanced by policy field, but still, the Swiss voters seem to decide more often in favour of minorities than voters in the US.

These studies have all mainly investigated the outcome of direct democratic decisions, and looked if they were in favour of minority groups. This, certainly, captures a subjective appreciation of the direct democratic effect by concerned minorities: gathering a majority of supporters behind minority rights in a referendum might have the function of approval for a minority within a society, while the contrary might lead to a deterioration of the subjective integration. However, this is not necessarily always related to the real consequences in terms of public policies, because this view neglects two important aspects. On the one hand, direct democratic institutions have an indirect impact on the decision-making process in legislative institutions, and on the other hand, not all direct democratic verdicts are fully implemented.

**Considering the indirect effect**

While the results show that many voters who belong to a minority often are among the winners in referendums, so that not all minorities need to feel always or systematically as losers after the holding of referendums, this does not teach us very much about the full effect of direct democracy on minority and civil rights. All these studies neglect the indirect effect of direct democracy on legislation. Namely, if the people can veto the decisions of its representatives, there is not only a direct effect that is manifested in the direct democratic votes, but likewise, already the threat of a referendum might affect the policy. Because legislators are aware that their laws might be subject to a referendum, they anticipate a possible negative verdict of the people, so that the decision-process is indirectly affected by direct democratic institutions, even if they are not used. This is why
direct democratic institutions restrict thus the representative to respect the will of the majority of voters (Gerber 1996; Gerber and Hug 2001; Hug 2004).

For this reason, some studies have been interested in evaluating both the direct effect of direct democracy and the indirect effect on decision making in the representative institutions. Nicholson-Crotty (2006), studying the passage of same-sex marriage amendments in the US states, applies a different methodology, looking directly at the resulting policies both in referendum states as in states with purely representative institutions. He finds that purely representative systems are leading to more minority-friendly policies, and the difference is even more pronounced in particularly diverse societies.

Christmann (2008) focuses on the recognition of small confessional communities in Swiss cantons, namely Jewish or Muslim communities. All Swiss cantons use direct democratic institutions, but in some cantons, liberal solutions for the recognition of religious communities have passed in total revisions of cantonal constitutions. Such packages of various reforms allow the lawmakers to combine different disputed issues in one decision, and to create artificial majorities. Christmann’s (2008) result show that all fully liberal rules for the recognition of religious minorities have only passed in general constitutional reforms, where they were only minor aspects among many more relevant changes to the constitutions. All other full liberalisations of the recognition rules have either failed already in the parliamentary debate, or the degree of liberalisation was substantially reduced. In both cases, the legislators probably anticipated a possible negative verdict of the people. While the study shows a negative indirect effect of direct democracy institutions on one particular type of minority groups, mainly driven by the issue of official recognition of Muslim communities, it is questionable though if the results can be generalised. Other civil and minority rights might not have such a hard stand as Muslims in referendums, and the study design does not include the potential direct and indirect effect of popular initiatives, which can be used to affect civil and minority rights through direct democratic instruments.

The problem of implementation of direct democratic verdicts

The full effect of direct democratic institutions can still not be estimated, if considering the direct effect and the indirect effect on decision-making. Even if decisions of a majority of voters would be legally binding, they are not always implemented. There is still an

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4 Furthermore, packages can be used to create a problem of information and to inhibit public discussion on certain issues. The referendum campaign will possibly focus only on the major aspects of the constitutional reform, leaving minor changes out of sight.
institutional filter after the voters’ verdict, since initiatives that were accepted by a majority of voters might either not be implemented by governments, or challenged by courts (Gerber et al. 2001; Gerber et al. 2004). Especially, minority and civil rights are particularly protected by declarations of human rights that are binding to executives and to courts, so that the effect of referendums is mediated by these institutions that can affect how the people's decisions get implemented. For both reasons, it appears wishful to study not only the way how referendums on minority issues are scheduled and decided, but to study as well the full effect of referendums.

*Studying the full effect of direct democratic institutions*

Gerber’s (1999) comparison of policies of US states shows that states that use certain forms of direct democracy have more conservative policies than non-direct democracy states. For instance, in US states that use direct democracy, parental consent is more frequently required for teenage abortions than in states without direct democracy (after controlling for the public opinion), and capital punishment is more often allowed.

Gerber and Hug (2002) argue that direct democracy needs not necessarily to have a positive or a negative effect on minority rights, but this mainly depends on the voters’ preferences on a certain issue. In a comparative analysis of minority policies in US states, they look at three policies – the adoption of “English-only” laws (with anti-Latino undertones), the use of affirmative action in public contracts, and gay and lesbian protection policies. They find that the effect of direct democracy on public policies depends on the voters’ preferences. If a minority friendly policy finds strong support among the voters in a certain state, then easily accessible instruments of direct democracy will lead to a more minority friendly policy, while the contrary will be the case if the voters are rather reluctant to accord a minority more rights and protection.

Bowler and Donovan (2004) employ a similar method for an investigation of abortion rights, and Matsusaka (2007) for seven minority rights issues in the US states. Matsusaka’s study is based on a distinction of US states that use popular initiatives from non-initiative states, arguing that the initiative is the strongest instrument of direct democracy. Bowler and Donovan investigate several operationalisations of direct democracy, including measures of the difficulty to qualify for a referendum/initiative.

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5 Ferraiolo (2007) opposes the generalisation of the “stolen initiative” hypothesis beyond California, but her method of investigation – interviews with leading members of parliamentary groups – might be biased, given that such interviewees might not necessarily admit if they do not fulfil the people’s verdict.
Both studies find that the policy outcomes are in stronger congruence with the opinion of a majority of voters in states with (easy) access to direct democratic instruments.

The quite trivial result that under direct democratic regimes policies would more closely correspond to the median voter’s preferences than in solely representative democracies, is however all but obvious. The argument relies on the assumption that the decision-makers are informed about the preferences of the median voter. If, however, this is not the case, then interest groups can put pressure on the decision-makers with the threat of a referendum or a popular initiative (Broder 2000; Matsusaka and McCarty 2001). Further, interest groups might finance expensive campaigns in order to influence the referendum outcomes (Garret and Gerber 2001; Gerber 1999). When voters are uncertain about a ballot proposition, they tend to reject it, so that costly campaigns against a new bill can help to make voters doubt about a project and can lead to a negative outcome (Bowler and Donovan 1998; Lupia and Matsusaka 2004).

4. Method

Our methodology is aimed at testing the theoretical model, arguing that the effect of direct democratic instruments relies on the voters' preferences.

We have argued that in countries that employ instruments of direct democracy, policies ($PO_i$) in countries $i$ should closer correspond to the median voters' preference $X_{mi}$ than in countries with no direct democracy. $X_i$ is a dummy variable that measures the existence of direct democracy in a country.

$$\left| PO_i - X_{mi} \right| = f(X_i)$$

(1)

The median voters’ preference is estimated using comparative survey data. We face, however, the problem that $PO_i$ and $X_{mi}$ can not, or only exceptionally, be measured on exactly the same scale. Matsusaka (2001) shows that, lacking information about the comparability of the scales, we can measure an effect of direct democracy, but we do not know if this effect brings the policy outcomes closer to the voters’ preferences, or if it distances them.
Model for binary and ordinal scaled dependent variables

The problem of scale comparability can however be resolved for models that are based on naturally dichotomous policies, or for policies that are measured on ordinal scales.

\[
prob(P_i) = f(X_{m_i}, X_i, X_{m_i} \cdot X_i)
\]  

(2)

We estimate this model for five minority or civil rights that are measured on a binary or ordinal scale. Our dependent dichotomous variable is coded 1 if the right exists in a country, and 0 elsewhere. For ordinal variables, increasing values indicate increasing protection of civil or minority rights.

We expect that the effect of direct democracy on policies will rely on voters’ preferences. This is captured by the interaction term of preferences and institutions, \(X_{m_i} \cdot X_i\). We expect that at the existence of direct democracy, the extent of minority and civil rights will correspond more closely to the voters’ preferences. This means that interaction term will have a positive coefficient, if the preference measure and the policy measure are coded in the same direction, or otherwise negative.

Model for metric scaled dependent variables

For dependent variables which are not binary or ordinal scaled, the model that uses an interaction variable can not be employed in order to estimate for the effect of direct democracy towards the voters preferences (Matsusaka 2001).

Based on Matsusaka’s (2001) suggestions Hug (2010 forthcoming) 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 has been specified in equation 1:

\[
\left|PO_i - X_{m_i}\right| = f(X_i)
\]  

(1)

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. While this is the case when the policy outcome is binary or ordinal scaled, in other situations the voters’ preferences

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6 This part draws on Gilland Lutz and Hug (2007).
7 This problem is closely related to the appropriate measurement of the "representativeness" and "responsiveness" of legislators (e.g. Achen 1977; Bartels 1991).
8 Again, 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.
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, $X_{mi}$ 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:

$$X_{mi} = g(P_i)$$  \hspace{1cm} (3)

If we assume that the function $f$ in equation 3 is linear, Hug (2010 forthcoming) 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 3 error terms are attached, three variance-covariance terms must be estimated.\(^9\) The switching regression model derived from equations 1 and 3 under the assumption of linear relationships looks as follows:

$$\begin{align*}
    \text{if } PO_i - X_{mi} > 0 & \quad PO_i = P_i \beta + X_i \gamma + e_i + \theta_i \\
    \text{if } PO_i - X_{mi} \leq 0 & \quad PO_i = P_i \beta - X_i \gamma + e_i + \theta_i
\end{align*}$$  \hspace{1cm} (4)

Thus, negative estimated values for $\gamma$ (the coefficient for the referendum indicator) would suggest that policies match more closely voter preferences in states with referendums. We thus estimate this second, more appropriate, model which allows the effect of referendums to depend on voter preferences.

5. Empirical study and results

In the empirical part of our paper, we are interested in estimating the effect of direct democracy on minority issues and civil rights in an international comparison. Namely, we analyse if in polities with direct democratic instruments, the median voters’ preference has a stronger impact on minority rights and on civil rights than in solely representative democracies. Our study goes beyond the set of two dozens advanced industrial democracies, which are commonly used in comparative politics. Namely, we include as well systematically all post-communist democracies in Central and Eastern Europe and all countries in Latin America, if the needed measures of voter preferences, taken from the World Value Survey, are available.

\(^9\) Hug (2010 forthcoming) discusses this derivation in much more detail, provides evidence from Monte Carlo simulations that this estimator performs well and illustrates its performance in a reanalysis of the data used by Lascher, Hagen and Rochlin (1996) and finds substantively radically different results.
How to measure direct democratic institutions

The institutional variable measures whether there is any form of a referendum which restricts the power of the existing veto-players in a country. Our measure of direct democratic institutions relies on the typology by Hug and Tsebelis (2002). We distinguish different types of direct democracy institutions, according to if they can be used in order to veto a reform that was amended by parliament (referendums), or if it can initiate and decide a reform in a popular vote, possibly against the will of the parliament (popular initiatives). Referendums can be further distinguished by their trigger: Mandatory referendums always take place when a certain reform is decided by parliament, but in all investigated cases, they either apply only on changes of the constitution, or they are limited on a few pre-defined issues. Non-mandatory referendums can be either triggered by veto-players (typically a majority of the parliament, or one of the parliamentary chamber, or the executive in presidential systems), or by non-veto players (a certain number of voters, or a state institution with no veto power).

We aggregate this information in a single indicator that measures the existence of direct democratic instruments which empower a non-veto player to trigger a referendum that is binding. The variable is coded positively, if a country has either any type of a (binding) required referendum, a non-veto player referendum, or a popular initiative for the policy field that we investigate. The variable is coded as zero if a country does not foresee any direct democratic instruments, if they are triggered by existing veto players, so that they can decide on their own if they want to submit controversial legislation to referendums, or if direct democratic instruments are not applicable for the issues under study.

For the coding of our variables, we cross-validate the data with several different sources of data. The main source is C2D,10 the original countries’ constitutions which are accessible through C2D and the University of Bern.11 Further, for European countries Council of Europe, Venice Commission (2005), for countries in Central and Eastern Europe Auer and Bützer (2001). For Latin America, additional sources for coding were Lissidini (2007), Zovatto et al. (2004), Gonzáles Rissotto (2007), Donis (2006).

Among the 52 countries for which we provide on preference measures, 22 use certain of these forms of direct democracy, while 30 do not know any forms of direct democracy,
or only such that are triggered by the existing veto players. Three countries exclude certain issues that we investigate from direct democratic procedures.

**Dimensions of minority rights and civil rights**

We have estimated the effect of direct democracy institutions on several dimensions of minority rights and civil rights. We aim at including several aspects of civil rights and minority rights, in order to get a broad view on these policies, and in order to obtain results which are widely comparable to the findings of earlier studies on the sub-national level of politics.\(^{12}\)

Our data represent six different aspects of minority rights or civil rights (see table 1). Each of these variables is coded such that increasing values indicate more extended minority and civil rights, while low values indicate that the minority or civil rights are restricted; details for the binary and ordinal scaled variables are listed in the appendix, while the indicator for the rights of sexual minorities, that we constructed ourselves, is explained below in the paper. Data on most dependent variables was taken from Cingranelli and Richards (2005), while the abortion rights were coded from the Harvard Annual Review of Population Law (2008) and from the Center for Reproductive Rights (2007),\(^{13}\) and rights of sexual minorities were taken from Ottosson (2006).

<table>
<thead>
<tr>
<th>Variable name</th>
<th>description</th>
<th>scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>ciri_wosoc05</td>
<td>Women's Social Rights, 2005</td>
<td>ordinal scale</td>
</tr>
<tr>
<td>ciri_wecon05</td>
<td>Women's Economic Rights, 2005</td>
<td>ordinal scale</td>
</tr>
<tr>
<td>ciri_assn05</td>
<td>Freedom of Assembly and Association, 2005</td>
<td>ordinal scale</td>
</tr>
<tr>
<td>ciri_speech05</td>
<td>Freedom of Speech, 2005</td>
<td>ordinal scale</td>
</tr>
<tr>
<td>abortion</td>
<td>Is abortion allowed, generally or within a timeframe, 2007</td>
<td>binary variable</td>
</tr>
<tr>
<td>same_sex</td>
<td>index of rights of sexual minorities</td>
<td>metric scale</td>
</tr>
</tbody>
</table>

*Table 1: Dependent variables, variable names and scale level*

**Median voter preferences**

We have used survey data from the World Value Survey in order to estimate the preferences of the median voter on these policies. For some of the investigated policies,

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\(^{12}\) Certain dimensions that were studied in earlier research could not be investigated, because we are not aware of preference variables that would measure the policy preferences (namely, death penalty), or because we lack a valid measure for the study of policy outcomes in a cross-national setting (rights of racial or ethnic minorities).

\(^{13}\) Source for Bulgaria: Economic Position of Women in Bulgaria, Georgia, Macedonia, Poland, Serbia and Montenegro and Slovenia - Summary information sheet (49th Session of CSW, March 2005)
we were not able to select preference questions that would exactly fit the dependent variable. However, we are still confident that our preference questions are reasonably close to the measured policies. The following list indicates five preference measures on which our analysis relies for six policy fields (table 2). Given that every wave of the World Value Survey includes only a selection of countries, the number of countries we can retain varies. For the results we present in the main text we used systematically only the information from the 1999 wave, since this gives us some temporal distance to the measures of our policy outcomes. In appendix B we report the results of analyses using other rules to construct our preference measure. As these analyses suggest, the results are rather robust to these changes.

<table>
<thead>
<tr>
<th>Variable name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>wvs_v44m</td>
<td>Labour market gender discrimination (&quot;When jobs are scarce, men should have more right to a job than women&quot;, on a 3-point-scale from -1, disagree, to 1, agree)</td>
</tr>
<tr>
<td>wvs_v60m</td>
<td>Housework (&quot;Being a housewife is just as fulfilling as working for pay&quot;, on a 4-point-scale from 1, strongly agree, to 4, strongly disagree)</td>
</tr>
<tr>
<td>wvs_v148m</td>
<td>Strong leader (&quot;Having a strong leader who does not have to bother with parliament and elections&quot;, on a 4-point-scale, from 1, very good, to 4, very bad)</td>
</tr>
<tr>
<td>wvs_v202m</td>
<td>Homosexuality (on a 10-point-scale from 1, never justifiable, to 10, always justifiable)</td>
</tr>
<tr>
<td>wvs_v204m</td>
<td>Abortion (on a 10-point-scale from 1, never justifiable, to 10, always justifiable)</td>
</tr>
</tbody>
</table>

Table 2: Preference variables


Relevant control variables for minority rights

Furthermore, we include control variables that are often employed as statistical controls in studies on minority policies. Typically, studies have compared the minority rights across the US states, and come up with a set of control variables which are measurable and vary among the US states. Such variables are for instance household income, ideology (conservative – liberal), the percentage of self-reported Catholics or fundamental protestants, the degree of professionalisation of the legislature, population size, percentage of white population, education (college), share of non-married households, government ideology (relying on studies on rights of sexual minorities, on abortion, parent consent requirement for teenage abortions or death penalty, see for instance Gerber (1996); Gerber (1999); Donovan/Bowler (1998); Nicholson-Crotty (2006)). Certain studies include

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14 Theoretically, veto player models rely on the preference of the median voter. Empirically, measures of voter preferences rely on surveys with only a small number of categories, so that the median preferences often vary only little across countries. If the preference distribution is symmetrical, the median is however equal to the mean. For this reason, we rely on the mean voters preferences.

15 Others employ the related indicator of population diversity (Nicholson-Crotty 2006).
measures of the strength or activism of groups with interest in the policy field (Gerber 1996; Nicholson-Crotty 2006), but such a variable might be endogenous to our model: if the policy proposed by the parliament strongly differs from the policy preference of the population, this might prepare the grounds for such activity.

We have found control variables which aim at measuring similar aspects as the ones for the sub-national comparison of minority rights, but which are (almost) systematically available for a cross-country study (listed in table 3). GDP per capita measures the economic dimension; the political orientation of the executive and the legislative captures ideology and the impact of political institutions; the share of students measures education; while the degree of urbanisation captures the socio-economic dimension. For policy fields where we expect that religious values might have an impact, we further include the share of Catholics and the share of Muslims. Earlier research has shown that the confessional structure of a country can have a strong impact on values.\footnote{In the model with women’s social rights (ciri_wosoc05) as dependent variable, the share of Muslims in the population can not be included as control variable, because otherwise the likelihood function becomes too flat to be estimated.}

<table>
<thead>
<tr>
<th>Variable name</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>gle_gdp00</td>
<td>GDP per capita, 2000</td>
</tr>
<tr>
<td>dpi_chileg75b</td>
<td>Chief executive and one of the three largest parties in congress have left or center political orientation, 1975-2004 Source: Beck et al 2000; 2001; Keefer 2005, own calculation</td>
</tr>
<tr>
<td>van_urban98</td>
<td>urban population %, 1998</td>
</tr>
<tr>
<td>van_students98</td>
<td>students per 100,000 inhabitants, 1998</td>
</tr>
<tr>
<td>lp_muslim80</td>
<td>Muslims (population share), 1980</td>
</tr>
<tr>
<td>lp_catho80</td>
<td>Catholics (population share), 1980</td>
</tr>
</tbody>
</table>

Table 3: control variables

Source, where not indicated differently: Teorell et al. (2008).

Models with binary and ordinal dependent variables

We employ a logistic and an ordinal logistic regression model for the estimation of the five policies with a binary or an ordinal scaled dependent variable. The conditioned impact of voter preferences is included through an interaction term of direct democratic institutions with the median voters’ preferences.

Our models test the impact of policy preferences and direct democracy on five dimensions of policy outcomes. In a first step, we have calculated for each policy a model that includes direct democracy and the median voter's preferences without an interaction
term (models 1a, 2a, 3a, 4a, and 5a). In two out of five models, the preference variable has an effect in the expected direction (see table 4). Namely,

- women’s social rights are negatively correlated with a traditional view on the women’s role in society. The more respondents reject the statement that *being a housewife is just as fulfilling as working for pay*, the more women’s social rights are developed (model 1a);
- in countries where voters have a rather liberal view on abortion, abortion is more likely to be allowed (within a certain timeframe) than in other countries (5a).
- Further, the effect of preferences (’women should have the same rights on the labour market as men’) on women’s economic rights remains below standard levels of significance (model 2a).

In two models, explaining freedom of assembly and association (3a) and freedom of speech (4a), our preference measure, measuring authoritarian values (strong leadership), correlation with the policy outcome is extremely weak, and in the non-expected direction.

In the same models, we have included a simple, non-interactive measure for direct democratic institutions (ref3). In four models, explaining women’s social rights (1a), women’s economic rights (2a), freedom of assembly and association (3a), and freedom of speech (4a), direct democratic instruments are related to lower levels of protection of civil and minority rights (not statistically significant). Only abortion rights are slightly more liberal in countries with strong direct democratic rights (5a). Overall, for the five types of minority and civil rights that are investigated in these models, direct democracy seems rather to play a restrictive role, as long as the interaction effects of direct democracy with the preferences of the median voters are not considered in the model.

Our estimations are based on 38 to 41 cases, dependent on the availability of the relevant questions in the World Value Survey. (The estimation with data from several waves of the survey, reported in appendix B, allowed us to increase the number of cases to 48 to 51. The inclusion of additional cases affects the magnitude, but not the direction of the effects.)

The impact of direct democracy looks more nuanced, once we consider it in interaction with our preference measures. For each of the five policy fields, we have estimated a second model (models 1b, 2b, 3b, 4b, 5b), where the preference measure is introduced in

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17 The variable is coded differently in models 3 and 4, because three countries (Albania, Georgia, Slovakia) do not allow for referendums or popular initiatives in these areas of legislation.
an interaction effect with the institutional variable. We see now that the impact of preferences on outcomes is moderated by an institutional effect. In all five models, there is a measurable interaction effect of direct democratic institutions with preferences, although it is not statistically significant in any of the cases. And in four out of five models, the correlation fits with our expectation. In direct democratic countries, the preferences of the median voters seem not only to be decisive for the degree of minority and civil rights; furthermore, their impact seems to be slightly stronger than in solely representative democracies. This relationship even holds for those policies for which there was no correlation in the non-interactive models: in direct democracies, less authoritarian preferences of the voters lead to a higher degree of freedom of assembly and association (model 3b) and of freedom of speech (4b). Only, with regards to women’s economic rights (2b) no such effect could be found. Overall, in democracies with direct democratic institutions, the policy outcomes on civil and minority rights represent more closely the median voter's preference than in solely representative democracies, but the effect is not statistically significant. (If we include additional waves of the World Value Survey, the effects keep the same directions, but the effect of direct democracy in the field of abortion vanishes almost, cf. appendix B.)

Among the control variables included in the model, the GDP per capita seems to be related to stronger respect for women’s economic rights, freedom of assembly and association and of speech, although the effect is not statistically significant in all models.

For two of the policies we depict the substantive effects in figures 1 and 2. In each we depict in two panels the maximum effect of the preference variable (i.e., when it is changed from its lowest to its highest sample value), once for a country with no referendums, and once for a country with referendums. Figure 1 for women’s economic rights thus demonstrates that the effect of preferences is strongly amplified by referendums, since the density curves for the first category becomes much more pronounced. In figure 2 we find a similar effect for freedom of assembly and association, where the lower panel (countries with referendums) shows again a slightly stronger effect. Figure 2 shows in addition, however, that the direction of the preference effect is reversed in countries with no referendums.

18 These maximal effects were calculated while holding constant all other variables at their sample means.
<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Preference variable</th>
<th>coeff.</th>
<th>s.e.</th>
<th>coeff.</th>
<th>s.e.</th>
<th>coeff.</th>
<th>s.e.</th>
<th>coeff.</th>
<th>s.e.</th>
<th>coeff.</th>
<th>s.e.</th>
<th>coeff.</th>
<th>s.e.</th>
<th>coeff.</th>
<th>s.e.</th>
<th>coeff.</th>
<th>s.e.</th>
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<th>s.e.</th>
<th>coeff.</th>
<th>s.e.</th>
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<td>-9.117</td>
<td>6.64</td>
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<td>7.624</td>
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<td>3.236</td>
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<td>2.725</td>
<td>-1.995</td>
<td>2.958</td>
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<td>0.068</td>
<td>-0.019</td>
<td>0.073</td>
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<td>-1.961</td>
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<tr>
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<td>wvs_v44m</td>
<td>-0.018</td>
<td>0.057</td>
<td>-0.099</td>
<td>0.086</td>
<td>0.087</td>
<td>0.059</td>
<td>0.086</td>
<td>0.059</td>
<td>0.121</td>
<td>0.074</td>
<td>0.12</td>
<td>0.078</td>
<td>0.14</td>
<td>0.072</td>
<td>0.138</td>
<td>0.075</td>
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<td>0.099</td>
<td>-0.225</td>
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<td>4.45</td>
<td>2.778</td>
<td>9.71</td>
<td>5.964</td>
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<td>1.544</td>
<td>-0.847</td>
<td>1.594</td>
<td>0.737</td>
<td>1.297</td>
<td>0.933</td>
<td>1.338</td>
<td>-1.441</td>
<td>1.354</td>
<td>-1.255</td>
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<td>-1.5</td>
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<td>0.024</td>
<td>0.035</td>
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<td>0.03</td>
<td>-0.009</td>
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<td>0.021</td>
<td>0.029</td>
<td>0.026</td>
<td>0.029</td>
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<td>-0.35</td>
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<td>0.811</td>
<td>2.286</td>
<td>1.024</td>
<td>0.499</td>
<td>0.374</td>
<td>0.506</td>
<td>0.378</td>
<td>-0.029</td>
<td>0.483</td>
<td>-0.104</td>
<td>0.461</td>
<td>-0.531</td>
<td>0.425</td>
<td>-0.564</td>
<td>0.447</td>
<td>0.521</td>
<td>0.516</td>
<td>1.232</td>
<td>1.225</td>
</tr>
<tr>
<td>ciri_speech05</td>
<td>wvs_v204m</td>
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<td></td>
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<td></td>
<td></td>
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</tr>
</tbody>
</table>

| abortion         | abortion           |        |      |        |      |        |    |        |    |         |   |         |   |         |   |         |   |         |   |         |   |         |   |

| ref*preference    | wvs_v60m           | 26.66  | 15.56| 26.66  | 15.56| 3.382  | 2.066 | 27.48  | 2.2  | 2.936  | 1.594 | 1.041  | 0.078 | 0.117  | 0.121 | -0.125 | 0.075 | -0.125 | 0.075 | 0.125  | 0.259 |
| ref3 preference   | wvs_v44m           | -2.16  | 2.725| -2.16  | 2.725| 2.748  | 2.2   | 2.936  | 1.594| 1.041  | 0.078 | 0.117  | 0.121 | -0.125 | 0.075 | -0.125 | 0.075 | 0.125  | 0.259 |
|                   | wvs_v204m          | 1.833  | 0.811| 1.833  | 0.811| 1.833  | 0.811| 1.833  | 0.811| 1.833  | 0.811| 1.833  | 0.811| 1.833  | 0.811| 1.833  | 0.811| 1.833  | 0.811|

| Number of obs     | 38                 | 38     | 38     | 38     | 40     | 40     | 40     | 40     | 41     | 41     | 41     | 41     | 41     | 41     | 41     | 41     | 41     | 41     | 41     |
| LR chi2(7)        | 27.38              | 33.62  | 25.08  | 25.1   | 9.37   | 12.38  | 13.19  | 14.85  | 26.05  | 34.57  | 26.05  | 34.57  | 26.05  | 34.57  | 26.05  | 34.57  | 26.05  | 34.57  | 26.05  | 34.57  |
| Prob > chi2       | 0.0001             | 0.0007 | 0.0015 | 0.1536 | 0.0889 | 0.0401 | 0.0379 | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  |
| Pseudo R2         | 0.5443             | 0.6684 | 0.3884 | 0.3888 | 0.1741 | 0.2299 | 0.2151 | 0.2422 | 0.5256 | 0.6973 | 0.5256 | 0.6973 | 0.5256 | 0.6973 | 0.5256 | 0.6973 | 0.5256 | 0.6973 |

Table 4: Models with a dependent binary or ordinary scaled variable, logistic/ordinal logistic regressions, coefficients and standard errors.
Countries included for cir_i_wosoc05: Albania, Argentina, Belgium, Bulgaria, Canada, Chile, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Italy, Latvia, Lithuania, Luxembourg, Macedonia, Malta, Mexico, Moldova, Netherlands, Peru, Poland, Portugal, Romania, Serbia and Montenegro, Slovakia, Slovenia, Spain, Sweden, Turkey, Ukraine, United States, Venezuela;

for cir_i_wecon05: Albania, Argentina, Austria, Belgium, Bulgaria, Canada, Chile, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Macedonia, Malta, Mexico, Moldova, Netherlands, Peru, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Turkey, Ukraine, United States, Venezuela;

for cir_i_assn05: Albania, Argentina, Austria, Belgium, Bulgaria, Canada, Chile, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Macedonia, Malta, Mexico, Moldova, Netherlands, Peru, Poland, Portugal, Romania, Serbia and Montenegro, Slovakia, Slovenia, Spain, Sweden, Turkey, Ukraine, United States, Venezuela;

for cir_i_speech05: Albania, Argentina, Austria, Belgium, Bulgaria, Canada, Chile, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Israel, Ireland, Italy, Latvia, Lithuania, Luxembourg, Macedonia, Malta, Mexico, Moldova, Netherlands, Peru, Poland, Portugal, Romania, Serbia and Montenegro, Slovakia, Slovenia, Spain, Sweden, Turkey, Ukraine, United States, Venezuela;

for abortion: Albania, Argentina, Austria, Belgium, Bulgaria, Canada, Chile, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Ireland, Israel, Italy, Latvia, Lithuania, Macedonia, Malta, Mexico, Moldova, Netherlands, Peru, Poland, Portugal, Romania, Russian Federation, Serbia and Montenegro, Slovakia, Slovenia, Spain, Sweden, Turkey, Ukraine, United States, Venezuela.
Figure 1: The effect of preferences in the absence (top panel) and presence of referendums (lower panel) on women's economic rights

Legend: red (value of 1, rightish curve), green (value of 2, leftish curve), blue (value of 3, middle curve)

Figure 2: The effect of preferences in the absence (top panel) and presence of referendums (lower panel) on Freedom of Assembly and Association

Model with metrically scaled dependent variable

Further, we have included a model that measures the impact of direct democracy on the rights of same-sex couples, for which we employ a metric scaled indicator. These policies have been addressed already in earlier research on the effect of direct democratic institutions. Haider-Markel and Meier (1996) include a whole range of aspects of same-sex couples’ discrimination, and investigate prohibitions against discrimination in public
employment, public accommodations, private employment, education, housing, credit, and union practices.

In a cross-national study design, a focus only on prohibitions of discrimination of sexual minorities would however narrow down the perspective on only few aspects of policies towards sexual minorities. Besides the existence of legal provisions against discrimination, there is a number of issues, ranging from same-sex marriages, adoption through same-sex couples, up to the possibility for transgender persons to get new documents. We rather want to construct an indicator that depicts the general policy against sexual minorities, covering different aspects where minorities might experience discrimination. For this aim, we construct an indicator that covers eight dimensions, measuring if sexual minorities have similar rights as heterosexual couples, and if they are protected against discrimination (table 5). Comparable information on all issues has been compiled by Ottosson (2006), covering the legal situation of sexual minorities in 2006.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Coding</th>
<th>Mean (std. dev.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>same age limit for homosexual and heterosexual relationships (1) vs. higher age limit for homosexuals (0)</td>
<td>0, 1</td>
<td>0.951 (0.218)</td>
</tr>
<tr>
<td>Same-sex marriage allowed (1), same-sex civil unions/partnership laws (0.5), certain benefits for same-sex couples (0.25), vs. others (0)</td>
<td>0, 0.25, 0.5, 1</td>
<td>0.220 (0.327)</td>
</tr>
<tr>
<td>Adoption rights for same-sex couples (1) or step-child adoption (0.5) vs. others</td>
<td>0, 0.5, 1</td>
<td>0.134 (0.134)</td>
</tr>
<tr>
<td>Right of artificial insemination for same-sex couples or single women</td>
<td>0, 1</td>
<td>0.488 (0.506)</td>
</tr>
<tr>
<td>Prohibition of discrimination of homosexuals in employment</td>
<td>0, 1</td>
<td>0.756 (0.435)</td>
</tr>
<tr>
<td>General prohibition of discrimination of homosexuals</td>
<td>0, 1</td>
<td>0.512 (0.506)</td>
</tr>
<tr>
<td>Prohibition of homophobic propaganda</td>
<td>0, 1</td>
<td>0.366 (0.488)</td>
</tr>
<tr>
<td>Allowing new personal documents for transgender persons</td>
<td>0, 1</td>
<td>0.195 (0.401)</td>
</tr>
<tr>
<td>Overall additive index</td>
<td>Min: 1, Max: 8</td>
<td>3.622 (2.067)</td>
</tr>
</tbody>
</table>

*Table 5: Index of rights of sexual minorities.*

Again, we employ a variable on the preferences of the median voters on homosexuality, coded from the World Value Survey, wvs_v202m, and the same set of control variables. Since the dependent variable is continuous a simple interaction term between preferences and the presence of direct democratic instruments will not allow us to estimate the effect of these instruments. Consequently, we employ the switching regression model as discussed above.
Table 6: Model for the estimation of the effects on our metrically scaled dependent variable.

Legend: OLS stands for the linear regression model (ordinary least squares, while MLE SR stands for the switching regression model estimated with maximum likelihood.

Table 6 reports the results. In the first column the results of a simple OLS regression are reported, which suggest that the presence of direct democratic instruments fails to affect the presence of policies related to same-sex relations. Our preference variable weakly affects the extent of these policies, as does the degree of urbanisation. When the same model is estimated with the help of a switching regression the substantive results change dramatically. While the effects of the preference variable and control variables undergo some change, we find especially a solid and statistically significant effect for the presence of direct democratic instruments. More precisely, if a country makes available such instruments, policies regarding same-sex relations follow much more closely the preferences of the voters.

6. Conclusions
The impact of direct democracy on civil rights and minority rights has been vividly discussed in the literature on the effect of referendums. While the topic has mainly been
investigated on the sub-national level, looking at the political effect of referendums in Switzerland or in the US states, this is the first contribution that attempts to investigate this question in a cross-national perspective. Our database includes 52 democracies, going beyond the typical set of advanced industrialised democracies, and including as well post-communist democracies in Central and Eastern Europe and the countries of Latin America.

We rely on a model that takes into account the preferences of the median voter, policy outcomes, and the institutional settings. Our model predicts that the political effect of referendums and initiatives is not a genuinely positive or negative one, but rather, it depends on the preferences of the median voter. Namely, the possibility of using a referendum or an initiative in order to veto parliamentary legislation helps the median voter to realise a policy that is close to his preferences. In sum, policy outcomes in countries with direct democratic rights should be closer to the preferences of median voters than in countries with no referendums or initiatives.

For our study, we have focussed on six aspects of minority rights and civil rights, ranging from the rights of same-sex couples over freedom of speech, freedom of assembly and association, social and economic discrimination of women up to abortion rights. After controlling for voters preferences and a set of control variables, we find that there is a general restricting effect of direct democracy on minority rights or civil rights. Only with regards to abortion, direct democratic countries apply more liberal policies. The picture is getting more shades, however, once we estimate the joint effect of direct democracy and voter preferences. Our results, while remaining weak and below standard levels of statistical significance, suggest for almost all investigated policies that referendum and initiative move the results towards the preferences of the median voter.

This exploratory study opens new empirical perspectives for the study of minority rights and civil rights. In fact, many of these issues are regulated at the national level of politics, and for this reason, it is advisable to explore national regulations, rather than concentrating on the sub-national level, where only a small set of policies are defined. Our theoretical model – even if it is put up challenges for the estimation – remains rather simple, investigating a genuine effect of direct democracy, jointly with voter preferences. Further research might be done in order to differentiate between different institutions of direct democracy, or considering further aspects that, for the sake of simplicity and lacking readily available comparable data, did not consider, such as the difficulty to trigger a referendum or an initiative, or the homogeneity of voters’ preferences.
Appendix A

Description of the policy variables

ciri_wecon05 Women's Economic Rights, 2005
In measuring women's economic rights we are primarily interested in two things: one, the extensiveness of flaws pertaining to women's economic rights; and two, government practices towards women or how effectively the government enforces the laws.
Regarding the economic equality of women:
(0) There are no economic rights for women under law and systematic discrimination based on sex may be built into the law. The government tolerates a high level of discrimination against women.
(1) There are some economic rights for women under law. However, in practice, the government DOES NOT enforce the laws effectively or enforcement of laws is weak. The government tolerates a moderate level of discrimination against women.
(2) There are some economic rights for women under law. In practice, the government DOES enforce these laws effectively. However, the government still tolerates a low level of discrimination against women.
(3) All or nearly all of women's economic rights are guaranteed by law. In practice, the government fully and vigorously enforces these laws. The government tolerates none or almost no discrimination against women.

ciri_wosoc05 Women's Social Rights, 2005
In measuring women's social rights we are primarily interested in two things: one, the extensiveness of laws pertaining to women’s social rights; and two, government practices towards women or how effectively the government enforces the law.
Regarding the social equality of women:
(0) There are no social rights for women under law and systematic discrimination based on sex may be built into the law. The government tolerates a high level of discrimination against women.
(1) There are some social rights for women under law. However, in practice, the government DOES NOT enforce the laws effectively or enforcement of laws is weak. The government tolerates a moderate level of discrimination against women.
(2) There are some social rights for women under law. In practice, the government DOES enforce these laws effectively. However, the government still tolerates a low level of discrimination against women.
(3) All or nearly all of women's social rights are guaranteed by law. In practice, the government fully and vigorously enforces these laws. The government tolerates none or almost no discrimination against women.

ciri_worker05 Workers Rights, 2005
Worker's rights are:
(0) Severely restricted
(1) Somewhat restricted  
(2) Fully protected

**ciri_assn05**  Freedom of Assembly and Association, 2005  
Citizens’ rights to freedom of assembly and association are:  
(0) Severely restricted or denied completely to all citizens  
(1) Limited for all citizens or severely restricted or denied for selected groups  
(2) Virtually unrestricted and freely enjoyed by practically all citizens

**ciri_speech05**  Freedom of Speech, 2005  
Government censorship and/or ownership of the media (including radio, TV, Internet, and domestic news agencies) is:  
(0) Complete  
(1) Some  
(2) None

**abortion**  Abortion allowed, generally or within a certain timeframe  
Not included if abortion is only allowed as exception for life danger or only to preserve mental health of the woman, in cases of rape, or in difficult circumstances
Appendix B: Ordered logit models with preference measures from several WVS waves

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>ciri_wosoc05 (1a)</th>
<th>ciri_wosoc05 (1b)</th>
<th>ciri_wecon05 (2a)</th>
<th>ciri_wecon05 (2b)</th>
<th>ciri_assn05 (3a)</th>
<th>ciri_assn05 (3b)</th>
<th>ciri_speech05 (4a)</th>
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<td>wvs_v44m</td>
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<td>wvs_v148m</td>
<td>wvs_v204m</td>
<td>wvs_v204m</td>
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<td>ref*preference</td>
<td>16.84</td>
<td>10.41</td>
<td>-3.527</td>
<td>2.801</td>
<td>2.637</td>
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<td>2.117</td>
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<td>-2.183</td>
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<td>-0.342</td>
<td>0.72</td>
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<td>3.112</td>
<td>-1.741</td>
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<td>-0.301</td>
<td>1.839</td>
<td>0.016</td>
<td>0.992</td>
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<td>0.122</td>
<td>0.080</td>
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<td>0.052</td>
<td>-0.037</td>
<td>0.062</td>
<td>0.107</td>
<td>0.048</td>
<td>0.111</td>
<td>0.049</td>
<td>0.121</td>
<td>0.059</td>
</tr>
<tr>
<td>gle_gdp00 (in 1000)</td>
<td>0.008</td>
<td>0.052</td>
<td>0.172</td>
<td>0.089</td>
<td>0.034</td>
<td>0.028</td>
<td>0.04</td>
<td>0.029</td>
<td>0.018</td>
<td>0.026</td>
</tr>
<tr>
<td>wpl_urban98</td>
<td>-0.024</td>
<td>0.063</td>
<td>0.076</td>
<td>0.048</td>
<td>-0.007</td>
<td>0.067</td>
<td>0.080</td>
<td>0.124</td>
<td></td>
<td></td>
</tr>
<tr>
<td>wpl_students98 (in 1000)</td>
<td>1.199</td>
<td>0.757</td>
<td>1.296</td>
<td>1.139</td>
<td>0.752</td>
<td>0.43</td>
<td>1.139</td>
<td>0.142</td>
<td>0.006</td>
<td>0.016</td>
</tr>
<tr>
<td>constant</td>
<td>-0.36</td>
<td>0.371</td>
<td>-0.347</td>
<td>0.376</td>
<td>0.394</td>
<td>0.43</td>
<td>0.371</td>
<td>0.349</td>
<td>0.496</td>
<td>0.355</td>
</tr>
</tbody>
</table>

Number of obs | 49 | 49 | 48 | 48 | 50 | 50 | 50 | 50 | 51 | 51 |
LR chi2(7) | 33.53 | 38.18 | 34.64 | 36.39 | 13.75 | 16.09 | 15.99 | 17.22 | 32.58 | 32.68 |
Prob > chi2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0326 | 0.0243 | 0.0138 | 0.016 | 0.0001 | 0.0002 |
Pseudo R2 | 0.526 | 0.599 | 0.3765 | 0.3955 | 0.2043 | 0.239 | 0.2126 | 0.2288 | 0.4837 | 0.4852 |

Table A1: Models with a dependent binary or ordinary scaled variable, logistic/ordinal logistic regressions, coefficients and standard errors. Preference measures were taken from the most recent available wave of the World Value Survey, as of 2004.
Countries included for *ciri_wosoc05*: Albania, Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Chile, Colombia, Croatia, Czech Republic, Denmark, Dominican Republic, El Salvador, Estonia, Finland, France, Georgia, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Macedonia, Malta, Mexico, Moldova, Netherlands, New Zealand, Norway, Peru, Poland, Portugal, Romania, Serbia and Montenegro, Slovakia, Slovenia, Spain, Sweden, Turkey, Ukraine, United States, Uruguay, Venezuela;

for *ciri_wecon05*: Albania, Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Chile, Colombia, Croatia, Czech Republic, Denmark, Dominican Republic, El Salvador, Estonia, Finland, France, Georgia, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Macedonia, Malta, Mexico, Moldova, Netherlands, New Zealand, Norway, Peru, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United States, Uruguay, Venezuela;

for *ciri_assn05*: Albania, Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Chile, Colombia, Croatia, Czech Republic, Denmark, Dominican Republic, El Salvador, Estonia, Finland, France, Georgia, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Macedonia, Malta, Mexico, Moldova, Netherlands, New Zealand, Norway, Peru, Poland, Portugal, Romania, Serbia and Montenegro, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United States, Uruguay, Venezuela;

for *ciri_speech05*: Albania, Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Chile, Colombia, Croatia, Czech Republic, Denmark, Dominican Republic, El Salvador, Estonia, Finland, France, Georgia, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Macedonia, Malta, Mexico, Moldova, Netherlands, New Zealand, Norway, Peru, Poland, Portugal, Romania, Serbia and Montenegro, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United States, Uruguay, Venezuela;

for *abortion*: Albania, Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Chile, Colombia, Croatia, Czech Republic, Denmark, Dominican Republic, El Salvador, Estonia, Finland, France, Georgia, Germany, Great Britain, Greece, Hungary, Ireland, Israel, Italy, Latvia, Lithuania, Macedonia, Malta, Mexico, Moldova, Netherlands, New Zealand, Norway, Peru, Poland, Portugal, Romania, Russian Federation, Serbia and Montenegro, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United States, Uruguay, Venezuela.
References


