



Center for Research in Economics, Management and the Arts

Income and policy choices: Evidence from parliamentary decisions and referenda

Working Paper No. 2014-19

CREMA Südstrasse 11 CH - 8008 Zürich www.crema-research.ch

Income and policy choices: Evidence from parliamentary decisions and referenda^{*}

David Stadelmann^{a,c}

Marco Portmann^{b,c}

Reiner Eichenberger^{b,c}

December 2014

Abstract: We analyze political representation of preferences of different income groups by matching referendum outcomes for low, middle, and high-income voters with individual legislators' decisions on identical policy proposals. Results indicate that legislators more closely represent preferences of rich voters than preferences of middle-income and poor voters, and legislators are more responsive towards the rich. Preferences of low, middle, and high-income voters are, however, correlated. Representation of income groups varies according to legislators' party affiliations.

Keywords: Income, policy decisions, representation, voting, referenda, political behavior.

JEL Classification: D72, H70.

* Corresponding author: david.stadelmann@uni-bayreuth.de

^a University of Bayreuth, Universitätsstraße 30, 95440 Bayreuth, Germany.

^b University of Fribourg, Bd. de Pérolles 90, 1700 Fribourg, Switzerland.

^c CREMA – Center for Research in Economics, Management and the Arts, Zurich, Switzerland.

Worries about the influence of rich people on democracy are as old as elections.
(The Economist, June 3rd 2014, “Money in politics - Ogle like Vogel”)

I. INTRODUCTION

Does income matter for political representation? In principle, democracy rests on the notion that citizen’s preferences should count equally. But a popular belief is that preferences of the rich count more. The literature on income and representation by *individual* legislators offers inconclusive evidence on this issue (see Bartels 2008, Bhatti and Erikson 2011). A major challenge is to elicit preferences of voters with different incomes concerning policy proposals and confront them with actual political decisions by individual legislators.

We overcome this challenge by matching revealed preferences of voters with different incomes with decisions by individual legislators. In Switzerland, voters regularly reveal their policy preferences in referenda. Representative post referendum surveys allow identifying referendum decisions of low, middle, and high-income voters. Legislators decide in parliament on the identical issues as voters in referenda. Thus, we directly observe the extent of congruence between individual legislators’ decisions and preferences of voter income terciles on identical policy proposals.

Empirical results indicate that revealed preferences of low, middle, and high-income voters are correlated. Individual legislators represent the preferences of rich voters on average with a 1.7%-points and a 4.0%-points higher probability than the preferences of middle-income and poor voters, respectively. Representation varies with party affiliation: Legislators from left parties have higher congruence levels with the poor than with the rich, while the opposite holds for legislators from center and right parties. Legislators from center parties have the highest congruence levels with all income groups. Analyzing political responsiveness suggests that legislators are more responsive to the preferences of the rich.

We present the institutional setting and our data in Section 2, assess representation of income groups by individual legislators in Section 3, and conclude in Section 4.

II. POLICY PREFERENCES OF INCOME GROUPS AND POLITICAL DECISIONS

To analyze whether political representation depends on income, we must know how individual legislators decided on a large number of policy proposals and map their decisions to preferences of voters of different income groups. In Switzerland, as in other democratic countries, legislators decide on policy proposals. However, Swiss voters can demand a

referendum on any parliamentary law decision and they can advance proposals for constitutional amendments (“initiatives”). Signature requirements are low and referenda are mandatory for all constitutional changes (see Portmann et al. 2012 for details). Thus, both, voters in referenda and legislators in parliament decide on identically worded proposals such that their choices can be directly compared. Referendum decisions are binding. Voters reveal preferences in referenda which represent a dichotomous choice between the legislative proposal at stake and the status quo (see Schneider et al. 1981, Frey 1994, Carey and Hix 2013).

After every referendum, a representative sample of the electorate is surveyed in so-called “VOX surveys” regarding their voting behavior, political opinions and socio-economic background.¹ Individual respondents self-report their household net-incomes. Income concentration in Switzerland resembles that of other continental European countries (see Schaltegger and Gorgas 2011).

With this institutional setting, our empirical approach to measure congruence is straightforward: We split the national electorate in terciles of low, middle and high-income voters. Post referendum surveys allow us to determine how *individual* voters of each income terciles have voted. We compare their decisions with how individual legislators decided on the same policy proposals. Hence, we obtain a direct measure of congruence between legislators and individual voters of different income terciles. A notion of democracy is that citizens’ preferences *should* count equally (see Bartels 2008), i.e. all citizen’s *should* have equal electoral power. Our setting assesses to which degree this basic principle of democracy holds, i.e. if voters within different income terciles are equally represented by individual politicians.²

We analyze all legislative proposals since the introduction of an electronic recording system in the Swiss National Council (lower house of parliament) which were presented to voters in referenda between 1996 and 2012. While the National Council has 200 members, we observe 466 different legislators in 134 final legislative voting decisions which results in 23489 individual observations.³

We can analyze congruence between legislators and voters of different income groups decision by decision, thus avoiding difficulties related to reducing multiple policy dimensions to a single ideology scale. Congruence between legislators and low, middle, and high-income

¹ Newspapers and TV-broadcasts discuss VOX-surveys. They are credited to allow in depth interpretation of who supported/rejected a referendum.

² Individual voter data from the post referendum surveys assure equal electoral weight and allow us to analyze how the average voter of an income tercile decides in a referendum.

³ Votes are classified as missing when legislators are absent (2083 cases due sickness, etc.) or abstain from voting (1228 cases). Abstention does not vary by profession which is a proxy for a legislator’s income.

voters directly occurs if a legislator's vote coincides with the decision of voters of the respective income group. The comparison of referendum and legislators' decisions has been advocated by Matsusaka (2010) as an approach to evaluate overall responsiveness in US-States with direct democratic institutions. Brunner et al. (2013) apply the same basic methodology to measure congruence in California with 77 referenda but they use estimated income terciles from aggregated census tracks instead of employing information on individual voters. This direct measure of congruence achieves external validity as voter income groups only reveal their preferences after legislators have decided in parliament such that legislators need to anticipate their preferences as in countries/states without direct democracy (see Garrett 1999; Brunner et al. 2013).

III. POLITICAL REPRESENTATION OF INCOME GROUPS

Congruence levels

Table 1 evaluates political representation of low, middle, and high-income voters by individual legislators.

Panel (a) shows that average congruence between legislators' decisions in parliament and the voters' preferences increases with income. The average congruence level between individual legislators and poor voters amounts to 62.6%, while it is 2.3%-points higher for middle-income voters (64.9%), and even 4.0%-points higher for the rich (66.6%).⁴ Differences in congruence between voter income terciles are statistically significant (columns 4 and 5).

Panel (b) reveals an additional salient features of political representation: Congruence with low, middle, and high-income voters depends on a legislator's party affiliation. Legislators from left parties have higher congruence levels with low-income voters than with middle-income voters which, in turn, are more closely represented than the rich. The opposite holds for legislators with center and right party affiliation which explains the overall pattern of congruence of panel (a). Legislators from center parties have the highest congruence level for all income groups.

Robustness tests yield qualitatively similar interpretations.⁵

⁴ The congruence level between legislators and the majority of all voters evaluated with VOX-surveys (65.4%) is fully in line with the actual overall congruence using the official national result (64.5%) which points to the representativeness and correctness of the survey responses.

⁵ For robustness, we restrict the sample of legislative decisions and accompanying referenda (1) to constitutional proposals only, (2) to clear cut referendum results (absolute support higher than 52.5%), and (3) form two income groups (below and above the median income).

Table 1: Congruence between legislators and income terciles

	<i>Low-income voters</i> (1)	<i>Middle-income voters (median)</i> (2)	<i>High-income voters</i> (3)	<i>t-test: low-middle</i> (4)	<i>t-test: middle-high</i> (5)	<i>N</i> (6)
<i>Panel (a): Average level of congruence</i>						
Individual legislators	0.6262 (0.0032)	0.6488 (0.0031)	0.6661 (0.0031)	0.0001	0.0001	23489
<i>Panel (b): Level of congruence by party blocks</i>						
Left party legislators	0.5539 (0.0057)	0.5364 (0.0057)	0.5064 (0.0057)	0.0304	0.0002	7664
Center party legislators	0.7013 (0.0046)	0.7643 (0.0043)	0.8106 (0.004)	0.0001	0.0001	9701
Right party legislators	0.5976 (0.0063)	0.6065 (0.0062)	0.637 (0.0061)	0.4695	0.0205	6124

Notes: Congruence is measured by legislator's decisions in parliament and preferences of income groups revealed in identical referenda. Standard errors of the mean are given in parenthesis. p-values reported for t-tests.

Sources: Swiss Parliamentary Services and Swissvotes.

Unequal responsiveness

To evaluate legislators' responsiveness to the preferences of low, middle, and high-income voters, we estimate the change in the likelihood that a legislator accepts a proposal as a function of an income tercile's revealed preferences by means of a logistic model. The binary dependent variable indicates whether a legislator votes "yes". This type of analysis is credited to allow a flexible account of political responsiveness (see Bartels 2008). We always control for party fixed effects, include an intercept, and report robust clustered standard errors for individual legislators. Table 2 reports the results.

Table 2: Responsiveness of legislators towards income terciles

	(1)		(2)		(3)		(4)	
	<i>Estimate</i>	<i>%-point-change</i>	<i>Estimate</i>	<i>%-point-change</i>	<i>Estimate</i>	<i>%-point-change</i>	<i>Estimate</i>	<i>%-point-change</i>
Preference low-income voters	3.3802*** (0.1291)	0.7155					-0.7994*** (0.2036)	-0.1602
Preference middle-income voters			3.6253*** (0.1388)	0.7479			0.2553 (0.4026)	0.0511
Preference high-income voters					3.6033*** (0.1584)	0.7208	3.9535*** (0.3629)	0.7891
Party fixed effects	yes		yes		yes		yes	
Pseudo R2	0.1456		0.1774		0.2128		0.214	
Brier	0.2195		0.2137		0.2065		0.2062	
n. Obs.	23489		23489		23489		23489	

Notes: Dependent variable is "Legislator Votes YES" in parliament. The column "%-point-change" gives average effect in percentage points on the probability to observe the dependent variable for a 1-%-point change of the independent variable. *** <1%, ** 1-5%, * 5-10% significance level.

Preferences of low, middle, and high-income voters are highly correlated ($\rho_{low,middle} = 0.952$, $\rho_{middle,high} = 0.924$), and legislators respond to all income groups when analyzed

separately in columns 1-3. A higher preference intensity for the proposal in the referendum by one percentage point is associated with an increase in responsiveness of individual legislators by 0.72 to 0.75-%-points. Specification (4) jointly includes support of all three income terciles. Responsiveness is highest for the rich and negative for poor voters.⁶ *Ceteris paribus*, an increase in the preferences of the rich increases the probability that a legislator supports a policy proposal while the opposite, though at an absolutely smaller extent, is the case for poor voters. Both associations are statistically significant while the coefficient for middle-income is statistically insignificant.

IV. CONCLUSIONS

We evaluate whether the representation of voter preferences by individual legislators depends on voters incomes. By matching individual legislators' decisions with referendum choices of low, middle, and high-income voters, we obtain a direct and natural measure of congruence. We also distinguish representation of income groups by legislators with different party affiliation (left, center, right) in a multi-party institutional environment typical for European countries.

On average, high-income voters tend to be better represented than middle- and low-income voters. Center and right party legislators are more congruent with high-income voters than low-income voters while the opposite is true for left party legislators. Our results are consistent with recent important findings by Brunner et al. (2013) for California regarding the fact that legislators reflect the desire of poor, middle, and high-income voters (when analyzed individually), and the fact that party affiliation play role for the pattern of representation. However, our results suggest that congruence levels increase with voter income terciles such that policy makers do *not* necessarily behave as if all citizens were politically equal.

Existing differences in the representation of voters of different income groups need to be explained by future research. Explanatory factors may be found on the side of legislators (e.g. politicians' characteristics; Padovano 2013) and voters (e.g. preference intensities or voter participation; Kasara and Suryanarayan 2014).

⁶ This pattern corresponds to results in the literature based on W-NOMINATE scores (e.g. Bartels 2008, p. 259 or Bhatti and Erikson 2011)

REFERENCES

- Bartels, L. M. (2008). *Unequal Democracy: The Political Economy of the New Gilded Age*. Princeton: Princeton University Press.
- Bhatti, Y. and R. Erikson (2011). How poorly are the poor represented in the US Senate? In P. Enns and C. Wlezien (Eds.), *Who Gets Represented?* New York: Russell Sage.
- Brunner, E. J., S. L. Ross, and E. L. Washington (2013). Does less income mean less representation? *American Economic Journal: Economic Policy* 5(2), 53–76.
- Carey, J. M. and S. Hix (2013). District magnitude and representation of the majority's preferences: A comment and reinterpretation. *Public Choice* 154(1-2), 139–148.
- Frey, B. S. (1994). Direct democracy: Politico-economic lessons from Swiss experience. *American Economic Review* 84(2), 338–342.
- Garrett, T. A. (1999). A test of shirking under legislative and citizen vote: The case of state lottery adoption. *Journal of Law and Economics* 42(1), 189–208.
- Kasara, K. and P. Suryanarayan (2014). When do the rich vote less than the poor and why? Explaining turnout inequality across the world. *American Journal of Political Science*, forthcoming.
- Matsusaka, J. G. (2010). Popular control of public policy: A quantitative approach. *Quarterly Journal of Political Science* 5(2), 133–167.
- Padovano, F. (2013). Are we witnessing a paradigm shift in the analysis of political competition? *Public Choice* 156(3), 631–651.
- Portmann, M., D. Stadelmann, and R. Eichenberger (2012). District magnitude and representation of the majority's preferences: Quasi-experimental evidence from popular and parliamentary votes. *Public Choice* 151(3-4), 585–610.
- Schaltegger, C. A. and C. Gorgas (2011). The evolution of top incomes in Switzerland over the 20th century. *Swiss Journal of Economics and Statistics (SJES)* 147(4), 479–519.
- Schneider, F., W. W. Pommerehne, and B. S. Frey (1981). Politico-economic interdependence in a direct democracy: The case of Switzerland. In D. A. Hibbs and H. Fassbender (Eds.), *Contemporary Political Economy, Studies on the Interdependence of Politics and Economics*, pp. 231–248. North Holland, Amsterdam.