Income and policy choices: Evidence from parliamentary decisions and referenda

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HIGHLIGHTS

- Measure policy preferences of low, middle, and high-income voters.
- Compare legislators' decisions and preferences of voters.
- Legislators closely represent preferences of high-income voters.
- Representation depends on legislators' party affiliations.
- Policy preferences of low, middle, and high-income voters are correlated.

GRAPHICAL ABSTRACT
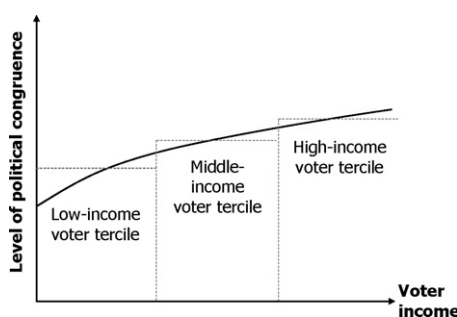
ABSTRACT

We analyze political representation of low, middle, and high-income voters by matching their referendum choices with parliamentary decisions of legislators on the identical policy proposals. Legislators more closely represent preferences of rich voters than preferences of middle-income and poor voters.

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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")

1. Introduction

Does income matter for political representation? In principle, democracy rests on the notion that citizen's preferences should

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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 (see Bartels, 2008 and Bhatti and Erikson, 2011). A major challenge is to elicit preferences of voters with different incomes concerning policy proposals and confront them with actual policy decisions by legislators (see Brunner et al., 2013).

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. 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 legislators' decisions and preferences of voter income terciles on identical policy proposals. While revealed preferences of low, middle, and high-income voters are highly correlated ($>90\%$), legislators represent the preferences of high-income voters on average with a 2.3%-points and a 4.0%-points higher probability than the preferences of middle-income and poor voters, respectively. Moreover, 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. Finally, analyzing a subsample of voters who are self-declared party supporters reveals that the legislators more closely match their party supporters than non-supporters. Within party supporters, congruence levels of legislators of the respective parties increase with voter income.

2. 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 with different incomes. In Switzerland, as in other democratic countries, legislators decide on policy proposals. However, Swiss voters can demand a referendum on any parliamentary decision on laws, and they can advance proposals for constitutional amendments. Signature requirements are low and referenda are mandatory for all constitutional changes (see Portmann et al., 2012 for details). 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 and 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. Respondents self-report their household net-incomes. Income concentration in Switzerland resembles that of other continental European countries (see Schaltegger and Gorgas, 2011). A subset of respondents (56.7%) declare which party they support.

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 tercile have voted. We compare their decisions with how legislators decided on the same policy proposals. Hence, we obtain a direct measure of congruence between legislators and 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 politicians.

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 23 489 observations.[1]

We analyze congruence between legislators and voters of different income groups decision by decision. Congruence between legislators and low, middle, and high-income voters occurs if a legislator's vote coincides with the decision of voters of the respective income group. Comparing referendum and legislators' decisions in general is recommended by Matsusaka (2010), Portmann et al. (2012), and Stadelmann et al. (2012) as an approach to evaluate overall responsiveness. Brunner et al. (2013) apply the same basic methodology to measure congruence in California with 77 referenda but use estimated income terciles from aggregated census tracks instead of employing information on individual voters. Our 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 and Brunner et al., 2013).

3. Political representation of income groups

Congruence levels

Table 1 evaluates political representation of low, middle, and high-income.

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%).[2] Differences in congruence between voter income terciles are statistically significant (columns 4 and 5).

Panel (b) reveals an additional salient feature of political representation: Congruence with low, middle, and high-income voters depends on a legislator's party affiliation. Legislators from left parties exhibit 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. Legislators from center parties have the highest congruence level for all income groups which is consistent with legislators from left and right parties focusing on smaller groups of voters at the edges of the electoral spectrum in a multi-dimension and multi-party environment. Congruence levels substantially increase for all party legislators when matched with their respective party supporters as shown in panel (c). Hence, party affiliations of legislators and their

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

[2] 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%). This points to the representativeness and correctness of the survey responses.

Table 1
Congruence between legislators and income groups.
Source: Swiss Parliamentary Services and Swissvotes.

	Low-income voters (1)	Middle-income voters (median) (2)	High-income voters (3)	t-test: (1)–(2) (4)	t-test: (2)–(3) (5)	obs. (6)
Panel (a): Average level of congruence						
Individual legislators = voters	0.6262 (0.0032)	0.6488 (0.0031)	0.6661 (0.0031)	0.0000	0.0001	23 489
Panel (b): Level of congruence by party blocks						
Left party legislators = voters	0.5539 (0.0057)	0.5364 (0.0057)	0.5064 (0.0057)	0.0304	0.0002	7 664
Center party legislators = voters	0.7013 (0.0046)	0.7643 (0.0043)	0.8106 (0.004)	0.0000	0.0000	9 701
Right party legislators = voters	0.5976 (0.0063)	0.6065 (0.0062)	0.637 (0.0061)	0.4695	0.0205	6 124
Panel (c): Level of congruence with party supporters by party blocks						
Left party legislators = left supporters	0.8117 (0.0045)	0.8376 (0.0042)	0.8516 (0.0041)	0.0000	0.0163	7 664
Center party legislators = center supporters	0.8047 (0.004)	0.8119 (0.004)	0.853 (0.0036)	0.3790	0.0000	9 701
Right party legislators = right supporters	0.7441 (0.0056)	0.7831 (0.0053)	0.7853 (0.0052)	0.0000	0.8216	6 124

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

Table 2
Responsiveness of legislators towards income terciles.

	(1) Estimate	%-point-change	(2) Estimate	%-point-change	(3) Estimate	%-point-change	(4) Estimate	%-point-change
Preference of low-income voters	3.3802*** (0.1291)	0.7155					−0.7994*** (0.2036)	−0.1602
Preference of middle-income voters			3.6253*** (0.1388)	0.7479			0.2553 (0.4026)	0.0511
Preference of 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.	23 489		23 489		23 489		23 489	

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% significance level.

supporters in the electorate explain even larger differences in congruence than income (see also Brunner et al., 2013). However, beyond previous findings in the literature, panel (c) shows that congruence is monotonically increasing in income for each subsample of party supporters.

Robustness tests yield qualitatively similar interpretations.[3]

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 in Table 2. The binary dependent variable indicates whether a legislator votes "yes". We always control for party fixed effects, include an intercept, and report robust clustered standard errors for legislators.

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 (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 0.72–0.75%-points. Specification (4) jointly includes support of all three income terciles. Responsiveness is highest for the rich and negative for poor voters.[4] 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, applies to poor voters.

[3] For robustness tests, we restrict the sample to constitutional proposals only, to clear cut referendum results (absolute support higher than 52.5%), and to two income groups (below and above the median income).

[4] This pattern corresponds to results in the literature based on W-NOMINATE scores (e.g. Bartels, 2008, p. 259 or Bhatti and Erikson, 2011). When analyzing separate samples for legislators of different parties, the negative relationship for low-income groups persists for left and center parties. When analyzing separate samples for party supporters in the electorate, legislators also tend to react less to low-income supporters of left, center, and right parties.

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4. Conclusions

We evaluate whether the political representation depends on incomes of voters. 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 distinguish representation of income groups by legislators with different party affiliation (left, center, right) in a multi-party institutional environment as 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 exhibit higher congruence levels with high-income voters than low-income voters while the opposite is true for left party legislators. Preferences of all income groups are, however, highly correlated. Our results are consistent with recent findings by Brunner et al. (2013) for California regarding the fact that legislators reflect the desire of poor, middle, and high-income voters and the fact that party affiliations of legislators and party supporters matter for the pattern of representation. Analyzing congruence of legislators with their respective party supporters reveals higher congruence levels for all income groups. However, our results suggest that congruence levels for legislators of all parties increase with their party supporters' incomes 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, 2015).

Appendix A. Supplementary data

Supplementary material related to this article can be found online at http://dx.doi.org/10.1016/j.econlet.2015.07.022.

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