A Validation Study on Voter Turnout Bias in Switzerland

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Outline

- Introduction
- Our study
- Results
- Conclusions
Introduction: Voter Turnout Bias in Switzerland

Source: Own calculations based on the most recent VOX dataset.

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Introduction: Research Questions

- What are the mechanisms that lead to the observed turnout bias in Swiss voting and election studies?
- How much do the different mechanisms contribute to the total bias?
- Is it possible to reduce the bias by special questioning techniques or weighting schemes?
Introduction: Types of Biases

- **Undercoverage**
  - Sampling frames typically do not cover the whole population.
  - Political participation is likely to be lower among uncovered subpopulations (e.g. young people without landline) than among covered subpopulation, leading to a positive bias in survey estimates of voter turnout (Mokrzycki, Keeter und Kennedy 2009, Blumberg und Luke 2007)

- **Nonresponse**
  - Participation in surveys correlates with political interest and political participation (Voogt und Saris 2003, Jackman 1999, Brehm 1993).

- **Misreporting**
  - Due to social desirability (Tourangeau und Yan 2007) and recall errors (Belli et al. 1999), respondents tend to overreport their participation behavior.
Introduction: Types of Biases

Measurement
- Construct
- Measurement
- Response
- Edited response
- Survey estimate

Representation
- Target population
  - Coverage error
- Sampling frame
  - Sampling error
- Sample
  - Nonresponse error
- Respondents
  - Adjustment error
- Postsurvey adjustments

Validity
Measurement error
Processing error

(Groves et al. 2009:48)
Our Study

- Voter turnout validation study comparing survey data to registered polling cards at a small municipality in Switzerland.

- Polling cards
  - Citizens who took part in the vote can be identified from the collected polling cards.

- Survey
  - Gross sample of 2000 citizens from the municipality’s register.
  - Net sample of 1696 (84.8%) citizens whose households could be found in the telephone register.
  - CATI survey between September 23 and October 20 with 893 respondents (52.7% of net sample).
  - Questions on: political interest, participation in the September 22 vote and other votes, social desirability of voting, key indicators of political participation research, social demographics.
  - Wording experiment for the September 22 voting question.
Main Results

59.2%  
N=4559  
Population
  Gross sample
  No telephone
  Net sample
  No interview
  Interviewed sample
  Self-report

Turnout (in percent)
Main Results

Turnout (in percent)

Population 59.2% N=4559
Gross sample 59.3% N=2000
No telephone
Net sample
No interview
Interviewed sample
Self-report

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Main Results

- Population: 59.2% (N=4559)
- Gross sample: 59.3% (N=2000)
- No telephone: 35.5% (N=304)
- Net sample: 63.4% (N=1696)

Turnout (in percent)

- No interview
- Interviewed sample
- Self-report

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Main Results

- **Population**
  - Turnout: 59.2%
  - Sample size: N=4559

- **Gross sample**
  - Turnout: 59.3%
  - Sample size: N=2000

- **No telephone**
  - Turnout: 35.5%
  - Sample size: N=304

- **Net sample**
  - Turnout: 63.4%
  - Sample size: N=1696

- **No interview**
  - Turnout: 53.1%
  - Sample size: N=803

- **Interviewed sample**
  - Turnout: 72.6%
  - Sample size: N=893

- **Self-report**
  - Turnout: 72.6%

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Main Results

- **Population**
  - Refused: 59.2% (N=4559)
  - Not reached: 59.3% (N=2000)
  - Unable: 35.5% (N=304)

- **Gross sample**
  - Refused: 63.4% (N=1696)
  - Not reached: 53.1% (N=803)
  - Unable: 72.6% (N=893)

- **Net sample**
  - Refused: 80.6% (N=893)
  - Not reached: 80.6% (N=893)
  - Unable: 80.6% (N=893)

Legend:
- Turnout (in percent)
- Refused
- Not reached
- Unable

- **Turnout (in percent)**: 0 to 85
- **Sample**: 0 to 85

- **Gross sample**: 0 to 85
- **Net sample**: 0 to 85
- **Interviewed sample**: 0 to 85
- **Self-report**: 0 to 85
### Over- and Underreporting

<table>
<thead>
<tr>
<th>polling cards</th>
<th>did not vote (N = 893)</th>
<th>voted (N = 893)</th>
<th>Total (N = 893)</th>
</tr>
</thead>
<tbody>
<tr>
<td>– did not vote</td>
<td>69.6</td>
<td>30.4</td>
<td>100.0</td>
</tr>
<tr>
<td>– voted</td>
<td>0.4</td>
<td>99.6</td>
<td>100.0</td>
</tr>
</tbody>
</table>

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Sociodemographic Profiles

**Undercoverage (N=1946, R^2_{MF}=.262)**
- Female
- Age (ref = 18 – 34)
  - 35 – 49
  - 50 – 64
  - 65 or older
- Marital status (ref = married)
  - single
  - divorced
  - widowed
- Household size (ref = 2)
  - 1 member
  - 3 members
  - 4 or more
- Single-family home
- Wealth (log/10)
- Income (log/10, equivalized)

**Nonresponse (N=1661, R^2_{MF}=.014)**
- Female
- Age (ref = 18 – 34)
- Marital status (ref = married)
- Household size (ref = 2)
- Single-family home
- Wealth (log/10)
- Income (log/10, equivalized)

**Overreporting (N=227, R^2_{MF}=.044)**
- Female
- Age (ref = 18 – 34)
- Marital status (ref = married)
- Household size (ref = 2)
- Single-family home
- Wealth (log/10)
- Income (log/10, equivalized)

Average marginal effects from logistic regressions

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Determinants of Overreporting

Political interest (1–5)
- Party member
- Left–right (0–10)
- Voting is civic duty
- Internal political efficacy (1–5)
- External political efficacy (1–5)
- Most people in own circle vote
  - People in own circle would not like it if I don't vote
- Female
- Tertiary education
- Age (ref = 18 – 34): 35 – 49, 50 – 64, 65 or older

Average marginal effects (N=183, $R^2_{MF}=.139$)
Wording Experiment

- The sample was randomized into a control group and a treatment group.
- The control group received a standard voting question.
  - „How about you, did you vote or not?“
- The treatment group received a modified voting question intended to minimize social-desirability bias and recall errors.
  - „Please try to remember whether you read the voting documents and whether you voted in person or by mail. Which of the following statements does apply to you?“
    - I did not vote.
    - I thought about voting, but did not.
    - I usually vote, but did not this time.
    - I am sure I did vote.
Wording Experiment: Results

Control group (N = 438) vs. Experimental group (N = 455)

- Turnout (in percent)
- Polling cards vs. Self-report
Wording Experiment: Results

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Reykjavik, 16.07.2015
Summary and Conclusions

- Undercoverage, nonresponse, and overreporting jointly contribute to the participation bias in survey data.

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sampling error</td>
<td>0.4%</td>
</tr>
<tr>
<td>Undercoverage</td>
<td>19.2%</td>
</tr>
<tr>
<td>Nonresponse</td>
<td>43.0%</td>
</tr>
<tr>
<td>Overreporting</td>
<td>37.4%</td>
</tr>
<tr>
<td><strong>Total bias (21.5 pp)</strong></td>
<td>100.0%</td>
</tr>
</tbody>
</table>

- Undercoverage, nonresponse, and overreporting have differential sociodemographic profiles.
- The errors potentially affect associations and regression models estimated from survey data. Overreporting appears particularly problematic.
- Effort should be put into improving survey measurements of political participation and new correction methods should be developed.
- However: Surveys will always remain an approximate science.
References


