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.

A Validation Study on Voter Turnout Bias

Baltimore, 21.09.2015
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
- Sampling frame
- Sample
- Respondents
- Postsurvey adjustments
- Coverage error
- Sampling error
- Nonresponse error
- Adjustment error

Validated by Groves et al. (2009:48)
Our Study

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

Polling cards

- Federal votes of September 22 and June 9, 2013.
- Citizens who took part in the votes 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 the votes, social desirability of voting, key indicators of political participation research, social demographics.
- Wording experiment voting question.
Main Results: September 22 Vote

Population: 59.2% N=4559

Turnout (in percent)

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85

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Main Results: September 22 Vote

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

Turnout (in percent)
Main Results: September 22 Vote

- **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)
Main Results: September 22 Vote

Population: 59.2% (N=4559)
Gross sample: 59.3% (N=2000)
No telephone: 35.5% (N=304)
Net sample: 63.4% (N=1696)
No interview: 53.1% (N=803)
Interviewed sample: 72.6% (N=893)

Turnout (in percent)

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85

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8
Main Results: September 22 Vote

- Population: 59.2% (N=4559)
- Gross sample: 59.3% (N=2000)
- No telephone: 35.5% (N=304)
- Net sample: 63.4% (N=1696)
- No interview: 53.1% (N=803)
- Interviewed sample: 72.6% (N=893)
- Self-report: 80.6% (N=893)
Main Results: June 9 Vote

- **Population**: 49.8% (N=4459)
- **Gross sample**: 49.6% (N=1966)
- **No telephone**: 27.5% (N=289)
- **Net sample**: 53.3% (N=1677)
- **No interview**: 43.8% (N=792)
- **Interviewed sample**: 61.7% (N=885)
- **Self-report**: 80.6% (N=871)

Turnout (in percent)

- Refused
- Not reached
- Unable

**Turnout (in percent)**

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85
### Over- and Underreporting

<table>
<thead>
<tr>
<th>polling cards</th>
<th>September 22</th>
<th>self-report</th>
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<td>(N = 893)</td>
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<tr>
<td>voted</td>
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<td>96.8</td>
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<td>(N = 864)</td>
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Sociodemographic Profiles (September 22 Vote)

Average marginal effects from logistic regressions

- Undercoverage (N=1946, $R^2_{MF}=.262$)
- Nonresponse (N=1661, $R^2_{MF}=.014$)
- Overreporting (N=227, $R^2_{MF}=.044$)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Female</th>
<th>Age (ref = 18–34)</th>
<th>35–49</th>
<th>50–64</th>
<th>65 or older</th>
<th>Marital status (ref = married)</th>
<th>Single</th>
<th>Divorced</th>
<th>Widowed</th>
<th>Household size (ref = 2)</th>
<th>1 member</th>
<th>3 members</th>
<th>4 or more</th>
<th>Single-family home</th>
<th>Wealth (log/10)</th>
<th>Income (log/10, equivalized)</th>
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Determinants of Overreporting (September 22 Vote)

- 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

[Bar chart showing turnout for September 22 vote and June 9 vote for Control and Treatment groups using polling cards and self-report methods.]

September 22 vote
- Control: 75% ± 5 (polling cards)
- Treatment: 80% ± 5 (polling cards)
- Control: 70% ± 5 (self-report)
- Treatment: 85% ± 5 (self-report)

June 9 vote
- Control: 85% ± 5 (polling cards)
- Treatment: 90% ± 5 (polling cards)
- Control: 80% ± 5 (self-report)
- Treatment: 95% ± 5 (self-report)
Wording Experiment: Results

September 22 vote

June 9 vote

Percent

Control

Treatment

Control

Treatment

bias

overreporting

underreporting

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Summary and Conclusions

- Undercoverage, nonresponse, and overreporting jointly contribute to the participation bias in survey data; contribution of overreporting increases over time.

- Undercoverage, nonresponse, and overreporting have differential sociodemographic profiles.

- The errors potentially affect associations and regression models estimated from survey data. Overreporting appears particularly problematic.

- Alternative wording to minimize social-desirability bias and recall errors did not lead to substantial improvement.

<table>
<thead>
<tr>
<th></th>
<th>Sept 22 PP</th>
<th>Sept 22 %</th>
<th>June 9 PP</th>
<th>June 9 %</th>
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</thead>
<tbody>
<tr>
<td>Sampling error</td>
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<td>-.2</td>
<td>-0.5</td>
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<td>Undercoverage</td>
<td>4.1</td>
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<td>3.7</td>
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<td>43.0</td>
<td>8.4</td>
<td>27.3</td>
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<tr>
<td>Overreporting</td>
<td>8.0</td>
<td>37.4</td>
<td>18.9</td>
<td>61.3</td>
</tr>
<tr>
<td>Total bias</td>
<td>21.5</td>
<td>100.0</td>
<td>30.8</td>
<td>100.0</td>
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References


