The National Do Not Call Registry and State-Level Response Rates: Taking Another Look

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National Do Not Call Registry

• **Background:**
  - Designed to reduce unsolicited calls from some segments of telemarketing industry
  - Effective October 1, 2003
  - Enforced by Federal Trade Commission (FTC)

• **Register up to 3 telephone numbers**
  - Landline or cell phone

• **Surveys are not covered by DNC Registry**
What effect has DNC Registry had on response rates?

- **DNC Registrants:**
  - Behaviorally different from non-registrants: they registered their telephone numbers

- **Hypothesis 1:**
  - Fewer unwanted calls will increase willingness to participate in surveys

- **Hypothesis 2:**
  - Individuals want to reduce all unsolicited calls which will decrease willingness to participate in surveys
Behavioral Risk Factor Surveillance System (BRFSS)

- Monthly state-based RDD survey of health issues
- 50 states, District of Columbia, Puerto Rico, Guam, and Virgin Islands
- 350,000+ adult interviews conducted in 2006
- From 2002 to 2006:
  - completed 1,517,000 interviews
  - Dialed 14,381,000 telephone numbers
Findings from initial investigation

• Examined state-level response rate trends from Jan. 2002 – June 2005

• Significant declining trends for 33 of 47 states
  – Median decline: 2.2% per year

• Time series modeling:
  – Percentage of households on DNC Registry was not significantly related to changes in response rates
New analysis

• Extended time series by 18 months
  – January 2002 through December 2006

• More state-level detail

• Refined measurement of percentage of households on DNC Registry
Original calculation (from article)

Percentage of Households with 1 or more telephone numbers on DNC Registry

\[
\text{Number of households with telephones (March 2003)} = \frac{\# \text{ telephone numbers on DNC Registry}}{1.3 \text{ numbers per HH}}
\]
Refined calculation

Percentage of Households with 1 or more telephone numbers on DNC Registry

\[
\text{(Screened \# telephone numbers on DNC Registry /} \\
\text{= \ Average number of landline telephones in HH)} \\
\text{(Estimated housing units * Estimated landline HHs)}
\]

- DNC numbers screened to purge known business, out of service, and cell phones;
- DNC count adjusted to determine number of households with 1+ numbers registered;
- Yearly estimates of housing units used;
- Number of housing units adjusted to reflect estimate of households with landlines (based on National Health Interview Survey estimates)
Variables and Analysis

• Examine trends in response rates
  – Using AAPOR #4 RR calculation

• Time series analysis of response rates:
  – % households on DNC Registry
  – Level of effort (sqrt of dialings per case)
  – Use of advance letter
  – Change in data collector
Findings
National Figures as of December 2006

• Total number of telephone numbers on the DNC Registry: 132M

• Number of landline telephone numbers estimated to be residential household lines: 73.6M

• Percentage of households with 1+ landlines on DNC Registry: 62.9%
State level cross-time trends
Median state-level response rate and percentage of households on DNC Registry

State median, 2002-2006

Response Rate

Do Not Call

2002 2003 2004 2005 2006

0 10 20 30 40 50 60 70 80 90 100
Trend and time series results

- Significant trending in response rates:
  - 40 states negative
  - 3 state positive
  - 4 no significant trending

- ARIMA Models:
  - DNC Registry: positive effect in 1 state
  - Advance letters: positive effect in 8 of 16 states
  - Increased effort: positive effect in 6 of 47 states
  - New data collector: negative effect in 1 of 6 states
State where DNC Registry had significant positive effect: California

California, 2002-2006

Do Not Call

Response Rate

CDC
SAFER · HEALTHIER · PEOPLE
State where DNC Registry had significant positive effect: California

California, 2002-2006

Graph showing the trend of Do Not Call and Response Rate from 2002 to 2006.
Highest percentage of households on DNC Registry: Colorado

Colorado, 2002-2006

Response Rate

Do Not Call

Start advance letters
Lowest percentage of households on DNC Registry: Indiana

Indiana, 2002-2006

Response Rate

Do Not Call
Steepest decline in response rate: Montana

Montana, 2002-2006

Response Rate

Do Not Call
Use of advance letters: Kansas

Kansas, 2002-2006

Response Rate

Do Not Call

Start advance letters

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Use of advance letters and new data collector: South Carolina

South Carolina, 2002-2006

Start advance letters and new data collector

Response Rate

Do Not Call

2002 2003 2004 2005 2006
Hurricane Katrina Effect?
Louisiana

Louisiana, 2002-2006

Response Rate

Hurricane Katrina: no data collection
Advance letters used
Start new data collector
Do Not Call

2002 2003 2004 2005 2006
Implications

• To date DNC Registry has neither helped nor hurt survey response rates
  – Seems to simply reflect pre-existing sentiment
  – May have longer-term effect, but unlikely

• Operational and other factors more important:
  – Advance letters & increased effort
  – But effects vary greatly across states
Future directions?

• Continue monitoring trends in response rates and DNC registration

• Examine other factors which may influence trends and may be controllable:
  – Sample size / cases worked per month
  – Interviewer effects
  – Other organizational variables
  – Societal variables?
For More information

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