Survey Nonresponse

Trends, Challenges, and Strategies

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“...there are a significant number of reports of completion rates declining, or where achieving a satisfactory completion rate is becoming increasingly more difficult.”
Why the (continued) focus on response?

- The most easily understood metric of survey *production*
- Important for planning, production, and monitoring
  - i.e., managing and monitoring data collection costs
- They are an *indicator* of the potential for bias
  - We’ve gotten really proficient at identifying and adjusting for bias...
  - Indicator of quality is debatable
    - See: Groves 2006; Groves & Peytcheva 2008; Brick & Tourangeau 2017; Lugtig 2016
Nonresponse Trends 2010 and Later

Trends ~2010 to latest reported period (~2019-~2021)

Household (n = 9)

(ATUS) American Time Use Survey
(CPS-Basic) Current Population Survey*
(GSS) General Social Survey
(MEPS) Medical Expenditure Panel Survey*
(NCVS) National Crime Victimization Survey*
(NHANES) Nat’l Heath & Nutrition Exam. Survey
(NHIS) National Health Interview Survey
(NSDUH) Nat’l Survey on Drug Use & Health
(NSFG) Nat’l Survey of Family Growth

Establishment (n = 7 BLS only)

(ARS) Annual Refiling Survey
(CES) Current Employment Statistics
(CPI C&S) Consumer Price Index (Comm. & Svcs)
(ECI) Employment Cost Index
(JOLTS) Job Openings & Labor Turnover Survey
(OEWS) Occ. Employment & Wage Statistics
(SOII) Survey of Occupational Injuries & Illnesses†

* For household longitudinal surveys, initial interview response is used (Time or Month in Sample 1).
NCVS: 2017-2021 includes all panel waves (except 2020 where new sample suspended due to COVID-19)
† Participation in this survey is required by law.
Household Surveys (Federal)

* GSS is conducted by NORC through NSF grant funding.
## Rates of Decline (Household)

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<tbody>
<tr>
<td>ATUS</td>
<td>56.9%</td>
<td>42.0%</td>
<td>-14.9</td>
<td>-1.6</td>
<td>39.4%</td>
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<td>CPS</td>
<td>89.9%</td>
<td>80.2%</td>
<td>-9.6</td>
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<td>71.8%</td>
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<td>GSS</td>
<td>70.3%</td>
<td>59.5%</td>
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<td>17.4%</td>
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<td>MEPS</td>
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<td>NCVS</td>
<td>90.4%</td>
<td>70.9%</td>
<td>-19.5</td>
<td>-2.2</td>
<td>67.2%</td>
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<tr>
<td>NHANES</td>
<td>79.4%</td>
<td>51.0%</td>
<td>-28.4</td>
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<tr>
<td>NHIS</td>
<td>79.5%</td>
<td>61.1%</td>
<td>-18.4</td>
<td>-2.3</td>
<td>52.8%</td>
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<td>NSDUH</td>
<td>65.9%</td>
<td>45.8%</td>
<td>-20.1</td>
<td>-2.3</td>
<td>10.3%</td>
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<tr>
<td>NSFG</td>
<td>72.8%</td>
<td>63.4%</td>
<td>-9.4</td>
<td>-1.6</td>
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## Rates of Decline (Establishment)

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<tbody>
<tr>
<td>ARS</td>
<td>80.9%</td>
<td>76.7%</td>
<td>-4.2</td>
<td>-0.7</td>
<td>69.1%</td>
<td>-7.6</td>
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<td>CES</td>
<td>58.3%</td>
<td>59.3%</td>
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<td>47.8%</td>
<td>-11.5</td>
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<td>CPI (C&amp;S)</td>
<td>66.6%</td>
<td>62.9%</td>
<td>-3.6</td>
<td>-0.9</td>
<td>54.1%</td>
<td>-8.9</td>
<td>52.0%</td>
<td>-2.0</td>
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<tr>
<td>ECI</td>
<td>71.8%</td>
<td>62.3%</td>
<td>-9.5</td>
<td>-1.2</td>
<td>54.3%</td>
<td>-8.0</td>
<td>50.6%</td>
<td>-3.7</td>
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<td>JOLTS</td>
<td>64.0%</td>
<td>58.3%</td>
<td>-5.7</td>
<td>-0.6</td>
<td>45.7%</td>
<td>-12.6</td>
<td>36.8%</td>
<td>-8.7</td>
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<td>OEWS</td>
<td>78.2%</td>
<td>70.9%</td>
<td>-7.3</td>
<td>-0.9</td>
<td>67.2%</td>
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<tr>
<td>SOII</td>
<td>89.5%</td>
<td>83.3%</td>
<td>-6.2</td>
<td>-0.5</td>
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Comparison: Response Trends

### Household
- Declines continuous: 1-3%
- Accelerated by COVID-19
  - Pandemic continued in 2021
- Sample loss not shown
- Moving to web: large negative decline
- 2022 TBD...

### Establishment
- Declines minor & incidental <1%
- Accelerated by COVID-19
  - Pandemic changed work: Telework
- Maintained sample in most
- Self-administration (web/mail): smaller decline
- 2022 – continued decline, but some stabilization
Challenges: What Can We Do?

- Increase sample to maintain analytic pool.
  - Without increase in RR → increase bias; increase costs; disproportionate burden on those who participate.

- Increase contacts / level of effort.
  - Increase cost; already increased effort; noncontact → refusal
  - Telework – for some industries, contact is not at the establishment.

- Increase field / data collection period.
  - Affects timeliness / relevance of data.
  - Potential recall issues → decrease in data quality.
Strategies: What Are We Doing (now)

- Increasing use of Web
  - CE – web expenditure diary; ATUS – web time & activity diary
  - Focus on MIS 2-4, 6-8 (and those identified as likely for web).
    - Other studies have/currently researching: PSID; Add Health; HRS; UKHLS
  - Census/BLS collaborating on experiments to identify optimal contact strategies (timing and mode – mail, email, text messaging).
  - Current focus – reviewing survey content; testing potential changes.
    - Concern with mode effects.
Strategies - Paradata

Paradata

- Using paradata to identify factors affecting survey process
  - Participation, burden, breakoff, etc...
- FY 21 – inventoried paradata currently available in BLS programs & measures to add as systems are upgraded.
- International Price Program (IPP) – drop in response between initiation and repricing (Kaplan & Langeland 2020).
  - Focus Groups – time gap between these events problematic.
  - Paradata analysis – empirical evidence.
IPP – Initiation & Repricing

Response Rates by Time Gap in Months

- Estimated 11% drop in response propensity with each passing month.
Strategies – Contact

Researching Contact Strategies

- For those with email contact – increased the number of contacts and reduced the timing between contacts.
  - Existing protocol relied heavily on telephone follow-up.
  - Concern with backfire effect – turning off response due to multiple contacts.
- Most frequent group increased response by 11 percentage points.
  - Reduced costs – less telephone follow-up.
Alternative Data Sources

Administrative/crowd sourced/third party data

- Alternative to collecting data from multiple sources.
- Consumer Price Index (CPI) – sources data for some items.
  - New vehicle prices; Gasoline Fuel; others in-progress (e.g., Airline; medical)
  - Data still collected as a back-up; dependent upon availability and timeliness of data source.

Challenges

- Understanding data quality properties of data and source.
- Data may not match/fit what we want to measure.
Conclusion

- Declines in response have been affecting surveys across agencies (since well before 2010) - *likely to continue*.

- COVID-19 was more disruptive than observed.
  - Effects of this disruption continue – we’re still recovering...
  - Telework may require new methods for contact (for some sectors).
    - During COVID-19 35% of estab. increased telework (50% of U.S. employment)*

- Is this a matter of concern?
  - Declines occurred despite efforts to improve response.
  - Programs continue to measure and evaluate potential for bias.

Contact Information

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