A Comparison of Online Panels with GSS and ANES Data

Elizabeth Zack and John Kennedy

May 16, 2015
Background

• Researchers increasingly using online non-probability samples
  o RDD response rates dropping
  o Cheaper
  o Quicker
Research Question:

• Are online non-probability samples an acceptable alternative to traditional probability samples? Do they provide “good” or “useful” data?
Past Research

• Experiments
  o Online non-probability samples produce high quality experimental data (e.g., Berinsky et al. 2012; Leeper & Mullinix 2014; Mullinix et al. 2013; Weinberg et al. 2014)

• Good for experiments but for public opinion research…?
  o MTurk samples are younger, higher levels of education, lower income, and more liberal than the U.S. population (Paolacci et al. 2010)
  o AAPOR Task Force on Online Panels (2010)
Current Study

• Study purpose

• Common ?s from GSS and ANES, fielded on Mechanical Turk (MTurk) and Qualtrics

• MTurk
  o Opt-in online platform
  o Requesters post & workers complete tasks for pay
Current Study, continued

• Test distributions

• Multivariate relationships between basic demographics and public opinion items

• Same story?
Data and Methods

• 2014 GSS (n= 1,000 to 2,300)
• 2013 ANES (n=700 to 750)
• 2015 MTurk (n=250 to 350)
• 2015 Qualtrics Panel (n=450 to 550)
Survey Questions

• Dependent Variables
  o Health and Well Being
  o Science
  o Education
  o Family
  o Government
  o Policy Preferences
  o Racial Attitudes
  o Knowledge

• Independent Variables
  o Demographics (gender, age, etc.)
Analytic Strategy

• Chi square tests (distributions)

• Logistic and multinomial logistic regressions (relationship between basic demographics and outcome variables)
Results: Demographic Distributions

- **MTurk**: differs from GSS & ANES on all demographic variables except race (not sig. different from ANES)
  - Younger, more educated, more liberal, more male

- **Qualtrics**: similar to GSS/ANES on gender, & similar to ANES on age & race

- So: Qualtrics closer match on demographics
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Age

GSS

ANES

MTURK

QUALTRICS
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Education

GSS

ANES

MTURK

QUALTRICS

INDIANA UNIVERSITY
Results: Outcome Variable Distributions

- **MTurk**: sig. differs from GSS & ANES on all variables but *helpful* (14/15)

- **Qualtrics**: distributions **do not differ** from GSS & ANES on *helpful, cappun, courts, govrole* (11/15)

- Qualtrics much more like GSS/ANES than Mturk is (except on well-being variables)
Should government do more to solve country’s problems, or should this be left to individuals/private businesses?
Should government make buying guns harder or easier?
Is life exciting, routine, or dull?

GSS

MTURK

QUALTRIC

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Regressions

- Regressed outcome vars on basic demographics (age, race, etc.)

- Results: Associations between basic demographic variables and outcome variables differ by sample

- Neither Qualtrics nor MTurk performed better than the other
### Significant Predictors: Support for Capital Punishment

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### Significant Predictors: Should Buying Guns Be Easier?

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MTurk & Qualtrics both differed from ANES/GSS, but...

- Directions of odds ratios same as GSS/ANES

- Random variation? (GSS 2012 & GSS 2014 also differed…)

- More research needed
Discussion

• Qualtrics is (slightly) better than Mturk for point estimates (except on Well Being variables)

• Neither Qualtrics nor MTurk performed well in multivariate analysis (but maybe random variation? Also, directions of associations do not differ.)

• Limitations: time, mode, & question order
Next Steps

• Compare to nationally representative study being fielded at IU now, and several other online samples.
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