



# Exploring the Methodological Tradeoffs of Mixed-Mode Surveys with an Experimental Design

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# Benefits of a mixed-mode design

- Researchers are increasingly using a mixed-mode survey design to obtain a representative sample.
- Allowing people to complete surveys on either the phone or the web can increase coverage and enhance representativeness.
  - A large portion of the public does not have access to the internet or prefers not to take surveys on the web (Sterrett et al. 2017).
  - Many households are wireless only and are difficult to reach via phone (Blumberg & Luke 2017).
- Research shows significant attitudinal/behavior differences between those with and without internet access in United States (Dutwin and Buskirk 2017).

# Challenges with a mixed-mode design

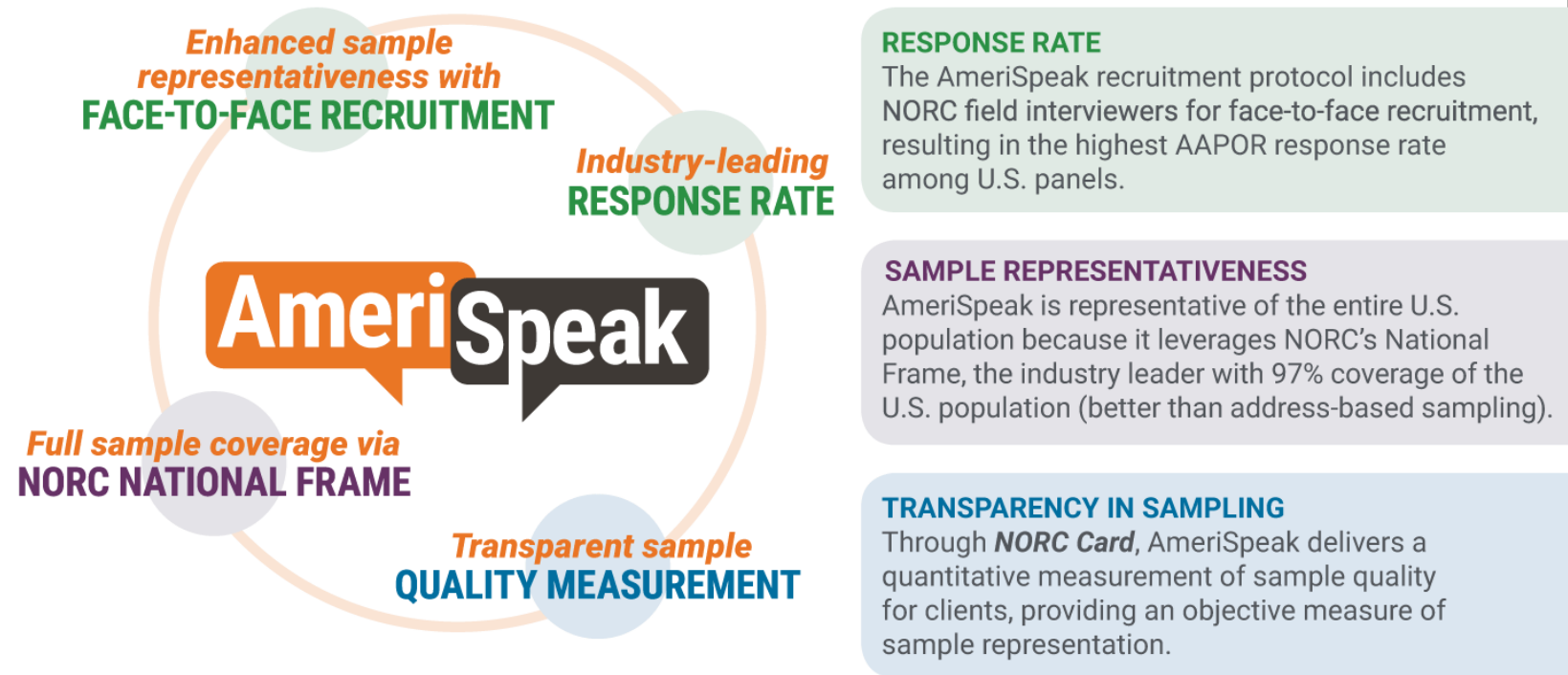
- A mixed-mode approach can potentially lead to survey mode effects.
- There could be differences between those who complete the survey on the web and those who complete it on the phone based on the interview mode.
  - Phone mode features interviewers while web mode is self-administered.
  - Phone mode presents questions verbally while web mode present questions visually.

# Research question

- When there are differences between those who complete the survey on the web and those who complete it on the phone, are those a result of differences in the composition of the two samples or the survey mode?
  - Researchers want to maximize representativeness and capture any composition differences between two samples.
  - Researchers want to minimize mode effects.
- The challenge is that respondents often select their mode so it is difficult to disentangle differences due to composition and mode.
- A survey experiment is needed to explore whether differences are due to the sample composition or survey mode.

# Survey experiment with AmeriSpeak Panel®

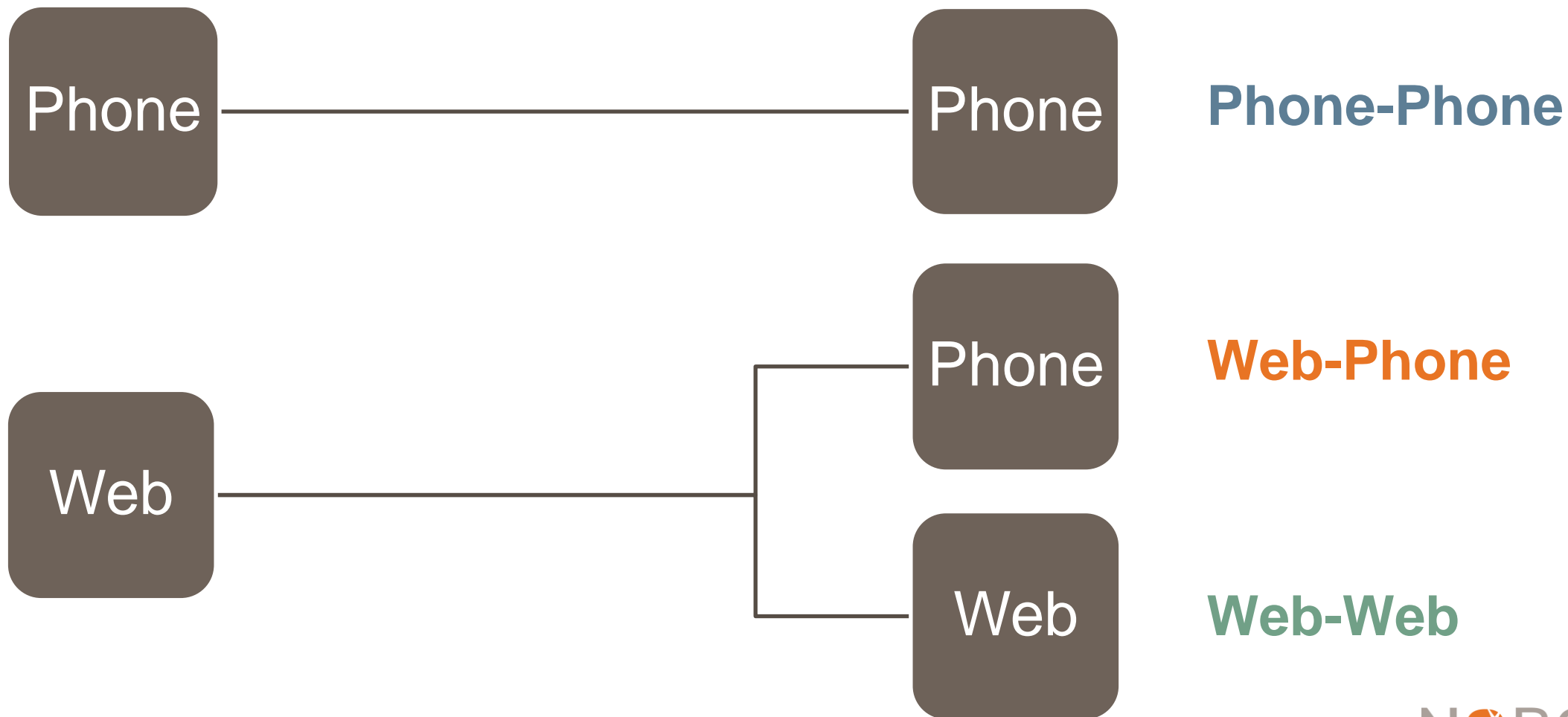
**AmeriSpeak** is the first U.S. probability-based household panel to combine the speed and cost-effectiveness of panel surveys with enhanced representativeness of the U.S. population.



# Experimental design

Panelist usual mode

Experimental study mode



# Sample details

- Drew a nationally representative sample.

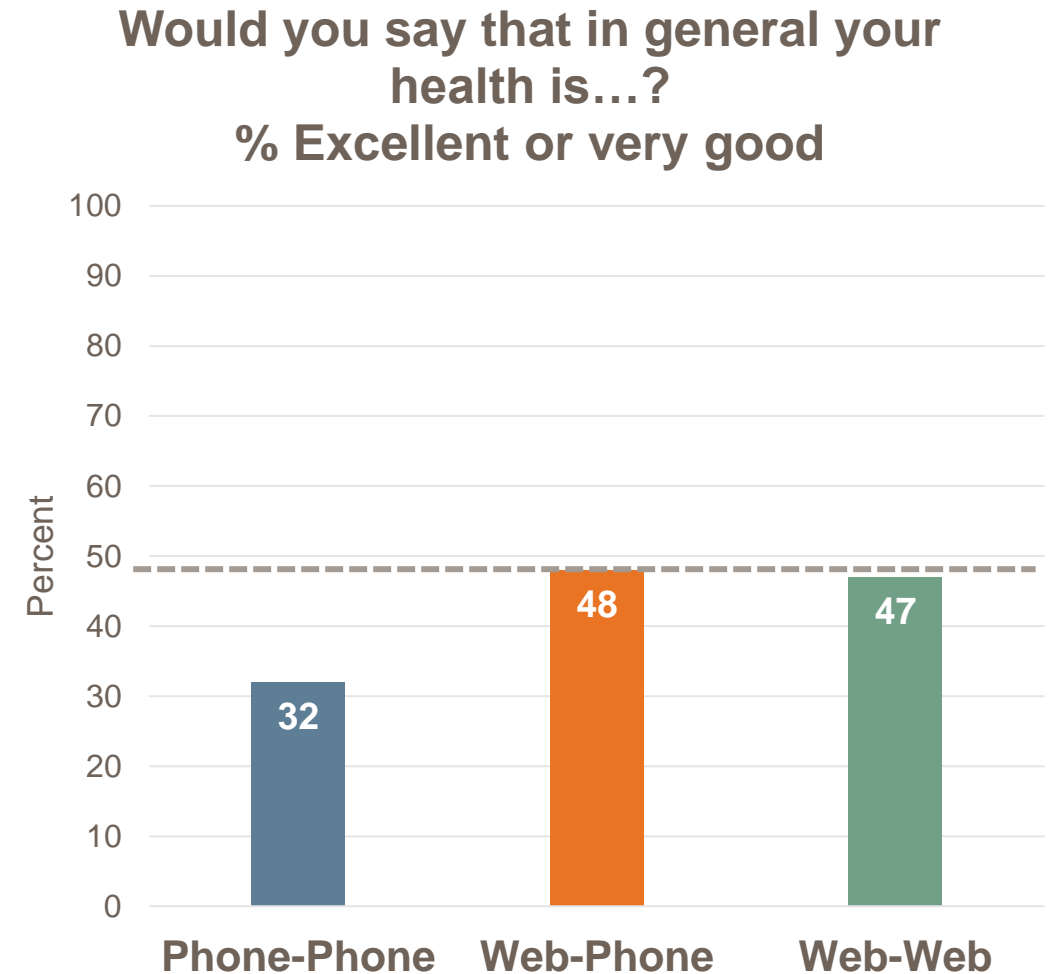
Group	Sample size
Web-Web	1,801
Web-Phone	1,017
Phone-Phone	880
Total	3,698

# Survey details

- A 15-minute survey with wide range of topics including:
  - Political attitudes
  - Views on social issues and the economy
  - Personal finances
  - Participation in social groups
  - News behavior
  - Personal health and medical care

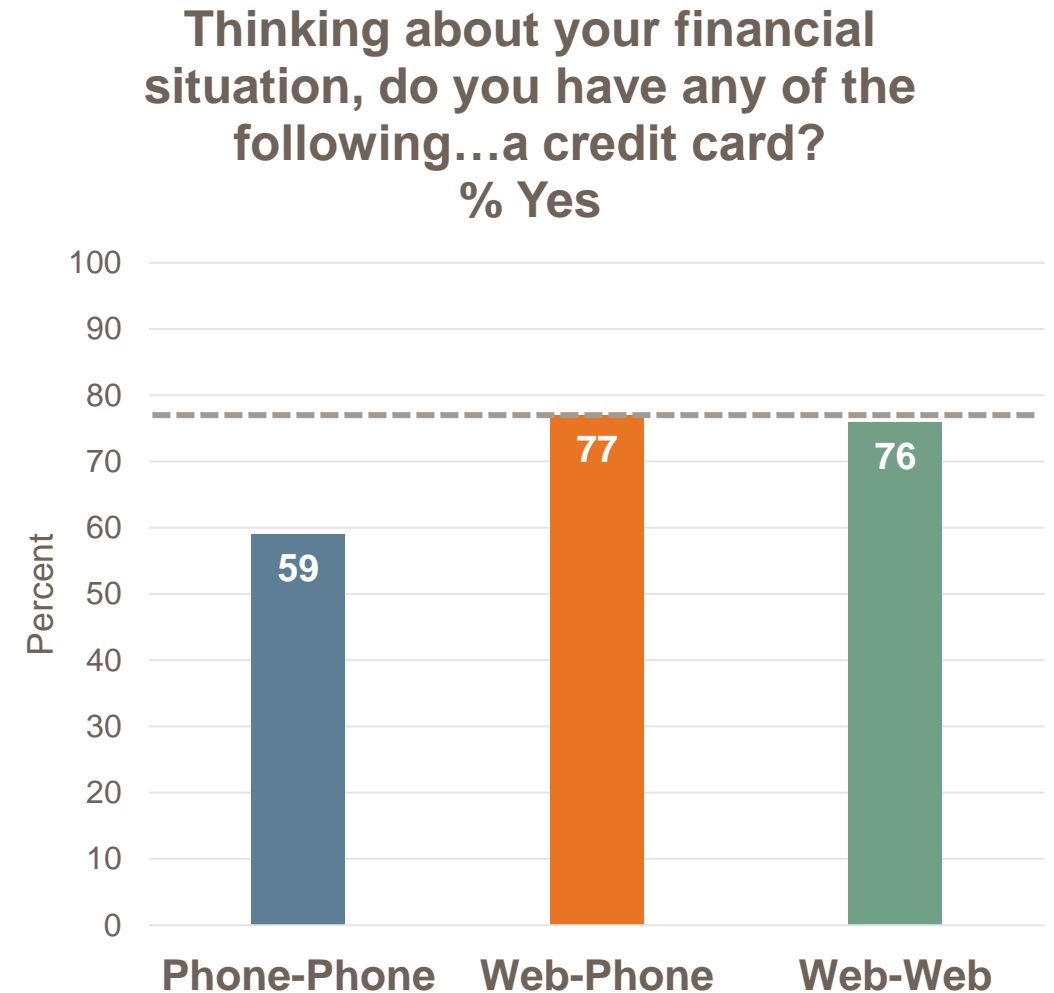
# Evidence of sample composition effects

- Large differences in self-reported health between Phone-Phone and Web-Web groups, and the Web-Phone group looks very similar to Web-Web group.
- Differences between Phone-Phone and Web-Web group are significant in regression controlling for age, sex, race/ethnicity, income, education, and partisanship.



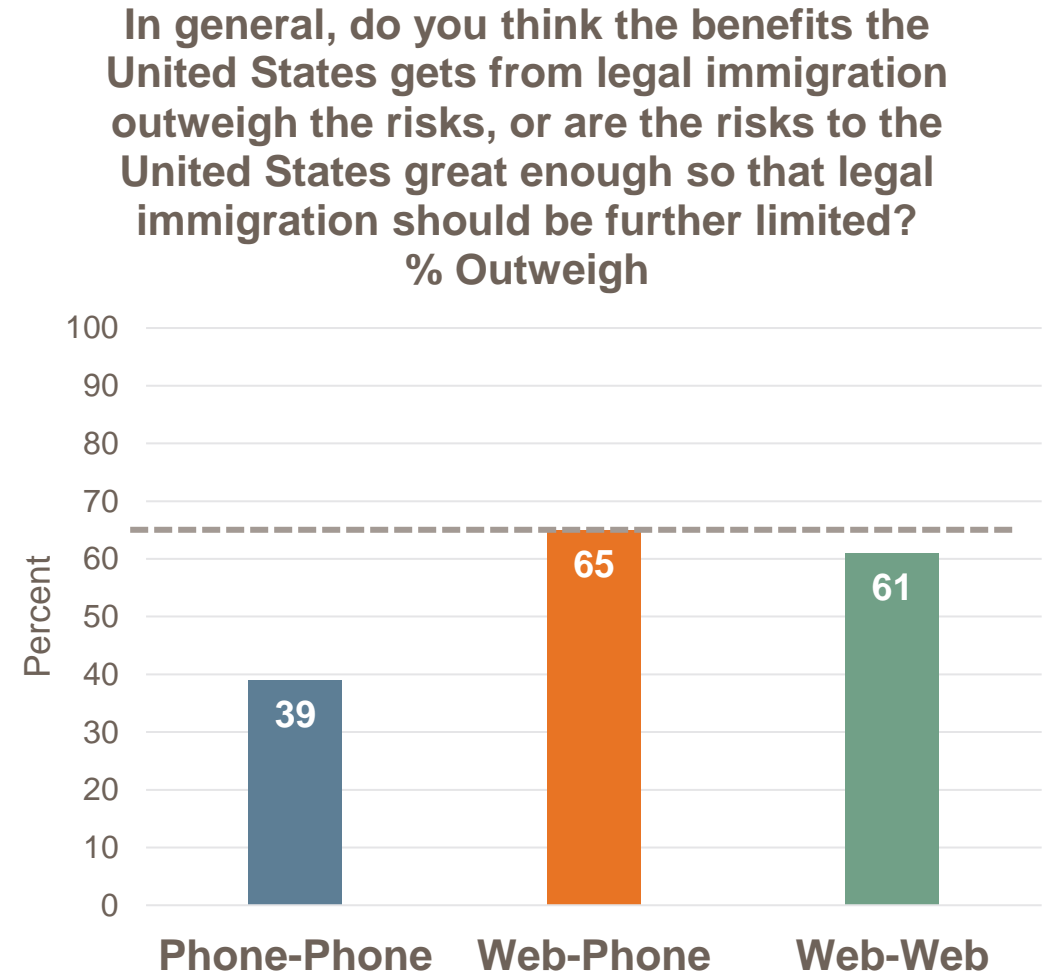
# Evidence of sample composition effects

- Large differences in likelihood of having a credit card between Phone-Phone and Web-Web groups, and the Web-Phone group looks very similar to Web-Web group.
- Differences between Phone-Phone and Web-Web group are significant in regression controlling for age, sex, race/ethnicity, income, education, and partisanship.



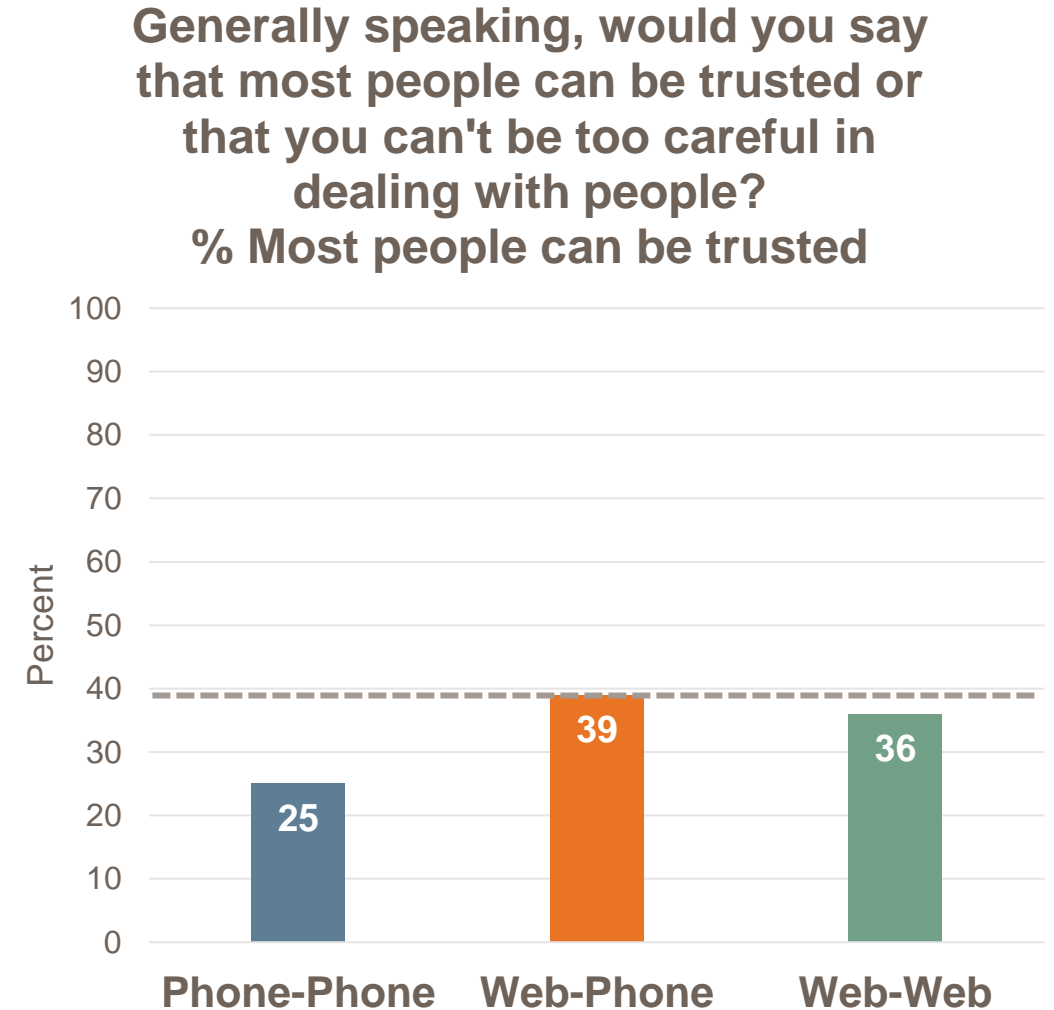
# Evidence of sample composition effects

- Large differences in likelihood of saying benefits of immigration outweigh the risks between Phone-Phone and Web-Web groups, and the Web-Phone group looks very similar to Web-Web group.
- Differences between Phone-Phone and Web-Web group are significant in regression controlling for age, sex, race/ethnicity, income, education, and partisanship.



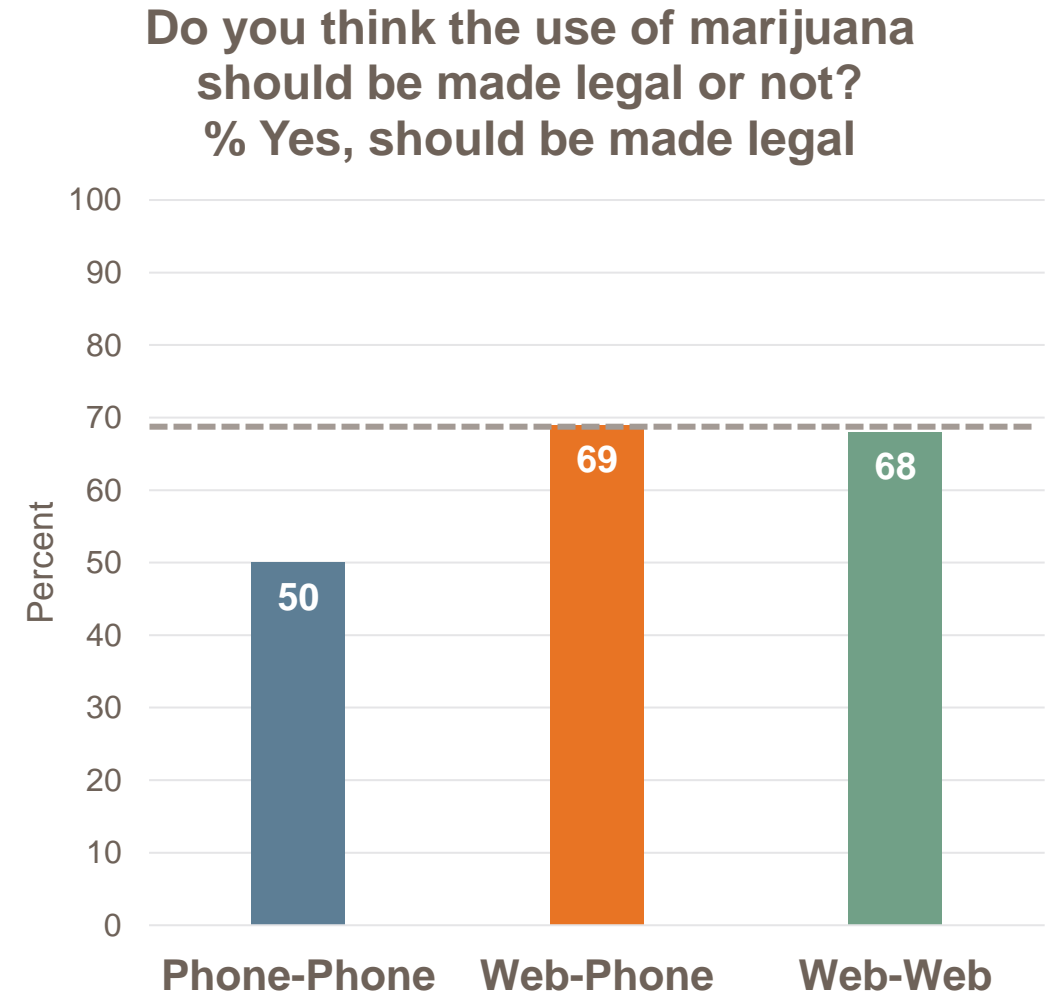
# Evidence of sample composition effects

- Large differences in general trust between Phone-Phone and Web-Web groups, and the Web-Phone group looks very similar to Web-Web group.
- Differences between Phone-Phone and Web-Web group are significant in regression controlling for age, sex, race/ethnicity, income, education, and partisanship.



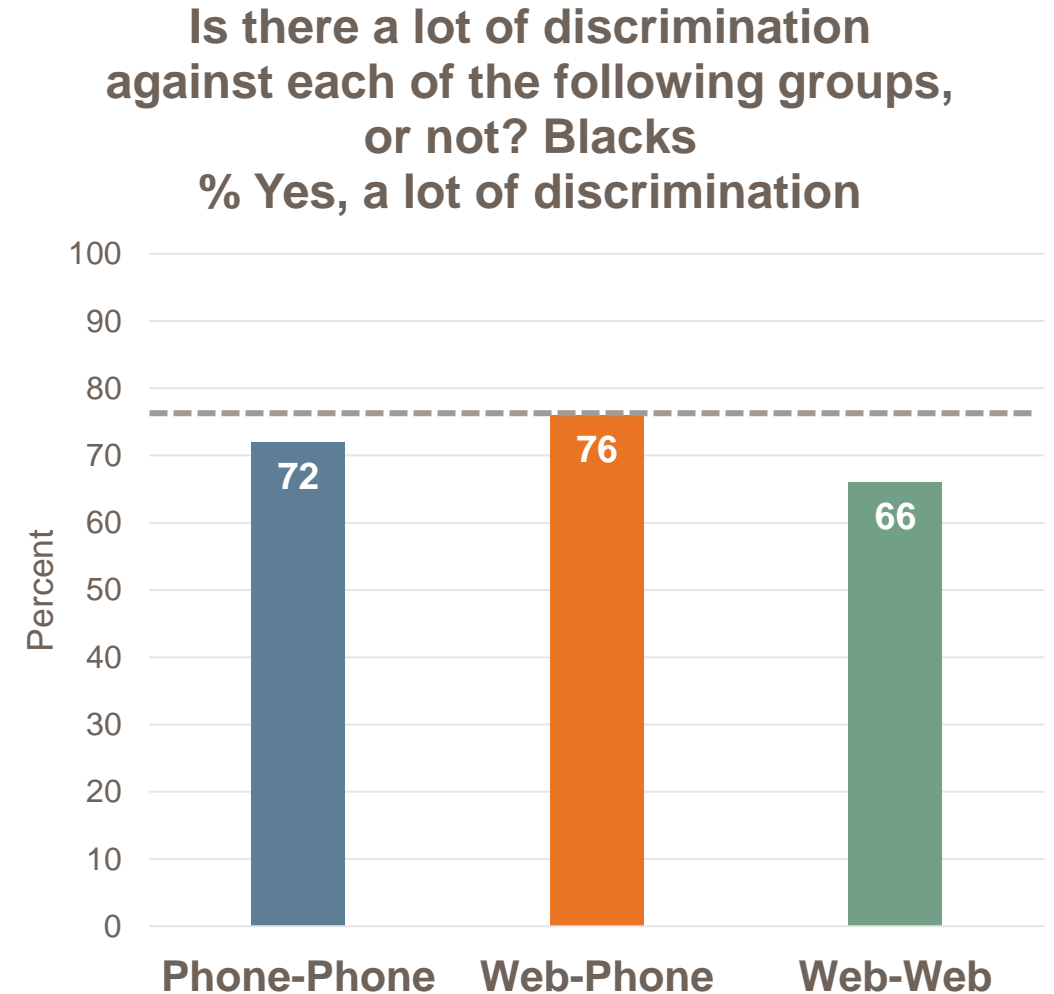
# Evidence of sample composition effects

- Large differences in view toward legalizing marijuana between Phone-Phone and Web-Web groups, and the Web-Phone group looks very similar to Web-Web group.
- Differences between Phone-Phone and Web-Web group are significant in regression controlling for age, sex, race/ethnicity, income, education, and partisanship.



# Evidence of sample mode effects

- There are differences in attitudes about discrimination against blacks between Phone-Phone and Web-Web groups, and the Web-Phone group looks more like Phone-Phone group.
- Questions such as this have potential mode effects related to social desirability bias and differences between interviewer/self administered modes.



# Preliminary takeaways

- There is strong evidence that offering a mixed-mode design improves sample coverage and the representativeness of the survey.
  - Those who choose to complete a survey in one mode (phone) are very different on some key attitudinal and behavioral issues than those who choose to complete the survey in another mode (web).
  - Many AmeriSpeak phone panelists are recruited by in-person non-response follow-up and these cases help improve sample representativeness (Bilgen 2017).
- Researchers should be aware of potential mode effects and design the questionnaire to mitigate such effects.
  - Limit questions prone to social desirability bias.

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**Thank You!**



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