Variability in Survey Estimates Across Multiple Nonprobability Samples

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In Collaboration with Westat and SurveyMonkey

What is the Pew Research Center?

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- Journalism
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- Religion & Public Life
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- Global Attitudes
- Social & Demographic Trends

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Non-probability Research at Pew Research Center

Except for limited purposes, Pew Research Center has used only probability samples

But non-probability surveys are increasingly prevalent, not just in market research but in public opinion and media surveys

Pew Research Center feels a need to understand these methods for its own benefit. We have launched a major research initiative focused on understanding when and how survey research with non-probability samples can have scientific merit:

- What are current practices in the industry?
- How do the results compare with our current methods?
- How do results differ for different providers of non-probability samples?

Review of Techniques Used By Non-Probability Providers

Recruitment to panel
- Anything from banner ads to ads on social media to joining via the panel website
- Not all panels use the same recruitment methods

Use of river sample
- Some panels only use panel sample
- Others use a mix of panel and river

Sampling and weighting for a particular study
- Most panels typically use "sample balancing" (quota sampling)
- Differ on which variables, categories of and extent of crossing variables
- Weighting is fairly uncommon

Routers
- Panelist sampled for a survey, but survey or their quota group is full and routed to a different survey
- Not all panels use routers, characteristics of routers used vary

Incentives
- Vary by panel and include cash, redeemable points, donations to charity, etc.

Quality control measures
- At the overall survey level (e.g. compare results to benchmarks)
- Many different measures at the individual level (e.g. ensuring panelist is a real person)

Current Research

In collaboration with Westat and SurveyMonkey, we have fielded six identical non-probability web surveys from different providers, with several more in progress

- Used common questionnaire with 61 individual estimates covering wide range of substantive topics and question formats (helping behaviors, political and social attitudes, privacy concerns, internet use, need for cognition, interests, demographic characteristics)
- Identical questionnaire and survey experience across all six (used SurveyMonkey platform)
- Two probability surveys for comparison – one draws on waves of the American Trends Panel and the other is an ABS survey fielded by Westat (Mike Brick's presentation)

Pew Research Center will share results and data from this research periodically.

This is a first, preliminary look at results. Warning: no conclusions yet!

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AMERICAN TRENDS **PANEL**

Probability-based panel recruited by RDD in early 2014

5,338 Total Panelists,
~90% respond by web, ~10% by mail

~2,850 web respondents per wave, ~350 by mail

This analysis is restricted to web respondents.

Panel built and managed by Abt SRBI

61 Unweighted Panel Estimates vs. Unweighted ATP
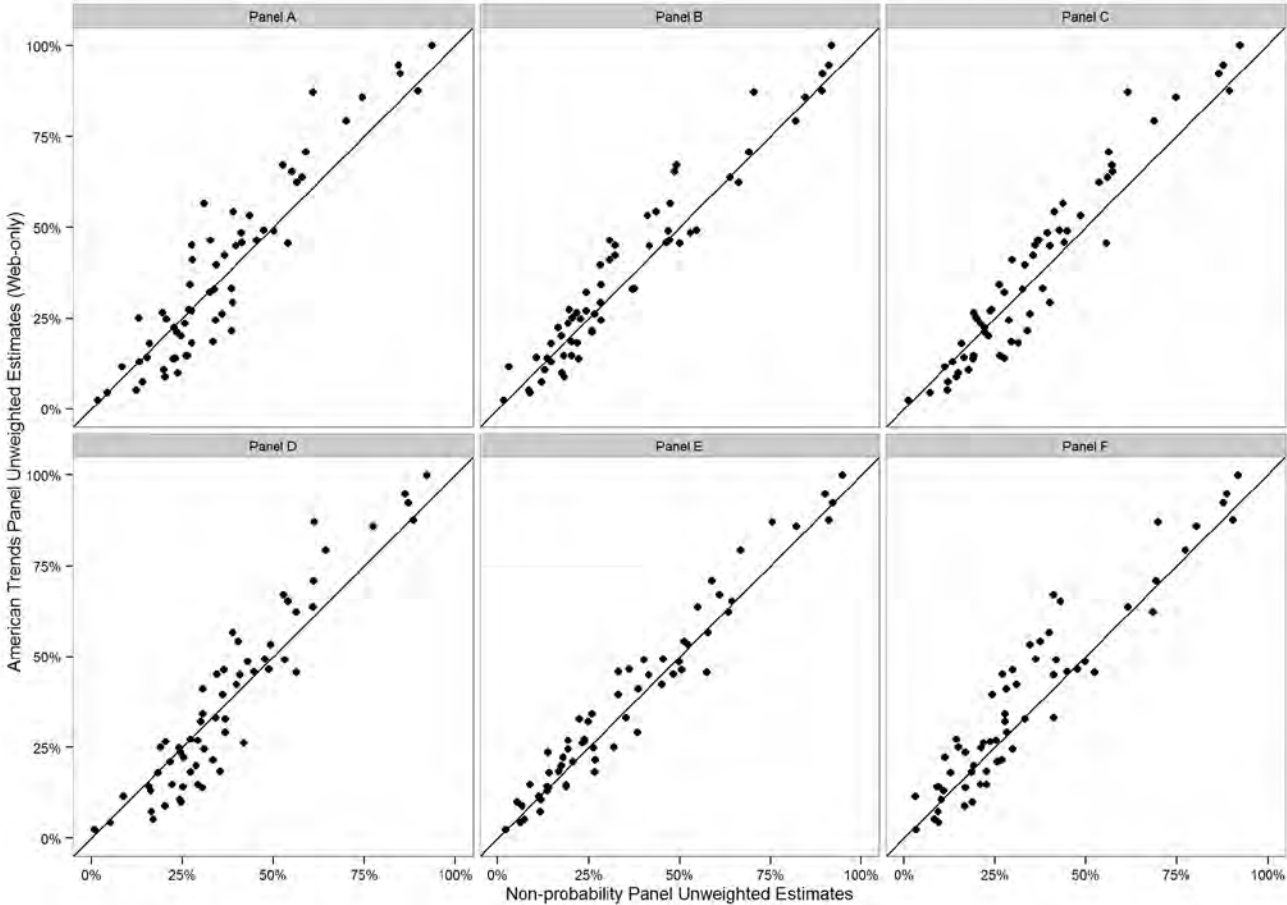
61 Weighted Panel Estimates vs. Weighted ATP
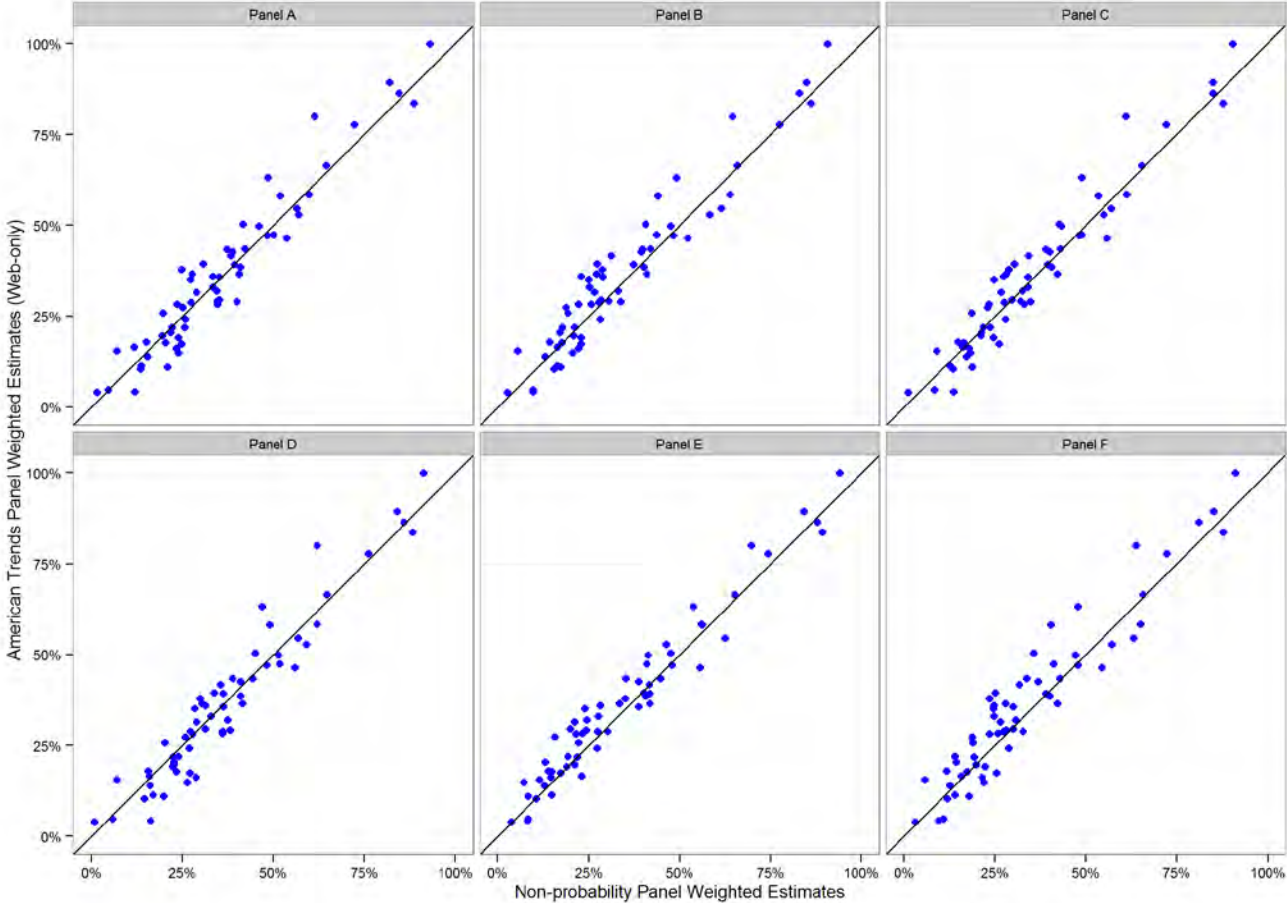
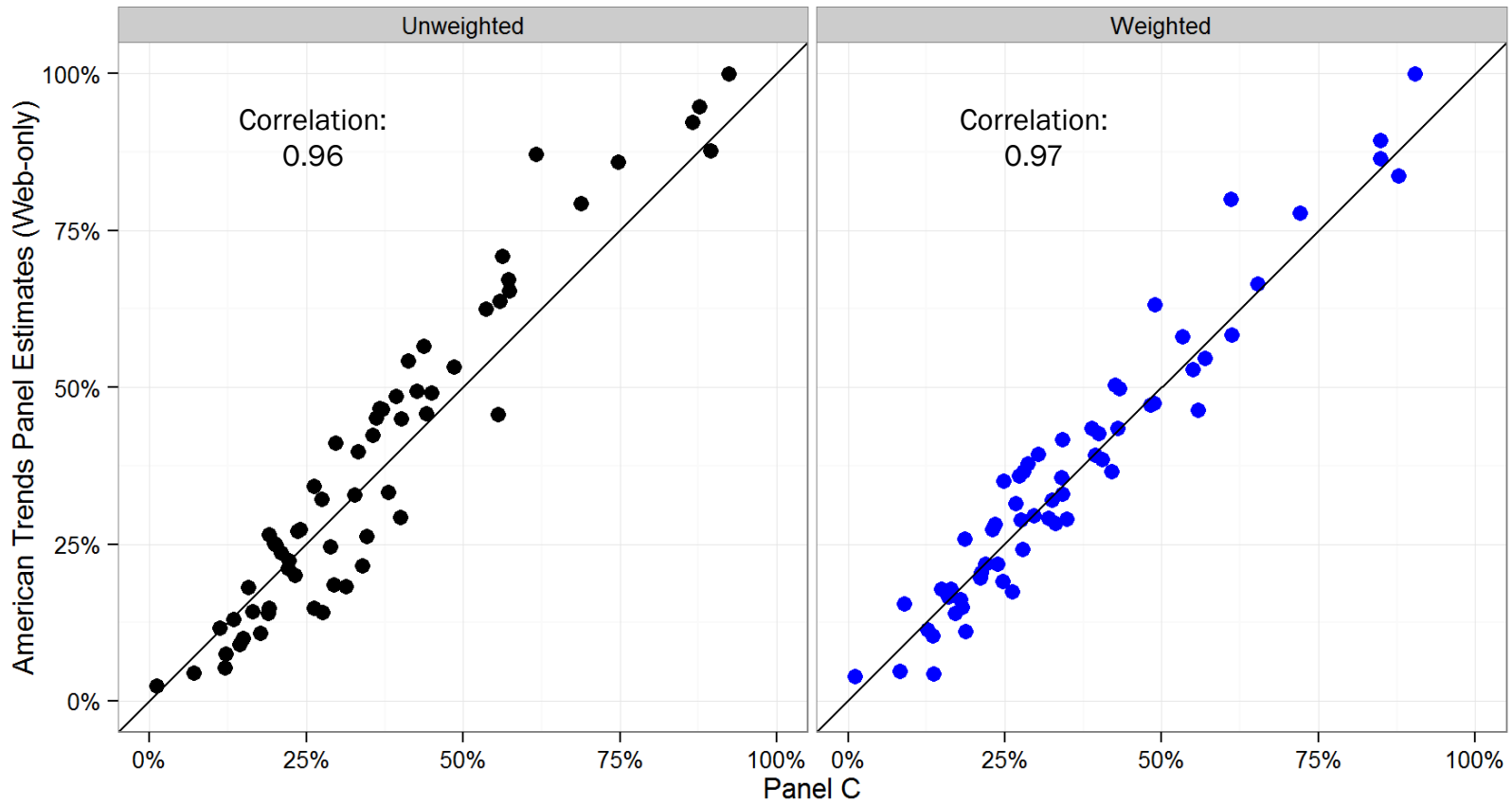# 90 Comparisons From Two Identical Phases of the Political Polarization Telephone Survey
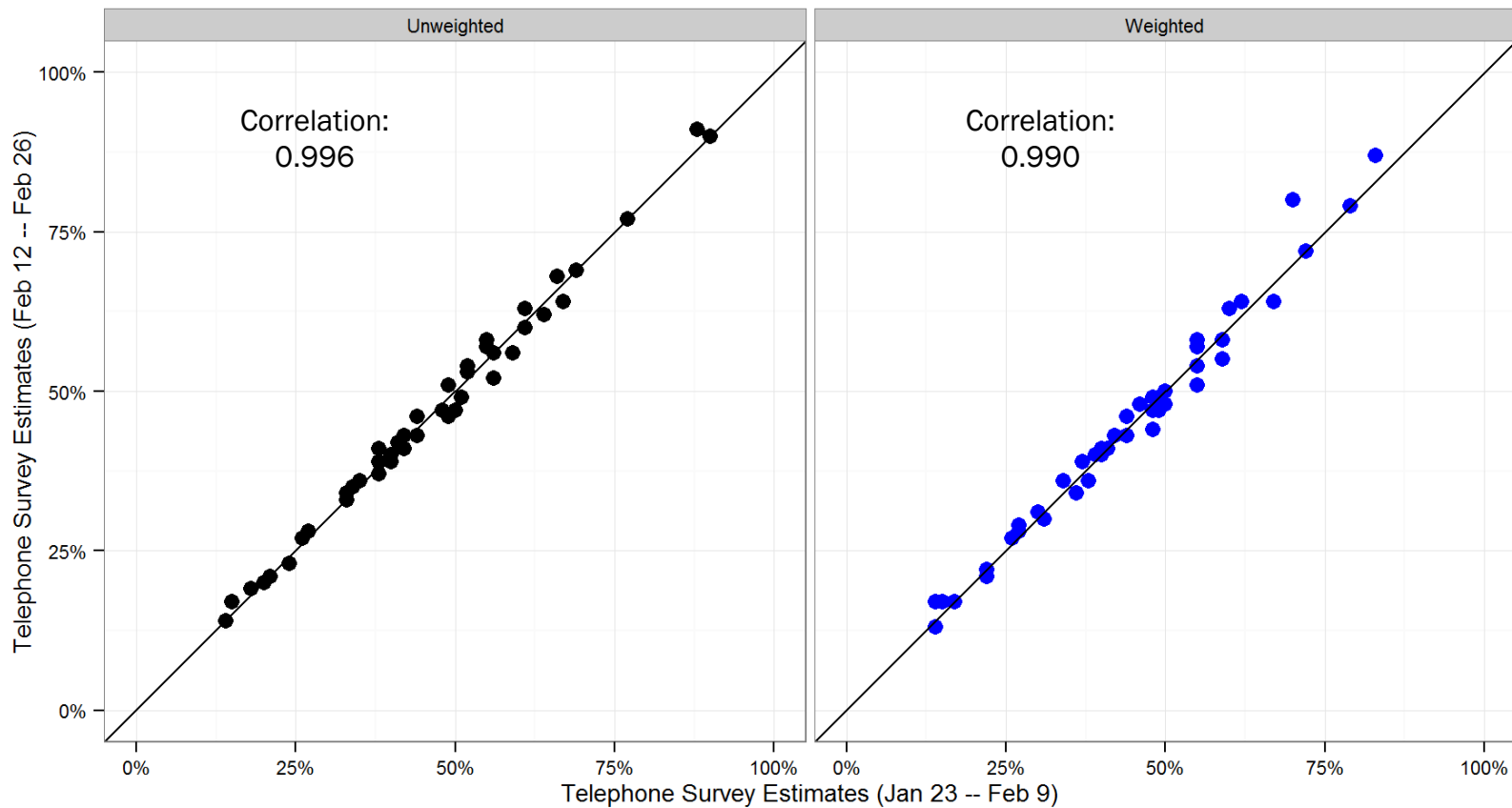
Panel A / American Trends Panel
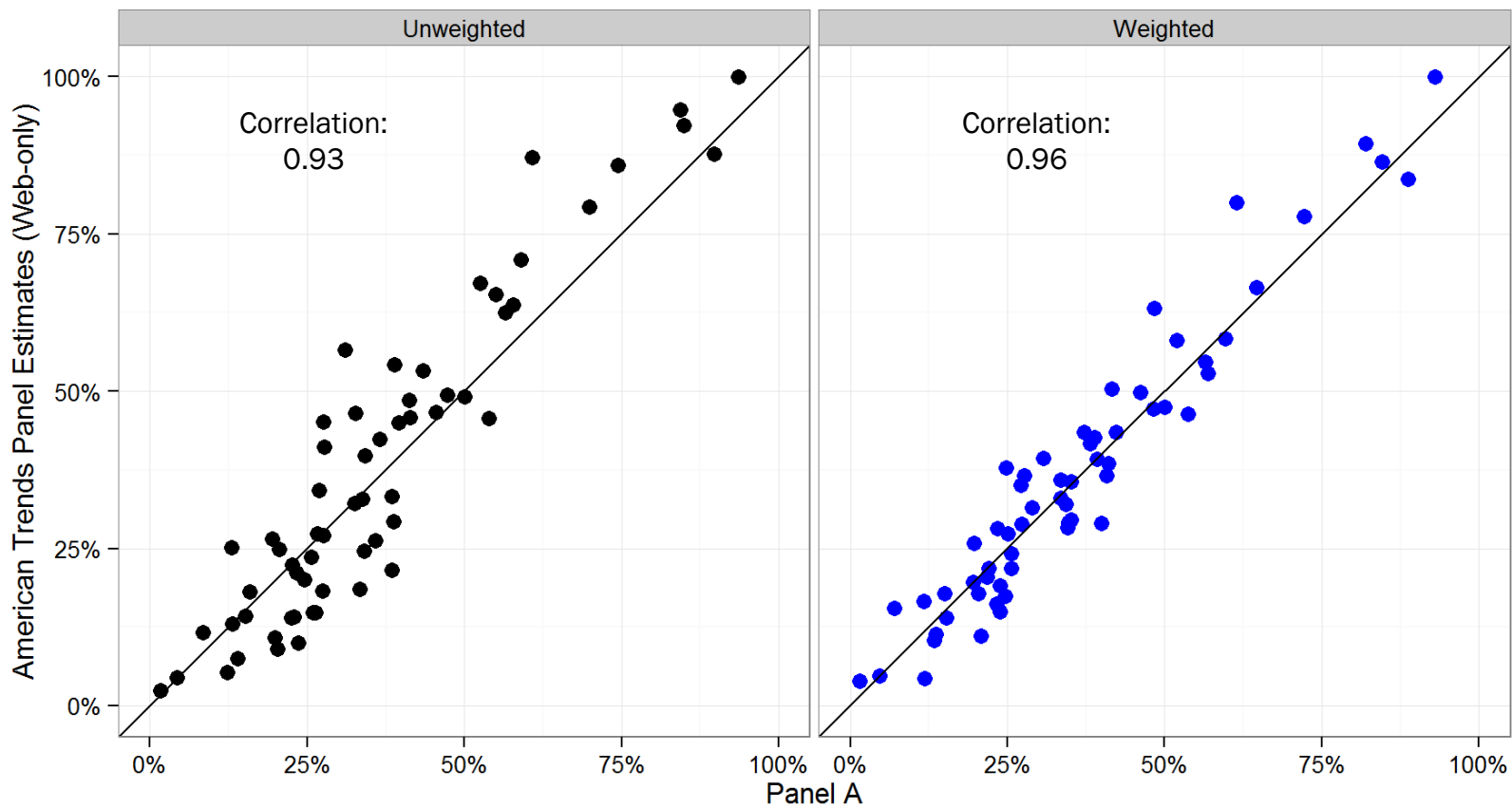
Panel B / American Trends Panel
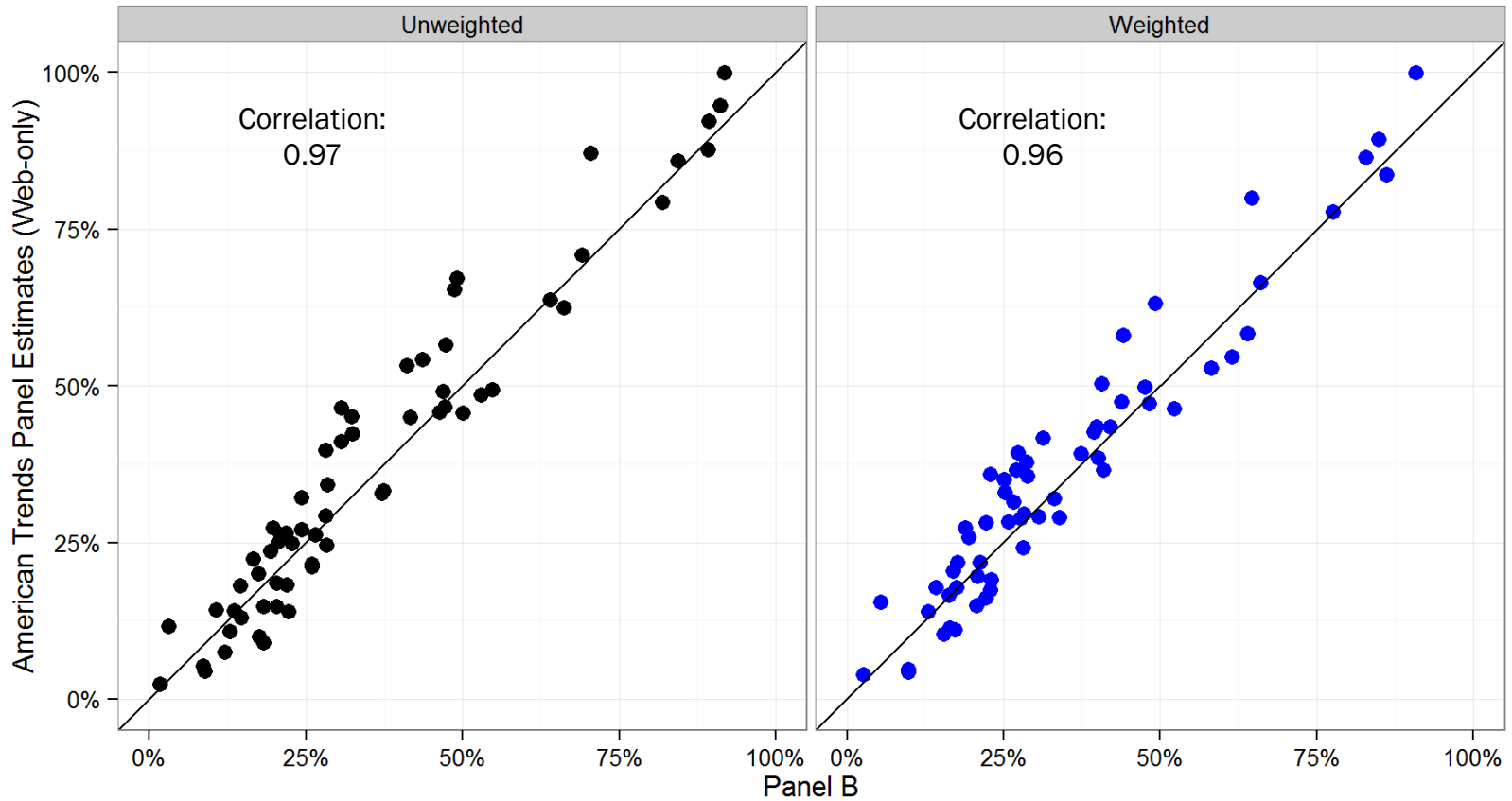
Panel C / American Trends Panel

Panel D / American Trends Panel
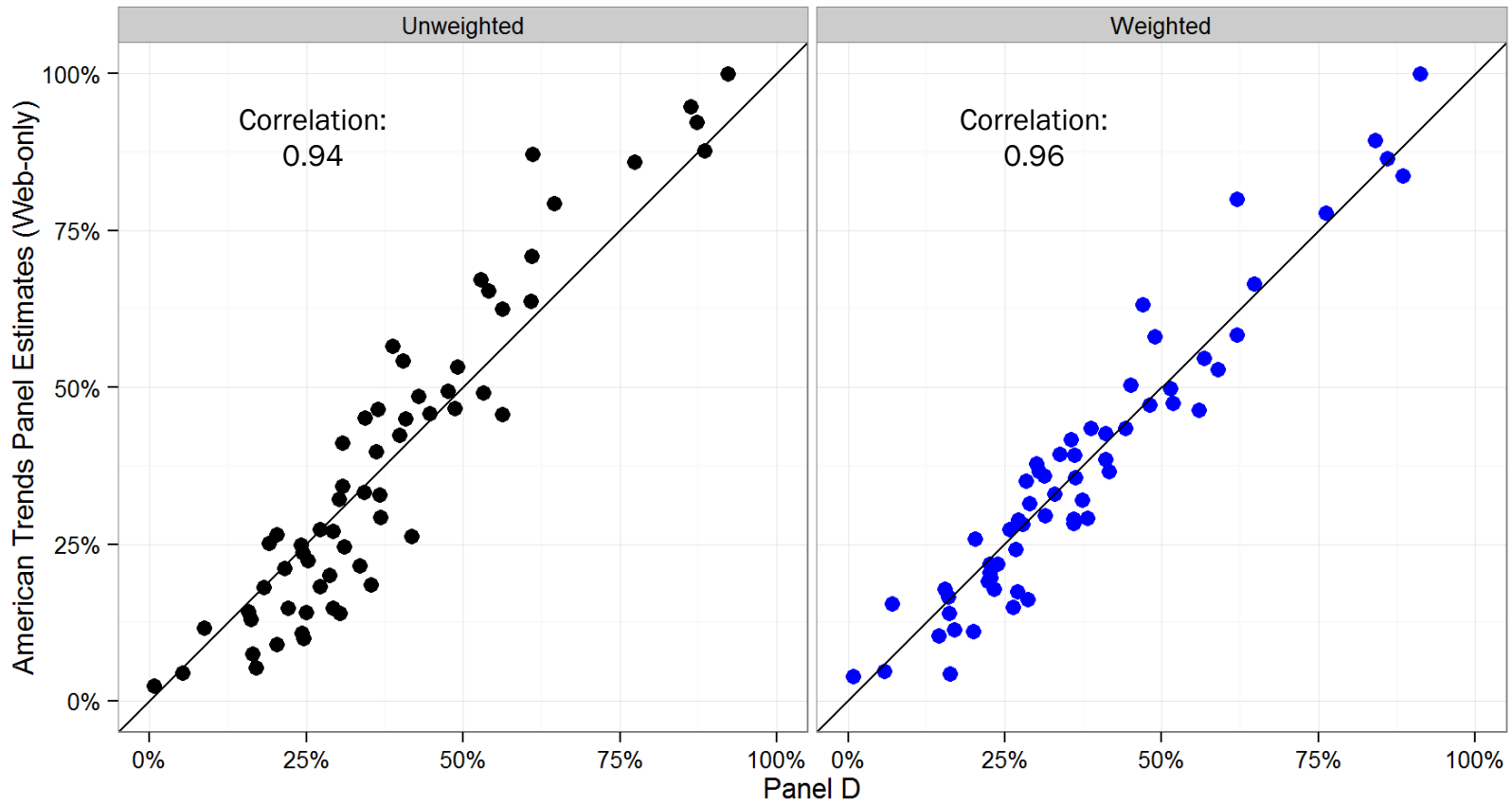
Panel E / American Trends Panel
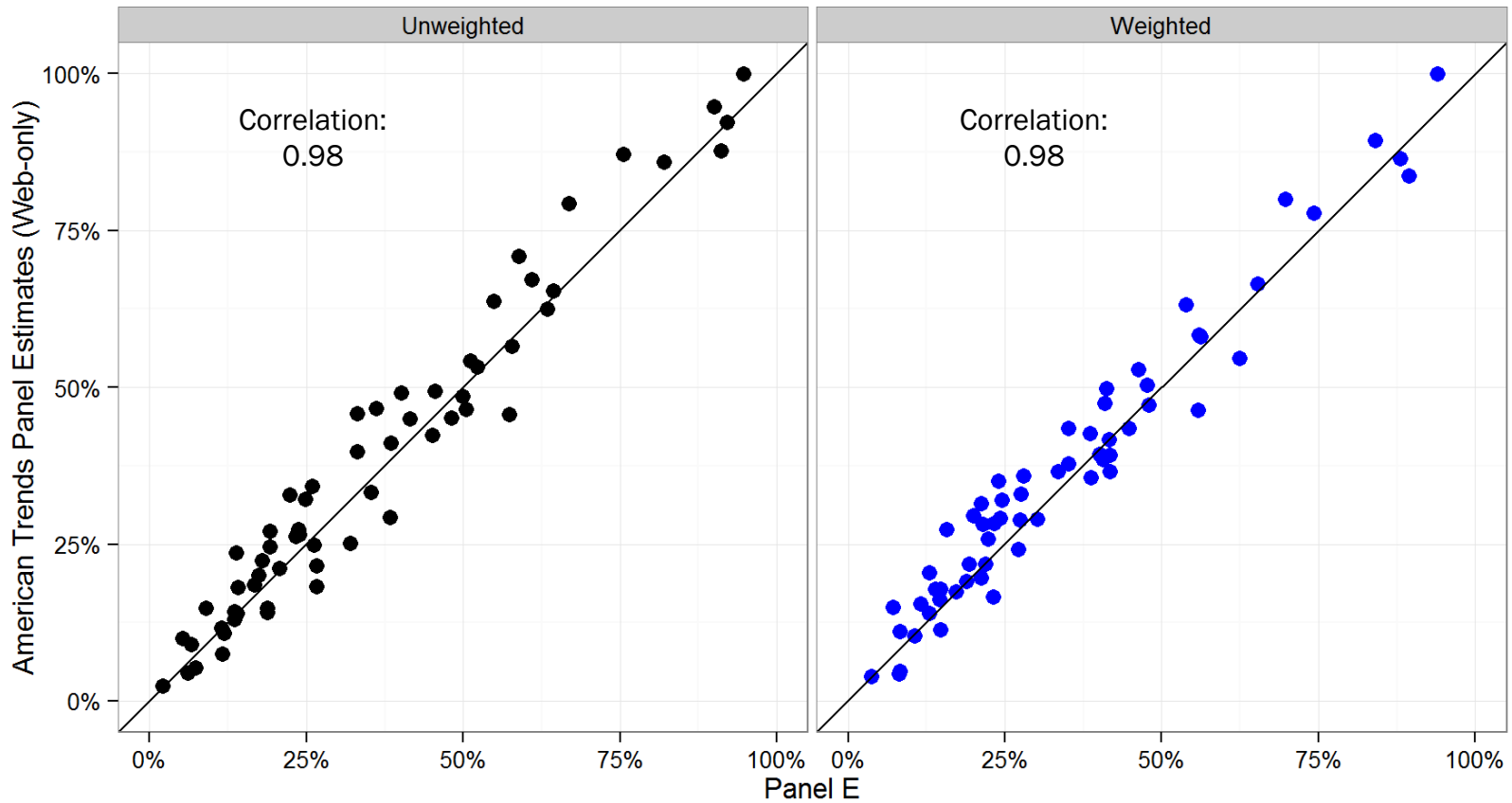
Panel F / American Trends Panel
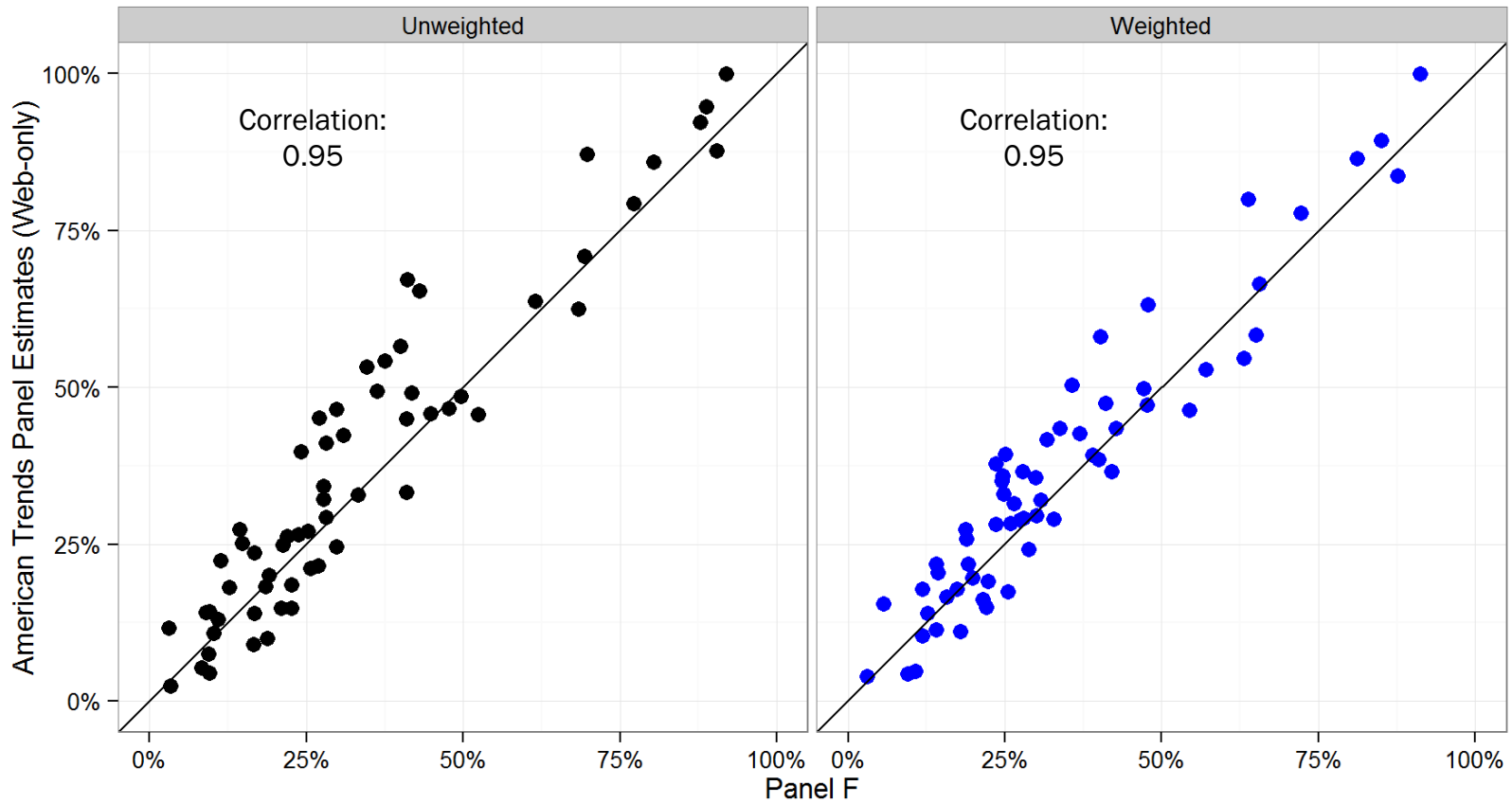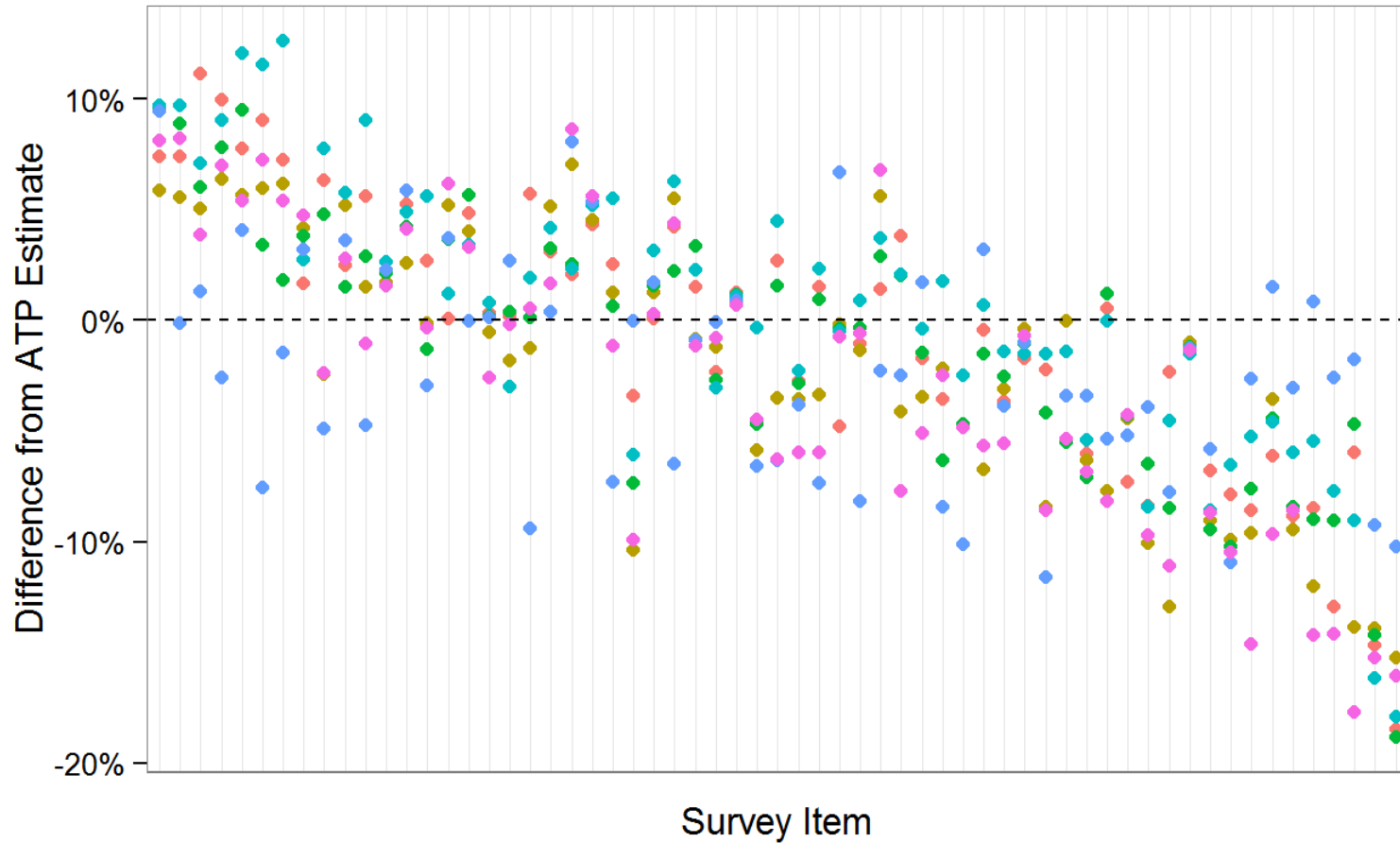
Mean Absolute Difference (61 Items) From
American Trends Panel
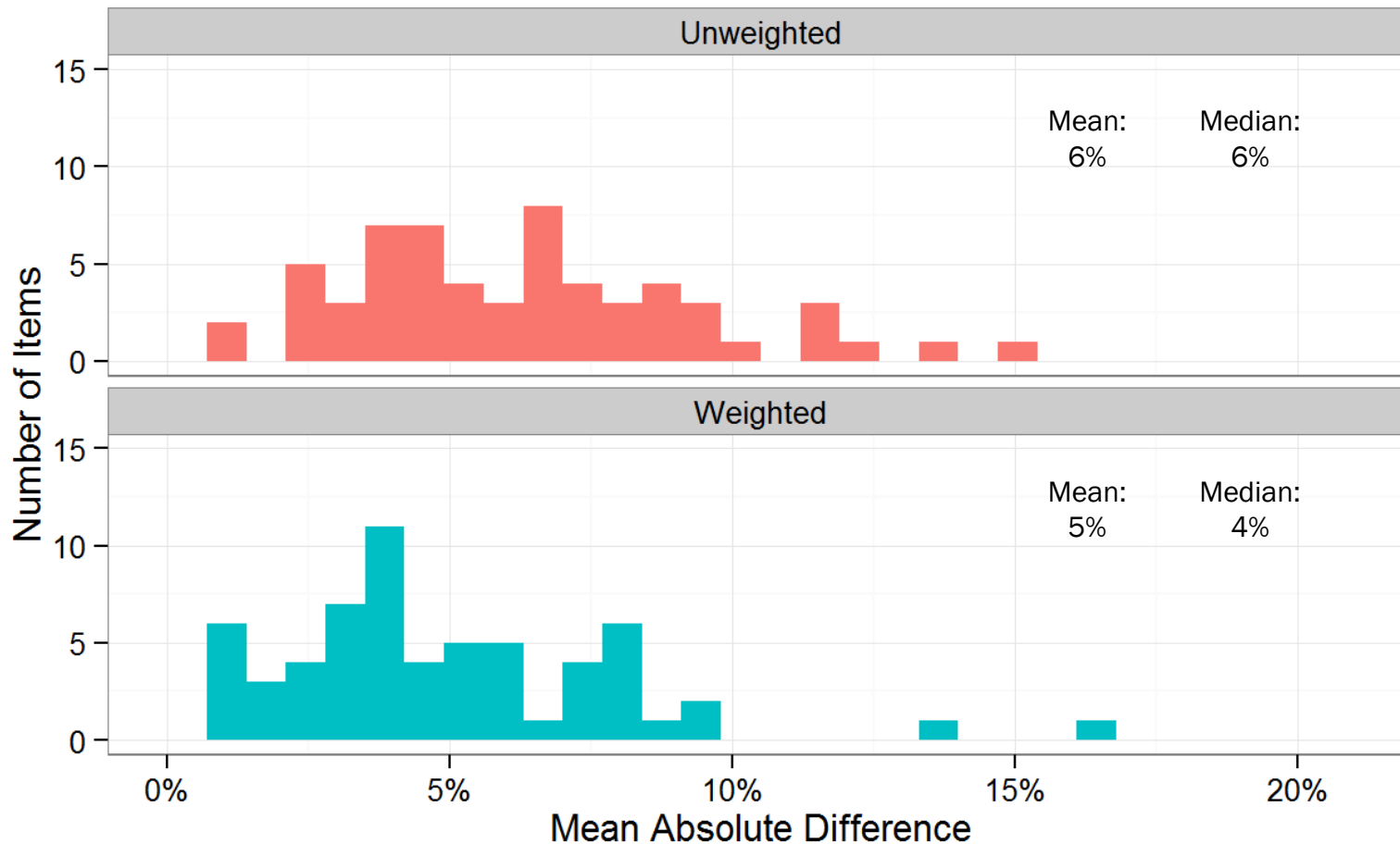
Mean Absolute Difference (61 Items) From
Mean of Other Non-Probability Samples
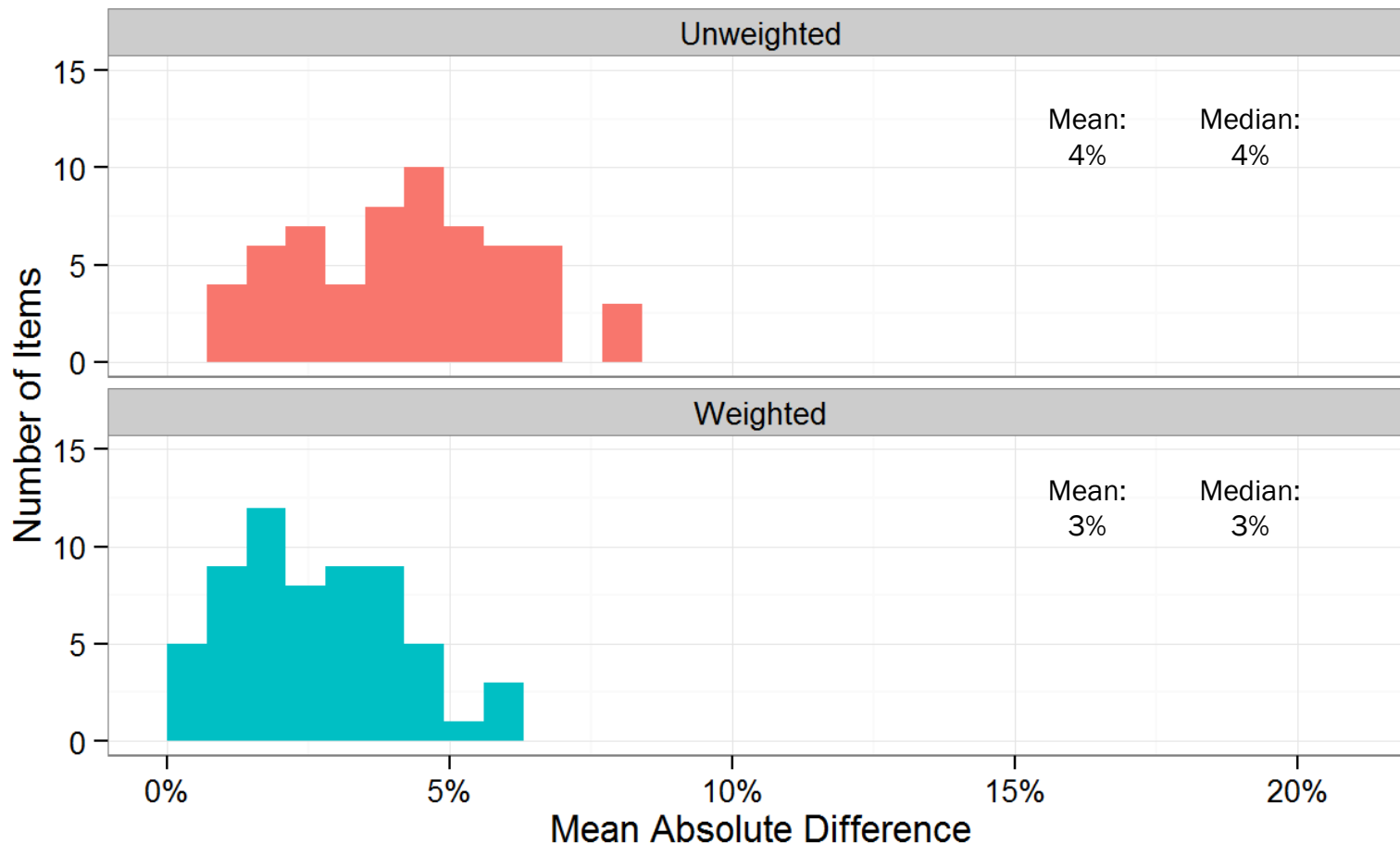
Mean of Absolute Differences (61 Items) By Panel

Survey	From Other Non-Probability Samples	From American Trends Panel
Panel A	2%	5%
Panel B	2%	5%
Panel C	1%	5%
Panel D	3%	5%
Panel E	5%	4%
Panel F	3%	6%

Item Deviations from ATP (Weighted)

Absolute Item Deviations from ATP (Weighted)
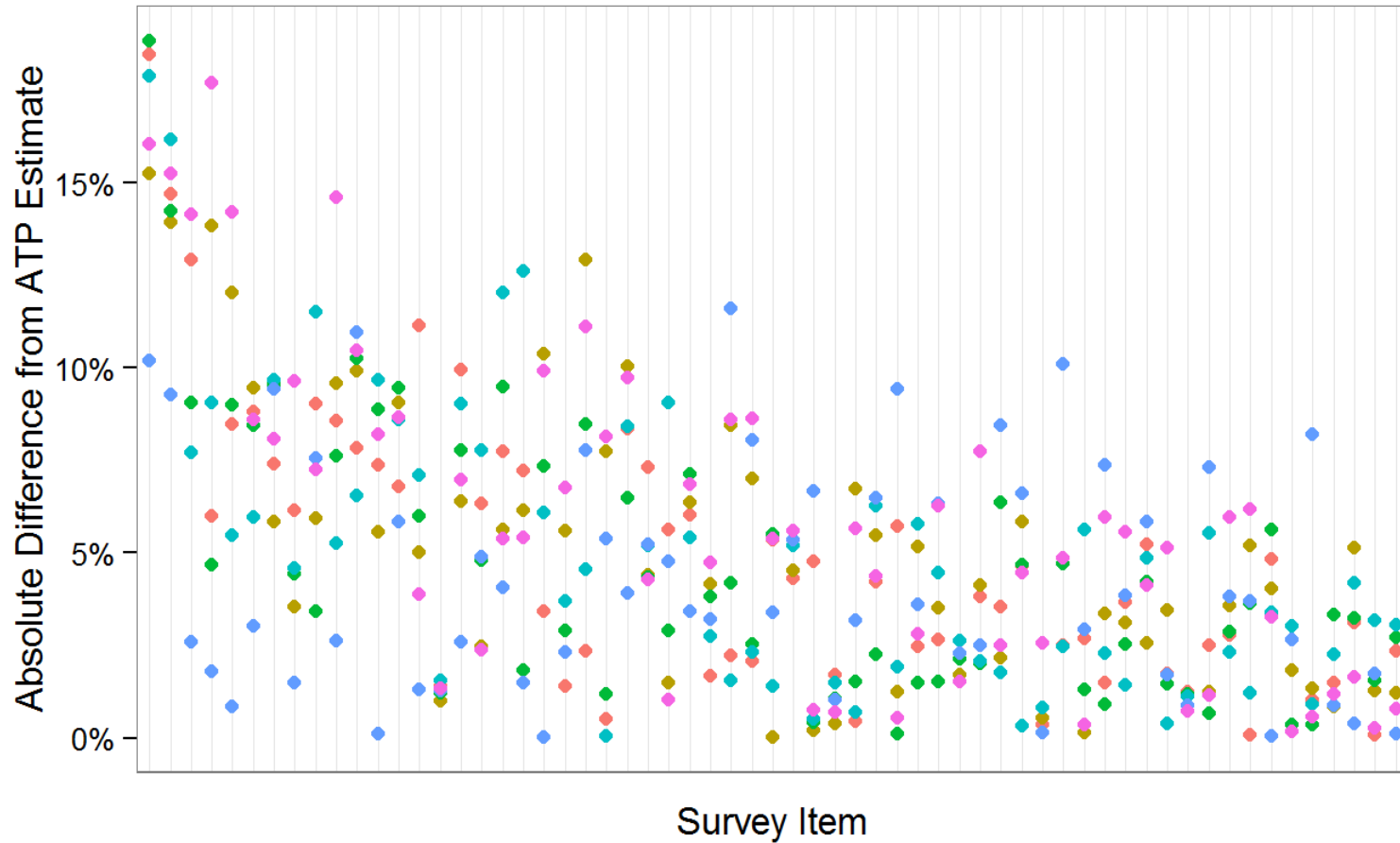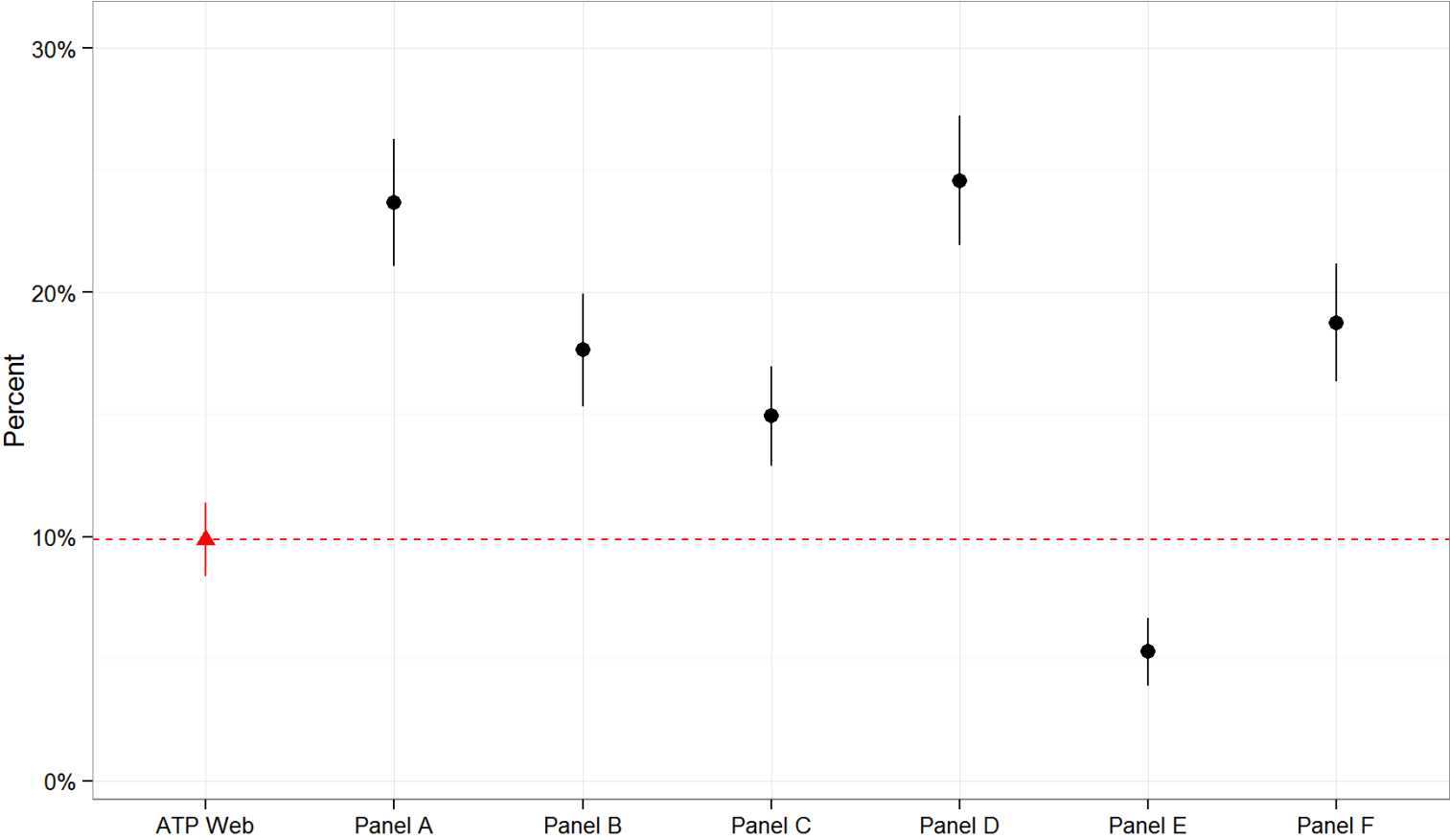
Substantive Measures: Interest in Country Music
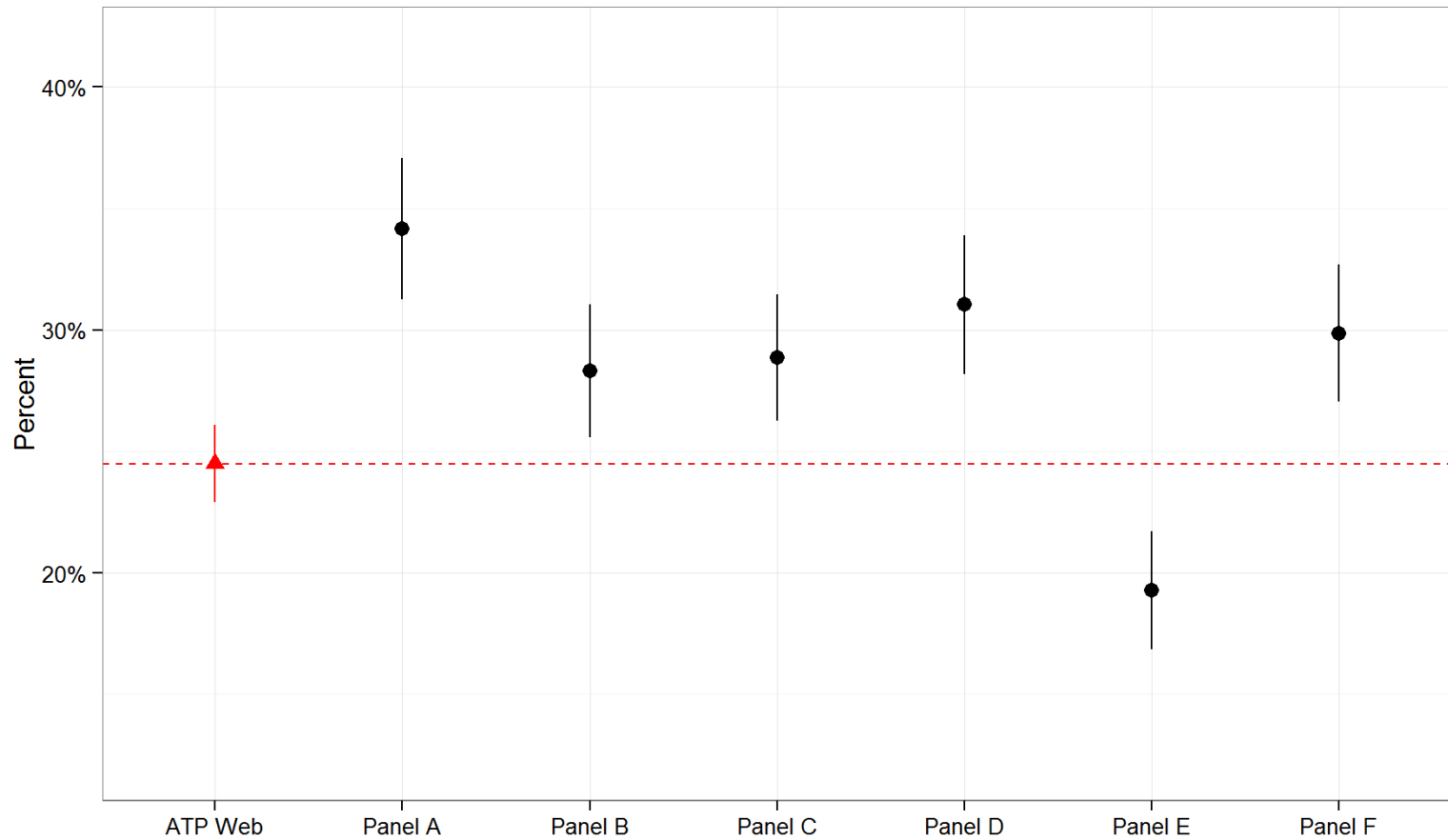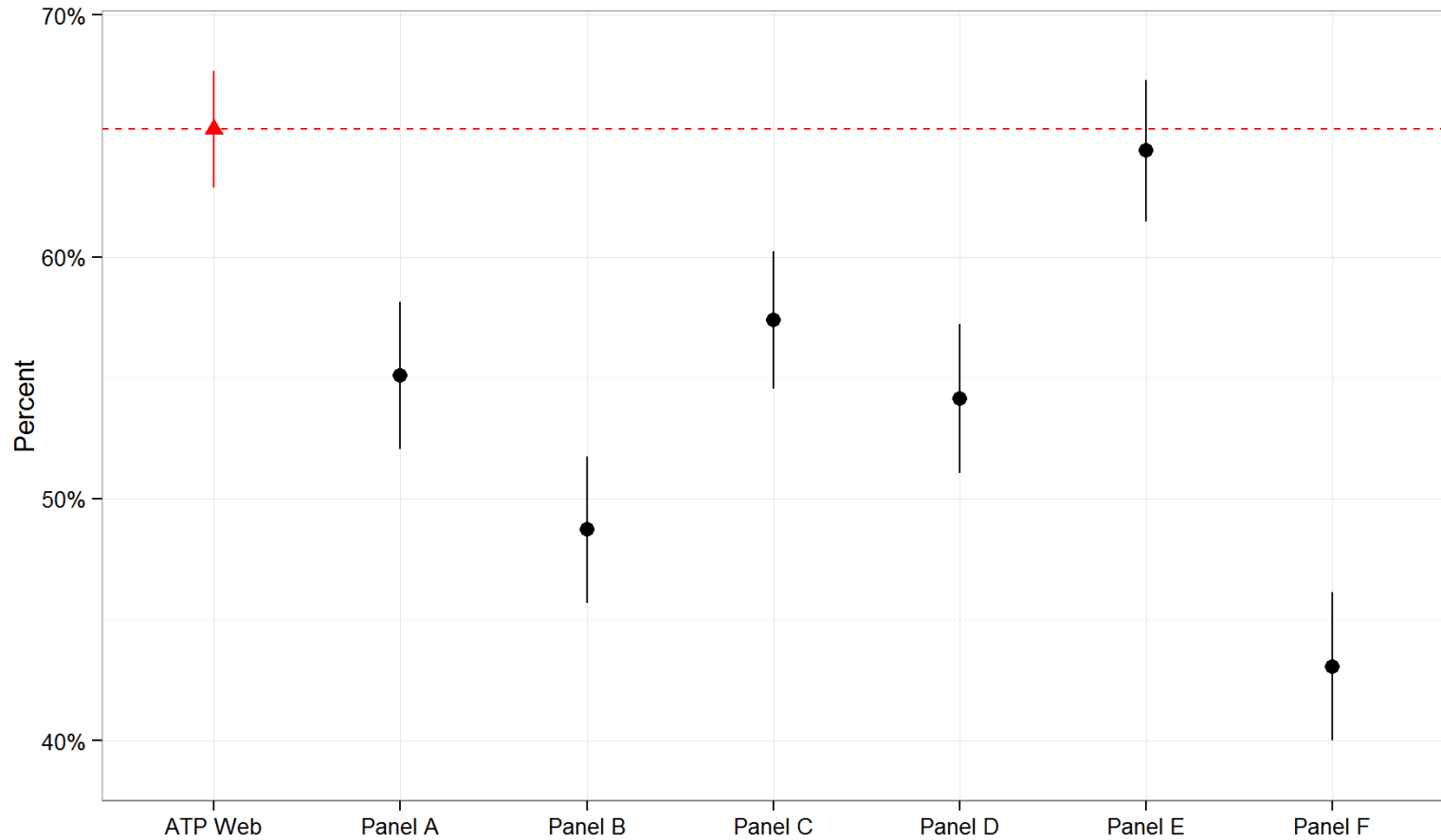
Substantive Measures: Interest in Reading the Bible
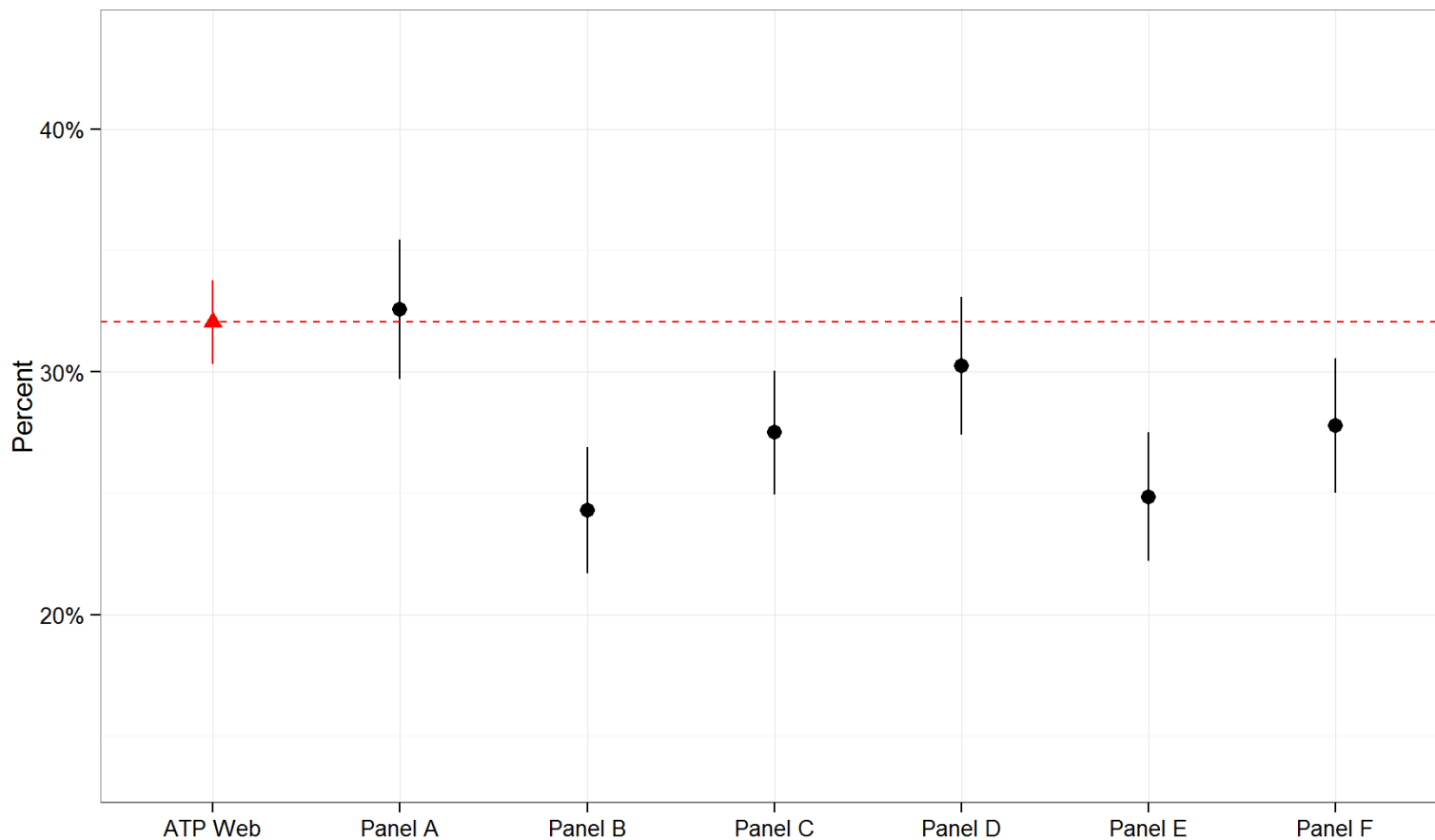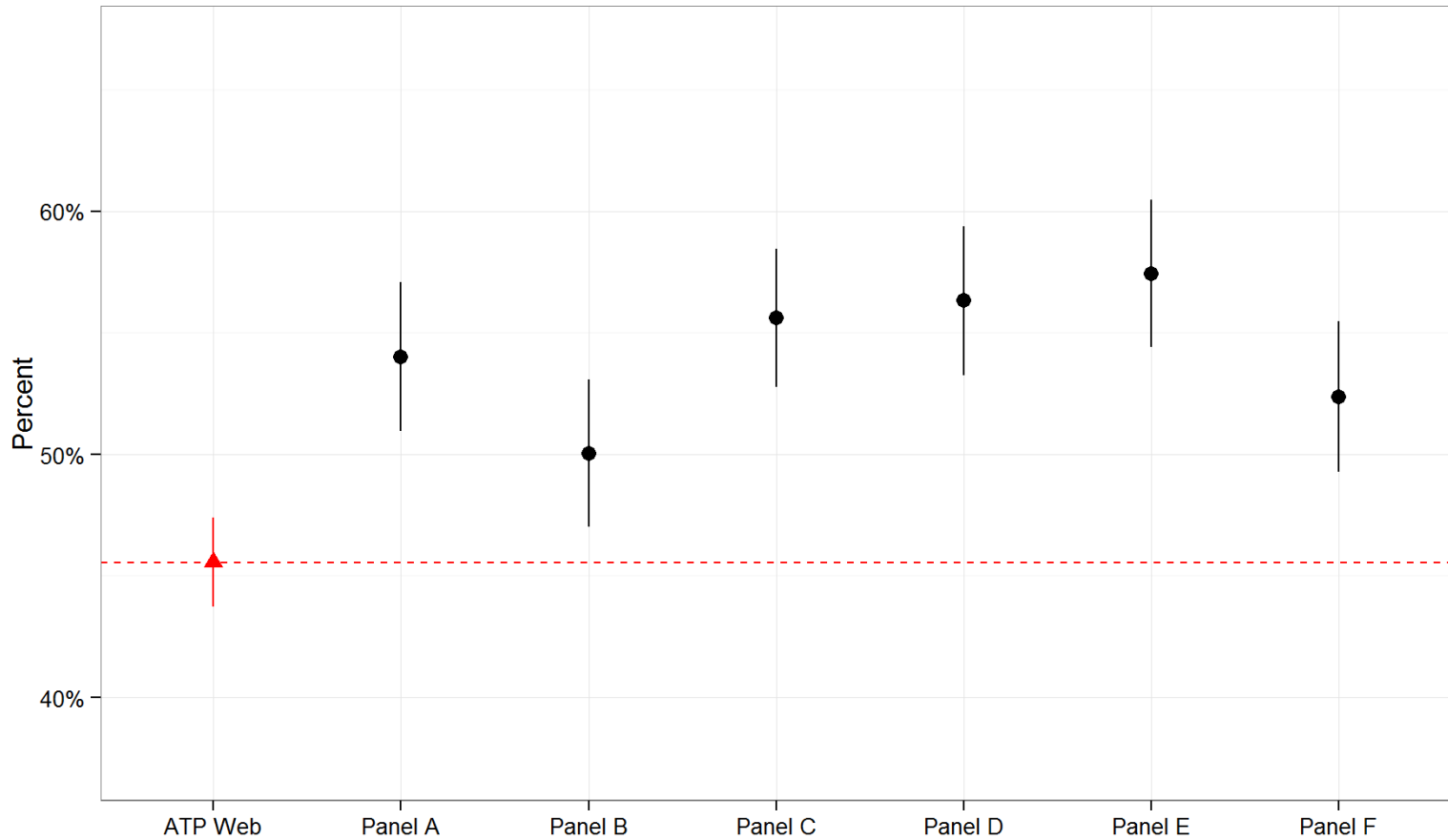
Substantive Measures: Always Vote in Local Elections
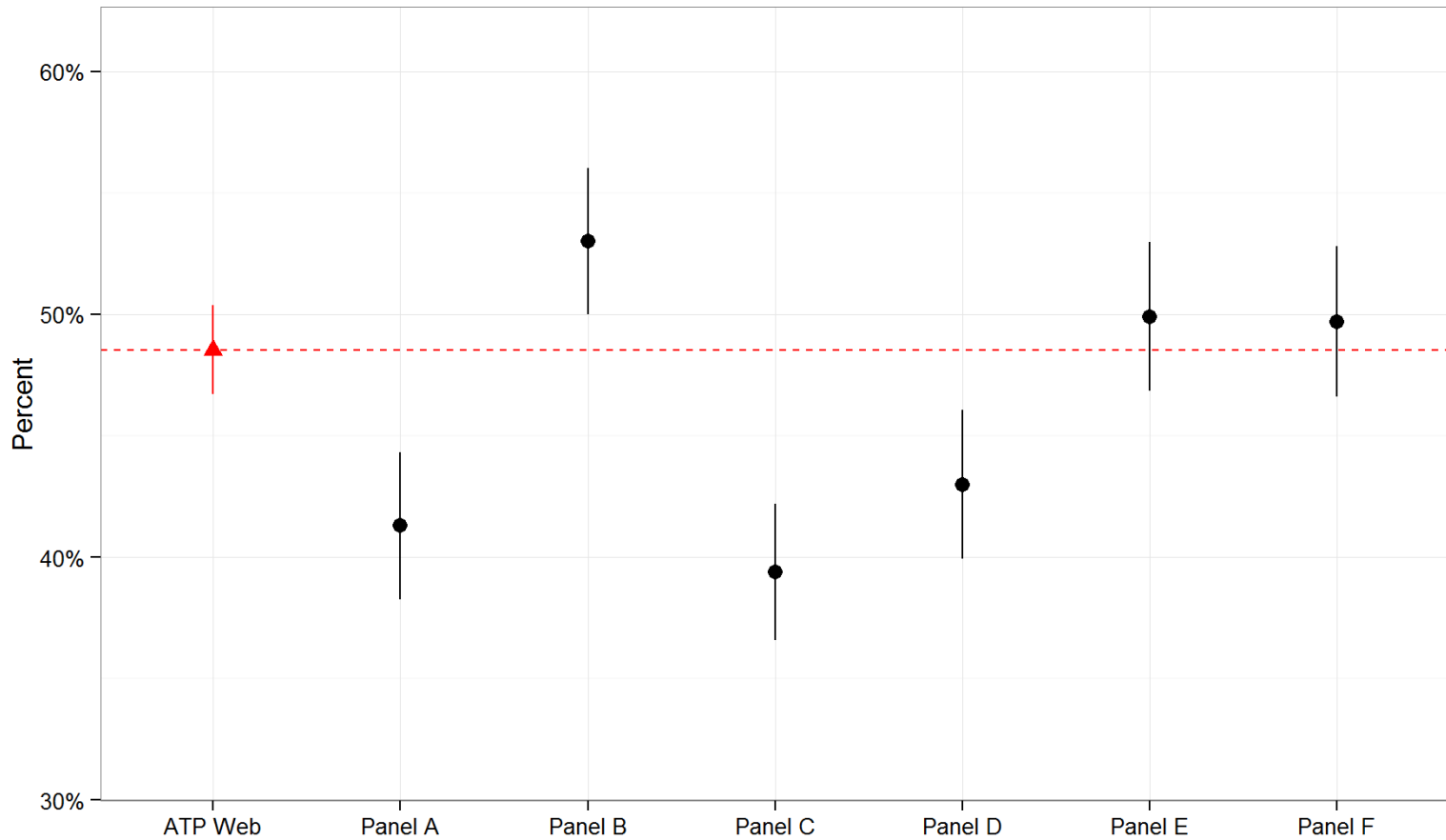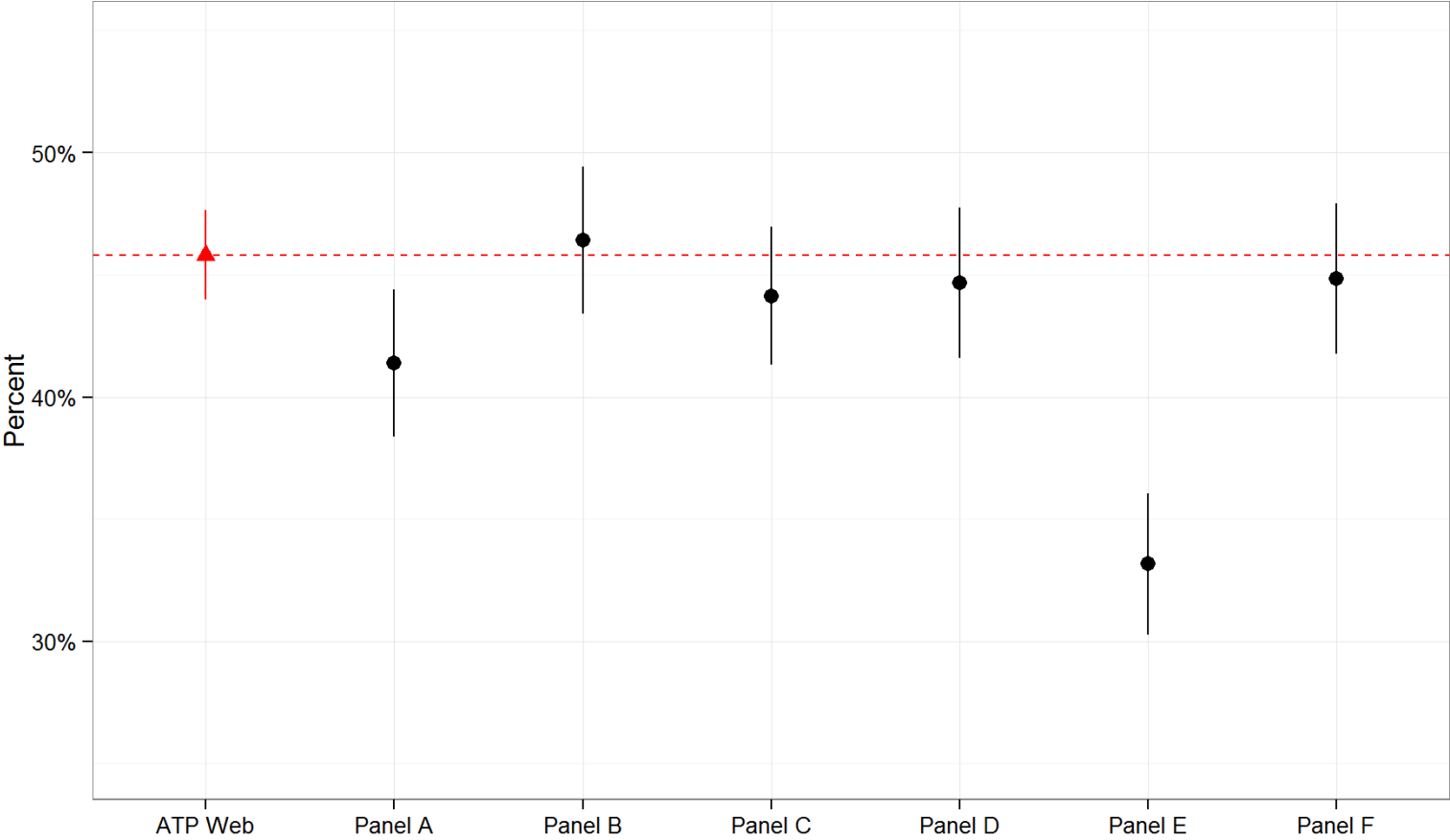
Substantive Measures: Smoke Cigarettes Every day
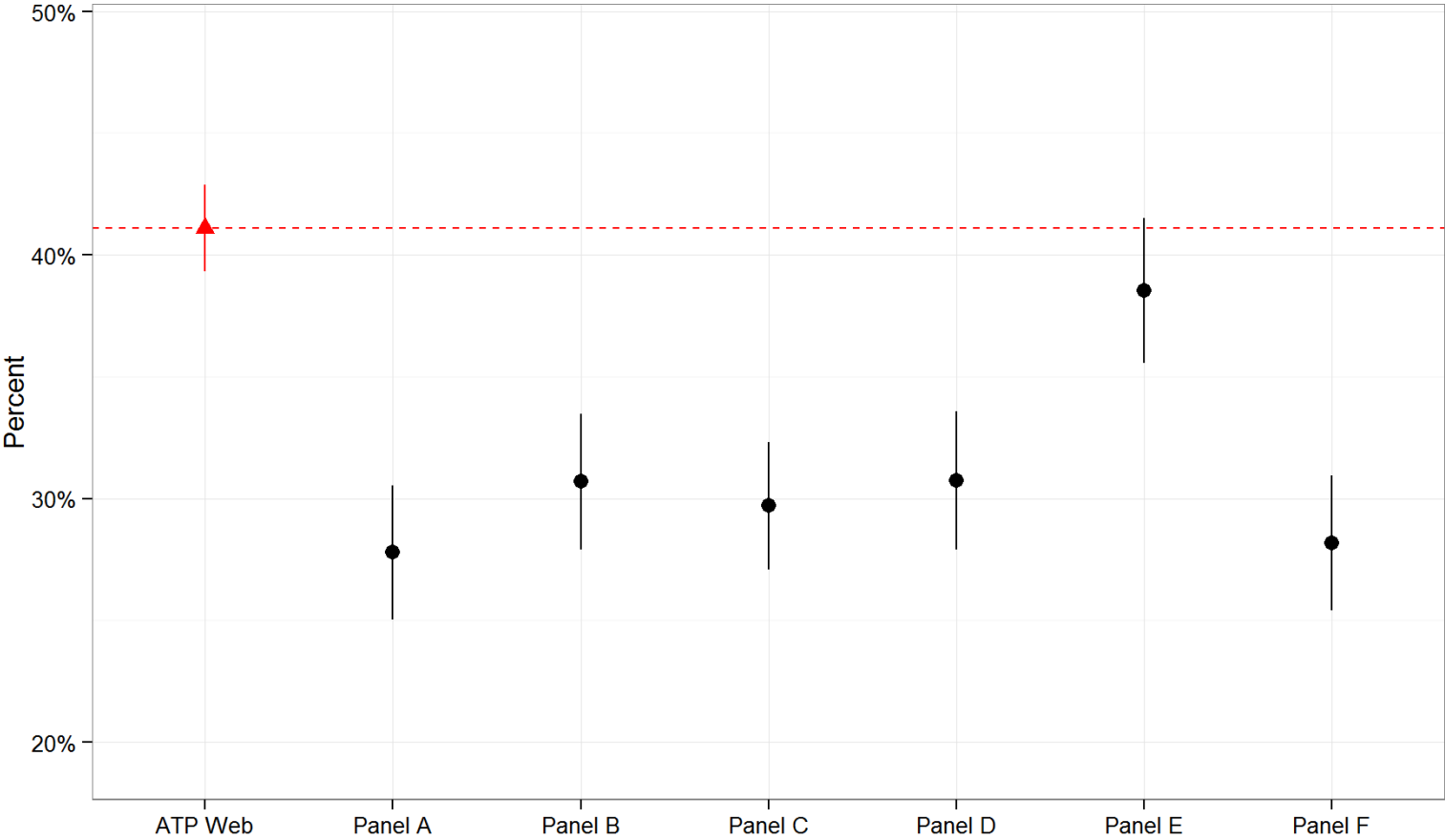
Substantive Measures: Volunteered in Last 12 Months

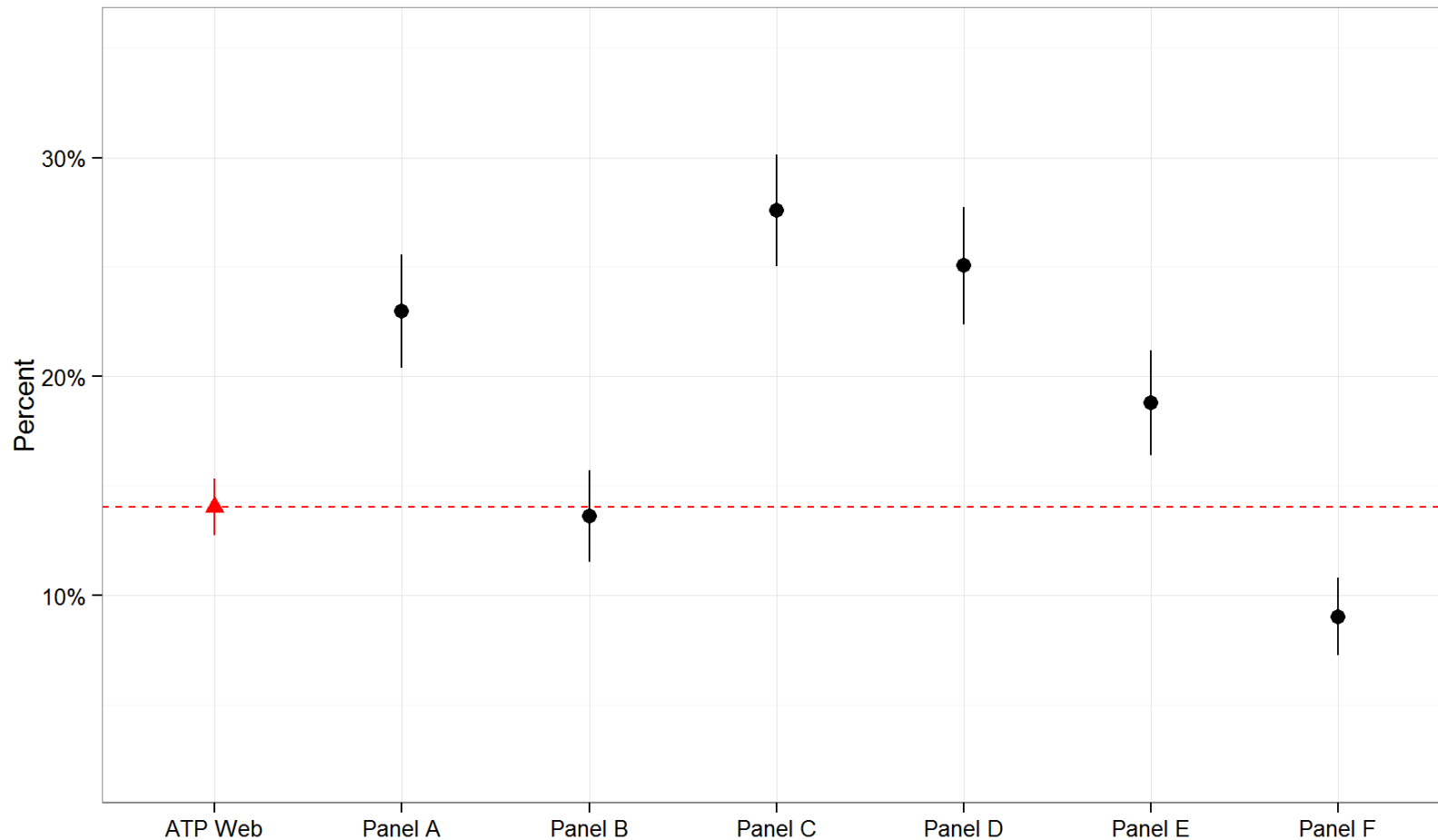# Substantive Measures: Government Should Do More to Solve Problems

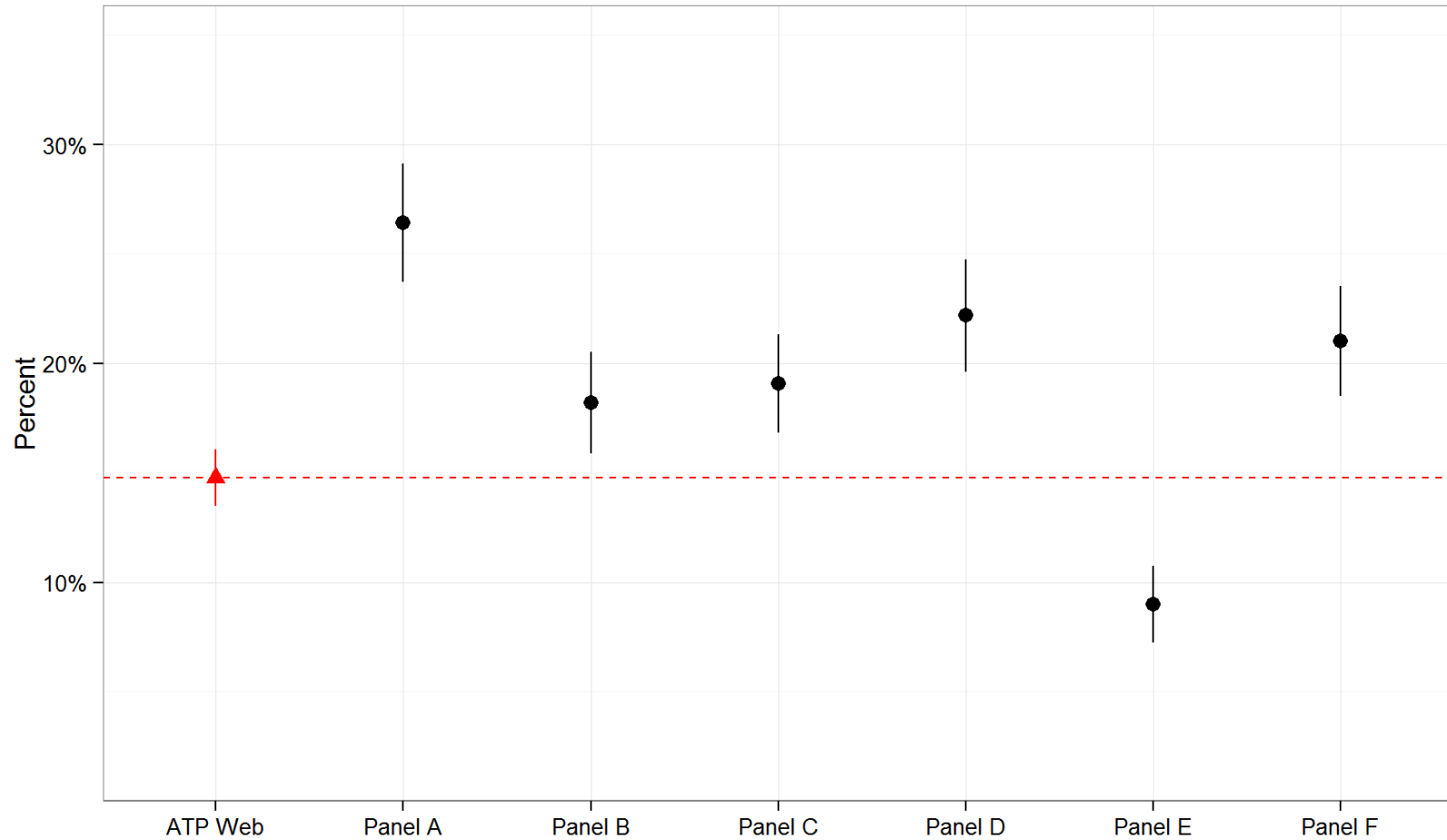# Substantive Measures: Republican/Lean Republican

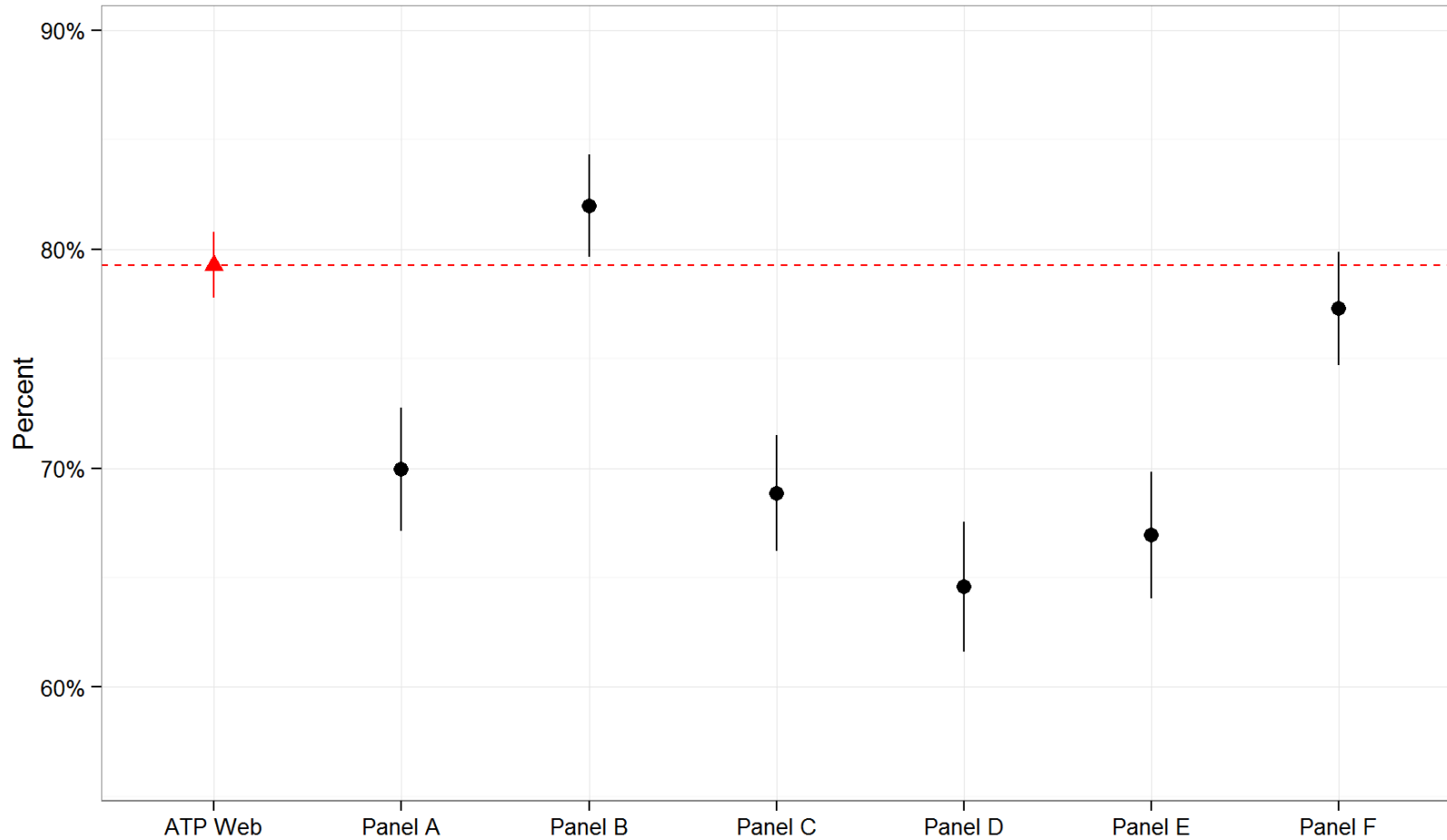# Substantive Measures: Knows That Water Boils at a Lower Temperature in Denver Than Los Angeles
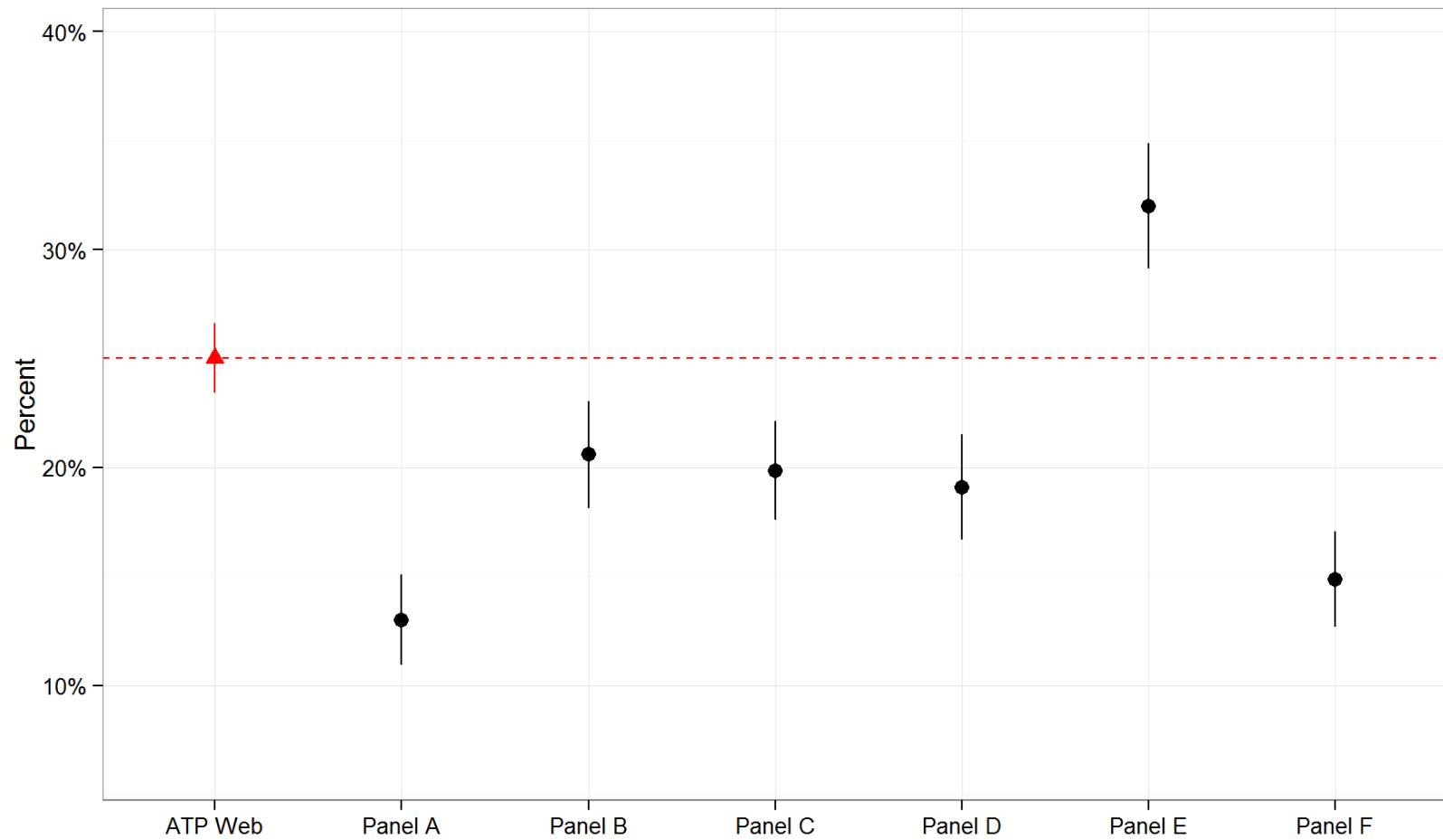
Unweighted Demographics: Ages 18-29

Unweighted Demographics: High School or Less

Unweighted Demographics: White, Non-Hispanic

Unweighted Demographics: HH income >$100,000

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