

## Methodology

This report is drawn from a survey conducted as part of the American Trends Panel (ATP), a nationally representative panel of randomly selected U.S. adults living in households recruited from landline and cellphone random-digit-dial (RDD) surveys. Panelists participate via monthly self-administered Web surveys. Panelists who do not have internet access are provided with a tablet and wireless internet connection. The panel, which was created by Pew Research Center, is being managed by GfK.

Data in this report are drawn from the panel wave conducted April 23-May 6, 2018, among 2,537 respondents. The margin of sampling error for the full sample of 2,537 respondents is plus or minus 2.8 percentage points.

Members of the ATP were recruited from several large, national landline and cellphone RDD surveys conducted in English and Spanish. At the end of each survey, respondents were invited to join the panel. The first group of panelists was recruited from the 2014 Political Polarization and Typology Survey, conducted January 23-March 16, 2014. Of the 10,013 adults interviewed, 9,809 were invited to take part in the panel and a total of 5,338 agreed to participate.<sup>1</sup>

The second group of panelists was recruited from the 2015 Pew Research Center Survey on Government, conducted August 27-October 4, 2015. Of the 6,004 adults interviewed, all were invited to join the panel, and 2,976 agreed to participate.<sup>2</sup> The third group of panelists was recruited from a survey conducted April 25 to June 4, 2017. Of the 5,012 adults interviewed in the

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### Margins of error

	Sample size	Margin of error in percentage points
U.S. adults	2,537	+/- 2.8
<i>Party including leaners</i>		
Republican	976	+/- 4.3
Democrat	1,486	+/- 3.6
<i>Party by ideology, including leaners</i>		
Conservative Republican	632	+/- 5.4
Mod/lib Republican	334	+/- 7.4
Mod/cons Democrat	734	+/- 5.2
Liberal Democrat	726	+/- 5.2

Note: The margins of error are reported at the 95% level of confidence and are calculated by taking into account the average design effect for each subgroup. Republicans and Democrats include independents and others who "lean" toward the parties.

Source: Survey conducted April 23-May 6, 2018.

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<sup>1</sup> When data collection for the 2014 Political Polarization and Typology Survey began, non-internet users were subsampled at a rate of 25%, but a decision was made shortly thereafter to invite all non-internet users to join. In total, 83% of non-internet users were invited to join the panel.

<sup>2</sup> Respondents to the 2014 Political Polarization and Typology Survey who indicated that they are internet users but refused to provide an email address were initially permitted to participate in the American Trends Panel by mail, but were no longer permitted to join the panel after Feb. 6, 2014. Internet users from the 2015 Pew Research Center Survey on Government who refused to provide an email address were not permitted to join the panel.

survey or pretest, 3,905 were invited to take part in the panel and a total of 1,628 agreed to participate.<sup>3</sup>

The overall target population for Wave 34 was non-institutionalized persons age 18 and over, living in the United States, including Alaska and Hawaii. The sample for Wave 34 consisted of 3,099 ATP members that were invited to Wave 33 and were still active. This subsample was selected using the following approach:

1. Panelists were grouped into three strata based on how underrepresented they are demographically. Then we analyzed response rates to the last five panel survey waves (W28-32) to project the number of panelists in each stratum who would respond to the W33 survey.
2. We then determined how many panelists we wanted to sample from each stratum in W33 in order to finish with around 2,500 completed interviews and have a responding sample that is as representative as possible.
  - Stratum A consists of panelists who are non-internet users, are black non-Hispanic, are Hispanic, or have high school or less education. There were 1,819 total panelists in this stratum and they are sampled at a rate of 100% for W33. 1,806 were active panelists.
  - Stratum B consists of panelists who are ages 18 to 34 or are non-volunteers. The 1,684 total panelists in this stratum are subsampled at a rate of 63%, yielding 1,061 sampled for W33 (1,057 were active).
  - Stratum C consists of the remaining 2,009 panelists not in stratum A or B. This group is subsampled at a rate of 12%, yielding 241 panelists sampled for W33 (239 were active).

The ATP data were weighted in a multi-step process that begins with a base weight incorporating the respondents' original survey selection probability and the fact that in 2014 some panelists were subsampled for invitation to the panel. Next, an adjustment was made for the fact that the propensity to join the panel and remain an active panelist varied across different groups in the sample. The final step in the weighting uses an iterative technique that aligns the sample to population benchmarks on a number of dimensions. Gender, age, education, race, Hispanic origin

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<sup>3</sup> White, non-Hispanic college graduates were subsampled at a rate of 50%.

and region parameters come from the U.S. Census Bureau's 2016 American Community Survey. The county-level population density parameter (deciles) comes from the 2010 U.S. decennial census. The telephone service benchmark comes from the July-December 2016 National Health Interview Survey and is projected to 2017. The volunteerism benchmark comes from the 2015 Current Population Survey Volunteer Supplement. The party affiliation benchmark is the average of the three most recent Pew Research Center general public telephone surveys. The internet access benchmark comes from the 2017 ATP Panel Refresh Survey. Respondents who did not previously have internet access are treated as not having internet access for weighting purposes. Sampling errors and statistical tests of significance take into account the effect of weighting. Interviews are conducted in both English and Spanish, but the Hispanic sample in the ATP is predominantly U.S. born and English speaking.

Margins of error tables shown here provide the unweighted sample sizes and the error attributable to sampling that would be expected at the 95% level of confidence for different groups in the survey taking into account the average design effect for each subgroup. Sample sizes and sampling errors for other subgroups are available upon request.

In addition to sampling error, one should bear in mind that question wording and practical difficulties in conducting surveys can introduce error or bias into the findings of opinion polls.

The April 2018 wave had a response rate of 82% (2,537 responses among 3,099 individuals in the panel). Taking account of the combined, weighted response rate for the recruitment surveys (10.1%) and attrition from panel members who were removed at their request or for inactivity, the cumulative response rate for the wave is 2.3%.<sup>4</sup>

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<sup>4</sup> Approximately once per year, panelists who have not participated in multiple consecutive waves are removed from the panel. These cases are counted in the denominator of cumulative response rates. Note that for the March 2018 survey, we calculated the response rates by computing the mean rates for the subsampled respondents (based on the rates from the recruitment survey they joined the panel on).

## Survey questionnaire and topline

**2018 PEW RESEARCH CENTER'S AMERICAN TRENDS PANEL  
APRIL 23-MAY 6, 2018  
TOTAL N=2,537**

### ADDITIONAL QUESTIONS HELD FOR FUTURE RELEASE

#### ASK ALL:

SCI3 In your opinion, do you think government investments in the following usually pay off in the long run, or are they not worth it? **[RANDOMIZE ITEMS]**

	<u>Government investments usually pay off in the long run</u>	<u>Government investments usually aren't worth it</u>	<u>No Answer</u>
a. Basic scientific research Apr 23-May 6, 2018	77	22	1
b. Engineering and technology Apr 23-May 6, 2018	80	19	1
<b>ASK FORM 2 [N=1,284]:</b>			
c. Medical research Apr 23-May 6, 2018	80	19	1

#### TREND FOR COMPARISON

Pew Research Center surveys conducted by telephone: In your opinion, do government investments in **[INSERT ITEM; RANDOMIZE]** usually pay off in the long run, or are they not worth it?

	<u>Yes, pay off in the long run</u>	<u>No aren't worth it</u>	<u>DK/Ref (VOL.)</u>
a. Basic scientific research Aug 15-25, 2014	71	24	5
Apr 28-May 12, 2009	73	18	9
b. Engineering and technology Aug 15-25, 2014	72	22	6
Apr 28-May 12, 2009	74	17	9

#### ASK ALL:

SCI4 Which statement comes closer to your view, even if neither is exactly right? **[RANDOMIZE RESPONSE OPTIONS]**

Apr 23- May 6 <u>2018</u>	
57	Government investment in research is ESSENTIAL for scientific progress
42	Private investment will ensure that enough scientific progress is made, even without government investment
2	No answer

**TREND FOR COMPARISON**

Pew Research Center surveys conducted by telephone: Which of these comes closer to your view?  
**[READ AND RANDOMIZE RESPONSE OPTIONS]**

	<i>Aug 15-25 <u>2014</u></i>	<i>Apr 28-May 12 <u>2009</u></i>
<i>Government investment in research is ESSENTIAL for scientific progress [OR]</i>	61	60
<i>Private investment will ensure that enough scientific progress is made, even without government investment</i>	34	29
<i>Don't know/Refused (VOL.)</i>	5	11

**ADDITIONAL QUESTIONS HELD FOR FUTURE RELEASE**