

## Methodology

The American Trends Panel (ATP), created by Pew Research Center, is a nationally representative panel of randomly selected U.S. adults recruited from landline and cellphone random-digit-dial 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 is being managed by Abt Associates.

Data in this report are drawn from the panel wave conducted May 1-May 15, 2017, among 4,135 respondents. The margin of sampling error for the full sample of 4,135 respondents is plus or minus 2.6 percentage points, and the margin of error for the Form 1 sample of 2,045 respondents is plus or minus 3.7 percentage points.

Members of the American Trends Panel were recruited from two large, national landline and cellphone random-digit-dial (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 Jan. 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 Survey on Government, conducted Aug. 27-Oct. 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 ATP data were weighted in a multistep 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 and region parameters come from the U.S. Census Bureau's 2015 American Community Survey. The county-level population density parameter (deciles) comes from the 2010 U.S. Decennial Census. The telephone service benchmark is comes from the January-June 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

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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 Survey on Government who refused to provide an email address were not permitted to join the panel.

of the three most recent Pew Research Center general public telephone surveys. The internet access benchmark comes from the 2015 Pew Survey on Government. 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 American Trends Panel is predominantly native born and English speaking.

<b>Group</b>	<b>Unweighted sample size</b>	<b>Plus or minus ...</b>
Total sample	4,135	2.6 percentage points
Ages 18-49	809	5.9
50+	1,235	4.8

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 May 2017 wave had a response rate of 80% (4,135 responses among 5,147 individuals in the panel). Taking account of the combined, weighted response rate for the recruitment surveys (10.0%) and attrition from panel members who were removed at their request or for inactivity, the cumulative response rate for the wave is 2.6 %.<sup>3</sup>

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<sup>3</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.

## Topline questionnaire

### 2017 PEW RESEARCH CENTER'S AMERICAN TRENDS PANEL

WAVE 27 May

FINAL TOPLINE

May 1 – May 15, 2017

TOTAL N=4,135

#### ASK FORM 1 [N=2,045]:

On a final topic ...

VOICE1 Do you ever use a voice-controlled digital assistant, such as Apple Siri, Amazon Alexa, Google Assistant, or Microsoft Cortana?

May 1-  
May 15  
2017

46	Yes
54	No
0	No answer

#### ASK IF USE DIGITAL ASSISTANT (VOICE1=1) [N=1,057]:

VOICE2 On what type of device do you use a digital assistant? **[RANDOMIZE 1-3 WITH ITEM 4 LAST]**

*[Check all that apply]*

		<u>Selected</u>	<u>Not selected</u> <u>/No answer</u>
1.	Smartphone May 1-May 15, 2017	90	10
2.	A stand-alone device, like an Amazon Echo or Google Home May 1-May 15, 2017	17	83
3.	Computer or tablet May 1-May 15, 2017	31	69
4.	Some other type of device May 1-May 15, 2017	7	93

#### ASK IF USE DIGITAL ASSISTANT (VOICE1=1) [N=1,057]:

VOICE3 Do you ever use a digital assistant to control other devices in your home, such as a stereo, TV, thermostat, or lighting?

May 1-  
May 15  
2017

26	Yes
73	No
1	No answer

**ASK IF USE DIGITAL ASSISTANT (VOICE1=1) [N=1,057]:**

VOICE4 When you use digital assistants, how often do they accurately respond to your commands?

May 1- May 15 <u>2017</u>	
39	Most of the time
42	Some of the time
16	Not very often
4	No answer

**ASK IF USE DIGITAL ASSISTANT (VOICE1=1) [N=1,057]:**

VOICE5 Which of the following, if any, are reasons why you use a voice-controlled digital assistant? **[RANDOMIZE]**

	<u>Major reason</u>	<u>Minor reason</u>	<u>Not a reason</u>	<u>No answer</u>
a. It lets me use my phone or device while doing other things with my hands May 1-May 15, 2017	55	28	16	1
b. Spoken language feels more natural than typing May 1-May 15, 2017	22	37	40	0
c. It's easier for children to use May 1-May 15, 2017	14	20	65	1
d. It's fun May 1-May 15, 2017	23	39	38	0

**ASK IF DO NOT USE DIGITAL ASSISTANT (VOICE1=2) [N=983]:**

VOICE6 Which of the following, if any, are reasons why you do not use digital assistants? **[RANDOMIZE 1-4 WITH ITEMS 5 AND 6 LAST AND IN ORDER]**

*[Check all that apply]*

	<u>Selected</u>	<u>Not selected</u> <u>/No answer</u>
1. Privacy concerns May 1-May 15, 2017	27	73
2. Don't own any devices that offer this feature May 1-May 15, 2017	28	72
3. Too complicated to use May 1-May 15, 2017	18	82
4. Just not interested May 1-May 15, 2017	61	39

	<u>Selected</u>	<u>Not selected /No answer</u>
<b>VOICE6 CONTINUED ...</b>		
5. Some other reason May 1-May 15, 2017	9	91
6. None of these [ <b>EXCLUSIVE PUNCH</b> ] May 1-May 15, 2017	8	92