

## Methodology

The American Trends Panel (ATP), created by Pew Research Center, is a nationally representative panel of randomly selected U.S. adults. Panelists participate via self-administered web surveys. Panelists who do not have internet access at home are provided with a tablet and wireless internet connection. The panel is being managed by Ipsos.

Data in this report are drawn from the panel wave conducted Oct. 1 to Oct. 13, 2019. A total of 3,627 panelists responded out of 3,954 who were sampled, for a response rate of 91.7%. This does not include three panelists who were removed from the data due to extremely high rates of refusal or straightlining. The

cumulative response rate accounting for nonresponse to the recruitment surveys and attrition is 4.9%. The break-off rate among panelists who logged onto the survey and completed at least one item is 0.9%. The margin of sampling error for the full sample of 3,627 respondents is plus or minus 2.1 percentage points.

The sample consisted of all existing panelists who had

completed the annual profile survey as of Sept. 9, 2019. Panelists who had not yet completed the profile survey were ineligible. A subsample from the ATP was selected by grouping panelists into six strata so demographic groups that are underrepresented in the panel had a higher probability of selection than overrepresented groups:

- Stratum A consists of panelists that completed interviews for previous ATP Waves 17, 33, or 34. They were sampled at a rate of 100%.
- Stratum B consists of panelists who are non-internet users. They were sampled at a rate of 72%.
- Stratum C consists of panelists with a high school education or less. They were sampled at a rate of 64.7%.

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### American Trends Panel recruitment surveys

Recruitment dates	Mode	Invited	Joined	Active panelists remaining
Jan. 23 to March 16, 2014	Landline/ cell RDD	9,809	5,338	2,291
Aug. 27 to Oct. 4, 2015	Landline/ cell RDD	6,004	2,976	1,314
April 25 to June 4, 2017	Landline/ cell RDD	3,905	1,628	663
Aug. 8 to Oct. 31, 2018	ABS/web	9,396	8,778	6,320
	<b>Total</b>	<b>29,114</b>	<b>18,720</b>	<b>10,588</b>

Note: Approximately once per year, panelists who have not participated in multiple consecutive waves or who did not complete an annual profiling survey are removed from the panel. Panelists also become inactive if they ask to be removed from the panel.

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- Stratum D consists of panelists that are Hispanic, unregistered to vote, or non-volunteers. They were sampled at a rate of 26.6%.
- Stratum E consists of panelists that are black or 18-34 years old. They were sampled at a rate of 12.8%.
- Stratum F consists of the remaining panelists. They were sampled at a rate of 9.6%.

The ATP was created in 2014, with the first cohort of panelists invited to join the panel at the end of a large, national, landline and cellphone random-digit-dial survey that was conducted in both English and Spanish. Two additional recruitments were conducted using the same method in 2015 and 2017, respectively. Across these three surveys, a total of 19,718 adults were invited to join the ATP, of which 9,942 agreed to participate.

In August 2018, the ATP switched from telephone to address-based recruitment. Invitations were sent to a random, address-based sample (ABS) of households selected from the U.S. Postal Service's Delivery Sequence File. In each household, the adult with the next birthday was asked to go online to complete a survey, at the end of which they were invited to join the panel. For a random half-sample of invitations, households without internet access were instructed to return a postcard. These households were contacted by telephone and sent a tablet if they agreed to participate. A total of 9,396 were invited to join the panel, and 8,778 agreed to join the panel and completed an initial profile survey. Of the 18,720 individuals who have ever joined the ATP, 10,588 remained active panelists and continued to receive survey invitations at the time this survey was conducted.

The U.S. Postal Service's Delivery Sequence File has been estimated to cover as much as 98% of the population, although some studies suggest that the coverage could be in the low 90% range.<sup>1</sup>

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### Weighting dimensions

Variable	Benchmark source
Gender	2017 American Community Survey
Age	
Education	
Race/Hispanic origin	2018 CPS March Supplement
Hispanic nativity	
Home internet access	2017 CPS Volunteering & Civic Life Supplement
Region x Metropolitan status	
Volunteerism	2016 CPS Voting and Registration Supplement
Voter registration	
Party affiliation	Average of the three most recent Pew Research Center telephone surveys.

Note: Estimates from the ACS are based on non-institutionalized adults. Voter registration is calculated using procedures from Hur, Achen (2013) and rescaled to include the total US adult population.

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<sup>1</sup> AAPOR Task Force on Address-based Sampling. 2016. "[AAPOR Report: Address-based Sampling.](#)"

## Weighting

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 and 2017 some respondents were subsampled for invitation to the panel. The next step in the weighting uses an iterative technique that aligns the sample to population benchmarks on the dimensions listed in the accompanying table.

Sampling errors and test of statistical-significance take into account the effect of weighting. Interviews are conducted in both English and Spanish, but the American Trends Panel's Hispanic sample is predominantly U.S. born and English speaking.

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 table shows the unweighted sample sizes and the error

## Margins of error

	Full sample		Form 2	
	Unweighted sample size	Margin of error in percentage points	Unweighted sample size	Margin of error in percentage points
U.S. adults	3,627	+/- 2.1	1,811	+/- 2.9
White	2,472	+/- 2.5	1,242	+/- 3.4
Black	413	+/- 6.3	205	+/- 9.1
Hispanic	491	+/- 6.2	244	+/- 8.9
Boomer and older	1,799	+/- 2.9	896	+/- 4.1
Generation X	854	+/- 4.2	422	+/- 5.8
Millennial and younger	970	+/- 4.0	490	+/- 5.6
Postgrad	680	+/- 4.7	339	+/- 6.5
College grad	874	+/- 4.1	437	+/- 5.7
Some college	1,008	+/- 3.9	500	+/- 5.5
H.S. or less	1,058	+/- 3.8	531	+/- 5.3
Upper income	821	+/- 4.3	405	+/- 6.1
Middle income	1,743	+/- 3.0	884	+/- 4.1
Lower income	912	+/- 4.2	443	+/- 5.9
<i>Parent of child under 18</i>				
Parent	944	+/- 4.0	466	+/- 5.7
Not a parent	2,676	+/- 2.5	1,341	+/- 3.5
Rep/Lean Rep (45% after weighting)	1,502	+/- 3.1	758	+/- 4.4
Dem/Lean Dem (52% after weighting)	2,023	+/- 2.9	995	+/- 4.0
White evangelical Prot.	560	+/- 5.1	-	-
White mainline Prot.	479	+/- 5.5	-	-
Black Protestant	292	+/- 7.5	-	-
Catholic	654	+/- 5.0	-	-
Nothing in particular	663	+/- 4.9	-	-
Atheist	212	+/- 9.0	-	-
Agnostic	233	+/- 8.4	-	-

Note: Whites and blacks include those who report being only one race and are non-Hispanic. Hispanics are of any race. Family incomes are adjusted for differences in purchasing power by geographic region and for household size. Middle income is defined as two-thirds to double the median annual income for the survey sample. Lower income falls below that range, upper income falls above it. 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.

Source: Survey conducted Oct 1-13, 2019.

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attributable to sampling that would be expected at the 95% level of confidence for different groups in the survey.

### **Adjusting income and defining income tiers**

Family income data reported in this study is adjusted for household size and cost-of-living differences by geography using a similar methodology to Pew Research Center's previous work on [the American middle class](#). The income tiers used in this analysis are also created following methodology previously used in the Center's work on the middle class.

Prior to these adjustments, American Trends Panel members were assigned to the midpoint of the income range they selected during the survey to provide an exact income figure for adjustment.

The metropolitan area cost-of-living adjustment is based on price indexes published by the U.S. Bureau of Economic Analysis. These indexes, known as [Regional Price Parities](#) (RPP), compare the prices of goods and services across 383 metropolitan statistical areas as well as non-metro areas with the national average prices for the same goods and services. The most recent available data is from 2017.

The national estimates presented in the analysis encompass the U.S. adult population. Those who fall outside of the 341 metropolitan statistical areas in this wave of the ATP are assigned the RPP for their state's non-metropolitan area.

Family incomes are then adjusted for the number of people in a household using the methodology from Pew Research Center's previous work on [the American middle class](#). That is done because a four-person household with an income of, say, \$50,000 faces a tighter budget constraint than a two-person household with the same income.

"Middle-income" adults live in families with annual incomes that are two-thirds to double the median family income in this ATP sample, after incomes have been adjusted for household size and the local cost of living. The median family income for this sample is about \$59,611 for a three-person household. Using this median income, the middle-income range is about \$39,700 to \$119,200 annually for a three-person household. Lower-income families have incomes less than roughly \$39,700 and upper-income families have incomes greater than roughly \$119,200 (all figures expressed in 2018 dollars).

Based on these adjustments, 32% of U.S. adults in this wave are lower income, 47% are middle income and 17% fall into the upper-income tier.

Two examples of how a given area's cost-of-living adjustment was calculated are as follows: Jackson, Tennessee, is a relatively inexpensive area, with a price level that is 17.9% less than the national average. The Hawaii metropolitan area known as Urban Honolulu is one of the most expensive areas, with a price level that is 24.4% higher than the national average. Income in the sample is adjusted to make up for this difference. As a result, a family with an income of \$45,000 in the Jackson area is equivalent to a family with an income of \$68,200 in Urban Honolulu.

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## Survey question wording and topline

2019 PEW RESEARCH CENTER'S AMERICAN TRENDS PANEL  
WAVE 55 FINAL TOPLINE  
OCTOBER 1-13, 2019  
TOTAL N=3,627

### OTHER QUESTIONS PREVIOUSLY RELEASED OR HELD FOR FUTURE RELEASE

#### ASK FORM 2 [N=1,811]:

#### RANDOMIZE ORDER OF BIO33A AND BIO33B; DISPLAY ON SAME SCREEN WITH BIO34, BIO35

BIO33 Thinking about childhood vaccines for measles, mumps and rubella (MMR) how would you rate... **[RANDOMIZE ITEMS; FLIP ORDER OF RESPONSE OPTIONS HIGH TO LOW; LOW TO HIGH USING SAME ORDER FOR BOTH ITEMS]**

	<u>Very high</u>	<u>High</u>	<u>Medium</u>	<u>Low</u>	<u>Very low</u>	<u>No Answer</u>
a. The risk of side effects						
Oct 1-13, 2019	5	7	17	28	42	1
May 10-June 6, 2016	5	6	21	29	38	1
b. The preventive health benefits						
Oct 1-13, 2019	56	21	13	4	3	2
May 10-June 6, 2016	45	28	18	4	3	2

#### ASK ALL:

BIO34 Overall, do you think...

<u>Oct 1-13 2019</u>		<u>May 10-June 6 2016</u>
88	The benefits of childhood vaccines for measles, mumps and rubella outweigh the risks	88
10	The risks of childhood vaccines for measles, mumps and rubella outweigh the benefits	10
2	No answer	2

#### ASK ALL:

BIO35 Which comes closer to your views about childhood vaccines for measles, mumps and rubella, even if neither is exactly right? **[RANDOMIZE RESPONSE OPTIONS 1-2]**

<u>Oct 1-13 2019</u>		<u>May 10-June 6 2016</u>
16	Parents should be able to decide NOT to vaccinate their children, even if that may create health risks for other children and adults	17
82	Healthy children should be required to be vaccinated in order to attend public schools because of the potential risk for others when children are not vaccinated	82
1	No answer	2