

# Methodology

## The American Trends Panel survey methodology

### Overview

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. Interviews are conducted in both English and Spanish. The panel is being managed by Ipsos.

Data in this report is drawn from the panel wave conducted from Jan. 10 to Jan. 17, 2022, and included oversamples of Asian, Black and Hispanic Americans in order to provide more precise estimates of the opinions and experiences of these smaller demographic subgroups. These oversampled groups are weighted back to reflect their correct proportions in the population. A total of 5,128 panelists responded out of 5,850 who were sampled, for a response rate of 88%. The cumulative response rate accounting for nonresponse to the recruitment surveys and attrition is 3%. The break-off rate among panelists who logged on to the survey and completed at least one item is less than 1%. The margin of sampling error for the full sample of 5,128 respondents is plus or minus 2.0 percentage points.

### Panel recruitment

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 whom 9,942 (50%) agreed to participate.

### 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	1,601
Aug. 27 to Oct. 4, 2015	Landline/ cell RDD	6,004	2,976	938
April 25 to June 4, 2017	Landline/ cell RDD	3,905	1,628	470
Aug. 8 to Oct. 31, 2018	ABS	9,396	8,778	4,430
Aug. 19 to Nov. 30, 2019	ABS	5,900	4,720	1,625
June 1 to July 19, 2020; Feb. 10 to March 31, 2021	ABS	3,197	2,812	1,696
May 29 to July 7, 2021				
Sept. 16 to Nov. 1, 2021	ABS	1,329	1,162	937
	<b>Total</b>	<b>39,540</b>	<b>27,414</b>	<b>11,697</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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In August 2018, the ATP switched from telephone to address-based recruitment. Invitations were sent to a stratified, random sample of households selected from the U.S. Postal Service's Delivery Sequence File. Sampled households receive mailings asking a randomly selected adult to complete a survey online. A question at the end of the survey asks if the respondent is willing to join the ATP. Starting in 2020 another stage was added to the recruitment. Households that do not respond to the online survey are sent a paper version of the questionnaire, \$5 and a postage-paid return envelope. A subset of the adults returning the paper version of the survey are invited to join the ATP. This subset of adults receive a follow-up mailing with a \$10 pre-incentive and invitation to join the ATP.

Across the four address-based recruitments, a total of 19,822 adults were invited to join the ATP, of whom 17,472 agreed to join the panel and completed an initial profile survey. 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. Of the 27,414 individuals who have ever joined the ATP, 11,697 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> The American Trends Panel never uses breakout routers or chains that direct respondents to additional surveys.

### **Sample design**

The overall target population for this survey was non-institutionalized persons ages 18 and older, living in the U.S., including Alaska and Hawaii.

This study featured a stratified random sample from the ATP. The sample was allocated according to the following strata, in order: Black, Asian or Hispanic Americans, tablet households, not registered to vote, high school education or less, ages 18 to 34, uses internet weekly or less, nonvolunteers and all other categories not already falling into any of the above.

Black, Asian and Hispanic panelists were sampled with certainty. The remaining strata were sampled at rates designed to ensure that the share of respondents in each stratum is proportional to its share of the U.S. adult population to the greatest extent possible. Respondent weights are

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



adjusted to account for differential probabilities of selection as described in the Weighting section below.

### **Questionnaire development and testing**

The questionnaire was developed by Pew Research Center in consultation with Ipsos. The web program was rigorously tested on both PC and mobile devices by the Ipsos project management team and Pew Research Center researchers. The Ipsos project management team also populated test data that was analyzed in SPSS to ensure the logic and randomizations were working as intended before launching the survey.

### **Incentives**

All respondents were offered a post-paid incentive for their participation. Respondents could choose to receive the post-paid incentive in the form of a check or a gift code to Amazon.com or could choose to decline the incentive. Incentive amounts ranged from \$5 to \$20 depending on whether the respondent belongs to a part of the population that is harder or easier to reach. Differential incentive amounts were designed to increase panel survey participation among groups that traditionally have low survey response propensities.

### **Data collection protocol**

The data collection field period for this survey was Jan. 10 to Jan. 17, 2022. Postcard notifications were mailed to all ATP panelists with a known residential address on Jan. 10.

Invitations were sent out in two separate launches: Soft Launch and Full Launch. Sixty panelists were included in the soft launch, which began with an initial invitation sent on Jan. 10, 2022. The ATP panelists chosen for the initial soft launch were known responders who had completed previous ATP surveys within one day of receiving their invitation. All remaining English- and Spanish-speaking panelists were included in the full launch and were sent an invitation on Jan. 11.

All panelists with an email address received an email invitation and up to two email reminders if they did not respond to the survey. All ATP panelists that consented to SMS messages received an SMS invitation and up to two SMS reminders.



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**Invitation and reminder dates**

	<b>Soft Launch</b>	<b>Full Launch</b>
Initial invitation	Jan. 10, 2022	Jan. 11, 2022
First reminder	Jan. 13, 2022	Jan. 13, 2022
Final reminder	Jan. 16, 2022	Jan. 16, 2022

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**Data quality checks**

To ensure high-quality data, the Center’s researchers performed data quality checks to identify any respondents showing clear patterns of satisficing. This includes checking for very high rates of leaving questions blank, as well as always selecting the first or last answer presented. As a result of this checking, three ATP respondents were removed from the survey dataset prior to weighting and analysis.

**Weighting**

The ATP data is weighted in a multistep process that accounts for multiple stages of sampling and nonresponse that occur at different points in the survey process. First, each panelist begins with a base weight that reflects their probability of selection for their initial recruitment survey. The base weights for panelists recruited in different years are scaled to be proportionate to the effective sample size for all panelists in their cohort who were active at the time of the most recent profile survey. These weights are then calibrated to align with the population benchmarks in the accompanying table to correct for nonresponse to recruitment surveys and panel attrition up to that point. A second calibration adjustment was made to account for more recent attrition. If only a subsample of panelists was invited to participate in the wave, this weight is adjusted to account for any differential probabilities of selection.

Among the panelists who completed the survey, this weight is then calibrated again to align with the population benchmarks identified in the accompanying table and trimmed at the 1st and 99th percentiles to reduce the loss in precision stemming from variance in the weights. Sampling errors and tests of statistical significance take into account the effect of weighting.

Some of the population benchmarks used for weighting come from surveys conducted prior to the coronavirus outbreak that began in February 2020. However, the weighting variables for panelists recruited in 2021 were measured at the time they were recruited to the panel. Likewise, the profile variables for existing panelists were updated from panel surveys conducted in July or August 2021.



This does not pose a problem for most of the variables used in the weighting, which are quite stable at both the population and individual levels. However, volunteerism may have changed over the intervening period in ways that made their 2021 measurements incompatible with the available (pre-pandemic) benchmarks. To address this, volunteerism is weighted using the profile variables that were measured in 2020. For all other weighting dimensions, the more recent panelist measurements from 2021 are used.

## Weighting dimensions

Variable	Benchmark source
Age x Gender	2019 American Community Survey (ACS)
Education x Gender	
Education x Age	
Race/Ethnicity x Education	
Born inside vs. outside the U.S. among Hispanics and Asian Americans	
Years lived in the U.S.	
Census region x Metro/Non-metro	2020 CPS March Supplement
Volunteerism	2019 CPS Volunteering & Civic Life Supplement
Voter registration	2018 CPS Voting and Registration Supplement
Party affiliation	2021 National Public Opinion Reference Survey (NPORS)
Frequency of internet use	
Religious affiliation	

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 U.S. adult population.

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For panelists recruited in 2021, plausible values were imputed using the 2020 volunteerism values from existing panelists with similar characteristics. This ensures that any patterns of change that were observed in the existing panelists were also reflected in the new recruits when the weighting was performed.



The following table shows 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.

Group	Unweighted sample size	Weighted %	Plus or minus ...
Total sample	5,128		2.0 percentage points
Half sample	At least 2,558		2.8 percentage points
Rep/Lean Rep	2,031	42	3.0 percentage points
Half sample	At least 993		4.3 percentage points
Dem/Lean Dem	2,935	51	2.6 percentage points
Half sample	At least 1,434		3.7 percentage points

Note: This survey includes [oversamples](#) of Asian, Black and Hispanic respondents. Unweighted sample sizes do not account for the sample design or weighting and do not describe a group's contribution to weighted estimates. See the [Sample design](#) and [Weighting](#) sections above for details.

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.



**Dispositions and response rates**

<b>Final dispositions</b>	<b>AAPOR code</b>	<b>Total</b>
Completed interview	1.1	5,128
Logged onto survey; broke off	2.12	28
Logged onto survey; did not complete any items	2.1121	60
Never logged on (implicit refusal)	2.11	630
Survey completed after close of the field period	2.27	1
Completed interview but was removed for data quality		3
Screened out		0
<b>Total panelists in the survey</b>		<b>5,850</b>
Completed interviews	I	5,128
Partial interviews	P	0
Refusals	R	721
Non-contact	NC	1
Other	O	0
Unknown household	UH	0
Unknown other	UO	0
Not eligible	NE	0
<b>Total</b>		<b>5,850</b>
AAPOR RR1 = $I / (I+P+R+NC+O+UH+UO)$		88%

<b>Cumulative response rate</b>	<b>Total</b>
Weighted response rate to recruitment surveys	12%
% of recruitment survey respondents who agreed to join the panel, among those invited	69%
% of those agreeing to join who were active panelists at start of Wave 101	43%
Response rate to Wave 101 survey	88%
<b>Cumulative response rate</b>	<b>3%</b>

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**Adjusting income and defining income tiers**

To create upper-, middle- and lower-income tiers, respondents' 2020 family incomes were adjusted for differences in purchasing power by geographic region and household size. "Middle-income" adults live in families with annual incomes that are two-thirds to double the median family income in the panel (after incomes have been adjusted for the local cost of living and household size). The middle-income range for the American Trends Panel is about \$42,000 to \$125,900 annually for an average family of three. Lower-income families have incomes less than roughly \$42,000, and upper-income families have incomes greater than roughly \$125,900 (all figures expressed in 2020 dollars).

Based on these adjustments, 33% of respondents are lower income, 45% are middle income and 16% fall into the upper-income tier. An additional 6% didn't offer a response to either the income question or the household size question.

For more information about how the income tiers were determined, please see [here](#).