

## 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 ATP Wave 131, conducted from July 17 to July 23, 2023, and includes an [oversample](#) of Hispanic men, non-Hispanic Black men, and non-Hispanic Asian men 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 5,057 panelists responded out of 5,875 who were sampled, for a response rate of 86%. 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 1%. The margin of sampling error for the full sample of 5,057 respondents is plus or minus 1.7 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

#### 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	1,496
Aug. 27 to Oct. 4, 2015	Landline/ cell RDD	6,004	2,976	877
April 25 to June 4, 2017	Landline/ cell RDD	3,905	1,628	431
Aug. 8 to Oct. 31, 2018	ABS	9,396	8,778	4,104
Aug. 19 to Nov. 30, 2019	ABS	5,900	4,720	1,461
June 1 to July 19, 2020; Feb. 10 to March 31, 2021	ABS	3,197	2,812	1,537
May 29 to July 7, 2021; Sept. 16 to Nov. 1, 2021	ABS	1,329	1,162	784
May 24 to Sept. 29, 2022	ABS	3,354	2,869	1,687
April 17 to May 30, 2023	ABS	686	576	573
	<b>Total</b>	<b>43,580</b>	<b>30,859</b>	<b>12,950</b>

Note: RDD is random-digit dial; ABS is address-based sampling. 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.

PEW RESEARCH CENTER

these three surveys, a total of 19,718 adults were invited to join the ATP, of whom 9,942 (50%) agreed to participate.

In August 2018, the ATP switched from telephone to address-based sampling (ABS) recruitment. A study cover letter and a pre-incentive are mailed to a stratified, random sample of households selected from the U.S. Postal Service's Delivery Sequence File. This Postal Service 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> Within each sampled household, the adult with the next birthday is asked to participate. Other details of the ABS recruitment protocol have changed over time but are available upon request.<sup>2</sup>

We have recruited a national sample of U.S. adults to the ATP approximately once per year since 2014. In some years, the recruitment has included additional effort (known as an "oversample") to boost sample size with underrepresented groups. For example, Hispanic adults, Black adults and Asian adults were oversampled in 2019, 2022 and 2023, respectively.

Across the six address-based recruitments, a total of 23,862 adults were invited to join the ATP, of whom 20,917 agreed to join the panel and completed an initial profile survey. Of the 30,859 individuals who have ever joined the ATP, 12,950 remained active panelists and continued to receive survey invitations at the time this survey was conducted.

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 noninstitutionalized persons ages 18 and older living in the U.S., including Alaska and Hawaii. It featured a stratified random sample from the ATP in which Hispanic men, non-Hispanic Black men and non-Hispanic Asian men were selected with certainty. The remaining panelists 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 adjusted to account for differential probabilities of selection as described in the Weighting section below.

---

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

<sup>2</sup> Email [pewsurveys@pewresearch.org](mailto:pewsurveys@pewresearch.org).

## 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 July 17 to July 23, 2023. Postcard notifications were mailed to all ATP panelists with a known residential address on July 17.

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 July 17. 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 sampled panelists were included in the full launch and were sent an invitation on July 18.

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 who consented to SMS messages received an SMS invitation and up to two SMS reminders.

---

### Invitation and reminder dates, ATP Wave 131

	<b>Soft launch</b>	<b>Full launch</b>
Initial invitation	July 17, 2023	July 18, 2023
First reminder	July 20, 2023	July 20, 2023
Final reminder	July 22, 2023	June 22, 2023

PEW RESEARCH CENTER

---

## 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, one ATP respondent was 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. These weights are then rescaled and adjusted to account for changes in the design of ATP recruitment surveys from year to year. Finally, the weights are calibrated to align with the population benchmarks in the accompanying table to correct for nonresponse to recruitment surveys and panel 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.

---

### American Trends Panel weighting dimensions

Variable	Benchmark source
Age (detailed)	2021 American Community Survey (ACS)
Age x Gender	
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	2021 CPS March Supplement
Volunteerism	2021 CPS Volunteering & Civic Life Supplement
Voter registration	2018 CPS Voting and Registration Supplement
Party affiliation	2022 National Public Opinion Reference Survey (NPORS)
Frequency of internet use	
Religious affiliation	
<i>Additional weighting dimensions applied within Black adults</i>	
Age	2021 American Community Survey (ACS)
Gender	
Education	
Hispanic ethnicity	
Voter registration	2018 CPS Voting and Registration Supplement
Party affiliation	2022 National Public Opinion Reference Survey (NPORS)
Religious affiliation	

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

**PEW RESEARCH CENTER**

---

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.

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.

---

### Sample sizes and margins of error, ATP Wave 131

Group	Unweighted sample size	Plus or minus ...
Heard of ChatGPT	3,813	2.0 percentage points
<i>Half sample</i>	At least 1,895	2.8 percentage points
<i>Among those who have heard of ChatGPT only</i>		
Ages 18-29	513	5.3 percentage points
<i>Half sample</i>	At least 253	7.6 percentage points
30-49	1,364	3.3 percentage points
<i>Half sample</i>	At least 675	4.6 percentage points
50-64	1,042	3.6 percentage points
<i>Half sample</i>	At least 519	5.2 percentage points
65+	884	3.8 percentage points
<i>Half sample</i>	At least 441	5.6 percentage points
HS or less	740	4.4 percentage points
<i>Half sample</i>	At least 364	6.4 percentage points
Some college	1,160	3.5 percentage points
<i>Half sample</i>	At least 554	5.0 percentage points
College grad	1,018	3.5 percentage points
<i>Half sample</i>	At least 500	5.0 percentage points
Postgrad	886	3.8 percentage points
<i>Half sample</i>	At least 442	5.4 percentage points

Note: This survey includes oversamples of Hispanic men, non-Hispanic Black men and non-Hispanic Asian men. 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.

PEW RESEARCH CENTER

---

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.

**Coding of industries**

Employed respondents were asked what industry or field they work in. The response options were based on the latest U.S. Census Bureau codes using the net categories for industry, as reported by IPUMS. “Other” responses were backcoded into these industry categories when possible.

Due to small sample size for analysis, some industries were further collapsed into larger net categories as follows: The arts, entertainment and recreation industry was combined with hospitality or service; the agriculture, forestry, fishing and hunting industry was added to manufacturing, mining, or construction; and transportation was included in the retail and trade industry.

## Dispositions and response rates

### Final dispositions, ATP Wave 131

	AAPOR code	Total
Completed interview	1.1	5,057
Logged on to survey; broke off	2.12	61
Logged on to survey; did not complete any items	2.1121	29
Never logged on (implicit refusal)	2.11	727
Survey completed after close of the field period	2.27	0
Completed interview but was removed for data quality		1
Screened out		0
<b>Total panelists sampled for the survey</b>		<b>5,875</b>
Completed interviews	I	5,057
Partial interviews	P	0
Refusals	R	817
Non-contact	NC	0
Other	O	1
Unknown household	UH	0
Unknown other	UO	0
Not eligible	NE	0
<b>Total</b>		<b>5,875</b>
$AAPOR\ RR1 = I / (I+P+R+NC+O+UH+UO)$		86%

PEW RESEARCH CENTER

### Cumulative response rate as of ATP Wave 131

	Total
Weighted response rate to recruitment surveys	11%
% of recruitment survey respondents who agreed to join the panel, among those invited	71%
% of those agreeing to join who were active panelists at start of Wave 131	49%
Response rate to Wave 131 survey	86%
<b>Cumulative response rate</b>	<b>3%</b>

PEW RESEARCH CENTER