Oh 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 May 17 to May 31, 2021. The sample is comprised of panelists who indicated that they use Twitter on the Wave 85 survey conducted on the ATP in March 2021. A total of 2,548 panelists responded out of 2,643 who were sampled, for a response rate of 96%. The cumulative response rate accounting for nonresponse to the recruitment surveys and attrition is 4%. 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 2,548 respondents is plus or minus 3.4 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.

In August 2018, the ATP switched from telephone to address-based recruitment. Invitations were sent to a random, address-based sample of households selected

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	2,181
Aug. 27 to Oct. 4, 2015	Landline/ cell RDD	6,004	2,976	1,241
April 25 to June 4, 2017	Landline/ cell RDD	3,905	1,628	620
Aug. 8 to Oct. 31, 2018	ABS	9,396	8,778	5,893
Aug. 19 to Nov. 30, 2019	ABS	5,900	4,720	2,323
June 1 to July 19, 2020; Feb. 10 to March 31, 2021	ABS	3,197	2,812	2,442
Total		**38,211**	**26,252**	**14,700**

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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from the U.S. Postal Service's Delivery Sequence File. Two additional recruitments were conducted using the same method in 2019 and 2020, respectively. Across these three address-based recruitments, a total of 18,493 adults were invited to join the ATP, of whom 16,310 (88%) 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 26,252 individuals who have ever joined the ATP, 14,700 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.[1] 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 Twitter users ages 18 and older, living in the U.S., including Alaska and Hawaii. The sample consisted of 2,643 panelists who indicated that they use Twitter on the Wave 85 survey conducted on the ATP in March 2021.

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 which 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.

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[1] AAPOR Task Force on Address-based Sampling. 2016. "AAPOR Report: Address-based Sampling."

Data collection protocol

The data collection field period for this survey was May 17 to May 31, 2021. Postcard notifications were mailed to all ATP panelists with a known residential address on May 17, 2021.

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 May 17, 2021. 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 May 18, 2021.

All panelists with an email address received an email invitation and up to four 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 four SMS reminders.

Invitation and reminder dates

	Soft Launch	**Full Launch**
Initial invitation	May 17, 2021	May 18, 2021
1st reminder	May 21, 2021	May 21, 2021
2nd reminder	May 24, 2021	May 24, 2021
3rd reminder	May 26, 2021	May 26, 2021
Final reminder	May 28, 2021	May 28, 2021

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 was 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 (and the probability of being invited to participate in the panel in cases where only a subsample of respondents were invited). The base weights for panelists recruited

Weighting dimensions

Variable	Benchmark source
Age x Gender	Twitter users from ATP Wave 85
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	
Volunteerism	
Voter registration	
Party affiliation	
Frequency of Internet use	
Religious affiliation	

Note: These dimensions were also used to construct the Wave 85 weight. See the Wave 85 methodology statement for more details.

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in different years are scaled to be proportionate to the effective sample size for all active panelists in their cohort. To correct for nonresponse to the initial recruitment surveys and gradual panel attrition, the base weights for all active panelists are calibrated to align with the population benchmarks identified in the accompanying table to create a full-panel weight.

For ATP waves in which only a subsample of panelists are invited to participate, a wave-specific base weight is created by adjusting the full-panel weights for subsampled panelists to account for any differential probabilities of selection for the particular panel wave. For waves in which all active panelists are invited to participate, the wave-specific base weight is identical to the full-panel weight.

In the final weighting step, the wave-specific base weights for panelists who completed the survey are again calibrated to match the population benchmarks specified above. These weights are trimmed (typically at about the 1st and 99th percentiles) to reduce the loss in precision stemming from variance in the weights. Sampling errors and test of statistical significance take into account the effect of weighting.

For this wave, the sample was weighted to align with benchmarks that were estimated among all Twitter users who responded to Wave 85.

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	Plus or minus …
Total sample	2,548	3.4 percentage points

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

Final dispositions	AAPOR code	Total
Completed interview	1.1	2,548
Logged onto survey; broke off	2.12	14
Logged onto survey; did not complete any items	2.1121	8
Never logged on (implicit refusal)	2.11	72
Survey completed after close of the field period	2.27	0
Completed interview but was removed for data quality		1
Screened out		0
Total panelists in the survey		**2,643**
Completed interviews	I	2,548
Partial interviews	P	0
Refusals	R	95
Non-contact	NC	0
Other	O	0
Unknown household	UH	0
Unknown other	UO	0
Not eligible	NE	0
Total		**2,643**
AAPOR RR1 = I / (I+P+R+NC+O+UH+UO)		96%

Cumulative response rate	Total
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 W90	56%
Response rate to Wave W90 survey	96%
Cumulative response rate	**4%**

Analysis of Twitter behavioral data

The analysis of Twitter users' behaviors and activities on the site is based on a subsample of 1,026 respondents to the main survey who had previously agreed to share their Twitter handle for research purposes and provided a valid handle. Researchers from the Center used these handles to collect information about their on-site behaviors using the Twitter API.

The handles for these respondents were initially collected in a previous wave of the ATP fielded March 8 to March 14, 2021. These respondents were then included in the subsequent survey of all Twitter users that the main analysis in this report is based on.

Of the 2,548 adults who completed this survey, 1,099 (43%) had previously agreed to provide their Twitter handle. After the survey was fielded, researchers reviewed each account individually and removed any accounts that were suspended, invalid, or that belonged to institutions, products or international entities. The analysis of Twitter behavioral data in this report is based on the 1,026 respondents who both completed the survey and had a valid, active handle at the time of the study.

This final sample of 1,026 U.S. adult Twitter users with valid, active handles was weighted using an iterative technique that matches gender, age, race, place of birth among Hispanics and Asian Americans, years lived in the U.S., education, region, party identification, volunteerism, voter registration, and metropolitan area to American Trends Panel March 2021 (Wave 85) survey respondents who provided their Twitter handles for research purposes. The margin of error for the full sample is plus or minus 6 percentage points.

How this report defines frequent and infrequent tweeters

Findings in which respondents' activities on Twitter are matched directly with their survey responses are based on Twitter account metadata obtained through the Twitter API. For any valid account (including those set to private), the Twitter API provides basic summary information such as the age of the account and total number of tweets over the life of the account. Researchers used these metadata figures to categorize respondents based on the average number of tweets per month they have produced over the total amount of time their account has been active. Frequent tweeters are defined as those who have posted five or more tweets (of any type) per month, while infrequent tweeters are defined as those who have posted fewer than five tweets per month.

The findings examining on-site behaviors – specifically, the types of tweets produced by frequent and infrequent tweeters – are based on tweets produced by respondents with public accounts (N=917) from Jan. 1, 2018, to Dec. 31, 2021. This dataset was collected Jan. 12-19, 2022, and

includes all tweets from these users from 2018 through 2021 that had not been deleted (either by Twitter or by the users themselves) as of the time of collection.