

# 2024 Pew Student Loans Return to Repayment Survey

Prepared for The Pew  
Charitable Trusts



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## Study overview

The Pew Charitable Trusts contracted with SSRS to conduct the 2024 Pew Student Loans Return to Repayment Survey. The goal of the survey was to explore the experiences and financial situations of federal student loan borrowers during the transition to repayment after the loan payment pause. SSRS interviewed current nonstudent federal student loan borrowers about their repayment experiences since the end of the pandemic pause, their familiarity with various repayment plans, and how borrowers' financial security impacts their repayment plans. Among the target population, specific targets were set for Black and Hispanic current nonstudent federal student loan borrowers who owe payments on their loans, as well as borrowers who owe payments but are not currently making payments, to explore if and how the experiences of these subgroups differ from student loan borrowers overall.

The 2024 Pew Student Loans Return to Repayment Survey launched May 30, and field closed July 2. The survey collected data online from a sample of 1,533 current nonstudent federal student loan borrowers (age 18 and older).

The data for this survey was weighted to represent the population of current nonstudent federal student loan borrowers in the United States. This report provides additional information about the methods used to collect the data and report the survey results.

## Sample design and screening

The majority of interviews (n=1,284) were completed via the SSRS Opinion Panel.<sup>1</sup> Additional interviews (n=249) with Black and Hispanic current nonstudent federal student loan borrowers were completed via our partner probability panel, the Ipsos KnowledgePanel.<sup>2</sup>

Because there are no existing benchmark parameters for the population of interest, a nationally representative sample of SSRS Opinion Panelists were invited to participate in this survey with two goals: 1) to identify eligible respondents for the survey, and 2) to collect demographic information for eligible and ineligible respondents for the purpose of calculating benchmarks for the target population based on weighting the entire sample of qualified respondents and terminated screen-outs and then removing the screen-outs from the sample and rebalancing the weights.

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<sup>1</sup> For additional information about the SSRS Opinion Panel, see <https://ssrsopinionpanel.com>.

<sup>2</sup> For additional information about the Ipsos KnowledgePanel, see <https://www.ipsos.com/en-us/solutions/public-affairs/knowledgepanel>.

Invited panelists from the SSRS Opinion Panel and the Ipsos KnowledgePanel were asked screener questions to identify potential respondents who left school more than six months ago (current nonstudent) and currently hold student loans that are either federal or of an unknown type for their own education or someone else’s education (federal student loan borrower). The incidences for the target population of current nonstudent federal student loan borrowers among the invited population for each sample source is listed in Table 1.

**Table 1. Incidence Rates by Sample Source**

<b>SOURCE</b>	<b>INCIDENCE RATE</b>
SSRS Opinion Panel	16%
Ipsos KnowledgePanel	13%
<b>Total</b>	<b>15%</b>

Respondents who did not qualify based on the screener questions were asked to provide demographic information (race, ethnicity, educational attainment, employment status, and income). Respondents who did qualify proceeded to the survey.

## **Questionnaire development and field procedure**

The questionnaire was initially developed by the Pew Charitable Trusts team. SSRS provided feedback regarding question wording, order, clarity, screener qualifications, and other issues pertaining to questionnaire quality. Together, the SSRS and Pew teams worked to finalize the questionnaire.

To ensure that the screener was capturing the target population as closely as possible, respondents were required to answer all screener questions. If they attempted to skip a screener question, they were shown the following message: “Your answers to these questions are very important to us. Can you please take a moment to review your responses for completion?” If they again skipped the screener question, they were terminated from the survey. Respondents who qualified for the survey were allowed to skip nonscreener questions and were shown the above message the first time they attempted to skip a question.

Upon final approval, SSRS formatted and programmed the survey and made sure that it was mobile optimized. After programming, the SSRS team tested the program to ensure that skip patterns were working correctly and that the program could be used efficiently by respondents. Additional steps were employed to ensure a quality experience in survey administration regardless of the device or browser used by respondents.

## Pretest

Once the survey was programmed, SSRS completed 11 cognitive pretest interviews to help identify questions that were confusing or not understood as intended, and to evaluate the usability of the online survey instrument. Upon completion of the pretest interviews, SSRS provided recordings and a detailed memo to the Pew team that included feedback and suggested revisions to the overall instrument. Following the pretest, adjustments were made to the questionnaire and the survey program, and it was prepared for the full launch.

## Data collection

### Survey administration procedures

#### *SSRS Opinion Panel*

The interviews conducted using the SSRS Opinion Panel are self-administered web surveys. Panelists were emailed an invitation, which included a unique passcode-embedded link, to complete the survey online. In appreciation for their participation, panelists received a modest incentive (an electronic gift card). All respondents who did not respond to their first invitation received up to four reminder emails or text reminders.

A “soft launch” inviting a limited number of panelists to participate was conducted May 30, 2024. After checking soft launch data to ensure that all questionnaire content and skip patterns were correct, additional sample was released to ensure that the final sample met the study goals.

#### *Ipsos KnowledgePanel*

Members of the Ipsos KnowledgePanel who were assigned to this survey received a notification email letting them know a new survey was available to complete. This email notification contained a link to the survey. Generally, after three days, automatic email reminders were sent to all nonresponding panel members in the sample. Ipsos also operates an ongoing modest incentive program, which includes special raffles and sweepstakes with both cash rewards and other prizes to be won.

### Data processing, integration, and management

SSRS implemented several quality assurance procedures in data file preparation and processing. Prior to launching data collection, extensive testing of the web survey was completed to ensure it was working as anticipated. After the soft launch, survey data was carefully checked for accuracy, completeness, and nonresponse to specific questions so that any issues could be identified and resolved prior to the full launch.

The data file programmer implemented a “data cleaning” procedure in which web survey skip patterns were created to ensure that all questions had the appropriate numbers of cases. This procedure involved a check of raw data by a program that consisted of instructions derived from the skip patterns designated on the questionnaire. The program confirmed that data was consistent with the definitions of codes and ranges and matched the appropriate bases of all questions. The SSRS team also reviewed preliminary SPSS files and conducted an independent checking of all created variables to ensure that all variables were accurately constructed.

After the first week of field, the SSRS team noticed a higher-than-expected proportion of respondents reporting that they didn’t know what type of loan they had and/or didn’t know their current repayment status. After sharing with the Pew team, the Pew team decided to add an additional screener qualification; existing respondents (n=23) who reported not having a federal student loan and/or not knowing the type of student loan they held AND not knowing their repayment status were removed from the survey, and new respondents were subject to this screener.

After receiving the data, the Pew team conducted additional cleaning to remove respondents whose responses indicated they did not meet the screening criteria. Several respondents were removed because they indicated they did not know if they owed loans AND did not know if they were making payments (n=19). Four respondents were removed because their open-ended responses indicated they did not have loans (n=4). Additional respondents were removed because they reported that they did not know if their loans were held by the federal government, and their responses to other questions did not indicate that their loans were federally held (n=29). After removing these cases from the original sample of 1,533 respondents, the survey sample used for future analyses contains 1,481 respondents.

As a standard practice, quality checks were incorporated into the survey. Quality control checks for this study included a review of responses to insincerity or “trap” questions<sup>3</sup> to ensure respondents were paying attention, looking for “speeders,”<sup>4</sup> reviewing the internal response rate (number of questions answered divided by the number of questions asked), and reviewing any verbatim responses. No cases were eliminated after quality control checks.

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<sup>3</sup> One type of “trap” question we typically use is to ask respondents to select a specific response option (e.g., “Select the option that is not a fruit”) to ensure they are fully reading the question before selecting an answer.

<sup>4</sup> As part of the data quality checks, we review how long respondents take to complete the survey relative to the average respondent time. When the length of the interview is significantly below the average, it can indicate a lack of attention to the questions or low data quality. However, this is not always the case, which is why “speeding” is reviewed in conjunction with other measures, such as reviewing open-ended responses.

In the course of fielding the surveys, SSRS regularly met with and provided fieldwork updates to the Pew team with the number of completed surveys by key parameters of interest. Additionally, a few survey questions were specifically monitored to see how unweighted data came in.

## Weighting procedures

The data from this project was weighted to represent the U.S. residential population of current nonstudent federal student loan borrowers. As noted above, since there are no existing benchmarks for the target population, a process of “self-weighting” was used to develop benchmarks. Specifically, the survey data from the SSRS Opinion Panel, including qualified completed respondents and terminated screen-outs, was weighted initially using base weights. The qualified respondents were then separated out, and the demographic parameters of this group were used as the weighting benchmarks for the full set of qualified respondents.<sup>5</sup> This section further details the process followed to weight the survey data.

### Base weight

The first step in the weighting was to apply base weights to account for sampling probabilities. Base weights were computed separately for each of the two sample sources. In addition to accounting for sampling probabilities, the base weights also include a compositing adjustment to account for the oversampling performed via the Ipsos KnowledgePanel.

### *SSRS Opinion Panel*

The base weights for SSRS Opinion Panelists were their standard design weights, which account for differential probabilities of selection for the sample. The design weights for the SSRS Opinion Panel were computed differently depending on whether the panelist was recruited from address-based sample (ABS), a prepaid cell sample, or the SSRS dual-frame random digit dialing (RDD) telephone Omnibus. Final base weights for SSRS Opinion Panelists were computed by applying noninternet, nonresponse, and attrition adjustments to the design weights.

### *Ipsos KnowledgePanel*

Ipsos’ KnowledgePanel is an online research panel that is representative of the entire U.S. population. Panel members are randomly recruited through probability-based sampling, and households are provided with access to the internet and hardware if needed. Ipsos recruits panel

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<sup>5</sup> The full set of qualified respondents includes qualified respondents from the SSRS Opinion Panel and the Ipsos KnowledgePanel.

members by using ABS methods. Respondents recruited from the Ipsos KnowledgePanel were assigned base weights provided by Ipsos upon completion of data collection.<sup>6</sup>

Base weights were standardized by sample source, so that the weights within each sample source sum to the number of interviews by sample source.

### *Composite adjustment*

The next step in the weighting was to combine the samples using a compositing factor to account for the oversampling performed via the Ipsos KnowledgePanel.

With each panel's standardized base weight applied and normalized to the combined sample of interviews ( $d_0$ ), a compositing factor was calculated that corrected the distribution of the race/ethnicity subgroups, among all qualified interviews in the sample ( $\lambda_{SSRS,IPROS}$ ), to the self-weighted distribution of qualified interviews exclusively among SSRS Opinion Panelists ( $\lambda_{SSRS}$ )—which were also used as population benchmarks in the calibration.

### *Final base weight*

The final base weight is the product of the initial panel-specific base weight and the composite adjustment.

## Calibration

The sample was split into three groups ([1] Black, [2] Hispanic, and [3] White/another race), and each group was calibrated separately.

Weights within the three subgroups were then trimmed at the 2nd and 98th percentiles to ensure that individual respondents did not have too much influence on survey-derived estimates. After the weights were trimmed, the subgroups were combined and the weights adjusted, so that the subgroups were represented in their proper proportions for a final combined, race/ethnicity-adjusted weight.

### *Population parameters for calibration*

The benchmarks or population parameters used in the calibration were derived from the weighted sample of interviews among SSRS Opinion Panelists. This weighted sample of qualified interviews was developed by (1) weighting the entire sample of qualified interviews and terminated screen-outs, among the SSRS Opinion Panel, according to the SSRS Opinion Panel's standard calibration

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<sup>6</sup> KnowledgePanel Sampling and Weighting Methodology, Ipsos, <https://www.ipsos.com/sites/default/files/kpsamplingandweighting.pdf>.



process for U.S. adults 18+; (2) removing the terminated screen-outs from the sample; and (3) rebalancing the calibrated weight to n-size of qualified interviews.

This process produced a “self-weighted” sample of the study’s target population (current nonstudent federal student loan borrowers), which served as a source of benchmarks for that target population.

Table 2 lists the dimensions used in the SSRS Opinion Panel’s standard general population (U.S. adults 18+) calibration process, as well as their sources. Table 3 lists the dimensions used, from the self-weighted sample of qualified interviews among SSRS Opinion Panelists, that served as parameters for the target population in the calibration of the combined sample of qualified interviews for the study.

**Table 2. U.S. Adults 18+ Calibration Dimensions and Sources for SSRS Opinion Panel Completes and Screen-Outs**

DIMENSIONS	SOURCE
Sex	2023 Current Population Survey <sup>7</sup>
Age	
Education	
Race/ethnicity	
Hispanic nativity	
Census region	
Home tenure	
Number of adults per household	Claritas Pop-Facts Premier 2023 <sup>8</sup>
Population density	
Religion affiliation	Pew Research Center’s National Public Opinion Reference Survey (NPORS) <sup>9</sup>
Internet frequency	
Party ID	
Civic engagement	September 2021 CPS Volunteering and Civic Life Supplement <sup>10</sup>

<sup>7</sup> Sarah Flood, Miriam King, Renae Rodgers et al., IPUMS Center for Data Integration: Version 11.0 (dataset) (Minneapolis, MN: IPUMS, 2023), <https://doi.org/10.18128/D030.V11.0>.

<sup>8</sup> Claritas Pop-Facts Premier, Environics Analytics Inc., <https://environicsanalytics.com/data/demographic/pop-facts-premier>.

<sup>9</sup> National Public Opinion Reference Survey (NPORS), Pew Research Center, May 19–Sept. 5, 2023, <https://www.pewresearch.org/methods/fact-sheet/national-public-opinion-reference-survey-npors>.

<sup>10</sup> Supplemental Surveys, U.S. Census Bureau, <https://www.census.gov/programs-surveys/cps/about/supplemental-surveys.html>.

## Voter registration

Aristotle Voter Data 2023 and Annual Estimates of the Resident Population by Single Year of Age and Sex for the United States: April 1, 2020, to July 1, 2022, from the U.S. Census Bureau<sup>11</sup>

**Table 3. Calibration Dimensions for Combined Sample of Qualified Interviews**

DIMENSIONS	CATEGORIES
Sex	Male, female
Age	18-29, 30-49, 50-64, 65+
Education	High school or less, some college, college degree, graduate degree or more
Race/ethnicity <sup>12</sup>	Black, Hispanic, White/another race
Census region	North, Midwest, South, West
Civic engagement	Yes, no
Population density quintiles	Least to most (5)

The following tables compare unweighted and weighted sample distributions to the target population's benchmark distributions.

**Table 4. Sample Demographics, Black Respondents**

CATEGORY	VALUES	PARAMETER	UNWEIGHTED	WEIGHTED
Gender	Male	36.9%	31.8%	36.5%
	Female	63.1%	68.2%	63.5%
Age	18-29	20.9%	19.3%	20.9%
	30-49	51.3%	48.9%	51.1%
	50-64	20.9%	24.4%	21.2%
	65+	6.8%	7.4%	6.9%
Education	HS or less	19.2%	20.4%	19.4%
	Some college	35.1%	40.2%	35.4%
	College degree	27.7%	20.1%	27.3%
	Grad degree+	18.0%	19.3%	18.0%
Census region	North	14.8%	13.7%	14.5%
	Midwest	16.9%	19.8%	17.0%
	South	60.9%	59.8%	61.1%
	West	7.4%	6.6%	7.4%

<sup>11</sup> National Population by Characteristics: 2020-2023, U.S. Census Bureau, <https://www.census.gov/data/tables/time-series/demo/popest/2020s-national-detail.html>.

<sup>12</sup> The within-race/ethnicity subgroup calibration of the White/another race subgroup included race/ethnicity (White vs. another race) as a separate dimension.

Civic engagement	Not engaged	74.1%	61.3%	73.8%
	Engaged	25.9%	38.7%	26.2%
Population density quintiles	Least	8.7%	8.1%	8.8%
	2	18.0%	18.3%	18.1%
	3	20.4%	18.6%	20.0%
	4	23.1%	24.7%	23.0%
	Most	29.8%	30.3%	30.1%

**Table 5. Sample Demographics, Hispanic Respondents**

CATEGORY	VALUES	PARAMETER	UNWEIGHTED	WEIGHTED
Gender	Male	41.1%	43.1%	41.2%
	Female	58.9%	56.9%	58.8%
Age	18-29	31.2%	25.1%	31.1%
	30-49	47.4%	51.9%	47.3%
	50-64	15.8%	18.7%	15.8%
	65+	5.7%	4.3%	5.7%
Education	HS or less	16.2%	15.8%	16.2%
	Some college	41.0%	42.9%	41.0%
	College degree	30.1%	27.1%	30.0%
	Grad. degree+	12.7%	14.2%	12.8%
Census region	North	17.2%	14.7%	17.2%
	Midwest	10.8%	10.8%	10.8%
	South	33.8%	38.1%	33.7%
	West	38.2%	36.3%	38.2%
Civic engagement	Not engaged	78.0%	67.7%	77.9%
	Engaged	22.0%	32.3%	22.1%
Population density quintiles	Least	12.8%	13.3%	12.8%
	2	11.3%	16.0%	11.4%
	3	24.3%	24.2%	24.3%
	4	22.6%	18.1%	22.6%
	Most	29.0%	28.4%	29.0%

**Table 6. Sample Demographics, White/Another Race Respondents**

CATEGORY	VALUES	PARAMETER	UNWEIGHTED	WEIGHTED
Gender	Male	50.3%	48.4%	50.3%
	Female	49.7%	51.6%	49.7%
Age	18-29	22.6%	24.2%	22.6%
	30-49	45.1%	46.6%	45.1%
	50-64	25.0%	22.1%	25.1%
	65+	7.2%	7.0%	7.3%

Education	HS or less	17.6%	15.8%	17.7%
	Some college	27.3%	33.4%	27.4%
	College degree	29.7%	26.0%	29.4%
	Grad. degree+	25.5%	24.8%	25.5%
Race/ethnicity	White	86.7%	86.5%	86.7%
	Another race	13.3%	13.5%	13.3%
Census region	North	19.7%	18.8%	19.6%
	Midwest	24.0%	27.4%	24.1%
	South	32.6%	32.9%	32.4%
	West	23.8%	20.9%	23.9%
Civic engagement	Not engaged	76.5%	63.3%	76.4%
	Engaged	23.5%	36.7%	23.6%
Population density quintiles	Least	17.8%	18.8%	17.9%
	2	23.1%	24.0%	23.1%
	3	22.5%	22.7%	22.5%
	4	20.1%	17.8%	19.9%
	Most	16.5%	16.8%	16.5%

Table 7. Sample Demographics, All Respondents

CATEGORY	VALUES	PARAMETER	UNWEIGHTED	WEIGHTED
Gender	Male	45.9%	42.6%	45.8%
	Female	54.1%	57.4%	54.2%
Age	18-29	23.9%	23.2%	23.8%
	30-49	46.8%	48.7%	46.7%
	50-64	22.4%	21.7%	22.5%
	65+	6.9%	6.3%	6.9%
Education	HS or less	17.6%	17.0%	17.7%
	Some college	31.5%	37.9%	31.6%
	College degree	29.3%	24.8%	29.1%
	Grad. degree+	21.6%	20.4%	21.6%
Race/ethnicity	Black	19.9%	25.6%	19.9%
	Hispanic	19.1%	28.9%	19.1%
	White	52.9%	39.3%	52.9%
	Another race	8.1%	6.1%	8.1%
Census region	North	18.2%	16.3%	18.2%
	Midwest	20.0%	20.7%	20.1%
	South	38.4%	41.3%	38.3%
	West	23.3%	21.7%	23.4%
Civic engagement	Not engaged	76.3%	64.1%	76.1%
	Engaged	23.7%	35.9%	23.9%

Population density quintiles	Least	15.0%	14.5%	15.1%
	2	19.8%	20.2%	19.9%
	3	22.4%	22.0%	22.4%
	4	21.2%	19.6%	21.0%
	Most	21.5%	23.6%	21.6%

## Design effect and margin of sampling error

Specialized sampling designs and post-data collection statistical adjustments require analysis procedures that reflect departures from simple random sampling. SSRS calculates the effects of these design features so that an appropriate adjustment can be incorporated into tests of statistical significance when using these data. The so-called “design effect” or *deff* represents the loss in statistical efficiency that results from a disproportionate sample design and systematic nonresponse. The total sample design effect for this survey was 1.56.

SSRS calculates the composite design effect for a sample of size  $n$ , with each case having a weight,  $w$  as<sup>13</sup>:

$$deff = \frac{n \sum w^2}{(\sum w)^2}$$

The survey’s margin of error is the largest 95% confidence interval for any estimated proportion based on the total sample—one around 50%. For example, the margin of error for the total sample is  $\pm 3.1$  percentage points. This means that in 95 out of every 100 samples using the same methodology, estimated proportions based on the entire sample will be no more than 3.1 percentage points away from their true values in the population. Margins of error for subgroups will be larger. It is important to remember that sampling fluctuations are only one possible source of error in a survey estimate. Other sources, such as respondent selection bias, questionnaire wording, and reporting inaccuracy, may contribute additional error of greater or lesser magnitude.

Table 8 shows the sample sizes, design effects, and margins of error for the total sample and subgroups of interest.

**Table 8. Sample Sizes, Design Effects, and Margins of Sampling Error**

GROUP	N	DESIGN EFFECT	MARGIN OF SAMPLING ERROR
Total	1,533	1.56	$\pm 3.1$ percentage points
White respondents	600	1.45	$\pm 4.8$ percentage points
Black respondents	393	1.38	$\pm 5.8$ percentage points

<sup>13</sup> Leslie Kish, “Weighting for Unequal Pi,” *Journal of Official Statistics* 8, no. 2 (1992): 183-200, <https://www.proquest.com/openview/8196b6985339ec9885193d56a5c44ca0/1?pq-origsite=gscholar&cbl=105444>.

Black respondents who owe payments	342	1.38	± 6.2 percentage points
Hispanic respondents	443	1.32	± 5.4 percentage points
Hispanic respondents who owe payments	390	1.34	± 5.7 percentage points
Respondents who owe payments	1,378	1.56	± 3.3 percentage points
Respondents who owe payments and are not making them	217	1.5	± 8.2 percentage points

## How to analyze data with oversamples

It is a common practice to oversample certain groups of interest to provide larger sample sizes for analysis. When groups are oversampled, weighting will correct for the oversampling by “weighting down” the groups to their proper proportion of the sample.

It is important for researchers to understand the weighting implications of these oversamples. SSRS typically computes “balancing weights,” which means that the weights across the entire sample sum to the total number of interviews. If we have oversampled a group, the sum of that group’s balancing weight will then be less than the number of interviews we completed with the group because that group has been weighted down in the aggregate. If such data were analyzed with a basic statistics package like SPSS, the margin of error for the oversample population would reflect the weighted n-size and not the number of interviews, which would lead to an overestimate of the sample variance.

There are two solutions to this problem. The first is to use a statistics package that can apply a Taylor series linearization to the data. Under this procedure, the researcher would enter a strata variable into the statistics package that indicates the sample selections upon which under/oversampling occurred. In effect, this will allow the statistics package to calculate proper margins of error for estimates based on the true sample sizes of groups. Taylor series linearization will also account for the impact of any complex sample design features, such as stratification, on sample variances. The researcher will also attain a margin of error appropriate to the number of interviews rather than the weighted n size, which can be a problem in some statistical software packages such as SPSS. Statistics packages with the capability to compute linearized variance estimates include SAS with the Survey Procedures module, R with the survey package, Stata, and SPSS with the Complex Samples module.

If one does not have access to such a package, SSRS will provide a secondary weight to be used to conduct analyses within oversampled groups or between oversampled groups and other respondents, as the main weight supplied with the data will be appropriate for analysis of the overall population only.

Researchers should be aware that these two methods will obtain equivalent point estimates; however, they may not obtain equivalent sample variances, meaning that results of statistical tests could differ depending on the method used. In general, when the two methods differ, Taylor series linearization will obtain the most accurate sample variances and statistical tests, both overall and within subgroups. Therefore, if the researcher has access to software that can conduct Taylor series linearization, this is the preferred method.

Regardless, SSRS will identify the strata and primary sampling unit (PSU) variables whenever they are applicable, so that researchers can properly analyze their data with the correct margins of error. The variable to identify the final race groups for this study is MRACE\_3.

## Completion rate and response rate

The completion rate is calculated by dividing the number of completed interviews by the total amount of eligible sample. The combined cooperation rate for this survey is 48%. The cumulative combined response rate for the survey is 2%, using American Association for Public Opinion Research's Response Rate 3 formula, which accounts for response rates to initial panelist recruitment as well as the response rates among panelists to the invitation to participate in this study.<sup>14</sup> While response rates are often linked with data quality, research finds that a low response rate does not necessarily lead to meaningful nonresponse bias in substantive outcomes.<sup>15</sup>

## Statement on acknowledgment of limitations

Survey research is subject to unmeasured error that cannot be eliminated, such as coverage error, sampling error, nonresponse error, measurement error, and data processing and editing error. While steps have been taken to mitigate these errors throughout the research process, it is impossible to eliminate these.

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<sup>14</sup> For more on AAPOR response rates, see <https://aapor.org/response-rates>.

<sup>15</sup> Robert M. Groves and Emilia Peytcheva, "The Impact of Nonresponse Rates on Nonresponse Bias: A Meta-Analysis," *Public Opinion Quarterly* 72, no. 2 (2008):167-89, [https://www.researchgate.net/publication/249277698\\_The\\_Impact\\_of\\_Nonresponse\\_Rates\\_on\\_Nonresponse\\_Bias\\_A\\_Meta-Analysis](https://www.researchgate.net/publication/249277698_The_Impact_of_Nonresponse_Rates_on_Nonresponse_Bias_A_Meta-Analysis).