

SUPPORTING STATEMENT B
U.S. Department of Commerce
U.S. Census Bureau
Census Military Panel
OMB Control No. 0607-1027

B. Collections of Information Employing Statistical Methods

- 1. Describe (including a numerical estimate) the potential respondent universe and any sampling or other respondent selection method to be used. Data on the number of entities (e.g., establishments, State and local government units, households, or persons) in the universe covered by the collection and in the corresponding sample are to be provided in tabular form for the universe as a whole and for each of the strata in the proposed sample. Indicate expected response rates for the collection as a whole. If the collection had been conducted previously, include the actual response rate achieved during the last collection.**

The initial sample for the Census Military Panel includes approximately 8,000 military active-duty service members and active-duty service member spouses. The response rate for panel recruitment is 15%, resulting in approximately 1,200 panel members. For members of the panel, the response rate to the topical invitation is 50% resulting in approximately 600 panel members responding to the fourth topical survey.

- 2. Describe the procedures for the collection of information including:**

- **Statistical methodology for stratification and sample selection,**
- **Estimation procedure,**
- **Degree of accuracy needed for the purpose described in the justification,**
- **Unusual problems requiring specialized sampling procedures, and**
- **Any use of periodic (less frequent than annual) data collection cycles to reduce burden.**

The Census Military Panel sample design is a stratified simple random sample within strata formed for sex¹, race, marital status, and branch of service. The sample is distributed equally between strata (service members/spouses) and proportionally among substrata (sex, race, marital status, branch of service). Due to lower response rates, as well as different response rates between the service member and spouse files, an initial oversample of service members and spouses was selected. The targeted final panelists will be 1,000 service members and 1,000 spouses with the sample size in each sub-stratum proportionate to the total number of panelists in each stratum.

Future refreshment samples will be drawn from the DOD Universe files based on response rates

¹ The Census Military Panel (CMP) Topical 4 Supporting Statement B initially referenced "gender" in its description of the sampling strata. It is a binary measure of male and female in the DOD universe file and the sample file. From here on out, the Census Bureau will reference this as "sex."

throughout the data collection cycle. The refreshed sample will boost the sample to originally expected sample sizes. These refreshment sample will be selected randomly in the same stratum as the original sample design.

The final Census Military Panel Survey weights are designed to represent the number of enlisted service members and spouses, enabling the production of estimates at branch of service (Army, Navy, Marine Corps, Air Force) level.

To create the final Census Military Panel Survey weights, the initial weights are adjusted for nonresponse and coverage bias using an iterative raking procedure. Post-stratified sample estimates are raked to known population controls (number of overall records) sourced from the universe file provided by the DoD.

The population controls include total military members, total spouses, totals by branch of service, totals by marital-status, totals by sex, totals by race, totals by service and sex, and totals by service and race.

Weighting calibration is performed separately for the service member sample and the spouse sample files.

3. Describe methods to maximize response rates and to deal with issues of non-response. The accuracy and reliability of information collected must be shown to be adequate for intended uses. For collections based on sampling, a special justification must be provided for any collection that will not yield "reliable" data that can be generalized to the universe studied.

Enrolled panelists will be invited to respond to bi-monthly topical surveys. Invitations will be sent by email, text message (opt-in), and outbound telephone calling. Phone-only panelists will complete topical surveys via inbound or outbound telephone.

Data collection for each topical survey will take place in a 2-week window. New panelists will receive the first topical survey invitation 4 weeks after the initial recruitment period ends. Each topical survey will take up to 20 minutes to complete and panelists will receive up to three reminders to complete a topical survey. Panelists who complete a topical survey will be mailed a thank you letter with a \$10 cash incentive about 20 days after the topical survey field period closes.

Content for topical surveys will come from DoD and be provided by Census. Some content space will be dedicated to monitoring data quality and items necessary for non-response bias analysis. Staff from the Census Bureau should be notified of content changes as soon as possible but no less than 8 weeks before the content change is requested. This allows for time to cognitively test new items as well as expert review and programming changes. Content changes will happen no more than three times each year. Each topical survey will offer panelists an opportunity to update contact information and verify their address for incentive mailing.

Keeping panelists engaged will prevent attrition and maintain the representativeness of the panel. We anticipate sending panelists one topical survey every other month to keep them engaged. Panelists will not be eligible for more than one survey per data collection month to keep burden low and reduce panel conditioning.

At least once a year, panelists will be asked to verify or update information from their original Baseline Questionnaire to ensure information about the panelist and their household is current.

Panel Replacement and Replenishment

Census Household Panel members will be asked to complete approximately one questionnaire every other month and will receive an incentive for each questionnaire. Panelists will be enrolled for three years and drop off after that period. In addition to this three-year limit, we expect attrition due to inactivity and requests to disenroll. Attrition can bias the panel estimates, making the development of a panel member replenishment plan of vital importance (Herzing & Blom, 2019; Lugtig et al., 2014; Schifeling et al., 2015; Toepoela & Schonlau, 2017).

Panelist requests to disenroll from the panel will be identified and processed according to forthcoming protocols. Periodic nonresponse or refusal to the bi-monthly requests for otherwise active panelists is expected. The definition of an inactive panelist is as follows:

No response or active refusal to:

- a survey request for two consecutive surveys; or
- more than 50% of survey requests within a 12-month period.

A particular questionnaire may be classified as “no response” due to unit nonresponse (i.e., no questionnaire initiation), item nonresponse resulting in an interview that is not usable for analyses (e.g., item nonresponse to questions deemed critical for analysis, high item nonresponse alone or after data review), and poor-quality data resulting in an unusable interview. Inactive panelists will remain members of the Census Military Panel if reengagement is desired by DoD, especially for newer service members and other targeted groups.

We will assess on an ongoing basis (and no less than quarterly) the generalizability of the panel estimates to represent the target population. Evaluative methods will include precision within important demographic and geographic characteristics, R-indicators, propensity scores, and nonresponse bias analyses (Bianchi & Biffignandi, 2017; Eckman et al., 2021; Groves & Peytcheva, 2008; Peytcheva & Groves, 2009; Rosen et al., 2014). All analyses will be released to the public in coordination with the Department of Defense.

Based on results from multiple analyses, we will identify any subgroups requiring replenishment. New members will be sampled and recruited using the same protocol as for initial enrollment.

Because incentives remain one of the most effective ways to encourage survey participation. The current incentive design includes the following:

- Initial Invitation: \$5 visible prepaid incentive with the initial invitation to complete the screener.
- Baseline Questionnaire: \$20 baseline contingent incentive after initial recruitment field period.
- Topical Surveys: \$10 for each topical survey (~up to 20 minutes; once every other month).

Respondents will be mailed cash incentives for survey completion. NPC will coordinate incentive distribution. The incentive structure could be amended to facilitate ongoing engagement of panelists, particularly for groups of panelists that are rare or historically undercounted.

4. Describe any tests of procedures or methods to be undertaken. Testing is encouraged as an effective means of refining collections of information to minimize burden and improve utility. Tests must be approved if they call for answers to identical questions from 10 or more respondents. A proposed test or set of tests may be submitted for approval separately or in combination with the main collection of information.

The Ask U.S. Panel Pilot was developed to test methods for a Federally-sponsored, probability-based, nationally-representative survey panel which would include historically undercounted populations. The Pilot was designed to answer critical methodological questions about our ability to recruit and retain historically undercounted population groups in a panel. To address two related challenges that may contribute to nonresponse bias in estimates – how to engage those who are unlikely to complete an online screening questionnaire and how to include the population without internet, we launched a two-phase panel recruitment design with subsampling for nonresponse. We oversampled populations who were historically missing from online surveys – those with low internet penetration and Hispanics – and evaluated recruitment protocols that may increase response rates and minimize the potential for nonresponse bias. We found that nonresponse follow-up efforts allowed us to access more diverse households, such as those who do not own their home, speak a language at home other than English, and who receive financial assistance.

Experimentally, we focused on two design elements – sponsorship and prepaid incentives. In a 2x2 design, we compared explicit government sponsorship vs. none and visibility of a \$5 prepaid incentive sent with the initial recruitment letter. We found that both the explicit government sponsorship and the visible \$5 incentive had a positive and significant influence on the response rates. The effect remained significant even after controlling for design variables. The interaction of the two experimental conditions was also significant such that the condition with the visible incentive and the Census Bureau brand had the highest response rate. These findings are all described: Ask U.S. Panel Pilot General Population Final Report (census.gov)

We plan to continue to experiment with ways to maximize recruitment and retention using incentives for the Census Military Panel. Any experiment will be submitted to OMB as it is planned.

5. **Provide the name and telephone number of individuals consulted on statistical aspects of the design and the name of the agency unit, contractor(s), grantee(s), or other person(s) who will actually collect and/or analyze the information for the agency.**

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