

**Request:**

The Census Bureau plans to conduct additional research under the generic clearance for questionnaire pretesting research (OMB number 0607-0725). We plan to conduct debriefing interviews with business respondents to examine the accuracy and availability of a series of items that was added to the Annual Survey of Manufactures (ASM).

**Purpose:**

The Annual Survey of Manufactures is an annual survey, with coverage of manufacturing establishments, defined as establishments with one or more paid employees from the North American Industry Classification System (NAICS) sectors in 31, 32, and 33. It is a sample survey, with approximately 50,000 establishments included in the survey sample (approximately 15,000 of which are included with certainty). The purpose of the survey is to provide statistics on the manufacturing industry, on topics such as employment, payroll, worker hours, payroll supplements, cost of materials, operating expenses, value added by manufacturing, capital expenditures, inventories, energy consumption, and value of shipments. The survey is conducted annually, except for years ending in 2 and 7, when the data items become a part of the Economic Census. Data users include academics, economists, and policymakers. More information about the ASM can be found at <https://www.census.gov/programs-surveys/asm.html>.

The Census Bureau added questions to the 2018 ASM to collect information on the use of robotics in manufacturing. Robotics have been increasingly used in manufacturing, but no Census Bureau economic surveys collected data on their use (now there are also new questions on this topic on the Annual Capital Expenditures Survey and the Annual Business Survey). Areas of research using this data may include the types of firms that use robotics, their relationship with human labor and employment rates, and how various aspects of the market might influence the use of robotics. These questions attempt to measure the value of, and expenditures on, robotic equipment in the reporting year. The first question asks for the capital expenditures for new and used industrial robotic equipment in 2018. The second question asks for the number of industrial robots used at the plant in 2018, as well as the number of industrial robots purchased for the plant in 2018.

These debriefings are one part of an evaluation plan, which will attempt to assess the data quality of these questions. Results from the debriefings will be summarized in a written report, which we expect will be considered in conjunction with other empirical evaluations of data from the Economic Census, in order to provide additional evidence for OMB's and other stakeholders' consideration of next steps.

Staff from the Data Collection Methodology & Research Branch within the Economic Statistical Methods Division (ESMD) of the Census Bureau will be conducting debriefing interviews for this evaluation, with support from staff from the Economy-Wide Statistics Division (EWD), and the Economic Management Division (EMD). For this research, we will interview up to 20 respondents.

**Method:**

The method of research will be telephone debriefing interviews, which are interviews aimed at understanding how a respondent recently reported to a survey. For the purposes of this research,

the debriefing questions will be focused on the respondents' reporting on the robotic questions. All interviews will be conducted over the telephone. The interviews will follow a semi-structured interview protocol (Attachment A). Subject area specialists from the Census Bureau may observe some of the debriefing interviews.

**Sample Population:**

Staff from the Center for Administrative Records Research and Applications (CARRA) and Associate Directorate for Economic Programs (ADEP) will provide DCMRB staff with a list of businesses and respondent contact information, from which we will recruit. The frame of respondents will be recent respondents to the Annual Survey of Manufactures, who answered questions about industrial robots and robotic equipment on the 2018 ASM.

Approximately 20 interviews will be conducted in total. The number of interviews was selected because it is a manageable number of interviews for the time period allotted, it should adequately cover target company sizes and classifications, and it should be large enough to provide reactions to the target questions in order to identify meaningful findings.

**Sample recruitment:**

We will contact potential participants via phone or email, explain the nature of our research, and ask them to participate in our study. The sample of participants will be those who are able to be contacted and who agree to participate in the study. Efforts will be made to sample respondents with a variety of products that they manufacture, from variably-sized companies. We will attempt to recruit those who provided answers to these questions, and those who did not, including those who wrote in comments. We will aim to include several respondents in auto manufacturing and chip lithography, as respondents in those industries had some concerns with their ability to report in our cognitive testing.

Participants will be informed that their response is voluntary and that the information they provide is confidential and will be seen only by Census Bureau employees or those with Special Sworn Status who are involved in the research project. We will not be providing monetary incentives to participants in this study. Once interviews are scheduled, researchers will send respondents a confirmation via email, and may conduct reminder calls a few days before the meetings.

**Timeline:**

Recruiting for these interviews will begin as early as July 2019, for interviews that will be conducted during July through November 2019.

Our goal is to schedule up to 20 interviews. We anticipate that each interview will include one participant. We estimate that, on average, the interviews will take 30 minutes. Thus, the total estimated burden for completed interviews is 10 hours (20 interviews X 1 participants X .5 hour).

Additionally, to recruit respondents, we expect to make up to 5 phone contacts per completed

case. The recruiting calls are expected to last on average 3 minutes per call (5 attempted phone calls per completed case x 20 cases x 3 minute per case = 5 hours). Thus, the estimated burden for the entirety of this project is approximately 15 hours (10 hours for interviews + 5 hours for recruiting).

**Language:**

Testing will be conducted in English only.

Enclosed are the draft questions and the protocol that we will be using for the telephone respondent debriefing interviews.

The contact person for questions regarding data collection and statistical aspects of the design of this research is listed below:

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