

Memorandum

Date: April 10, 2018

To: Margo Schwab, Desk Officer
Office of Management and Budget

From: Emilda B. Rivers, Acting Division Director
National Center for Science and Engineering Statistics
National Science Foundation

Via: Suzanne Plimpton, Reports Clearance Officer
National Science Foundation

Subject: Request for Approval for Cognitive Testing of Innovation Activities as Input to Annual Business Survey

This memorandum is to request approval for the National Science Foundation's (NSF) National Center for Science and Engineering Statistics' (NCSES) plans to conduct cognitive interviews under the generic clearance for survey improvement projects (OMB number 3145-0174). This research will focus on the ability of small and medium sized companies (between five and 500 employees) to answer questions on innovation and innovation activities. This activity is associated with the Annual Business Survey to be conducted in partnership with NCSES and the U.S. Census Bureau (Census).

Background

NCSES is broadly tasked with measuring the role of science and technology (S&T) in the United States' economy and abroad. A major component of this activity is its sponsorship of the Business Research and Development (R&D) and Innovation Survey (BRDIS), which collects information annually on R&D and innovation by industrial firms within the United States. BRDIS consists of multiple questionnaires, the most prominent being the BRDI-1 questionnaire for companies with five or more employees. Last year another questionnaire was added, the Business Research and Development and Innovation Survey for Microbusinesses (BRDI-M), for companies with fewer than ten employees.

The BRDI-1 and BRDI-M surveys are conducted through a partnership NCSES has with Census. NCSES is continuing this partnership through a new survey called the Annual Business Survey (ABS). The ABS is designed to combine multiple existing firm-level collections to reduce respondent burden, increase data quality, reduce operational costs, and operate more efficiently. The ABS replaces the Survey of Business Owners (SBO), the Annual Survey of Entrepreneurs (ASE), and the Business R&D and Innovation for Microbusinesses (BRDI-M) surveys.

The ABS questionnaire contains sections or modules on research and development, financing, company and owner characteristics, technology and intellectual property, and innovation. Testing has been conducted on the innovation questions. This request is to focus on the innovation activities, the

ability of respondents to provide cost estimates, and the reasons why some businesses do not innovate.

Proposed Methodology

NCSES is working with cognitive researchers from Westat to conduct no more than 40 interviews with respondents from a variety of businesses with five to 500 employees. Interviews will be conducted either in person or utilizing WebEx conferencing, and will assess the ability of respondents to provide data. All interviews will be based on the attached protocols (Attachments 2 and 3). It is possible that the protocol will be modified in minor ways as the interviews progress; e.g., if an item is not being understood properly, then alternative wordings may be offered to see if they are more effective.

These interviews will allow NCSES to better understand the question-response process, examining whether participants understand the questions, whether the questions are interpreted consistently across respondents, whether data are available for answering the questions, what strategies participants use to develop answers, and whether the participants are willing and able to respond accurately. In most cases, an NCSES subject matter expert will accompany the researchers to observe the interviews.

The in-person and WebEx interviews will be conducted in the same manner and based on the same protocol, except that not all people will be in the same room. In-person interviews are an ideal format because it is possible to view a participant's facial expressions, and it is easier to establish a personal relationship with the participant. However, WebEx interviews are still effective, they allow greater geographic disparity among the participants while controlling costs, and they are easy to schedule and less invasive for the participants. It is expected that in-person interviews will be conducted at the participants' offices.

Businesses will be selected to ensure representation across a variety of characteristics such as geographic region, number of employees, and industry. It is anticipated that either the Small Business Administration (SBA) database (http://dsbs.sba.gov/dsbs/search/dsp_dsbs.cfm) or the Dun & Bradstreet (D&B) database will be used to select businesses to recruit. Preliminary review of each database suggests that while D&B's database is more comprehensive, the SBA database may be updated more frequently. Thus, both will be used.

To recruit respondents, businesses will be contacted by phone and e-mail utilizing the Recruiting Script in Attachment 1. The best respondent for the interview will be "the person in your company who is most knowledgeable about innovations your company has made or is working on", which may or may not be the business owner. After respondents agree to participate, an e-mail will be forwarded thanking them for their willingness to participate and confirming the appointment. Interviews will be recorded, but only after written (Informed Consent Form - Attachment 4) or verbal consent from the respondent is obtained. The protocol used during the interview will depend on how the respondent answers the questions in the recruitment script.

Incentive Payments

NCSES proposes offering respondents an incentive of \$40 per interview, an amount that was offered in earlier cognitive interviews with the same population. This is a standard amount for cognitive interviews, which are more intensive than ordinary surveys and which require people to schedule a

significant amount of time to be away from their normal activities (in contrast, surveys can be completed in small portions at a time at a person's convenience).

The incentive payments will be made after the interview is completed. For in-person interviews, the participants will receive \$40 in cash immediately at the end of the interview. For WebEx interviews, a check will be mailed after the interview is completed.

Response Burden

Less than 74 burden hours are estimated for this project. The estimated time for completion of the interview is about 60 minutes each for a total of 40 hours (40 interviews x 60 minutes = 40 hours). It is anticipated that 400 companies will be contacted for recruiting purposes. The recruiting process should take on average five minutes per company resulting in 33.3 hours (400 company contacts x 5 minutes = 33.3 hours).

Contact Person

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Attachment 1: Recruiting Script

Attachment 2: Innovation Activities Cognitive Testing Interview Protocol

Attachment 3: Non-Innovators Cognitive Testing Interview Protocol

Attachment 4: NSF/NCSSES Consent Form