Round One AIES Cognitive Interview Findings

Rebecca Keegan, Economic Statistical Methods Division

Aryn Hernandez (ESMD)

Kristin Stettler (ESMD)

December 9, 2021

Cognitive Interviewing Methodology

What is Cognitive Interviewing?

A methodology used to test and improve survey questions by asking participants open-ended questions. Cognitive testing ensures that survey questions successfully capture the intent of the questions and, at the same time, make sense to respondents.

- *Do respondents understand the questions?*
    - *Can they provide accurate answers?*
- *What is the burden associated with obtaining the data?*

Cognitive Interviewing Methodology

Cognitive Interviewing for AIES

For this research cognitive testing will be more of an investigation of *respondent process*, rather than the typical function of cognitive testing which is usually to test the questions themselves.

- Through previous research we already have a good sense of how respondents interact with the survey questions and content of the annuals.
- Especially in round one, the research is more geared towards understanding how the groupings of the modules and various parts of the survey work together in a holistic sense, and to understand if changes are needed in this sense.

Cognitive Interviewing Methodology

Methods:

- Respondents are recruited over email and are able to self-schedule themselves via Qualtrics.
- Hour long interview conducted over Teams.
    - Participants view a handful of mockups and listings of topics designed to give respondents an overview of each module and the survey at large.
    - Respondents are asked about their record keeping practices and preferences for reporting (e.g., spreadsheet or not).

Cognitive Interviewing Methodology

Primary research questions:

- Understand respondents' preferences regarding organization of the modules and their content
- How do the modules relate in a holistic sense?
- Understand how the module topics align with respondents' record keeping practices
- Investigate further the relationship between company and establishment record keeping practices
- Learn about respondents' strategies for compiling the data for the questionnaire, with an eye towards identifying difficulties and mismatches between recorded and requested data, along with how those mismatches are resolved
- Assess the capabilities and preferences of respondents answering via spreadsheet upload
- Assess how a reporting change like this might affect respondent burden
- Linkage not just between the modules but back to the consolidated figures (totals)

Demographics

Respondent Characteristics:

- 18 interviews conducted
- Respondents were selected if they represent companies selected in at least two Census Bureau annual surveys (e.g. ARTS, AWTS, SAS, ASM and ACES)
- Conducted interviews with companies across multiple sectors such as: Construction, Wholesale, Trade Retail Trade, Manufacturing and Accommodation and Food Services.
- Generally, from larger more “complex” companies

Job Titles

- Financial Planning and Analysis Manager
- Manager of Corporate Finance for U.S. Operations,
- Manager of External Financial Reporting
- Manager of Finance Reporting
- Manager of Financial Planning and Analysis
- Manager of Regulatory Reporting
- Senior Corporate Paralegal,
- Staff Accountant
- Tax Accountant
- Tax Analyst
- Tax Manager
- Treasurer

Findings

- Overview
- Reporting Options
- Question Content: Location ID & Primary Business Activity
- NAICS & Company Summary Page
- Module 2
- Module 3
- Take Aways

Overview

Welcome to the **Annual Integrated Economic Survey.** This survey is designed to merge the annual surveys you receive from the Census Bureau into one consolidated report.

To begin, first you will complete Module One which relates to higher level company data. That data will then carry over into Modules Two and Three which ask for more detailed company data.

Module One: Company Level Data → **Module Two:** Revenues, Products, and Expenses → **Module Three:** Assets, Inventories, and Capital Expenditures

Save and Continue >

Overview

Overview

- Seemed clear, R's thought the overview page gave them a good idea of what to expect from the survey

Interpreting "Company-Level Data"

- Generally well understood, many R's interpreted this to include the "nature of the company", "basic hierarchy" or "call report like address etc."
  - Some assumed it would include "how many owners- public or private; how many employees you have."
- "Company-Wide Data" was seen as synonymous, some had a slight preference to this.

Access to Data

R's will have access to company-level data. The data may be stored in various places. Often accounting data is separate from payroll, and/or employee count.

Choose Reporting Method

Please review your options below and choose a reporting method for this module.
You may change to a different option later.

total locations have been identified for your company.
View Module One Questions as PDF

Start

Consolidated Spreadsheet Reporting

- Recommended if you have more than 5 locations to report for
- Download a spreadsheet template containing all selected locations for your company.
- This option will allow you to answer the questions for Module One on a spreadsheet template that you will then upload

Start

Individual Reporting

- Recommended if you have 5 or less locations to report for
- This option will allow you to answer the questions for Module One on a page-by-page basis

Reporting Options

Thoughts on instructions

- Some had questions as to what “locations” entails, and wanted more detail as to what *kind* of locations were going to be asked about
  - “Locations meaning what? manufacturing? Admin? Some aren't active. Maybe say what KIND of locations, or OPERATIONAL locations”
- Some R’s mentioned appreciating the note that they can change decision if you need to
  - Need to include a note about whether data would be lost after changing paths
- Several mentioned the recommendations being useful
- The PDF link was mentioned multiple times as a feature they would use.

Preference towards spreadsheet for almost all:

- R’s often wondered if you need to fill out 400 rows if they have 400 locations

Question Content: Location ID

Instructions

- It was unclear to some R's whether the Location ID is something to be matched to a Census code, or whether it is internal. Some wondered if this would be assigned to them.
    - Be clear in instructions state that this can be a nickname that is a meaningful identifier to you, or the ID you refer to each location as. Note that they can change a prefilled cell to their own preferred nickname.

Location ID: The internal identifier or ID for this location. Maximum length is 12 characters

Accessibility:

- Accessible to all. Note contracting agencies may not structure records by location.

Terminology: *'Location' versus 'Establishment'*

- Many R's felt 'location' is more colloquial whereas establishment evokes something more formal/legal. There was a general preference for 'location'.
    - "In my head they're the same. Maybe location is a simple word ESTAB is more fancy like legally? I prefer location it's a simple word 'establishment' has legal implications."
    - "Location is more plain. We use term 'location'".

- "

Question Content: Location ID

Location ID as proper indicator in Mods 2 & 3:

- Most R's stated that the location ID alone would be sufficient identifier, but that providing the location ID in addition to the address would leave no room for confusion
    - "Location ID is clear- straightforward. I know what to input, we have NUMBERED each location. Really meaningful in [company] basically go by that SOLEY in case you need a second reference also use the address. Some places might use that same ID for offsite showroom"

Prefilling Information:

- Respondents anticipated having their addresses and locations ID's prefilled, if the information was available.
    - "Prefilled saves time"

Question Content: Primary Business Activities

Familiarity with NAICS

- There is variability. Some R's know their industry and NAICS code off the top of their head, others will need to look it up.
  - One person who recently had to look up the code said the process was arduous
  - The broader the NAICS category (2 digit versus 4) the more confident the R will feel in their response. "Familiar, not sure what our designation is, would have to look it up. Food manufacturing [is the] broad category, then there's a bakery"

- Respondents do not consistently accurately differentiate between 'sector' and 'industry' as terms.
  - "Industry is larger scope than sector which is subset." ; "I think they're the same. Sector more your government terminology, but industry is more conversational. Without example we assume it's the same. We do not think those are different."

- For most R's there will be little to no variation between establishment level industry codes, but the more detail required , the more difficult it will be for the respondent to provide, i.e., retail is simple but the *kind* of retail which may vary by establishment is more difficult.

Company Summary

Click each button below to view your locations which have been categorized by sector. Note some of the establishments listed below may have overlapping sector activities. For the purposes of this survey, only one sector is assigned.

Total Establishments: 18

View Retail Locations (6)

View Service Locations (10)

View Wholesale Locations (2)

View as PDF

Download Spreadsheet of all locations by sector

*Fictional example

NAICS & Company Summary Page

How to provide the NAICS?

Write-In

- While some R's were comfortable with this, some thought it was "too much freedom". There was some general concern that our systems would not make the correct match based on key words. "I want to make sure I'm doing it right. I don't want to answer it wrong. On your end might not be clear."

Picklist

- Some did prefer a picklist to write-ins, while others thought write-ins were more "natural". Respondents may struggle between two similar NAICS. *Level* of industry not clear to people i.e., sector vs industry

Prefill

- By far, the prefill option was preferable to having the respondent select/provide their own codes. One appeal of this option is taking the *cognitive* burden off the respondent, but additionally the burden of manually providing a multitude of codes.
- Prefilling also helps eliminate any confusion regarding selecting one primary business activity for an establishment that has several activities at the same location
- Many R's said they would "break a tie" by selecting the industry that reflected the "nature of the company" at large. Others said they would make the decision based on which ever competing description had the higher amount of sales attributed to it
  - "50/50 I face that question all the time. We may have more retail revenue at one location but we label it to be WHOLESALE to be CONSISTENT with our NAICS. and it's the NATURE OF THE COMPANY. "

United States Census 2020

Module 2

Groupings Thoughts

- In general R's felt that the topics were well aligned and would be accessible in their records.
- Some respondents stated that pulling for *establishment* level data may be easier than at some other level such as state or industry.
- Some exceptions included:
    - Some concern over data related to *e-commerce* some companies do not maintain this data in an easily accessible way
        - E-commerce as a concept can be difficult without clear instructions/examples
    - What level of detail for sales/receipts they would need to pull *at the establishment level* . Some R's were concerned about the actual quantity of data they would need to pull
        - "to pull those reports, they're like a gigabyte".
    - Potential overlap between accounting topics (would 'detailed sales' include electronic sales previously reported? Are sales and revenue treated differently?)
    - Some were unfamiliar with unfilled orders
    - Contracting agencies sometime do not maintain their records by location making this task difficult. One R mentioned to gather data by location she would need to reach out to each establishment.

Module 3

Grouping Thoughts

- R’s seemed to think that the topics made sense together
  - There is variation regarding whether or not the topics will be stored in one system/report, but R’s seemed to think the data would be easily accessible.

- Concern about pulling data at the establishment level for a multitude of companies was brought up again
  - “This is like a balance sheet- is this for company or location based? [A couple hundred] balance sheets would need to run a lot of reports for each location”

- R&D data is often stored separately or may require reaching out to locations
  - Several R’s had questions about robotics because they can be a confusing concept. Some mentioned they would need to reach out to individual locations to learn more.

Take Aways

Overall, participants seemed enthused by the idea of merging the annual surveys.

- Many mentioned that it seemed like a “good idea”. The general flow of the modules seemed to make sense to them.

Totals from Mod One

- Several R’s liked the idea of providing the totals from Mod one. The consistent question was if there would be guidance as to whether their detailed accounts should *add up* to those totals or not.
    - “Difficult to reconcile there could be **variance for different reasons**. gross receipt for each location might not add up to consolidated. “
    - “Mod one **would be grea**t to refer back to - what you're reporting on a detail, scales back to totals- like quality check. **Tell us if you want it to match back**- if it doesn't match they can go back and adjust so it matches. As accountant like it to match.”

Shape your future START HERE >

United States® Census 2020

Take Aways

Burden

- Burden was generally anticipated to be **about the same in terms of pulling/collecting data**. But the time savings would be in terms of lack of redundancy between previously separated surveys.
- Another person mentioned that it was coordinating the various responses to the surveys that arrived at numerous locations and with different due dates
- For many, annual data is much easier to pull than quarterly.
  - "pay by quarter time consuming" column M limited information about NEW OWNER we would know it was sold. Anything ANNUAL we can pull much easier than quarterly to pull.

Filter Questions & Skip Logic

- Where possible, utilize filter questions & skip Logic. Templates should reflect their answers. This will majorly reduce respondent burden.
  - R's sometimes commented that in filling out surveys they have to manually skip past whole sections, such as robotics, or e-commerce.

Prefilling

- Participants generally expect that data such as addresses and other consistent data will be prefilled.

Take Aways

Spreadsheets

- Almost all respondents indicated they would prefer to provide their data via spreadsheet.
  - One qualification is that spreadsheets are most useful when there are a multitude of rows (estabs) to fill out data for. For this reason, if Module one does not ask for estab level data, it should only be offered as questions within the instrument.

Many R's anticipated utilizing PDFs

- whether to get a see the questions to make a plan for data collection
- or to email relevant questions to other departments/locations

Delegating Questions

- Some respondents thought breaking out Payroll (and potentially employee count) would make sense
  - Payroll is often stored separately from other accounting data
  - Payroll also tends to be the most sensitive.
- R's often do not realize that e-corr has a delegate feature and usually report either email specific questions or send a listing of the questions via pdf or excel sheet.

Next Steps

Round Two Goals

- Further feedback regarding the content of the mods and how they relate.
    - Should payroll be separated?
- Will Mods 2 and 3 need to add up to Mod 1 figures?
    - How should we present those totals? level figures they reported in Module 1.
- How to circle back to mod 2's mod 3.
- Offer R's clarity about what data items will be collected at establishment level versus 6 digit NAICS level, and how that would relate to difficulty in pulling the data

Timing

- Conduct Round Two Testing (Dec – Jan)
- Conduct Round Three Testing (Jan)
- Three total rounds of testing with up to 30 interviews per round.

Thank you!

Questions?

Rebecca.Keegan@census.gov

aryn.hernandez@census.gov

kristin.j.stettler@census.gov