

FIFTH INTERNATIONAL WORKSHOP ON BUSINESS DATA COLLECTION METHODOLOGY

19-21 SEPTEMBER 2018 – STATISTICS PORTUGAL, LISBON

FROM EXPERIMENTATION TO IMPLEMENTATION: PUTTING THE PIECES TOGETHER TO FORM A COHESIVE CONTACT STRATEGY FOR THE U.S. ECONOMIC CENSUS

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NOTE: Any views expressed are those of the authors and not necessarily those of the U.S. Census Bureau.

Backgrounder

The Economic Census, conducted by the U.S. Census Bureau every 5 years for reference years ending in '2' or '7', is a mandatory, self-administered survey collecting detailed financial data from approximately 4 million business establishments. Data are used by businesses, policymakers, local communities, and researchers for economic development, business decisions, and strategic planning, and provide key source data for the Gross Domestic Product (GDP) and other indicators of economic performance. In addition, economic census data form the foundation of the Census Bureau's Business Register, which supports numerous annual, quarterly, and monthly surveys that measure the U.S. economy.

Although response to the Economic Census is required by law, the Census Bureau employs an intensive contact strategy in order to maintain high response rates. This has traditionally included offering multiple self-administered data collection modes, in the form of paper or electronic questionnaires, tailored by industry, resulting in several hundred different questionnaire versions. Electronic modes consisted of a downloadable software facilitating spreadsheet reporting amongst the United States' largest companies with multiple, potentially thousands of, individual establishment locations. An internet-based instrument was also available, designed for and marketed to single unit establishments.

For the 2017 Economic Census, the Census Bureau undertook a major re-engineering and modernization effort. This includes implementation of 100% Web data collection, with limited options for alternative reporting arrangements offered incidentally only in U.S. territories affected by 2017 natural disasters. Although respondents' uptake of electronic reporting has generally been quite favorable among the Census Bureau's economic surveys, providing only online reporting for the 2017 Economic Census contributes an additional layer of risk to ensuring adequate response rates. Therefore, we conducted a multi-faceted research program, which included obtaining feedback from respondents via focus groups and cognitive testing, as well as randomized experiments testing different contact strategies. Results from these studies were combined with lessons learned from an assessment of historic economic survey response patterns, to aid development of an effective communication plan.

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Since the Economic Census is an infrequent collection with heavy response burden, it was infeasible to conduct one or more census-like pilot tests to investigate alternatives, nor even to test a complete communication strategy from beginning to end. Instead, we tested one or more components by incorporating randomized experiments into the production collection of several annual or sub-annual surveys. These experiments tested options and approaches briefly described below, along with the surveys within which they were embedded.

Variations in the type, timing, and/or sequence of contacts

Strategy	Survey	Target population / industry
Advance notice, mailed 30-90 days prior to delivery of questionnaires	2012 Economic Census	Employer establishments in all industries except Agriculture and Public Sector.
Certified vs. non-certified mail during 2 nd nonresponse follow-up		
Certified mail during 2 nd vs. 3 rd nonresponse follow-up		
Due date reminder (DDR) mailed 2-3 weeks before the due date	2014 Quarterly Business Professional & Classification Survey – 2 nd Qtr (aka SQ-Class)	Quarterly survey of businesses in the service sector industries with new or reactivated tax ID numbers (e.g., business “births”).
DDR mailed 2 weeks before due date	2014 Annual Retail Trade Survey	Enterprises engaged in retail and accommodations (food service, hotels, etc.) industries.
Accelerated 1 st nonresponse follow-up letter, mailed 2 weeks earlier than “normal” mailing schedule		
Combination of DDR and Accelerated Follow-up		

Optimal targeting of escalation techniques under adaptive design scenarios

Strategy	Survey	Target population / industry
Adaptive design strategies tested: 1) Targeted Allocation: Targeted selection of cases to receive certified follow-up with remainder receiving standard follow-up vs. 100% certified follow-up 2) Subsampling: Probability subsampling to receive certified follow-up (with remainder receiving no further follow-up) vs. 100% certified follow-up	2015 Annual Survey of Manufactures (ASM)	SUs with employees, in manufacturing industries

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Envelope appearance and labeling

Strategy	Survey	Target population / industry
Using red ink vs. standard black ink in an imprinted due date/past due notice on the envelope.	2014 Annual Wholesale Trade Survey	Enterprises in the wholesale trade sector.
Alternate envelope sizes: half-page-sized envelopes (9.5"x6") vs. standard letter-sized envelopes (9.5"x4").	2015 Annual Retail Trade Survey	Enterprises engaged in retail and accommodations (food service, hotels, etc.) industries.
Use of pressure-sealed envelopes vs. standard envelopes in:		
1) DDR	2016 SQ-Class 3 rd Qtr	Quarterly survey of businesses in the service sector industries with new or reactivated tax ID numbers (e.g., business "births").
2) 1 st NR follow-up reminder vs. 1 st and 2 nd NR follow-up reminders	2016 Industry Classification Report	Businesses with poor classification data on the Business Register
3) DDR vs. DDR and 1 st NR follow-up reminder	2016 Company Organization Survey / Annual Survey of Manufactures (COS/ASM)	<ul style="list-style-type: none"> • COS: Single-unit (SU) and multi-unit (MU) companies with employees, all industrial sectors (except Agriculture or Public Sector). • ASM: SU and MU companies with employees, manufacturing industries. • Establishment level reporting. • Units may be in COS only or in both COS and ASM

Alternative motivational messages

Strategy	Survey	Target population / industry
<p>Flyers inserted into initial and follow-up mailings that contained motivational messages providing information about:</p> <ol style="list-style-type: none"> 1) Key uses and users of Services Annual Survey data products, including charts and summary statistics. 2) An "app" available on the Census Bureau's website to aid business decisions, demonstrating the broader mission of the Census Bureau to provide data products that rely on "the participation of businesses like yours in our surveys." 3) Electronic reporting, with illustrations showing the steps for accessing the online reporting system, and describing benefits to respondents of electronic reporting. 	2015 Services Annual Survey	Enterprises in the services sector.

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Experimental results indicated individual components to use or avoid, along with associated circumstances. Although tested separately, it was impractical to consider any of these techniques to stand alone. While this presentation will briefly describe the experimental results, its primary focus will demonstrate how these results, along with other empirical evidence of survey response patterns, were woven together – and subsequently adjusted due to practical constraints of time, resources, and scope – to form an evidence-based comprehensive, integrated, and cost-effective data collection strategy for the 2017 U.S. Economic Census.

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