

RESEARCH INVESTIGATIONS IN GAINING PARTICIPATION FROM SAMPLE FIRMS IN THE CURRENT EMPLOYMENT STATISTICS PROGRAM

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I. Introduction

This paper reviews a set of randomized experiments designed to identify causes of nonresponse in establishment surveys. It draws heavily on the experience of the authors with the U.S. Current Employment Statistics (CES) program, a monthly survey of about 400,000 employers. The purpose of the survey is to provide monthly estimates of jobs created in the economy and of changes in payroll levels. The experience of the authors is limited to experimental research to increase the cooperation rate of sample employers. The paper is organized by stages of the survey process. For some of these stages the discussion begins with some theoretical constructs that appear to be relevant to the stage.

2. Frame Development and Updating

Establishment survey sampling frames (especially those conducted by government agencies) are often constructed from an administrative record system, designed not for survey purposes but for program purposes. Such administrative record systems might contain estimates of numbers of employees, an industry classification, reports of income or production counts, as well as address and telephone information. Whether the content of the sampling frame record is relevant to the survey depends on the relationship between the administrative record system producing the frame and the survey in question.

2.1 Births in Establishment Frames

A critical step in frame evaluation is the determination of new units coming into the population ("births") and units that have ceased existence ("deaths"). The first experiment describes reviews some insights into this process.

Experiment 1. CES Enrollment for Business Births.

Data collection for the CES is extremely critical for decision makers in a variety of areas, and the data collected should be an accurate reflection of the economic

situation in the United States. To ensure that all business establishments are represented, Westat conducted a study to specifically examine the most effective procedures for soliciting new businesses (i.e., business births) into the CES. Business births are establishments who recently applied for a new unemployment insurance (UI) account number. These businesses generate between 2 and 2.5 million jobs a year and represent 750,000 establishments. Including these businesses in the CES is vital since they represent a large share of the fluctuation in employment each year.

Sample design. The sample for the study included establishments selected by BLS from six states. Establishments in these states recently applied for a UI number. The majority of establishments were businesses that began operations within the last year and were very small (e.g., 5 or fewer employees).

Treatments. Once the sample was received, refinement calls were made to identify the most knowledgeable respondent and update information such as address, phone number, fax number, etc. "Knowledgeable" was defined as the individual within the establishment who was responsible for payroll activities. Next, the sample was assigned to one of two experimental conditions. The experiment varied the amount of information the respondent received in the mail prior to the interview. In condition 1, respondents received an advance letter which described the purposes of the study and urged their participation. In condition 2, respondents received the advance letter as well as materials describing the CES and the 790 form used to collect the CES data.

After refinement, the enrollment process began. During enrollment, interviewers read a verbatim script that introduced the study and briefly described the purpose. During this call, interviewers attempted to collect CES data.

All respondents who provided the first month of CES data were conducted five months thereafter to collect the same CES information. Prior to the second CES data

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collection call, all respondents received the 790 form.

Results. The refinement call yielded a response rate of 94%. Ineligible cases included establishments with no employees, establishments with no location in the sampled state, and establishments that went out of business. A total of 372 businesses were eligible for CES enrollment.

A total of 282 establishments were successfully enrolled into the CES. The remaining cases were determined ineligible, unavailable, or refused to participate. Enrollment response rates did not differ between conditions 1 and 2. Thus, it appears that sending additional materials did not affect enrollment rates.

In over 50% of the cases, the interviews were completed with the owners of the establishment. 80% of the respondents were located at the sampled address identified during the refinement call.

About 6% of the sample included establishments who applied for a UI number but currently had no employees. In fact, businesses in this situation fell into several categories-- seasonal; just opened haven't hired yet; and probably would never hire employees in the future.

Of the refusals, workload was primary reason reported. Owners of the establishments could not assign the task to another division, location, etc.

2.1 The Sample Refinement Step

A common first step in an establishment survey is a frame cleaning and enrichment step, sometimes called "sample refinement." This often involves a first contact with the sample establishment to determine whether it is still in business, has merged with another firm, or has changed its identity in some other way important to the survey (e.g., industry classification).

Experiment 2. Using Initial Contacts to Gather Information on the Firm. The aim of this study was to assess whether or not the likelihood of successfully obtaining the name of a contact person during sample refinement varied as a function of the number of questions asked of the respondent. These questions were designed to be of value to the interviewer at the time of the first enrollment call in anticipating concerns of the employer about the survey request. A sample of 320 employers of less than 100 employees from 4 states and four SIC codes in retail and services sectors was used.

Statistical analyses revealed no differences in the likelihood of successfully obtaining the name of a contact person as a function of using a "short" (98% refinement rate) versus "long" questionnaire (95% refinement rate). On average, the results showed no effect of questionnaire length on likelihood of obtaining information, regardless of firm size or SIC category. Based on the results of this experiment, the decision was made to continue seeking information about the firm beyond the name of the

contact person in future experiments.

3. Advance Communication with the Sample Unit

Since some business establishments have hundreds or thousands of employees, the chances are small that advance letters addressed merely to the firm would be read by an appropriate staff member. Thus, in some establishment surveys, during the sample refinement step, the name and address of either the preferred informant or the person with authority to commit the establishment to the survey participation is obtained. This person is then mailed a letter addressed to him/her personally, which sometimes has content tailored to their role in the company.

Experiment 3. Alternative Mailings to the Contact Person. The purpose of this experiment was to determine whether differences in the appearance, volume, or frequency of mailings describing the CES program affected participation rates among newly solicited establishments. Four different advance mailings were randomly assigned to subsets of a sample of employers.

The mailings varied on the amount of descriptive content about BLS programs, of information about the CES, and of information about the data items requested. The mailings also varied on their use of modern graphics and presentation style. It was hypothesized that more information about BLS and more modern-appearing advance mailings would improve cooperation rates. A sample of 1379 employers of less than 100 employees from 4 states and four SIC codes in retail and services sectors was used.

Results. Approximately 48% of all cases were successfully enrolled, and enrollment rates were comparable across the treatment conditions. In general, enrollment rates were consistent both between and within firm size categories across the treatment conditions; however, there was some indication that the mailing strategy that had the greatest amount of information about BLS and the survey achieved higher cooperation rates as the firm sizes increased.

4. Initial Contact to Deliver the Survey Request

This section first reviews a set of organization attributes that may affect a firm's likelihood of cooperation with a survey request, then describes relevant experimental studies.

GOAL STRUCTURE. The goals of many establishments are more narrowly defined than those of most households. Most business establishments have goals of profit for the owners and shareholders as well as employment stability for their staff. The restricted number of goals of establishments could affect their initial perspectives on requests from the external environment. Their views of the external environment are heavily shaped by their goal

orientation. Because they focus on profit and quality employees, their external environments are hostile ones. Most businesses have competitors, who seek to increase their own market share at their expense. In doing so, they seek intelligence about the operations of their competitors, to assess their plans for new products or services and to judge their strength for innovation.

To some extent all requests from the outside might be seen through the filter of the goal of profit and employment. Hence, the most salient aspects of the request often involve the amount of time the survey will take away from profit activities or the threat that releasing the information will have on actions of competitors or government regulators (an indirect threat to profit).

The fact that business organizations appear to be subject to more "form-filling" requirements than households intensifies the focusing effect of restricted goals of organizations. That is, when there is a request for information from a survey organization, it appears likely that firms are associating that request with past form-filling requests. Most of these requests in the U.S. are made by government agencies, either for tax collection, personnel policy requirements, environmental regulation compliance, job safety regulation compliance, building code regulations, wholesale and retail licensing, or health requirements. Sometimes, establishment survey interviewers appear to develop techniques that distinguish their request from those other requests. If it appears that the respondent is associating the request with a mandatory form, the interviewers do not make distinctions, because the analogue is helpful to the likelihood of cooperation.

AUTHORITY HIERARCHIES. Most business establishments with more than a few employees contain a hierarchy that gives to some staff members more authority to make decisions than to others. These distinctions are made real by systems of job titles, formal rules, written job descriptions, and well-defined supervisory relationships. Of great relevance to survey requests is that not all staff have the authority to interact freely with those outside the organization, especially regarding the provision of information about the firm. Permission to obtain information about the firm is generally controlled at higher levels of the authority chain.

ROLE DIFFERENTIATION. Consistent with authority hierarchies, staff differ in their role definitions. As organizations grow, role specialization seems to increase, with each member being assigned the responsibility for a smaller number of areas. (Downsizing of organizations and attempts to flatten the structure of organizations are acting against this tendency.) This is relevant to survey requests because it is common that only some roles in the organization have access to information being sought by a survey. With role differentiation comes information

restrictions. Some roles are privy to knowledge about personnel counts; others, to production figures. Some roles know about financial affairs; others, about environmental compliance experiences. Further some roles have direct access to the public outside the firm; others, do not.

There are three role related duties of particular interest to survey takers: 1) receptionist to the public, 2) decision-makers for release of information about the firm, and 3) roles compiling and updating the information being sought by the survey. The receptionist role is one that exists in organizations that judge it useful to screen and disperse outside contacts in a manner to minimize disruptions of staff involved in the production processes of the firm. Firms appear to differ on what rights and responsibilities are given to the receptionist role. Sometimes they are trained only in telephone or greeting skills and instructed in what queries are sent to which other individuals in the firm. Other times they are experienced employees with deep knowledge of the firm, and thus possess information about authority structures and information resources within the firm. Some organizations have units specializing in dealing with requests from the public (e.g., public relations divisions or legal affairs divisions). Interviewers find themselves routed to these units when presenting survey requests to the firm. When information needed by the survey is isolated into a single unit, sometimes the interviewer is referred to that unit. In many organizations, however, that unit does not have the authority to provide the information to outsiders.

The existence of role differentiation concurrent with authority chains produces a dilemma for interviewers in some cases. The role with authority to permit the interviewer to obtain information may have very little knowledge about whether the information exists within the firm or whether it exists in a form desired by the survey. This sometimes means that the target person makes judgements about the difficulty of complying with the survey request that are wildly incorrect. A top manager, unaware that the reporting requirement for unemployment insurance is similar to that of the survey requirement, may judge that to assemble the information required by the survey would require many more staff hours than are actually required. In this case, the ignorance by the top manager leads to reluctance to cooperate. The opposite can also occur, sometimes to the advantage of the survey requestor.

Interviewers in establishment surveys appear sensitive to discerning the extents of the role of the gatekeepers. Indeed, the sample refinement step permits the interviewer to learn what information is possessed by the gatekeeper, what authority they have to provide information, and what knowledge they have of the

authority structure of the firm. It appears that establishment interviewers tend to be flexible about what information is sought from the gatekeeper. The stakes of this strategy are reduced by the fact that the purpose of the sample refinement call is merely obtaining information about the contact person for later mailing. In most cases refusal to provide this information might be seen as a restriction on the freedom of the contact person to make decisions in the interests of the firm.

Experiment 4. Level of Entry into the Firm. The aim of this study was to assess whether the likelihood of successfully obtaining the name of a contact person during sample refinement and collecting data during enrollment varied as a function of the organizational level at which the request was made. This study was motivated by both qualitative observations of CES respondents and theories about organizational structure and decision-making.

In the sample refinement stage, interviewers were asked to request the name, address, telephone number, and title of the "Top Manager" in Treatment 1, the "Head of Payroll" in Treatment 2, and the "Unemployment Insurance (UI) Reporter" in Treatment 3. A sample of 646 employers of less than 100 employees from 4 states and four SIC codes in retail and services sectors was used.

Results. Approximately 59% of all refined cases agreed to participate during the enrollment call. There was a marginally statistically significant effect of entry level such that rates of successful enrollment were higher in the Head of Payroll condition (61.5%, *s.e.*=4.2) than the Top Manager condition (54.1%, *s.e.*=4.7). Moreover, there was some suggestion that enrollment rates for the Top Manager and Head of Payroll conditions are lower in larger firms than smaller firms, and in the UI Reporter condition, higher in larger firms than in smaller firms. It is possible that this finding can be explained by differences between large and small firms in the organization of labor category roles.

Experiment 5. Manipulating the Saliency of Mandatory Participation in the Survey. The CES data request is mandatory in some states and nonmandatory in others. The BLS was interested in discovering whether the mandatory/nonmandatory nature of the data request affected cooperation rates. Thus, the specific aim of this study was to assess the impact of varying the emphasis on the mandatory nature of CES on the likelihood of obtaining agreement to participate during enrollment. The experiment was conducted on a sample of cases in two states whose laws require compliance with the CES program.

Experimental Treatment Conditions. The experimental variation across treatment groups was introduced at the mailing stage and the enrollment stage.

A sample of 741 employers of less than 250 employees from North Carolina and Florida (states with mandatory compliance laws) and four SIC codes in retail and services sectors was used.

Results. Approximately 78% of all eligible cases agreed to participate during the enrollment call, with 85% (*s.e.*=2.6) of cases in the mandatory condition agreeing to participate, compared to 72% (*s.e.*=3.2) of cases in the nonmandatory condition.

The experimental design did not allow us to test hypotheses about how strong the mandatory appeal needed to be to improve response rates. There is some evidence on this issue. For example, Tulp et al. (1991) found that a mandatory statement on an outer envelope raised response rates by businesses to Census Bureau surveys by 20 percentage points or more. In a national probability study, Dillman, Singer, Clark and Treat (1996) found that a mandatory appeal using a statement on the outer envelope was as effective as an appeal using both an insert and the envelope statement. However, when evaluating this evidence, an important design difference to weigh is the fact that the CES data request is not a one-time request and may, in fact, need a particularly strong appeal.

Experiment 6. The Effect of Requested Length of Participation on Cooperation. The specific aim of this study was to assess the impact of describing the length of program participation as two years versus three years on the likelihood of obtaining agreement to participate during enrollment. The study was motivated by a concern at the BLS about whether cooperation rates were negatively affected by a requested length of participation (three years), compared to some other shorter period of time. A sample of 740 employers of less than 250 employees from 4 states and four SIC codes in retail and services sectors was used.

Experimental Treatment Conditions. The experimental variation across treatment groups was introduced at the mailing stage and the enrollment stage. Following sample refinement and assignment to the experimental treatment condition, interviewers mailed program materials that varied by whether the data request was made for "24 months or 2 years" or "36 months or 3 years" to the contact person.

Results. Approximately 53% of all eligible cases agreed to participate during the enrollment call, with 54.8% of cases in the two-year condition agreeing to participate, compared to 52.8% of cases in the three-year condition. There were no significant effects of panel length on cooperation rates during enrollment, regardless of firm size or SIC category. It is noteworthy that more elaborate logistic regression models were estimated to explore the possibility that the effects of treatment condition depend on firm size or SIC category. No

significant effects of this sort were found.

These results suggest that a three-year panel length is the most cost effective choice. Respondents who were told that participation would last for two years were no more likely to agree to participate than those who were told that participation would last for three years. Moreover, the three-year condition was no more costly than the two-year condition in terms of number of calls or number of person contacts. In fact, the three-year condition is less costly than the two-year condition in terms of numbers of panels to be rolled into the sample.

5. Handling the Reluctant Respondent

5.1 Perceived Burden as a Function of Information Access

It appears common in establishment surveys that reluctant respondents will reveal that their lack of access to the desired information complicates providing the survey interview. Establishment survey protocols thus invest more time in getting the name of a contact person with intimate knowledge of the information being sought.

5.2 Experience with Using Information to Obtain Goals

It is a common interviewing technique in establishment surveys to couch arguments for cooperation in terms related to the organizational goals of the sample unit. For example, when the unit is affected by interest rates and competitive pressures for staff salaries, a survey of payroll and employment can be presented as providing information of use to the firm for its own decision-making on future activities. Similarly, a farm survey of costs and production can be portrayed as valuable to the sample farmers in their own work. It seems safe to observe that business establishments more readily tend to make decisions regarding their goal attainment using objective information than do households. There appear to be two levels of this phenomenon. First, since many business persons use quantitative information in their day to day work, they appreciate the utility of such information for other purposes, as well. Second, when the survey collects data from their unit that they use for their own decision-making, the interviewer can attempt to link their personal value of that information to the value of statistics on larger population, based on those data.

5.3 The Existence of Policies Guiding Survey Participation

Some businesses have formal policies about what types of information can be released outside of the firm. These policies are rules of the company that constrain the behavior of all employees, unless exceptions are made or the rules changed. Interviewers report that this form of reluctance is the most difficult for interviewers to

overcome. The strategy most often suggested by interviewers is an appeal to a level of authority that can label the case as an exception to the rule. In organizations with such rules formally codified in written procedures, the likelihood is small for such decisions. In less formally documented cases, the odds increase.

For any of the above reasons, it appeared likely that CES interviewers needed a set of flexible techniques to address the variety of criteria used by contact persons in making decisions regarding survey cooperation.

Experiment 7. Interviewer Training to Handle Reluctant Respondents. The goal of this experiment was to test the impact of a training protocol specifically developed to increase interviewers' skills in overcoming respondent reluctance during solicitation. Response rates achieved by interviewers prior to the reluctance training were compared to post-training response rates. A sample of 320 employers of less than 100 employees from 4 states and four SIC codes in retail and services sectors was used in a "pre-" phase and 329, in a "post-" phase.

Seventeen interviewers from the Kansas City data collection center (DCC) participated in both phases of the sample refinement and solicitation stages. Work-histories supplied by the DCC manager indicated that all had been employed primarily as CATI data collectors and lacked experience with solicitation prior to this study. Their average tenure as BLS interviewers was nearly 2 years, ranging from approximately 1 year to nearly 5 years. Prior to the start of Phase 1, interviewers received a general training on data solicitation that entailed a review of a sample solicitation script, multi-establishment classification rules and the respondent packet materials. The Reluctance Workshop took place between the completion of Phase 1 and the start of Phase 2.

The Reluctance Workshop. Each interviewer was provided with a workshop manual including notes which paralleled the training. Specific topics covered in the workshop were: general principles of refusal aversion; non-specific respondent concerns; diagnosing the concern; time and burden concerns; government concerns; dealing with hostile respondents; company policy concerns; confidentiality concerns; and the "pass-off."

Workshop participants learned that refusal aversion is a two-step process: once reluctance is encountered, the interviewers' task is to quickly and accurately **identify/diagnose** the source of the reluctance and appropriately **match** a rebuttal to that source. The workshop interspersed mini-lectures on each topic with written and oral practice exercises, including role-playing in pairs (interviewer-respondent) and small groups. An important goal of the role-playing was to help the interviewer provide quick and accurate diagnoses of respondent concerns and, in a seamless fashion, provide

appropriately tailored rebuttals. Interviewers were encouraged to practice rebuttals using their own words.

Interviewer evaluations indicated that they did not particularly enjoy the role-playing but nearly all of them rated it as one of the most helpful aspects of the training, both because of the practice it provided and because of the exposure to the rebuttals of other interviewers.

Results. There was a statistically significant increase in enrollment rates in the post-workshop phase. Cooperation was obtained from 62.9% (s.e.=3.0%) of cases worked before the Reluctance Workshop (i.e., Phase 1 respondents), compared to 73.3% (s.e.=2.8%) of cases worked following the Reluctance Workshop (i.e., Phase 2 respondents). This increase between the phases of slightly more than 10 percentage points is statistically significant ($t=2.53$, $p<.05$, one-tailed). Examination of enrollment rates by firm size showed a pattern of higher rates in Phase 2 compared to Phase 1 for firms of all sizes except those with 20-49 employees. The largest differences were found in the smallest firms, suggesting that the reluctance training was particularly helpful for dealing with small firms. Interviewer-level analyses revealed that the workshop may be most cost effectively targeted to the lowest performing interviewers. Interviewers with Phase 1 enrollment rates below the median were compared with interviewers above the median on their Phase 2 enrollment rates and on their change in rates between the phases. The two sets of interviewers had similar Phase 2 enrollment rates. As would be expected, low performers showed the most improvement between the phases, while high performers changed very little. These results indicate that the workshop had little impact for the high performing interviewers, but was effective in leveling the playing field for the lower performing interviewers.

6. Summary

This set of experiments was designed to systematically probe various stages of the enrollment protocol of an establishment survey, with results contributing to design decisions. At the conclusion of the studies some decisions were taken; others were postponed to await further assessments. The head of payroll was the chosen contact person; advance mailings consist of the new folder with a trifold and a short description of data items sought; and the reluctance training has been implemented. The results of the mandatory/voluntary experiment, the study of births, and the panel length experiments have not been implemented, awaiting meshing with other design features.

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