

A QUALITATIVE APPROACH TO THE STUDY OF BLS ESTABLISHMENT SURVEY NONRESPONSE

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INTRODUCTION AND STUDY PURPOSE

Recently, a trend toward increased nonresponse in government surveys has resulted in concern about the effect of nonresponse on data quality and statistical estimates. Several recent studies have examined this issue in the context of describing nonresponse, and identifying ways to reduce nonresponse (Christianson, & Tortora, 1995; Osmint, McMahon, & Ware Martin, 1994). Concerns about declining response rates, both in household and establishment surveys, have been documented in the research literature (Smith, 1995; Atrostic, et al., 1999) and have been duly noted by government survey program managers.

The Bureau of Labor Statistics (BLS) has always recognized the importance of nonresponse relative to data quality and the accuracy of statistical estimates for both its household and establishment surveys. In response to these concerns, BLS embarked upon an intensive study of nonresponse issues associated with four of its establishment surveys. The study was designed to learn more about the nature of establishment survey nonresponse; it focused specifically on nonresponse trends, causes of nonresponse, patterns in nonresponse, and possible solutions to nonresponse. The ultimate outcome of this research is the identification and implementation of improved data collection procedures that will address establishment survey nonresponse problems.

The research team conducted a comprehensive review of the current state of nonresponse in four BLS establishment surveys. The surveys are: the Current Employment Statistics Program (CES), the National Compensation Survey (NCS), the International Price Program (IPP), and the Producer Price Index (PPI). The team conducted a qualitative study emphasizing personal interviews and focus groups, which addressed the following topics:

- current levels of nonresponse
- the various forms of nonresponse

- reasons establishments give for not responding to BLS surveys
- possible interviewer and mode effects on nonresponse
- the effects of technological and program changes on nonresponse
- communications among survey management and data-collection offices on matters related to nonresponse
- differences in nonresponse patterns according to establishment characteristics
- training and other methods used to combat nonresponse

In addition, the team asked BLS staff about other possible causes of nonresponse and methods that might be used to address the nonresponse problems in their surveys.

Participating Survey Programs

To a large extent, BLS is organized around its survey programs, with individual Program Offices responsible for surveys on key topics. The national office in Washington, DC has program-wide oversight and responsibility for setting policies, selecting samples, and aggregating, analyzing, and publishing data. Six Regional Offices are responsible for most (but not all) data collection and associated activities. An internal research office whose personnel are independent of the program and regional offices was largely responsible for the current study. The surveys covered in this research are:

- ***Current Employment Statistics (CES)***. The CES survey is the source of data on month-to-month changes in payroll employment, hours, and earnings, by detailed industry, and represents nonagricultural payroll employment in the U.S. Monthly data collection is based on a panel sample of approximately 300,000 business establishments. Depending on the industry, the survey collects 5 to 7 variables each month. Newly-selected establishments are sent a mail package describing the survey, but are initiated by telephone (CATI). Interviewers conduct

CATI calls for the first several months an establishment is in sample, after which many respondents transition to touchtone data entry (TDE), mail, fax, or Internet.

- **National Compensation Survey (NCS).** The NCS produces a comprehensive data series for U.S. employee compensation practices. The survey generates detailed data on wages, benefit costs, benefit practices, and other compensation topics for the total U.S., nine census divisions, and selected metropolitan areas. NCS covers workers in private industry and State and local governments in the 50 States and the District of Columbia. The sample of 42,000 establishments has two components. Forty percent report annual wage data and sixty percent provide quarterly data on both wages and detailed benefits. Initial contacts are made through personal visits, and follow-up contacts are by either personal visit or phone.
- **Producer Price Index (PPI).** The Producer Price Index (PPI) measures average changes in selling prices received by domestic producers for their output. Most of the information used in calculating the PPI is obtained through the systematic sampling of virtually every industry in the mining and manufacturing sectors of the economy. The PPI program (also known as the industrial price program) includes some data from other sectors as well--agriculture, fishing, forestry, services, and utilities (gas and electricity). Thus the title "Producer Price Index" refers to an entire "family" or system of indexes. Measures or indexes of price change classified by industry form the basis of the program. Data collectors solicit cooperation from a firm during a personal visit. About 21,000 establishments are contacted monthly; they receive their forms by mail and return them by fax.
- **International Price Program (IPP).** The International Price Program (IPP) is the primary source of data on price changes in the foreign trade sector of the U.S. economy. The program publishes indexes on import and export prices of merchandise and services. For imports, the IPP samples about 15,000 total items from 4,400 U.S. importers. For exports, the IPP samples about 12,000 individual items from 6,000 U.S. exporters. In addition, IPP uses a subset of the data collected for the Import Price Index to produce import price indexes by country or region of origin. The IPP also publishes monthly

and quarterly indexes for transportation services. Field economists conduct a personal interview to secure initial cooperation from sample establishments. Then, data are collected monthly via forms mailed to respondents and faxed back, with some phone collection by industry analysts in the national office headquarters. Data sources for services and a few product industries are researched separately.

METHODOLOGY

Data Collection Design: Overview

Data collection for this research was carried out over a 10-month period and took several different forms. It included personal interviews with managers in the national office and four of the six BLS regional offices. The data collection team also conducted focus groups in the four regions and contacted sample establishments from the four programs by telephone. Team members were trained moderators and interviewers and were also well-informed about objectives of the study.

Qualitative Data Analysis: Principles & Methods

Qualitative methodology is very powerful and can lead to important understandings about significant social phenomena, including answering *why* and *how* questions. Aspects of qualitative data analysis that distinguish it from quantitative information include the collection of non-empirical data, such as perceptions, attitudes, and opinions. While the primary purpose of quantitative research is to determine cause-and-effect relationships, qualitative research aims to describe on-going processes. Specifically, in quantitative research, the independent variables are controlled and manipulated. On the other hand, in qualitative research, there are no specific independent variables; instead, the focus is on the study of naturally occurring phenomena, without interference from the researcher.

Another substantive difference between these approaches is that the qualitative approach is flexible and develops throughout the investigation, rather than stemming from a precise hypothesis stated before the study begins. Quantitative studies are also represented and summarized in numerical form, while qualitative data are usually represented or summarized in narrative or verbal forms.

Another important distinction between these approaches exists with respect to the issue of

reliability and validity. Reliability and validity are determined through statistical and logical methods in quantitative studies. By contrast, qualitative studies determine reliability and validity by gathering data from multiple sources, a process also known as triangulation. Although there are many other distinctions between quantitative and qualitative methods, the dimensions most relevant to this study are that in qualitative studies:

- samples are purposeful, rather than randomly selected to represent the population;
- phenomena are studied holistically as a complex system, rather than simplified for the sake of the study methodology; and
- the researcher must come to terms with procedural bias, rather than relying on the research design and instrumentation to control for procedural bias.

Related to this last point is the fact that participants are often operating within constraints associated with complex organizations that limit their perspective and comprehension of what is actually happening. As a result, qualitative research must be interpreted within that context and these limitations should be duly noted.

Preliminary analysis of qualitative data begins with the identification of major themes that emerged from the discussions. These themes are usually identified through an examination of participant comments. Ideally, these themes will be articulated by a number of participants in different settings. It is important that the researcher not over-generalize from extreme or inflammatory comments based on a single participant's experience, although individual participants may be useful in illustrating themes. It is also important to ensure that quotations are presented in context, as they often result from the researchers' probes (or, in group settings, in response to other participants).

After major themes have been identified, analysis includes determining significant secondary themes, which may have received lesser emphasis, but which usually raise important points that clarify topics under discussion. Secondary issues may be associated with the major themes, or may represent relatively independent, albeit important, strands of information. The researcher should identify conclusions and make recommendations, as appropriate.

Qualitative data analysis can be susceptible to error due to the extensive application of judgment when analyzing the data. The researcher must use extreme caution when interpreting qualitative results. A fundamental goal for the researcher is to represent accurately the essence and substance of what research participants have attempted to convey in the interviews or group discussions. Thus, the researcher must sift through the qualitative information in order to present a comprehensive, cohesive, and balanced narrative that succinctly summarizes major and minor research findings.

The BLS team applied these principles in this study. After the individual analyses were completed, they were reviewed and synthesized for this report. Although the review of audiotapes and written documents could have been assigned to different analysts (in the interest of objectivity), the team decided it would be easier to have analysts focus primarily on the survey for which they had collected data. Accordingly, analysts reviewed the audiotapes and additional written materials relevant to the survey for which they had collected data and also reported the results for that survey program. Findings were included only if they reflected themes and issues generated from more than one source. This information was used to make recommendations and draw overall conclusions for each survey.

BLS Personal Interviews

Personal Interview Methodology. Personal interviews were selected as one of the primary data collection methods for this study. Personal interviews offer certain advantages, specifically:

- their semi-structured nature allows the interviewer to explore the specific issues and response problems that are salient for the respondent;
- they allow interviewees freedom to expound upon topics they find important; and
- they allow important information to be collected relatively easily, quickly, and inexpensively.

Protocol Development. The BLS team developed the initial version of each of the interview protocols (discussion guides) to be administered to different BLS groups. A primary goal of the task was to address several issues associated with establishment survey nonresponse, but be sufficiently flexible to allow participants to offer unanticipated information or insights. The team developed different protocols for each type of participant (e.g., respondent, analyst,

manager). A secondary goal was to use the same questions across protocols as much as possible to enhance comparability of results across interviews. The interview protocols underwent several iterations, resulting in separate protocols for the following groups of managers:

- national office senior managers
- national office mid-level managers
- regional office managers
- national office managers for regional data collection staff

The final versions of the four survey protocols included the following general topics: measurement of nonresponse and trends; problematic aspects of non-response; reducing nonresponse; staffing issues and nonresponse; training and its relationship to nonresponse; procedures for communication about nonresponse among different organizational units; use of technology in data collection; use of incentives with both respondents and interviewers as a means of reducing nonresponse; possible improvements if additional resources were devoted to non-response; and any other thoughts, opinions, and suggestions participants offered.

Data Collection Procedures. Twenty-nine personal interviews were conducted with BLS personnel from the national office and four of the six BLS regional offices. The interview participants were senior or mid-level managers, representing one, sometimes two, of the four surveys of interest. Interviewers used the protocols described above and incorporated flexible interviewing and probing techniques to address participants' questions and comments.

BLS participants were advised that the goal of the interview was to get a better idea of the procedures currently implemented within the surveys, and to identify, evaluate, and ameliorate the problem of nonresponse. Interviewers secured the permission of participants to audiotape the interview (all but one participant agreed), and assured participants that their responses would remain confidential. Participants were also informed that their feedback would be used to:

- learn about current non-response trends and interventions designed to address the problem of non-response;
- examine non-response across several BLS establishment surveys, so an agency-wide perspective could be obtained; and

- make recommendations for reducing non-response in BLS establishment surveys.

Focus Groups

Focus Group Methodology. Focus groups are guided discussions conducted with a small number of participants. The participants are selected to represent target populations based on characteristics such as age, gender, or socioeconomic status. A moderator or co-moderator guides a focus group discussion using a discussion guide.

The purpose of a focus group is to collect the opinions, attitudes, and beliefs of participants about a given topic or issue. Often, the interaction among participants generates new ideas that might not come up in individual interviews.

Protocol Development. The focus group protocols were developed using procedures similar to those described earlier for the BLS personal interview protocols. The first protocol was used with data collectors from the four regional offices involved in this study and focused on approaches used to secure cooperation during initial and follow-up interviews on three of the surveys. A second protocol was designed for national office staff who collect updated data on two of those surveys. A third protocol focused on issues related to moving respondents from CATI to self-reporting via touch-tone data entry (TDE), and included issues related to non-response.

Major topics addressed by the protocols included strategies used by data collectors to develop rapport with establishment respondents, characteristics commonly found in “good” versus “poor” respondents and in nonrespondents, training and job-related issues, and program-specific questions (e.g., transitioning CES respondents from CATI to TDE; delinquent IPP reporters, etc.).

Data Collection Procedures. Trained focus-group moderators from the BLS team conducted the focus groups. The moderator introduced him/herself to participants and described the purpose of the study. The moderator informed participants that the goal of the focus group was to learn about their experiences interacting with respondents to collect data for the survey in question. Participants were advised that their participation would help identify ways to approach respondents for future BLS data collection, that their participation was totally voluntary, and that their confidentiality was assured. The moderator asked for permission to audiotape the group discussion, and all of the participants agreed.

The following 14 focus groups were conducted for this study:

- Focus groups were conducted at each participating regional office with compensation (NCS) staff and with prices (IPP and PPI) data collection staff, for a total of eight groups.
- A focus group was conducted at the national office with industry analysts from the IPP program.
- Four focus groups were completed with CES CATI interviewers in two regional offices. Participants were selected to participate in the focus group based upon their success in converting respondents to touchtone data entry (TDE) for several months prior to the sessions. A focus group consisted of either “high performers” (interviewers with comparatively high degrees of success in successfully transitioning respondents to TDE) or “combined performers” (interviewers who were among the most and least effective at transitioning respondents to TDE).
- A focus group was held with the managers of the centralized telephone data collection facilities that are responsible for CATI interviewing in the CES.

Establishment Interviews

Establishment Interview Methodology. The third part of data collection consisted of telephone interviews with establishments from each of the four BLS surveys under study. The primary objectives of these interviews were to learn (1) why some establishments comply with BLS requests for data, whereas others do not and (2) why some establishments simply stop providing data, or provide data less often than the survey’s prescribed data collection cycle. We should point out that, because of the small sample sizes, our intention was not to generate conclusions that could be applied to all nonrespondents in the different groups. Instead, this was simply an attempt to identify some issues or themes related to nonresponse.

Protocol Development. Using the iterative procedures described earlier, interview protocols were developed for the following groups of establishments:

- ***Cooperative Respondents:*** establishments that have reported regularly and consistently since enrollment in the survey sample;
- ***Intermittent Responders:*** establishments that reported for a while, stopped, then resumed reporting (e.g., they may have been converted from “refusal” status to active reporting status after an interval of time).
- ***Dropouts:*** establishments that reported for a number of data collection cycles, then stopped reporting before their period in the sample ended; and
- ***Nonrespondents:*** establishments that declined to participate in the survey when initially contacted by the survey program.

All of the protocols focused on why respondents agreed (or failed to agree) to participate in the survey programs, and addressed issues such as:

- company policies about participation in government surveys
- company decision-making about government survey participation
- concerns about confidentiality
- clarity of data requests
- relationship of frequency and timing of data requests to nonresponse
- availability of requested data in establishment records and respondent access to those data
- preparation required to provide requested data
- perceived relevance of collected survey data
- experiences with BLS personnel and effect on survey participation
- suggestions to improve BLS relations with respondents in the future
- strategies BLS can undertake to promote future respondent participation
- any other thoughts, opinions, suggestions.

Additional items were also developed for each respondent group emphasizing relevant topics:

COOPERATIVE RESPONDENTS

- ways to simplify data requests
- whether respondent has ever failed to comply with a data request after originally agreeing to comply with data request

INTERMITTENT RESPONDERS

- reasons why establishment reports for some data collection cycles and not others

- ways BLS could encourage respondent to participate regularly

DROPOUTS

- reasons why establishment ceased providing data
- strategies BLS could implement to encourage establishment to respond

NONRESPONDENTS

- opinions about the value of government statistics
- types of information company would prefer not to provide the government

Data Collection Procedures. Personnel from the research office, who are not affiliated with the survey programs, conducted the interviews. Program offices provided samples of each of the four types of establishments, which included a contact name who would serve as the respondent for the purposes of this study. A total of 32 interviews were completed, with 8 interviews completed with each type of respondent across the four study surveys. Interviewers began by explaining to respondents that BLS was conducting a study to improve procedures used in establishment surveys. All of the participants allowed the interview to be taped. Everyone interviewed was assured of confidentiality, that their name or company would not appear in any final report, and that this was not an effort to recruit them for a survey.

Summary

In order to examine the issue of nonresponse in its establishment surveys, BLS studied this issue in four surveys: the Current Employment Statistics survey, the National Compensation Survey, the Producer Price Index, and the International Price Program. The study focused on causes and consequences of nonresponse, and identified ways to decrease nonresponse in the future.

This study implemented an extensive data collection plan, focusing on the collection of qualitative information from BLS personnel at the national and regional offices. Managers and data collectors from all four survey programs participated in this study. In addition, data were collected from 32 establishments that have either participated in BLS surveys, have declined to do so, have dropped out after initial participation, or have participated intermittently.

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