

# REPORT FROM THE INTERAGENCY GROUP ON ESTABLISHMENT NONRESPONSE

Carl Ramirez, US GAO<sup>1</sup>

Carl Ramirez, U.S. GAO, 441 G St., NW, Washington DC 20548, ramirezc.ggd@gao.gov

## ABSTRACT

This paper documents the work of the Interagency Group on Establishment Nonresponse (IGEN), which was established in 1998 and draws its members from seven U.S. Federal statistical agencies. It was charged with examining issues associated with unit nonresponse in Federal establishment surveys, sharing and disseminating methodological research findings and survey design practices related to the measurement and abatement of nonresponse, and fostering future collaborative research on establishment nonresponse within the federal statistical community. IGEN is now promoting three research programs for adoption by agencies. The paper also notes other efforts at collaboration, and lists difficulties in promoting such interagency collaboration.

**Key Words:** Collaboration, research agenda, unit nonresponse

## 1. BACKGROUND OF IGEN

### 1.1 Origins, Membership and Purposes

In 1998, the Interagency Group on Establishment Nonresponse (IGEN) was formed and charged with examining unit nonresponse in Federal establishment surveys. The initiative to form IGEN grew partially from the past work of the Subcommittee on Nonresponse, commissioned in 1991 by the Federal Committee on Statistical Methodology (FCSM). That interagency group was formed to study the causes and effects of unit nonresponse in Federal surveys of both households and establishments. The work of that subcommittee resulted in three papers, one of which (Osmint, McMahon & Martin 1994), focused on establishment survey nonresponse.

In addition to sharing knowledge of agency practices on this issue and serving as a clearinghouse for information on establishment nonresponse, the ultimate goal of the group is to identify and promote opportunities for collaborative research and the standardization of best practices in the Federal statistical community related to nonresponse. Federal agencies represented in IGEN are: Bureau of the Census, Bureau of Labor Statistics (BLS), Energy Information Administration (EIA), the General Accounting Office (GAO), National Agricultural Statistics Service (NASS), the National Center for Education Statistics (NCES), and the National Center for Health Statistics (NCHS). Not all Federal statistical agencies conducting periodic or one-time establishment surveys or related statistical programs are currently represented in the group, although representatives of other agencies are welcome to join. Individual representatives to IGEN are behavioral scientists, statisticians and economists who are familiar with a range of survey programs at their agencies.

### 1.2 Past Work

IGEN first performed an overall survey of the state of establishment survey nonresponse in Federal surveys. The group reviewed the literature, documented different ways response rates are calculated, analyzed nonresponse rate trends in 12 major government surveys over 10- and 20-year periods, profiled a number of government surveys and

---

<sup>1</sup> The opinions expressed here are those of the authors and do not necessarily represent those of their agencies. This paper is based on the work of IGEN, whose members currently are: Stephanie H. Brown, U.S. Bureau of the Census (BOC); Jay Casselberry, Energy Information Administration (EIA); Sylvia Fisher, Bureau of Labor Statistics (BLS); David M. Friedman, BLS; Steven Kaufman, National Center for Education Statistics; Douglas G. Kleweno, National Agricultural Statistics Service (NASS); Ruey-Pyng Lu, EIA; Donald M. Luery, BOC; Jean C. Mah, BLS; Chris Manning, BLS; Antoinette Martin, EIA; Chester H. Ponikowski, BLS; Carl Ramirez, U.S. General Accounting Office; Robert Sabatelli, BLS; Iris Shimizu, National Center for Health Statistics; David Slack, BLS; Jaki Stanley McCarthy, NASS; Albert Tou, BLS; Clyde Tucker, BLS; Diane K. Willimack, BOC.

their procedures for abating and adjusting estimates for nonresponse, and reviewed member agency research efforts on establishment nonresponse. IGEN presented these findings at a November 1998 research conference sponsored by the Council of Professional Associations on Federal Statistics (IGEN 1998).

### **1.3 Information sharing activities**

IGEN meets periodically to share information on nonresponse-related issues concerning member agency establishment survey programs and any related research projects that agencies may be conducting. In addition to profiling the design and administration of individual survey programs and how that relates to nonresponse experience, the group has also examined how and why certain response rate measures are calculated for various surveys conducted by member agencies.

## **2. CONTEXT OF IGEN – OTHER COLLABORATIVE EFFORTS**

Other efforts have been made to foster collaboration between Federal statistical agencies to promote shared research agendas (and actual joint research), develop shared standards for such research, and even data sharing. Some of these activities touch on issues related to establishment survey nonresponse.

### **2.1 Shared Research Agendas and Joint Projects**

The National Science Foundation's Methodology, Measurement and Statistics Program supports funding for various survey research methodology projects, and explicitly identifies establishment surveys as an area of research. Missing data resulting from nonresponse is a problem singled out for attention in its research agenda (NSF 1996).

At the second seminar on the cognitive aspects of survey methodology (CASM II), a research agenda focused on adapting cognitive techniques to establishment surveys was produced (National Center for Health Statistics 1999). First, it suggests that the decision to participate in an establishment survey be examined in terms of the authority and capability of an informant to provide a response. Another CASM II research proposal recommends relating the willingness of organizational involvement in a study with ultimate levels of nonresponse and data quality. In addition, it recommends that survey design features that might influence willingness to participate, such as form design, incentives, and interviewer roles, should be examined.

Because the design and administration of some surveys at a number of statistical agencies is actually carried out by other agencies, such as the Bureau of the Census, opportunities have arisen for collaborative research. For example, The Census Bureau provided consultation on methods for cognitive testing of survey questionnaires to personnel at EIA, which subsequently used that knowledge to conduct its own survey redesign research to improve one of its surveys, the Manufacturing Energy Consumption Survey, that Census fields for EIA.

### **2.2 Developing shared standards**

The American Association of Public Opinion Research (AAPOR) recently published a set of standard definitions for typically used response rates for telephone and in-person household surveys, as well as definitions of the dispositions that are used to calculate such rates (AAPOR 1998). In the future, a similar set of definitions is planned for self-administered mail surveys (which is a frequently used mode for establishment surveys). IGEN has documented the wide variety of establishment survey response rate definitions used by federal agencies.

### **2.3. Data Sharing**

Attempts have been made to foster sharing of establishment survey data and information from business registers and other administrative databases. This might help improve parallel sample frames maintained by different agencies, or might even reduce the duplicative collection of some data from establishments surveyed by two or more agencies. Legislation passed by the House of Representatives (H.R. 2885) and currently pending in the Senate, would enact the Statistical Efficiency Act of 1999. This Act would permit data sharing to a limited extent by "identifying opportunities to eliminate duplication and otherwise reduce reporting burden and cost...by sharing information for exclusively statistical purposes." It might also facilitate joint statistical projects between agencies.

### **3. IGEN'S AGENDA FOR COLLABORATIVE RESEARCH**

Because member agencies are often faced with the same challenges in their surveys, their individual research efforts to measure, characterize and reduce establishment nonresponse may overlap. Coordinating some research activities between agencies can result in better use of resources and consistent experimental design and coding schemes, leading to more powerful and replicable research findings.

#### **3.1 Proposals**

After considering a number of pressing research problems, IGEN has chosen to first promote the following three research proposals regarding establishment survey nonresponse for adoption by member agencies (See Section 5 for a more detailed description of each proposal):

- 1) Establishing a website, linked to member agency websites, to serve as a clearinghouse of information on research into establishment nonresponse.
- 2) A study of how tailoring survey procedures to individual businesses selected into the survey might increase response, particularly a) the profiling of large business operations prior to fieldwork, b) fine-tuning the process of business enrollment in surveys and questionnaire routing to respondents within establishments, and c) using different strategies to convert initial survey refusals, based on refusal reason or time since refusal, for example.
- 3) A study examining the relationship of customer satisfaction of the data provider to survey cooperation, in programs in which the data provider is also a user of the data product.

The above proposals were selected because IGEN members saw the greatest number of common benefits that could accrue to agencies from pursuing this kind of research, and detected the greatest level of interest from their respective agencies. Other proposals that were considered, some of which may be promoted in the future, include:

- Determining whether increasing "ease of reporting" increases response rates.
- Determining if increased awareness by data providers of the importance of the data they are asked to provide would increase response rates.
- Research on developing "best practices" for reducing nonresponse -- a systematic, hierarchical set of procedures for maximizing response in establishment surveys, rather than piecemeal evaluation of individual techniques.
- Assessing the extent of variance underestimation due to imputation methods across member surveys.
- Research on the effects of sponsorship and endorsement of surveys.
- Determining more conclusively the effects of mandatory reporting requirements on response rates.
- Developing typologies of nonresponding establishments to improve the targeting of reduction efforts.
- Exploring the benefits and feasibility of coordinated collection of data from businesses falling in the samples of two or more agencies.
- Determining the extent to which sample frames used by some member agencies overlap, as a means to assess frame coverage and to estimate benefits of coordination of frame development and maintenance.
- Examining the relation between the burden/sensitivity of information requests and response rates.
- Investigating special problems relating to nonresponse in small establishments.

#### **3.2 Work in progress**

IGEN has asked senior managers at member agencies to review the proposals and determine if they could be initiated as original research projects, or adapted and combined with ongoing work. In some cases, IGEN proposals may reflect work already in progress at an agency, and might be used to change such a project so that it would more closely replicate subsequent projects in other agencies. That is, it would standardize the methodology of the research so replication of experiments would be possible.

In November of 1999, the FCSM reviewed and approved of the proposals, and was also asked to promote the IGEN research agenda. Member agencies, representatives of which make up the FCSM, were asked not only to endorse the proposals, but also to devote staff time and other resources to actually undertake projects.

Recently, member agencies have undertaken projects independent of the IGEN agenda that happen to be related to one of the three proposals. For example, the US Bureau of the Census has conducted an in-depth study of reporting practices at large companies in their business samples (Nichols, Willimack & Sudman, 1999), allowing analyses suggested in IGEN's "tailoring of survey procedures" proposal, on issues such as profiling large operations, enrollment of firms into the survey, and informant selection.

#### **4. THE CHALLENGES OF INTER-AGENCY COLLABORATION**

U.S. Federal statistical agencies have widely differing mandates and establishment populations that they collect data from. It is difficult to obtain agreement on which nonresponse issues are most relevant to their surveys, and even the primacy of the nonresponse problem itself among a number of other challenges to data quality that they face. There are several challenges to overcome with any such agenda. There are institutional obstacles, such as:

- resistance to change or fear of negative reaction from data providers (e.g., to increased burden),
- bias against interagency cooperation, or legal prohibition against sharing of certain data across agencies,
- lack of a single individual at an agency who is able to authorize such projects,
- disagreement about the importance or priority of this kind of work,
- perception that projects are not feasible or directly linked to current interests of agency managers.

There are also objective obstacles, such as:

- resource limitations (staff expertise, time and materials),
- mandated survey design characteristics (e.g., a data collection schedule set by law, which might preclude some types of experimentation),
- Loss of time series comparability from an experimental treatment or subsequent permanent design change.
- Uniqueness of some survey programs might limit generalizability of research to other establishment surveys.

#### **5. APPENDIX: TEXT OF THE 3 IGEN PROPOSALS**

##### **I. Federal Establishment Survey Nonresponse Web Site with Agency Links**

Background: One of the purposes of the IGEN is to act as a resource and a clearinghouse of information on establishment nonresponse. The IGEN collaborated to author a paper which was presented at the November 1998 COPAFS conference. This paper included a summary of the relevant research issues in establishment survey nonresponse but, importantly, also included an overview of current and recent research being conducted by member agencies. Many of these projects are unpublished or incomplete and information about them is not readily available to outside researchers. Unfortunately, once this paper was concluded, there was no formal mechanism left by which to continue the process of sharing latest or newly "discovered" research.

Goal: This project will formalize the concept of a clearinghouse, providing a mechanism for the ongoing identification and presentation of establishment nonresponse research. It is proposed that all IGEN participating agencies create and maintain web sites which will be linked to a home page (maintained by the BLS). The home page, developed collaboratively, will identify a set of common establishment non response issues, definitions, concerns, and be linked to agency maintained web pages that will present each agency's past and current research on nonresponse. Additionally, each web site shall have links to the other participating agencies such that a reader can easily jump from one agency's site to another and be able to access other research on establishment nonresponse. While this project is devoted to nonresponse in establishment surveys, it is anticipated that similar pages with information about nonresponse research in Federal household surveys would ultimately also be linked to these pages.

Method: The method for such a project is fairly simple. Each agency will be responsible for building, testing, and maintaining its own web pages (outside the agency's firewall). The IGEN will design the 'establishment survey nonresponse research' home page, develop the contents of the common pages to be linked to all participating

agencies and design a generic web page each individual web site can use. IGEN members will be responsible for specifying and collecting information from their respective agencies to post to their agency's web pages. It will be up to individual agencies to decide where in their overall agency web site these pages will reside.

Costs: Costs for this project would be primarily for staff time to work on content and layout for the web pages. Additional, but likely less costly, would be staff time necessary to program and maintain the web pages. This could fall to staff already involved in maintaining an agency's web site.

## **II. Tailoring Survey Procedures to Increase Establishment Survey Response**

Background: Although for most surveys, researchers attempt to standardize as much of the procedures and materials as possible, this project would investigate the utility of modifying procedures for data collection for different establishments. Establishments differ in a variety of ways that may affect their ability to report requested survey data. While households may differ in size or composition, differences between one establishment and another are potentially much larger than in households. These differences may make the reporting task for any particular establishment quite different from another in the same survey. If characteristics of the establishment make reporting for that establishment more difficult, their level of cooperation may be reduced.

Goal: This project would identify and test methods of tailoring survey procedures for particular establishments or groups of establishments in order to facilitate survey reporting.

Method: Participating agencies might test and compare similar tailoring methods, or might test alternative methods of tailoring procedures as proof of the general concept. Specific examples of potential projects for this proposal are below.

A. Profiling Large Operations: Large or influential operations (who are likely to have numerous survey contacts) can be profiled to maintain information about them that might aid in future data collection. These profiles are kept by the agency outside of survey contacts and contain information specific to that individual establishment. This enables customized handling of that establishment in future contacts based on known desires or characteristics of the establishment. To test profiling as a method of tailoring survey procedures, this project would first document which statistical agencies are currently doing this, what information can be kept in these profiles, what information may increase cooperation, and how these profiles can best be used. This would be followed by experimental comparisons of operations who have been profiled compared to those who have not to assess the impact of profiling on survey cooperation.

B. Effective Enrollment and Questionnaire Routing Through an Establishment: In self-administered mail questionnaire surveys, the exact routing of questionnaires within sampled organization, and the identities of the ultimate informants, is often not known. The probability of response may be influenced by the path the questionnaire takes within the firm: who receives it, whether there are multiple informants involved, and how many people handle the instrument. This basic research would document these paths, in a qualitative way, and would correlate them in a general way with survey outcomes and other independent factors such as organizational structure, size, and survey design and administration characteristics. Initial research would likely involve conducting in-depth interviews with various members of establishments as well as with field staff who are currently involved in collecting data from establishments.

Once relevant information about establishment structure is collected, systematic tests could be conducted to determine where in the establishment is the best office/division to approach, when is it best to approach the establishment, how to go about obtaining permission to collect data, and how to handle obtaining the authority to collect versus actually getting the data.

C. Refusal Conversion Strategies for Initial Survey Contacts: This project will explore conversion of initial survey nonrespondents to survey cooperators. Initial refusals will be followed up after "cooling off" periods (that may be varied in length) and asked to participate in the survey again. Will time have softened their initial convictions and refusals? Sampled establishments who refuse to participate during initiation of survey data collection also often provide reasons for refusing to participate. This project will also assess whether these reasons for refusing change over time and whether they are related to a refuser's 'convertability'. Other factors that may indicate the likelihood

of converting an initial survey refusal will also be tested. Results would help direct survey resources to those units that have the potential for conversion.

This project would allow development of standard coding of reasons for refusal, so general types of refusals could be compared across agencies.

Costs: Costs would be dependent upon what projects were specifically undertaken by the agency.

### **III. Customer Satisfaction and Survey Cooperation**

Background: Federal Agencies have recently initiated efforts to measure customer satisfaction. Data providers are one subset of customers of Federal statistical agencies. This project would be designed to support Government Performance and Results Act customer service activities required by Federal agencies. This would be an opportunity to develop a standard set of indices and data collection protocols that could be used across federal information-gathering agencies. Standard questions and procedures would then be available for use by any agency requiring customer satisfaction indices for data providers.

Goal: The objective of this study would be to define and measure customer satisfaction of data providers and explore its relationship to survey cooperation. This would allow participating agencies to not only track customer satisfaction, but also to gain insight into the effects of customer satisfaction.

Method: Initial work would involve identifying appropriate areas of data provider customer satisfaction and developing measures for them. These standard measures would then be used to collect information from past, present, or potential data providers. Information could be collected as part of ongoing survey contacts, as follow up contacts, or in completely separate surveys. Ratings for these measures would then be compared across survey cooperators and nonrespondents. Ratings could also be tracked to determine if customer satisfaction changed as measures to increase survey cooperation were implemented.

Costs: Costs would involve development and testing of the customer satisfaction indices, as with any new questionnaire. Therefore, development of the questions would likely require substantial questionnaire design and pretest work. Additional data collection costs would depend on whether these were used in stand alone surveys or added as additional questions on other survey contacts. In addition to data collection, there would be obvious costs associated with tabulation and analysis. However, if these costs have already been budgeted as part of GPRA activities in the agency, they may not require substantial additional expenditures.

## **6. REFERENCES**

- American Association for Public Opinion Research (1998), *Standard Definitions: Final Dispositions for Case Codes and Outcome Rates for RDD Telephone Surveys and In-Person Household Surveys*, Ann Arbor, MI: AAPOR.
- Interagency Group on Establishment Survey Nonresponse (1998), *Establishment Nonresponse: Revisiting the Issues and Looking to the Future*, Statistical Policy Working Paper 28, Washington, DC: Office of Management and Budget, pp. 181-227.
- National Center for Health Statistics (1999), "A New Agenda for Interdisciplinary Survey Research Methods: Proceedings of the CASM II Seminar," Monroe Sirken, Thomas Jabine, Gordon Willis, Elizabeth Martin, and Clyde Tucker, eds. Hyattsville, MD: NCHS.
- National Science Foundation (1996), *Methodological Advances and the Human Capital Initiative*, NSF Methodology Conference Report, NSF 97-97.
- Nichols, Elizabeth M., Diane K. Willimack, and Seymour Sudman (1999), "Who are Establishment Reporters: A Study of Government Data Providers in Large, Multi-Unit Companies", Paper presented at the 1999 Joint Statistical Meetings of the American Statistical Association, Baltimore, Maryland.
- Osmint, Jeffrey B., Paul B. McMahon and Antoinette W. Martin (1994), "Response in Federally sponsored Establishment Surveys," *Proceedings of the Section on Survey Research Methods, American Statistical Association*, pp. 977-982.