WHERE HAVE ALL THE NONRESPONDENTS GONE?

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Introduction

Unit nonresponse is a topic that has received a great deal of attention in the survey literature (Groves, 1989; Fowler, 1988; Biemer, Groves, Lyberg, Mathiowetz, and Sudman, 1992; Edwards and Cantor, 1992; Tomaskovic-Devy, Leiter, and Thompson, 1994). In establishment surveys, nonresponse is problematic but nevertheless a common occurrence. Survey researchers use a variety of mechanisms to convert nonrespondents or reduce the chance of their occurrence (e.g., sending advance materials, incentives). If such attempts are unsuccessful, they will typically use some nonresponse weighting adjustment technique to account for the refusals in the final survey statistics and response rates reported.

Techniques to facilitate the participation of nonrespondents would be valuable both in terms of increasing response rates and in the weighting adjustment process. The focus of this study was to explore whether certain reasons for nonresponse and other factors (e.g., time between call attempts) affect final survey completion rates. This study follows ongoing research conducted by the Bureau of Labor Statistics (BLS) on the viability of collecting monthly establishment data on job openings and labor turnover, hereafter referred to as the Job Openings and Labor Turnover Statistics (JOLTS) survey.

JOLTS was designed to investigate the availability of monthly data on the number of separations, new hires, and current job openings within selected firms of varying size and complexity. Establishments, once enrolled, were asked to provide data each month for a total of 14 months. The sample for this initial research was 200 establishments (145 single unit establishments and 55 multiple unit establishments). Most enrollment calls were completed in August and September, however, some cases trailed into December 1998. By December, the project had accumulated 61 nonrespondents. Nonrespondents were defined as: (a) establishments who refused to participate (n = 52); (b) establishments who indicated this was a very bad/busy time for them, and requested they be called back at a later time (n = 6); and (c) "max calls" – establishments who were contacted at least once and then evaded all subsequent phone contact attempts (n = 3).

Declining response rates have been an increasing concern to the government in general, and to the BLS in particular (Brick, 1991). The purpose of this study was to learn more about the etiology of nonresponse and whether we could convert some of the nonresponding establishments to completed cases. For example, would permitting some passage of time between initial attempts to enroll and second (final) enrollment attempts have an effect (i.e., whether the simple passage of time plays a role) in willingness to participate? We also examined stated reasons for initially refusing to participate and investigated whether any of these reasons could be predictive of the eventual status of the unit (i.e., a collectable unit or a refusal). Thus, we developed a series of questions about how to examine nonresponse. These five questions provided the context for the study design as follows:

(1) **Time.** Will a longer "cooling off" period soften initial survey negativity and result in a willingness to participate?
(2) **Survey Introduction.** Does it matter how the study is introduced to nonrespondents after the "cooling off" period – should nonrespondents be reminded of their past nonresponse?
(3) **Nature of the Initial Refusal.** Does it matter what the reason for the initial refusal was in predicting final willingness to cooperate?
(4) **Type of Reasons for Refusing.** Will the reasons for nonresponse remain the same, or will respondents provide some other explanation not to comply with the request for data?

[1] The co-authors would like to dedicate this paper to Leda Kydoniefs, a dear friend and colleague, who passed away in June 1999.

(5) **Effort, Time, and Conversion Possibilities.** How many nonrespondents can be converted and is it worth the effort or resource costs to recontact them? Are certain types of refusals more likely to lead to participation at a later time than others? Can we place the reasons provided for nonresponse on a continuum which will help direct or focus attention on those units that have the potential to be converted?

It was decided that "time," (see #1 above) would be, at minimum, two months in order to give respondents sufficient time to overcome or change their initial reasons for refusing to participate. "Survey Introduction" (see #2 above) was operationalized as the type of introductory letter sent to respondents prior to re-contacting them for this experiment and the script the interviewer followed in conducting the interviews. To answer questions #3 and #4, a categorical coding scheme was developed. An overall examination of the study results will answer #5.

Methodology

Experimental Sample. The 61 nonrespondents were randomly assigned to one of two experimental conditions: a group that was reminded of its previous nonresponse, and a group that was treated as an initial attempt. In the "reminder" condition, the interviewer acknowledged previous attempts to collect the data and encouraged participation at the present time. In the "no reminder" condition, respondents received a "cold call" from an interviewer and were not reminded of any previous contacts.

Advance Materials. Establishments in both groups were sent an advance letter signed by the Division Chief of the Occupational and Administrative Statistics at the BLS. The "reminder" letter acknowledged that the respondent was called several months ago by an interviewer at which time he/she was unable to assist in the request, and urged the respondent to reconsider participation. In addition, the "reminder" letter informed the respondent of the duration of the study. By contrast, in the "no reminder" condition advance letter, the study was introduced without acknowledging any previous contact attempts. The advance letters were mailed to the last known contact person for each case. Mailing occurred approximately one week in advance of the telephone call.

Initial Coding. At the outset of the study, all of the reasons for nonresponse, as recorded by the interviewer, were reviewed. Initial coding categories were created to capture all of the reasons. Researchers then reviewed the specific codes and grouped them into eight broad categories of nonresponse. Later review of the coding scheme found that an even broader level of coding was more appropriate, resulting in four general categories. The frequencies of assignment to each of these more general categories are listed in Table 1.

Table 1. Nonresponse Reasons Prior to Recontacting

Nonresponse Reason Category	Frequency (N=61)	Percent
Respondent Requires Survey Program Flexibility	31	51%
Company Policy	9	15%
Just Don't Want to Participate	15	24%
Other	6	10%

The Conversion Attempt. One senior level interviewer was trained in this experiment. Like the earlier (initial sample) interviewers, she worked on the Current Employment Statistics survey for the BLS and was therefore familiar with contacting businesses, locating the most knowledgeable respondent, and communicating the concepts associated with the collection of employment data.

The interviewer was provided with separate scripts for the "reminder" and "no reminder" cases. The scripts were consistent in wording to the information presented in the advance letters. The interviewer was told not to mention previous contact attempts to the "no reminder" cases. If a respondent in the "no reminder" condition recalled the previous contacts, the interviewer acknowledged the *possibility* of previous attempts but said that she was unaware of these attempts and continued with the interview.

For each establishment contacted, the interviewer completed a debriefing questionnaire about the conversion attempt. In addition to the data collected from the interviewer, researchers collected qualitative data through monitoring some of the conversion calls, holding a debriefing session with the interviewer, and conducting some re-interviews. Six of eight cases from the "reminder" condition, where the original respondent completed the data request (i.e., was converted and became a respondent), were successfully contacted for a reinterview. In this reinterview, a researcher inquired as to who or what finally persuaded the respondent to participate. Table 7 lists the reasons provided by respondents.

Nonrespondent Conversion Coding and Coder Reliability. After the study was completed, three researchers assigned codes to each case that resulted in a final non-response. Inter-rater reliability coefficients ranged from 52% to 76%. The three coders met to discuss differences and concluded that low agreement occurred when more than one code could be assigned to each case (i.e., respondent provided more than one

reason for nonresponse). A collaborative re-coding effort between the three researchers resulted in more specific coding rules and 100% agreement on the final nonresponse codes assigned. The coding rules developed during the re-coding effort include:

- Use the strongest reason given, which is usually the final reason.
- Pick the more specific reason. For example, if the respondent said "don't have time" and also gave a specific reason as to why they don't have time, use the more specific reason.
- Only use "not interested" if no other reason is given.
- Often when the respondent gave the reason that the survey is not mandatory, this was just an initial excuse. If "not mandatory" was offered along with another reason, choose the other reason offered.

Table 2 displays the nonresponse final results and the frequency of assignment within the experimental sample.

Table 2. Reasons for Nonresponse After Conversion Attempt

Nonresponse Reason Category	Frequency (N=37)	Percent
Respondent Requires Survey Program Flexibility	11	30%
Company Policy	4	11%
Just Don't Want to Participate	9	24%
Other	13	35%

Analysis

Due to the small sample size of 61 cases, it is difficult to present statistically significant findings on the nonresponse conversion effort. However, based on frequencies, we can draw some conclusions and hypotheses that could be tested with a larger sample size. The questions we seek to answer in this analysis are:

- Who are the nonrespondents?
- Could we convert them?
- Did conversion results differ by demographic characteristics?
- By survey introduction?
- By initial reason for not responding?

Who Were the Nonrespondents and Could We Convert Them?

Table 3 compares the 61 nonrespondents of the experimental sample to the 137 respondents of the initial sample. The nonrespondents of the experimental sample were similar to the respondents of the initial sample. The two samples were alike in relation to number of locations, size, and industry type. None of the differences between the samples is statistically significant.

Table 3. A Comparison of the Experimental and Initial Samples

	Experimental Sample N=61		Initial Sample N = 37	
STATUS				
Single	40	65.6%	99	72.3%
Multi	21	34.4%	38	27.7%
SIZE				
1-49	26	42.6%	72	52.6%
50 +	35	57.4%	65	47.4%
SIC				
Construction	14	23.0%	31	22.6%
Manufacturing	2	3.3%	13	9.5%
Transportation/ Communications	5	8.2%	13	9.5%
Wholesale Trade	7	11.5%	17	12.4%
Retail Trade	10	16.4%	14	10.2%
Finance	10	16.4%	26	19.0%
Services	13	21.3%	23	16.8%

We were able to convert 39% of the sixty-one cases in the experimental sample. Twenty-four respondents provided data, 25 respondents refused, and 12 cases were finalized as non-contact, (i.e., we were unable to reach anyone during the field period). Varying the time to call these 12 hard-to-reach respondents did not improve our chances for contacting them. Calls were made during business hours (9am to 5pm) as well as evenings and weekends. It seems that unlike household survey respondents, varying the time of the attempted contact does not increase successful contact of these businesses. These hard-to-reach cases were not clustered in any one particular SIC that may operate in nontraditional work hours.

Establishment Characteristics. As Table 4 illustrates, the conversion rate differed for establishments by size but not by industry type. Single establishments were more often converted than multi-establishments and smaller establishments with a total employee count of 49 or less, were converted more often than larger establishments. There was no difference in conversion rates in respect to standard industry code (SIC).

Table 4. Conversion by Establishment Size

	Converted	Not Converted	Total
Single	48% (n=19)	52% (n=21)	40
Multi	24% (n= 5)	76% (n=16)	21
SIZE			
Small (1-49)	50% (n=13)	50% (n=13)	26
Large (50 or more)	31% (n=11)	69% (n=24)	35

Of the 49 cases we contacted, we spoke to 36 of the original respondents and 13 new respondents. In seven of the cases with a new respondent, the *original* respondent had referred the interviewer to the *new* respondent. The remaining six new respondents were a result of the original respondent no longer being with the establishment (n = 4) and the interviewer finding a more knowledgeable respondent after speaking to the establishment's "gatekeeper" (n = 2).

Of the new respondents, eight provided data while five did not. It is interesting to note, the interviewer who made the calls indicated that it was easier to convince new respondents to participate. She was unable to express exactly why, but perhaps it was that she did not have to say as much to new respondents nor did she have to apologize for prior calls.

Reminder/No Reminder Condition. We were interested in finding out if reminding a respondent of previous contact attempts would affect his or her subsequent participation. Though not statistically significant, more of the "no reminder" cases (47%) were converted than the "reminder" cases (32%). Table 5 shows how many cases were converted by experimental condition.

Table 5. Conversion by Experimental Condition

	Converted		Not Converted	
Reminder Condition	10	32%	21	68%
No Reminder Condition	14	47%	16	53%

As explained in "The Conversion Attempt" section, on rare occasions, a "no reminder" respondent recalled the previous contact attempts. When this occurred, the interviewer apologized, pretended to be ignorant of any previous attempt, and then "stroked" the respondents by telling them how important they were to the success of the study. It is interesting to note the interviewer did not report any difference in ease of converting the "no reminder" over the "reminder" respondents. One could hypothesize the content of the letter had no effect or was not really read. However, according to the interviewer, the receipt of a letter – any letter – on Department of Labor letterhead paper, with a real signature on the bottom did seem to have an effect. Apparently, respondents remembered receiving the letter and remembered the name on the signature line even if they did not bother actually reading the letter.

Predictive Ability of Initial Refusal Reason. Another question under investigation was whether the initial reason the respondent gave for not participating was predictive of whether he or she would ultimately participate. Such a predictive relationship would be beneficial in targeting future conversion attempts. Unfortunately, we did not find any support for such a prediction.

We compared the reasons for *initially* not participating to those for finally not participating. Almost half of nonrespondents (six of thirteen) who initially said that they would be willing to participate under certain conditions (e.g., not at this time but later, would if they could fax in rather than answer over the telephone) indicated at the time of conversion that they just did not want to participate. This may indicate that respondents may feel obligated to provide an explanation more specific than saying, "I just don't want to participate." Table 6 compares the respondents' initial reason for not participating to their final reason. If final reasons given remained identical to the initial reason, we would expect to see numbers only in the diagonal of this table, that is, only where the "7" (Need Flexibility); "1" (Against Company Policy) and '3" (Just don't want to do it) appear. As can be seen, only eleven of the twenty-one possible reasons reside in the diagonal. In other words, ten of the twenty-one respondents gave a different reason for not responding the second time around. Six of the respondents changed their initial reason for needing survey flexibility, to the more general, "I just don't want to" reason.

Table 6. A Comparison of Initial Nonresponse and Final Nonresponse

	Final Reason			
Initial Reason	**Need Flexibility**	**Against Company Policy**	**Just Don't Want To Do It**	**Total**
Need Flexibility	7	0	6	13
Against Company Policy	2	1	0	3
Just Don't Want To Do It	0	2	3	5
Total	9	3	9	21

Reasons For Agreeing to Participate. Finally, we attempted to reinterview 8 cases from the "reminder" condition" and asked them why they ultimately decided to participate. We were able to successfully contact six of the 8 cases. Table 7 below, presents respondent reasons for participation.

Table7. Reasons for Responding Provided By Converted Respondents

Reason Provided	Total
Letter encouraged participation	2
Very busy at initial collection attempt	2
BLS persistence wore them down	1
Study somehow, now, seemed important	1
Total	6

Discussion

Does time alone provide a "cooling off" period for respondents who refuse study participation? What have we learned about waiting a few months before recontacting nonrespondents? Is it worth the additional effort or not? Of our sample of 61 nonrespondents, we converted 39%. Twenty-four provided data, 25 refused, and 12 cases were finalized as non-contact. Do we know why we were able to convert 24 cases? Not really. Reminding or not reminding the nonrespondents of previous attempts to enlist their participation seemed to have no statistically significant effect, though there seemed to be a tendency towards higher conversion rates in the no reminder condition. And, it comes as no surprise, smaller establishments are easier to convert than larger establishments.

Interestingly, the reasons provided for nonresponse proved to be of no help to us. There was neither a predictive relation found for any of the initial reasons for nonresponse with ultimate cooperation, nor did initial refusals use the same reason for refusing the second time around. This finding indicates that tailoring conversion scripts may not be productive. Therefore, was all the additional effort worth it? Certainly. We managed to achieve a 39% conversion rate. Once we ruled out all other possible reasons for this conversion, the only reason remaining to us was time. If one waits a few months or so, there may be enough change in the establishment and the establishment contact, as to reward one with a decent conversion rate. Calling <u>all</u> of the nonrespondents, regardless of nonresponse reason will yield some conversion. If recontacts are not overly expensive in one's organization, recontacting nonrespondents may very well be worth the additional effort.

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