RESEARCH REPORT SERIES
(Survey Methodology #1992-05)

The Simplified Questionnaire Test (SQT) Item Nonresponse Evaluation

Nancy A. Bates

Center for Survey Measurement
Research and Methodology Directorate
U.S. Census Bureau
Washington, D.C. 20233

Report issued: March 28, 2017

Disclaimer: This report is released to inform interested parties of research and to encourage discussion of work in progress. Any views expressed on the methodological issues are those of the authors and not necessarily those of the U.S. Census Bureau.

Abstract

The 1992 Simplified Questionnaire Test, (SQT) was developed to evaluate alternative short form designs in an effort to improve response rates in future censuses. Improvement to response rates became a salient concern to the Census Bureau following the unanticipated decrease of 10 percentage points in the short form mail response rate in 1990 from the 1980 census. The SQT was designed to determine the effects on response rates of asking fewer questions, using more "respondent friendly" forms, requesting social security numbers and using an implementation strategy that relies upon multiple contacts by mail. The study was conducted using the 1990 census short form as the control and four experimental versions of the 1990 census short form. The four experimental questionnaires included a user friendly "booklet", a shortened "micro" form, a shortened form including social security number (micro/SSN), and a postcard-like form referred to as the "roster" form. By comparing rates of question nonresponse across form types (in cases where content is comparable), this evaluation supplements the mail response rate analysis by providing a glimpse at the within-form levels of response.

Keywords: census, mail response rate

Suggested Citation: Nancy A. Bates**. (1992). The Simplified Questionnaire Test (SQT) Item Nonresponse Evaluation.** *Research and Methodology Directorate, Center for Survey Measurement Study Series (Survey Methodology #1992-05).* U.S. Census Bureau. Available online at
<http://www.census.gov/srd/papers/pdf/sm9205.pdf>.

UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, DC 20233-0001

July 22, 1992

MEMORANDUM FOR Susan M. Miskura
Chief, Year 2000 Research and Development Staff

From: Elizabeth A. Martin EAM
Chief, Center for Surveys Methods Research

Subject: Simplified Questionnaire Test (SQT)
Item Nonresponse Evaluation

Attached is the item nonresponse evaluation report for the Simplified Questionnaire Test (SQT). I understand this report is being included in a comprehensive draft memorandum of SQT findings which includes the mail response evaluation and a summary of results from the debriefing interviews.

Please forward any questions about this report to Nancy Bates at X7331.

Attachment

cc:
D. Dillman (DIR)
C. Miller (2KS)
J. Dinwiddie "
E. Singer (CSMR)
E. Miller (CSMR)

The Simplified Questionnaire Test (SQT)

Item Nonresponse Evaluation

Nancy Bates
Center for Survey Methods Research
July 22, 1992

INTRODUCTION

The 1992 Simplified Questionnaire Test, (SQT) was developed to evaluate alternative short form designs in an effort to improve response rates in future censuses. Improvement to response rates became a salient concern to the Census Bureau following the unanticipated decrease of 10 percentage points in the short form mail response rate in 1990 from the 1980 census.

The SQT was designed to determine the effects on response rates of asking fewer questions, using more "respondent friendly" forms, requesting social security numbers and using an implementation strategy that relies upon multiple contacts by mail. The study was conducted using the 1990 census short form as the control and four experimental versions of the 1990 census short form. The four experimental questionnaires included a user friendly "booklet", a shortened "micro" form, a shortened form including social security number (micro/SSN), and a postcard-like form referred to as the "roster" form. For a more detailed description of the treatment groups, implementation strategy and sampling design of the SQT see "Preliminary Results of the Mail Response Evaluation for the SQT" (Sinclair and West, 1992).

The SQT evaluation had three components: a mail response analysis, a respondent/nonrespondent telephone debriefing, and an item nonresponse evaluation. This report documents the item nonresponse evaluation. The SQT item nonresponse research was initiated to learn how changes to the questionnaire format and/or length might affect rates of response to some or all questions. By comparing rates of question nonresponse across form types (in cases where content is comparable), this evaluation supplements the mail response rate analysis by providing a glimpse at the <u>within</u>-form levels of response.

This evaluation is based upon data captured from 9,817 forms mailed back to Jeffersonville by the time of closeout to the SQT (May 15, 1992). These forms reflect data for 24,719 <u>persons</u>. Unless otherwise noted, item nonresponse is defined as cases where a question was left blank. The base N's include only eligible respondents for each particular item, for example, only homeowners are in the base for item nonresponse to the property value question. Cases where the homeownership question was left blank would be excluded from the property value item nonresponse base. All estimates are accompanied by standard errors (in parenthesis) which were generated by VPLX, a software estimation package which adjusts for the SQT's clustered sample design. National estimates are weighted to reflect the stratified sample. Differences reported as being "significant" reflect a confidence interval of 95%.

$$\text{Item nonresponse rate} = \frac{\text{Number of cases leaving item blank}}{\text{Number of cases eligible to answer that item}} \times 100$$

EXECUTIVE SUMMARY

- Nationally, the average household size from the micro/SSN form was slightly, yet significantly, smaller than households returning all other form types. In areas were mail response was low ~~to~~ in the 1990 census (LRA's), households were significantly smaller for the micro/SSN form only when contrasted with the roster form.

- Generally, item nonresponse in the population section was low for all form types (around 2-3 percent, excluding Hispanic origin and SSN). In cases where significant differences were found, it was usually the case that the experimental form(s) outperformed the control.

- The three experimental forms incorporating an order change and added instruction to Hispanic origin demonstrated a significantly lower rate of item nonresponse. The control form's rate of nonresponse to Hispanic origin was 18.1 percent compared to 7.0, 10.7 and 10.3 percent for the booklet, micro and micro/SSN form, respectively.

- For the most part, reordering race to follow Hispanic origin did not cause an increase in the rate of nonresponse to race.

- At the <u>individual</u> level, item nonresponse to social security number was 13.9 percent. This translates into 17.7 percent of the <u>households</u> failing to provide SSN's for at least one household member. Rates of nonresponse for the LRA group were no different from the 1990 "other" group.

- The estimated percentage loss in mail completion rates as a result of asking SSN added to the percentage of households who return the form without SSN's for all persons yields a measure of the additional follow-up required from adding SSN to the census form. Nationally, this estimate is 21.1 percent. This means that more than 2 households in 10 would require some type of recontact as a result of attrition in mail response or item nonresponse due to asking SSN.

- Overall, item nonresponse rates were consistently low for the housing questions and with the exception of one item, no differences in item nonresponse were found. The one difference was the tenure question where nonresponse was significantly higher in the booklet. The tendency to skip over the entire housing section did not vary by form type.

FINDINGS

ROSTER/COVERAGE QUESTIONS

Both the control and roster questionnaires asked that the names of all household members be listed in a traditional "roster" format. The roster for the control was located on a fold-out flap at the beginning of the form. The roster occupied the largest portion of the 12" X 5 1/2" card for the postcard

panel.

Overall, and within both strata, the postcard form had a significantly lower rate of nonresponse to the roster than the 1990 control form. This is expected, considering that the roster is one of only two items contained on the postcard format. The roster is somewhat obscured on the control form because of its location on the fold-out flap.

Percent Item Nonresponse to the Household Roster by Form Type by Strata

SQT Form Type	Item Nonresponse Rates		
	National	1990 LRA	1990 Other
1990 Short Form	8.4 (0.8)	10.3 (1.1)	8.2 (0.8)
Roster	1.4 (0.3)	0.8 (0.3)	1.4 (0.4)

For the control and postcard panels, the estimate for household size is based on the number of names on the roster. In the 8.4 percent of cases for the control form where the roster was left blank, household size was defined as the number of persons with at least some population data answered. Household size for the SQT forms without a roster was calculated by adding the number of persons for whom population data was reported plus the number of additional persons (beyond six or seven) listed in the addendum roster (Q. B).

All five forms allowed for a total report of up to 12 persons. The control and postcard rosters each contained 12 lines, the booklet allowed for seven persons to report population data plus five additional lines for extra names on the addendum roster. Both micro forms provided six "person boxes" for answering population questions plus six additional lines for names only. One hypothesis was that the elimination of a separate comprehensive roster on the booklet and micro forms might result in less accurate reporting of all household members, particularly beyond the number for which population data was reported. The following table breaks out the frequencies for reported household size by form type to explore this concern.

Household Size Distribution by Form Type

	Form type				
Household Size	1990 Short	Booklet	Micro	Micro/SSN	Roster
1	24.5%	26.7%	24.8%	26.6%	25.0%
2	35.4	32.9	33.5	35.4	35.6
3	16.7	16.4	17.1	17.9	15.9
4	14.0	13.3	15.2	12.8	14.4
5	6.3	6.7	5.7	4.7	5.3
6	2.1	2.6	2.6	2.1	2.4
7	0.7	0.8	0.7	0.2	0.6
8	0.3	0.5	0.3	0.3	0.3
9	0.0	0.1	0.2	0.0	0.3
10	0.0	0.1	0.0	0.0	0.1
11	0.0	0.0	0.0	0.0	0.2
12	0.0	0.0	0.0	0.0	0.1

Although the postcard form demonstrated a slightly higher tendency to report household sizes beyond 8, the X^2 value for the unweighted distribution indicated no significant differences by form type. From this measure at least, the absence of a comprehensive roster does not appear to affect coverage. The following table presents another measure of household size differences -- average household size by strata.

Average Household Size by Form type by Strata

SQT Form Type	Average Household Size		
	National	1990 LRA	1990 Other
1990 Short Form	2.54 (0.4)	2.58 (0.6)	2.53 (0.4)
Booklet	2.55 (0.4)	2.61 (0.5)	2.54 (0.4)
Microform	2.57 (0.4)	2.61 (0.5)	2.56 (0.4)
Microform/SSN	2.42 (0.4)	2.55 (0.5)	2.41 (0.4)
Roster	2.55 (0.4)	2.72 (0.6)	2.53 (0.4)

Overall, and in 1990 "other" areas, households returning the SSN microform reported a slightly, yet significantly, lower average household size than all the other form types. For the LRA group, reported household size differed significantly for the micro/SSN form only when contrasted with the roster questionnaire. Considering that the mail response evaluation indicated that significantly fewer households from LRA's returned the SSN form, we might have

expected the below average household size at the national level for this form assuming that LRA's contribute larger-than-average household sizes. However, the smaller household size for the SSN form was also evident in "other" areas suggesting that a different explanation is needed.

Item Nonresponse to the Undercoverage and Overcoverage Questions
by Form type by Strata

SQT Form Type	National	1990 LRA	1990 Other
	UNDERCOVERAGE		
1990 Short Form	12.8 (.94)	13.2 (1.3)	12.8 (1.0)
Booklet	30.0 (1.3)	33.9 (1.6)	29.7 (1.4)
	OVERCOVERAGE		
1990 Short Form	14.7 (1.0)	15.8 (1.4)	14.6 (1.1)
Booklet	33.0 (1.3)	38.8 (1.7)	32.5 (1.4)

Coverage questions were asked only on the control and booklet panels. Item nonresponse to the undercoverage and overcoverage items was defined as cases where both components of question were left blank (FOSDIC circles/check boxes blank and no names were entered).

Overall, and for both strata, item nonresponse to both coverage questions was significantly higher (more than double) for the booklet form. Both items are very wordy and contain several examples within the text of the question. In the booklet form, the length of the question and the text's location outside the shaded answer box make it resemble an instruction rather than a question. Both factors may have contributed towards the higher nonresponse. On the booklet form, nonresponse to both questions was significantly higher for LRA's than "other" areas; no significant differences existed between strata for the 1990 short form.

Percent Entering a Name(s) to the Undercoverage and Overcoverage Questions by Form Type by Strata

SQT Form Type	National	1990 LRA	1990 Other
	% Entering 1 or More Name - Undercoverage		
1990 Short Form	1.1 (.29)	1.4 (.43)	1.0 (.31)
Booklet	1.3 (.31)	2.0 (.48)	1.3 (.34)
	% Entering 1 or More Name - Overcoverage		
1990 Short Form	.81 (.26)	.41 (.24)	.84 (.28)
Booklet	1.1 (.29)	1.5 (.42)	1.1 (.31)

At the national level, no differences were found between forms regarding the likelihood of entering a name(s) to either coverage question. Within LRA's, however, respondents to the booklet form indicated a slight yet significantly higher tendency to enter a name(s) to the overcoverage question.

POPULATION QUESTIONS

One objective of the SQT was to determine the effect on response of asking fewer questions. As a result, the number of population questions varied across forms. The control and booklet form both contained all five demographic questions from the 1990 census short form (relationship, sex, race, age, marital status, and Hispanic origin). The micro forms eliminated relationship and marital status while the roster format contained only one demographic question -- date of birth.

Item nonresponse for relationship is based only of persons 2-7 (person 1 is not asked the question). Nonresponse was defined as cases where neither the FOSDIC circle/check box for a relative or nonrelative category was marked nor was any write-in provided.

Percent Item Nonresponse to the Relationship Question by Form Type by Strata

SQT Form Type	Item Nonresponse Rates		
	National	1990 LRA	1990 Other
1990 Short Form	3.3 (.62)	3.0 (.70)	3.4 (.67)
Booklet	2.0 (.32)	2.1 (.42)	2.0 (.35)

The relationship question was left unanswered less than 5 percent of the time and, while rates were somewhat lower for the booklet, differences were not significant from the control overall or within strata. This is noteworthy because the booklet form reordered this item from first to fourth in hopes of increasing response rates. Previous research has indicated that this question is confusing to respondents and tends to fare better when not used as the lead-off question in the population section (Bates, 1991).

Percent Item Nonresponse to the Sex Question by Form Type by Strata

SQT Form Type	Item Nonresponse Rates		
	National	1990 LRA	1990 Other
1990 Short Form	3.0 (.43)	3.3 (.64)	2.9 (4.7)
Booklet	0.4 (.10)	0.7 (.18)	0.3 (.11)
Microform	2.2 (.26)	2.9 (.43)	2.1 (.29)
Microform/SSN	3.5 (.42)	3.6 (.58)	3.5 (.45)

Overall and within strata, the booklet form had lower nonresponse rates to sex than all other forms. In addition, the microform without SSN had a lower nonresponse than the form with SSN overall and for the 1990 "other" group. Higher nonresponse in the SSN form may be due to the sex question being fit into a smaller space because of the additional SSN item.

Item nonresponse to the social security number (SSN) question using persons as the unit of analysis is presented below. Social security number was asked only on the microform/SSN panel. Item nonresponse to SSN is defined as cases where SSN was left blank, "refuse" or some other written refusal was present, or the entry was less than nine digits long. Item nonresponse to SSN at the individual level was 13.9 percent overall. This means that for approximately 14 percent of the persons reported on this form, no SSN was provided. The individual item nonresponse from LRA's was not significantly different from individuals in 1990 "other" areas. This finding somewhat contradicts earlier findings of a significantly lower mail response rate for the SSN form in these areas. For a more detailed evaluation of SSN nonresponse at the individual level, see the previous memorandum, "Revised Item Nonresponse Results for SSN from the SQT," (U.S. Bureau of the Census, 1992).

Percent Item Nonresponse to SSN by Strata (Individual Level)

SQT Form Type	Item Nonresponse Rates		
	National	1990 LRA	1990 Other
Microform/SSN	13.9 (.93)	14.9 (1.2)	13.9 (1.0)

Percent Item Nonresponse to SSN by Strata (Household Level)

SQT Form Type	Item Nonresponse Rates		
	National	1990 LRA	1990 Other
Microform/SSN	17.7 (1.1)	17.7 (1.4)	17.7 (1.1)

Nonresponse to SSN was next estimated using households as the unit of analysis. Nonresponse at the household level is defined as the percent of households who failed to provide an SSN for one or more household member(s). When calculated at this level, the overall rate of nonresponse increases approximately 4 percentage points to 17.7 percent. This means that almost 18 percent of the households returning the SSN form failed to give SSN's for at least one household member. Household nonresponse rates for both strata were identical to the national estimate, mirroring the earlier finding of no differences between groups in the ability or willingness to give SSN's once deciding to return the form.

Components of Nonresponse to Social Security Number

Nonresponse Component	Estimates (%)		
	National	1990 LRA	1990 Other
Estimated loss in completion rates*	3.4%	6.2%	3.0%
Household-level item nonresponse rates	17.7%	17.7%	17.7%
Total nonresponse	21.1%	23.9%	20.7%

* Estimates are from the draft memorandum of the SQT mail response evaluation (6/24/92).

The mail response evaluation revealed that the completion rate for the microform with the SSN was significantly lower than the completion rate for the same form without the SSN both at the national level and for the 1990 "other" stratum. By summing this potential loss in mail response with the additional percent of households who return the SSN form but don't report everyone's number, we arrive at a measure of the additional percent of households that would require a follow-up beyond what would ordinarily be required if SSN were not asked. When isolating SSN as the determinant of follow-up, an additional 21.1 percent of all households nationally would require a recontact. Close to an additional 24 percent of households from the 1990 LRA's would require some type of recontact resulting from loss in mail response or item nonresponse.

Race and Hispanic Origin were asked on all SQT forms except the roster. Traditionally, and on the SQT control form, race precedes Hispanic origin. The booklet and both micro forms reordered these two questions so that Spanish origin was asked before race. Additionally, a new instruction was placed before the Spanish origin question, to emphasize that it is important to answer both questions. Both modifications attempt to reduce item nonresponse to Hispanic Origin which historically is highest of the 100-percent population items. The instruction is to encourage non-Hispanics to answer "no" rather than skipping the question while the order change is to reduce the perceived redundancy of the Spanish origin question by placing it prior to race.

Percent Item Nonresponse to the Hispanic Origin Question
by Form Type by Strata

SQT Form Type	Item Nonresponse Rates		
	National	1990 LRA	1990 Other
1990 Short Form	18.1 (1.1)	20.7 (1.7)	17.8 (1.2)
Booklet	7.0 (.64)	8.7 (1.0)	6.8 (.70)
Microform	10.7 (.82)	14.1 (1.2)	10.4 (.89)
Microform/SSN	10.3 (.77)	11.9 (1.2)	10.1 (.83)

When placed before race and prefaced by the new instruction, Hispanic origin's rate of item nonresponse dropped significantly overall and for both strata groups. The traditional placement resulted in approximately 18 percent of respondents overall failing to respond compared to 7 percent for the booklet and approximately 11 and 10 percent for the micro and micro/SSN forms, respectively. Overall and for both strata groups, the item nonresponse rate for the booklet form was also lower than that of either micro form. The Hispanic origin rate of nonresponse was significantly different by strata only for the microform; for this form, the LRA group had a higher tendency to leave the item blank than the 1990 "other" group.

Percent Item Nonresponse to the Race Question by Form Type by Strata

SQT Form Type	Item Nonresponse Rates		
	National	1990 LRA	1990 Other
1990 Short Form	2.2 (.40)	4.5 (.86)	2.0 (.43)
Booklet	3.0 (.38)	4.9 (.80)	2.7 (.41)
Microform	1.9 (.29)	6.5 (.91)	1.5 (.31)
Microform/SSN	2.7 (.40)	7.3 (1.1)	2.3 (.43)

For the most part, placing race after Spanish origin did not cause an increase in nonresponse to race. Overall and for the 1990 "other" group, rates of nonresponse to race for the three experimental forms were no different from that of the control. For the LRA group, item nonresponse to race was significantly higher only on the micro/SSN form compared to the control.

Results from the 1990 census confirmed that most write-ins to the "other" race category are some type of Spanish/Hispanic ethnicity. In addition to reducing item nonresponse, reordering the race/Hispanic origin questions can result in a reduction of the reporting of "other" race by persons of Hispanic descent by allowing them first to record their Spanish heritage (Bates, 1991; Martin, DeMaio and Campanelli, 1990).

Percentage of Hispanics Reporting "Other" Race by Form Type by Strata

SQT Form Type	Estimates (%)		
	National	1990 LRA	1990 Other
1990 Short Form	47.8 (7.1)	48.6 (5.5)	47.4 (10.7)
Booklet	28.8 (5.6)	33.9 (4.3)	26.5 (8.0)
Microform	33.1 (6.5)	30.1 (4.7)	43.9 (10.1)
Microform/SSN	28.3 (6.1)	30.8 (4.4)	26.6 (10.0)

At the national level, two of the three experimental forms using the reordered sequence were successful in significantly reducing reports of "other" race by Hispanics. Both booklet and microform with SSN had lower percentages than the control form of Hispanics selecting the "other" race category. An examination at the strata level magnifies this finding. In LRA's (which were defined based upon percent Black or Hispanic) all three forms placing Spanish origin first had fewer reports of "other" race by persons of Spanish descent; among the 1990 "other" strata a similar trend is seen but the differences are not

significant, due to very large standard errors resulting from the smaller number of Hispanics in these areas.

Age information was obtained by two different means in the SQT. On the control form two measures were asked -- age in years and year-of-birth. Respondents reported these by writing in numbers and filling corresponding FOSDIC circles beneath each entry. The SQT experimental questionnaires obtained age by the day/month/year-of-birth method.

Item nonresponse was compared across panels by creating a variable that measured whether all components of the age question had been left blank. This means that nonresponse to age for the control form was defined as cases where both age and year of birth were blank. In the remaining panels, item nonresponse is defined as cases where neither day, month, nor year of birth were given. Failure to complete the FOSDIC circles in the control was not one of the criteria used to determine nonresponse. Defining nonresponse this way does not compare data quality across forms (i.e., which form obtained the most complete information for age). Instead, the measure used here compares the occurrence of some type of response to the question(s) measuring age versus no response at all.

Percent Item Nonresponse to Year of Birth/Age Question
by Form Type by Strata

SQT Form Type	Item Nonresponse Rates		
	National	1990 LRA	1990 Other
1990 Short Form	1.4 (.42)	1.5 (.43)	1.4 (.46)
Booklet	1.1 (.19)	1.6 (.31)	1.0 (.21)
Microform	0.8 (.18)	1.3 (.26)	0.7 (.19)
Microform/SSN	1.1 (.27)	1.5 (.46)	1.1 (.29)
Roster	0.3 (.14)	0.5 (.21)	0.3 (.16)

Overall, complete nonresponse to the age item(s) was very rare. However, nationally, the postcard form using the month/day/year format did exhibit significantly lower rates of nonresponse compared to the other forms. Presumably this is because age was the only information requested beyond names of household members. These results were replicated at the strata level with the exception that the difference between nonresponse to age between the microform and the roster were not quite significant for the 1990 "other" group.

Percent Item Nonresponse to the Marital Status Question by Form Type by Strata

SQT Form Type	Item Nonresponse Rates		
	National	1990 LRA	1990 Other
1990 Short Form	2.9 (.40)	5.9 (.81)	2.6 (.43)
Booklet	1.4 (.26)	1.9 (.37)	1.4 (.28)

The final population item, marital status, appeared only on the control and user-friendly booklet forms. It appeared next to last in the population section for the control but was placed second in the booklet. The tendency to skip this question was rare, but the booklet still had significantly lower nonresponse overall and for both strata. On the control form, nonresponse to marital status was significantly higher for the LRA group compared to the "other" group; the difference between groups was not significant for the booklet form.

HOUSING QUESTIONS

Questions about housing were eliminated from both microforms and the roster questionnaire as part of the test to shorten the census form. As a result, only the booklet form contained the same housing question content as the 1990 short form. Both the control and booklet questionnaires located the housing section on the last page. Within this section, however, the booklet changed the order of several questions and used a combination of graphic arrows and bracketed skip instructions to help guide respondents to the correct questions.

Percent Item Nonresponse to the Structure, Number of Rooms, and Tenure Questions by Form Type by Strata

SQT Form Type	Item Nonresponse Rates		
	STRUCTURE		
	National	1990 LRA	1990 Other
1990 Short Form	5.2 (.62)	6.3 (.90)	5.1 (.67)
Booklet	5.7 (.63)	7.1 (.88)	5.5 (.69)
	NUMBER OF ROOMS		
	National	1990 LRA	1990 Other
1990 Short Form	4.9 (.61)	4.7 (.78)	5.0 (.66)
Booklet	5.0 (.59)	5.6 (.79)	4.9 (.65)
	TENURE		
	National	1990 LRA	1990 OTHER
1990 Short Form	5.7 (.65)	7.3 (.96)	5.5 (.70)
Booklet	9.8 (.81)	12.4 (1.1)	9.5 (.88)

Inquiries about type of household structure, the number of rooms within a house and whether the house is owned or rented are the first three housing questions on the 1990 short form. The booklet also started off the housing section with the structure question but placed the number of rooms question fourth. The question about owning or renting was next after number of rooms.

Response rates to both the structure and number of rooms question did not vary significantly by form type overall or at the strata level. Nonresponse levels to tenure, however, were significantly higher for the booklet questionnaire nationally and for both strata. The reason for this is not immediately evident, however a minor typographical error to the booklet's question wording may account for the difference. The question is supposed to read "Is this house or apartment - " and is followed by four tenure categories from which to select. In the booklet, however, this lead-in statement mistakenly reads "Is this a house or apartment -" (underline added for emphasis). The extra article results in a slight change to the question flow that may lead respondents to expect different response categories and thus potentially explain the slightly higher nonresponse.

Percent Item Nonresponse to the Acreage, Commercial Property, Property Value, Rent Amount and Meals in Rent Questions by Form Type by Strata

SQT Form Type	Item Nonresponse Rates		
	National	1990 LRA	1990 Other
LOCATED ON 10 OR MORE ACRES			
1990 Short Form	1.6 (.42)	2.7 (.80)	1.5 (.45)
Booklet	2.8 (.56)	4.4 (.96)	2.7 (.60)
COMMERCIAL BUSINESS ON PROPERTY			
1990 Short Form	1.9 (.47)	2.4 (.76)	1.9 (.50)
Booklet	2.6 (.54)	2.6 (.58)	2.9 (.78)
PROPERTY VALUE			
1990 Short Form	6.2 (.82)	7.6 (1.3)	6.1 (.88)
Booklet	6.6 (.86)	7.6 (.92)	6.5 (.92)
MONTHLY RENT AMOUNT			
1990 Short Form	3.0 (1.0)	2.0 (.90)	1.1 (.62)
Booklet	2.5 (.89)	3.1 (1.1)	2.7 (1.0)

(table con't.)

	MEALS INCLUDED IN RENT		
1990 Short Form	3.3 (.97)	4.5 (1.3)	3.1 (1.1)
Booklet	3.2 (.95)	4.4 (1.2)	3.1 (1.1)
	NONRESPONSE TO ENTIRE HOUSING SECTION		
1990 Short Form	3.3 (.50)	3.8 (.71)	3.3 (.54)
Booklet	4.1 (.54)	4.9 (.74)	4.0 (.59)

For the remaining housing questions, item nonresponse was consistently low (usually under 5 percent). Overall and by strata, item nonresponse rates did not vary significantly by form type. Nonresponse to the entire housing section (cases where all housing questions were unanswered) was also very uncommon and did not vary by form type overall or by group. The combined graphic, order and layout changes apparently had neither a positive nor negative effect on item response rates in the housing section.

Item nonresponse to name and phone number of person completing the form

SQT Form Type	Item nonresponse estimates (%)		
	National	1990 LRA	1990 Other
	NAME OF RESPONDENT COMPLETING FORM		
1990 Short Form	9.2 (.81)	10.6 (1.1)	9.1 (.88)
Booklet	9.1 (.78)	10.8 (1.1)	8.9 (.86)
Microform	16.3 (.98)	17.1 (1.3)	16.2 (1.1)
Microform/SSN	16.2 (1.0)	18.8 (1.4)	15.9 (1.1)
	PHONE NUMBER OF RESPONDENT		
1990 Short Form	13.0 (.94)	17.5 (1.4)	12.6 (1.0)
Booklet	12.3 (.89)	15.2 (1.2)	12.0 (.98)
Microform	18.5 (1.0)	20.2 (1.4)	18.3 (1.1)
Microform/SSN	18.7 (1.1)	22.2 (1.5)	18.4 (1.2)

With the exception of the roster questionnaire, the SQT forms asked for the name and telephone number of the person who completed the form. During an actual census, this information is crucial to conduct follow-up operations if clarification is required. Name and telephone number were located on the back page of the 1990 short form, below the housing section in the booklet

questionnaire, and as the last question on the back page of both microforms. Item nonresponse was generally higher for these items compared to most population and housing questions examined earlier. This may reflect some resistance to providing information such as a telephone number, or it could simply result from the placement so near the end of the questionnaire.

Rates of nonresponse for both components were significantly higher overall for both microforms compared to either the standard short form or the booklet; this trend was evident at the strata level also. Rates of nonresponse for telephone number were significantly higher for the LRA group than the 1990 "other" group for all panels except the microform without the SSN. We might expect the LRA strata to have a higher nonresponse to telephone number if we assume these areas contain more households without a telephone.

REFERENCES

Bates, Nancy
"The 1990 Alternative Questionnaire Experiment: Preliminary Report of the 100-percent Items." 1990 Decennial Census PREM memorandum, No. 108, December 9, 1991.

Martin, Elizabeth A., Theresa J. DeMaio and Pamela C. Campanelli
"Context Effects for Census Measures of Race and Hispanic Origin." Public Opinion Quarterly, vol. 54, pp. 551-566, 1990.

Sinclair, Michael and Kirsten West
"Preliminary Results of the Mail Response Evaluation for the Simplified Questionnaire Test (SQT)." A draft Census Bureau report, June 24, 1992.

U.S. Bureau of the Census
"Revised Item Nonresponse Results for Social Security Number from the Simplified Questionnaire Test (SQT)." A Census Bureau memorandum from Nancy Bates to R.D. Tortora and S.M. Miskura, June 18, 1992.