

Questionnaire Design Activities in Government Statistics Offices

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Abstract: This article reports the results of a survey of questionnaire design activities in government statistics offices around the world. Substantial activity is in progress and is likely to increase even more in the future. More than 80 percent of countries test census forms, and better than half test continuing or special forms. Much less testing is done with

alternative time periods, respondents, or data collection methods. About half of all countries have a special group responsible for questionnaire design and development in addition to subject specialists.

Key words: Questionnaire; questionnaire design; censuses; surveys; statistics offices.

1. Introduction

There has been a growing recognition of the importance of questionnaire design in government statistics offices. The questions and forms used are a major source of survey error in most government surveys.

We believe that it is useful for government statisticians to know what is done in other countries to improve questionnaire design. To obtain this information, we conducted a worldwide survey of questionnaire design activities in government statistics offices. This article reports the results of that survey.

Responses were received from 88 countries (out of 137 contacted twice by mail). We think that this is an especially good response rate given the problems of mailing overseas in a

short time period and other problems detailed below. The data are presented by country and in summarized form. There are limitations to this study that must be recognized.

1. Within the time limits of the data collection period, we did not receive responses from all countries. In some cases this may indicate that no questionnaire design activities are conducted. In other cases, however, it may simply be that we had an incorrect or incomplete address or that the persons who received our questionnaire do not use English as one of their languages. The results thus should not be used to generalize to countries that are not included.

2. Some of our respondents told us that the questions asked did not fit well into the way that their questionnaire design activities are organized. To some extent, this may reflect our lack of knowledge or our preconceived ideas. Nevertheless, by careful editing, we have been able to place most answers into our framework.

3. We have selected a limited number of topics to explore, based on our ideas of what

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the most important issues are. Later researchers may well wish to study other aspects of questionnaire design in government statistics offices.

4. We sent only one questionnaire to one organization in each country. Our own experience, however, tells us that each organization may have several different groups involved in questionnaire design, and each of these groups may have different methods and perspectives. It will certainly be the case that there will be different government agencies that collect data. We have contacted only the agency that we were able to identify as the one with primary data collection responsibilities in a country, and we addressed our request for information to the head of that agency. Thus our sample is not representative of all governmental data collection activities throughout the world, but instead represents a census of the agencies with primary data collection responsibilities.

5. Because of the limited nature of our inquiry, we were not able to follow up nonrespondents more than once, and in cases where there was some concern regarding the respondent's interpretation of our questions, we were unable to follow up to edit the responses. We have reported all responses

faithfully in the tables that follow, even in those cases where we feel there obviously are outliers.

Although we have pointed out some limitations to the interpretation of our results, we believe that most countries found the questions applicable and interpreted the questions in the same way. We would, of course, be glad to get additional information from any country if we have misinterpreted their answers.

2. The Presence of Special Groups Responsible for Questionnaire Development

The first topic that we explored was whether, in addition to the subject specialists, there are special groups within the statistical offices that are responsible for questionnaire design and development. About 44 percent of all government statistics offices have a special group (39 of 88 countries, see Table 1). In some countries there is no special group because the office is too small to afford this kind of specialized group. In many countries, however, there is the feeling that ultimate responsibility for questionnaire design should be given to subject specialists.

Table 1. Presence of Special Group Responsible for Questionnaire Development and Organizational Setting

Country	Special group		Size of group	Name of group or job titles	Manager to whom group reports
	No	Yes			
Antigua		x	—	Chief Statistician	Permanent Secretary, Ministry of Finance
Argentina	x				
Australia		x	12	Survey Development Subsection	Director, Population Survey Operations
Austria		x	7	Statistical Illustrations	Chief, Department of Topography, Cartography and Statistical Illustrations
Bahamas	x				
Bangladesh		x	3	Director, Data Processing	Director General, Bureau of Statistics
Barbados	x				
Belgium	x				

Table 1 (cont.). Presence of Special Group Responsible for Questionnaire Development and Organizational Setting

Country	Special group		Size of group	Name of group or job titles	Manager to whom group reports
	No	Yes			
Belize	x				
Belmopan		x	2	Chief Statistician ,	Chief Statistician
Benin		x	100	National Institute of Statistics and Economic Analysis	Director General
Botswana	x				
Brazil	x				
Burundi	x				
Cameroon		x	10	Central Office of Censuses and Surveys	Chief of Studies
Canada		x	14	Federal Department/ Agency Relations Group	Assistant Director, Census & Household Survey Methods Division
Cayman Islands	x				
Chile		x	8	—	Chief of Division
Costa Rica		x	5	Department of Design and Statistical Analysis	Chief, Department of Design and Statistical Analysis
Cyprus	x				
Czechoslovakia	x				
Denmark		x	3	Forms Section	Head of Division
Ecuador		x	8	Programming Division	Director of Planning
El Salvador	x				
Finland		x	1	Planning Officer	Chief of Planning and Programming
France	x				
Gambia	x				
Great Britain	x				
Guatemala	x				
Hong Kong	x				
Hungary		x	3	Section for Data Collection and Coordination	Head of Department for System Development and Coordination
Iceland	x				
India	x				
Indonesia		x	16	Statistical Classification and Standardization Division	Chief, Analysis & Methodology Development Bureau
Iran		x	30	Questionnaire Design Group and Bureau of Statistical Designs and Calculations	Deputy Minister of Plan and Budget and Chief, Statistical Center
Ireland		x	1	O and M Officer	Personnel Officer
Israel	x				
Japan	x				
Jordan		x	15	Committee of Section Heads	Director General
Kenya	x				
Kiribati		x	1	Republic Statistician	Secretary for Finance
Rep. of Korea	x				
Kuwait		x	4	Research & Training Department	Assistant Under Secretary for Statistical Affairs
Lesotho	x				
Luxembourg	x				
Malagasy	x				

(cont.)

Table 1 (cont.). Presence of Special Group Responsible for Questionnaire Development and Organizational Setting

Country	Special group		Size of group	Name of group or job titles	Manager to whom group reports
	No	Yes			
Malawi	x				
Maldives		x	2	Under Secretary and Senior Statistician	Senior Under Secretary
Mauritania	x				
Mauritius	x				
Montserrat	x				
Netherlands		x	30	Social Survey Department	Head, Department for Statistical Development
Netherlands Antilles	x				
New Guinea	x				
New Zealand		x	5	Survey Control Section	Assistant Government Statistician Administration
Nigeria		x	7	Research and Statistical Standards Unit	Director, Common Services Department
Niue	x				
Norway		x	5	Group for Text Editing, Drawing and Forms Control	Head, Officer for Printing & Forms Control
Oman	x				
Pakistan	x				
Paraguay		x	2	–	Chief, Department of Census
Paramaribo	x				
Portugal		x	8	Statisticians, Division for Preparation of Census and Surveys and Data Analysis	Head of Division
Rwanda		x	6	Director General of Statistics	Minister of Planning
Senegal		x	15	Statistician, Demographers	Chief, Division of the Census and Surveys
St. Kitts		x	3	Chief Statistician, Senior Statistical Officer	Director, Planning Unit
Seychelles		x	3	Statisticians, Statistics Division	Chief Statistician
Sierra Leone	x				
Singapore	x				
Somalia	x				
South Africa	x				
Spain		x	8	Field work groups, Demographic and Social surveys, Economic surveys	Head of Division
Swaziland	x				
Sweden	x				
Switzerland	x				
Syria		x	9	Director General, Central – Bureau of Statistics, Director of Social Statistics, Director of Population Studies Center	–
Tchad		x	47	Statisticians	–
Thailand		x	8	Standards and Coordination Unit	Secretary-General National, Statistical Office
Tonga	x				
Trinidad		x	2	Chief Census & Survey Officer, Statistical Officer	Director of Statistics

Table 1 (cont.). Presence of Special Group Responsible for Questionnaire Development and Organizational Setting

Country	Special group		Size of group	Name of group or job titles	Manager to whom group reports
	No	Yes			
Turkey	x				
Tuvalu		x	1	Statistics Officer	Secretary of Finance
United Arab Emirates		x	22	Head, Research Group	Head, Population and Demographics Statistics, and Head, Economic Statistics Divisions
U.S.A.	x				
U.S.S.R.	x				
Vanvatu	x				
Venezuela	x				
West Germany		x	6	Working Group on Questionnaire Design	Head of Responsible Subject-Matter Subdivision

There is clearly no single right answer, but in our view there is a real advantage to having a special group that specializes in questionnaire development and that can help the subject matter specialists in both questionnaire wording and questionnaire design. Many government questionnaires that we have seen ask questions that are difficult for respondents to understand or to answer even if they understand them. Formats are also difficult to follow, and many questionnaires seem to be designed to save paper and make data processing easy without concerns about interviewers or respondents. In countries that do not have a group specializing in questionnaire development, we have also noticed a tendency to try to include as many questions as possible in a survey, without regard to the length of the interview, respondent burden, or the relationship of one question to another. Tests of alternative questionnaire formats would reveal these problems and make corrective actions possible. A recurring theme in this article is the need for testing in order to evaluate questionnaires.

Specialists in questionnaires, because of their training and experience, may be more likely to be aware of new methods for asking better questions as well as of errors to avoid. We advocate not that this group have veto

power over the subject matter specialists but that they be available as a resource.

Size of Special Groups. Obviously, the size of any special group will depend on the size of the government office and the resources available. Among the countries with special questionnaire groups, the median size of the group is seven persons, and in about three-quarters of the countries, the group consist of ten or fewer specialists. We note also that countries that do not have special groups devoted to questionnaire design nevertheless have some specialists knowledgeable in questionnaire design who can be called upon when necessary. This is a less satisfactory arrangement, since these staff members have to be drawn away from their regular duties to assist with questionnaire construction.

Organizational Setting. As may be seen in Table 1, the organizational setting for specialized groups varies from country to country. This would lead one to conclude that no unique organizational structure is required for a specialized questionnaire group.

3. Activities Conducted by Special Staffs

The activities conducted by special staffs in offices where they exist are summarized in Table 2. Although there are substantial differ-

ences by country, the median number of times per year that the group consults with subject matter specialists is ten, which is also the median number of times an evaluation is

performed. Thus, on average the consultation and evaluation functions seem to be of about equal importance.

Table 2. Activities Conducted by Special Staffs

Country	Activity	Frequency/ per year	Type of data		
			Census	Continuing survey	Special
Antigua	Consulting	1		x	
	Evaluation	1		x	
	Pilot tests	When necessary			x
Australia	Consulting	10	x	x	x
	Evaluation	12		x	x
	Pilot tests	2			x
	Large-scale experiments: Single form	15	x	x	x
	Multiple forms	2			x
Austria	Consulting	20	x	x	x
	Evaluation	2	x	x	x
Bangladesh	Consulting	3			x
	Evaluation	3		x	
	Pilot tests	1	x		
	Large-scale experiments: Single form	1	x		x
	Multiple forms	1	x	x	
Belmopan	Consulting	1	x		x
	Evaluation	1	x		x
	Pilot tests	1	x		x
	Large-scale experiments: Single form	Less than annually	x		
	Multiple forms	Less than annually			x
Benin	Consulting	—	x	x	x
	Evaluation	—	x	x	x
	Pilot tests	—		x	x
	Large-scale experiments: Single form	—	x	x	x
	Multiple forms	—	x	x	x
Cameroon	Consulting	—	x	x	
	Evaluation	—	x	x	
	Pilot tests	—			x
	Large-scale experiments: Single form	—			x
	Multiple forms	—			x
Canada	Consulting	55	x		x
	Evaluation	300		x	x
	Training workshops	3			

Table 2 (cont.). Activities Conducted by Special Staffs

Country	Activity	Frequency/ per year	Type of data		
			Census	Continuing survey	Special
Chile	Consulting	—	x	x	x
	Evaluation	—	x	x	x
	Pilot tests	—		x	x
	Large-scale experiments:				
	Single form	—	x	x	x
Costa Rica	Multiple forms	—	x		
	Consulting	Continuous	x	x	x
	Evaluation	Continuous	x	x	x
	Pilot tests	Continuous		x	x
	Large-scale experiments:				
	Single form	Every 5 years	x		
	Multiple forms	Continuous		x	x
Denmark	Consulting	Continuous	x	x	x
Ecuador	Consulting	4	x	x	
	Evaluation	4	x	x	
	Pilot tests	2			x
Finland	Consulting	100	x	x	x
	Evaluation	30	x	x	x
	Large-scale experiments:				
	Multiple forms	—	x	x	
	Systems and proce- dures	—			
Hungary	Consulting	25	x	x	x
	Evaluation	20	x	x	x
	Pilot tests	10	x		x
	Large-scale experiments:				
	Single form	1			x
Indonesia	Multiple forms	1	x		
	Consulting	3	x	x	x
	Evaluation	3	x	x	x
Iran	Establishing classifications	3			
	Consulting	1	x	x	x
	Evaluation	1	x	x	x
	Pilot tests	1			x
	Large-scale experiments:				
	Single form	1		x	x
	Multiple forms	1	x		
Jordan	Consulting	1-3	x	x	x
	Evaluation	1-3	x	x	x
	Pilot tests	1-3	x	x	x
	Large-scale experiments:				
	Single form	1-3	x	x	x
Kiribati	Multiple forms	1-3	x	x	x
	Consulting	1	x		x
	Evaluation	1	x	x	x

(cont.)

Table 2 (cont.). Activities Conducted by Special Staffs

Country	Activity	Frequency/ per year	Type of data		
			Census	Continuing survey	Special
Kuwait	Consulting	2			x
	Evaluation	42			x
	Pilot tests	1	x		
Maldives	Evaluation	10			x
	Pilot tests	—	x		
Netherlands	Consulting	25		x	x
	Evaluation	25		x	x
	Pilot tests	2			x
	Large-scale experiments:				
	Single form	3			x
	Multiple forms	1			x
	Questionnaire design	3		x	x
	Questionnaire testing	15			x
New Zealand	Consulting	Continuous	x	x	x
	Evaluation	Continuous	x	x	x
	Pilot tests	Large numbers	x	x	x
	Large-scale experiments:				
	Single form	Large numbers	x	x	x
Nigeria	Consulting	4			x
	Evaluation	8		x	x
	Pilot tests	5			x
Norway	Consulting	50	x	x	x
	Evaluation	300	x	x	x
	Pilot tests	300		x	x
	Large-scale experiments:				
	Single form	2-3			x
	Arrange printing	300	x	x	x
Paraguay	Consulting	—	x	x	
	Evaluation	—	x	x	
	Pilot tests	—	x	x	
Portugal	Consulting	10	x	x	x
	Evaluation	10	x		x
	Pilot tests	1	x		x
	Large-scale experiments:				
	Single form	1	x		
Rwanda	Consulting	3	x	x	x
	Evaluation	6	x	x	x
	Pilot tests	1			x
	Large-scale experiments:				
	Single form	—	x	x	
	Multiple forms	1		x	x

Table 2 (cont.). Activities Conducted by Special Staffs

Country	Activity	Frequency/ per year	Type of data		
			Census	Continuing survey	Special
Senegal	Consulting	—	x	x	x
	Evaluation	—	x	x	x
	Pilot tests	—	x	x	x
	Large-scale experiments: Single form	—	x	x	x
Seychelles	Consulting	1			x
	Evaluation	1			x
	Pilot tests	2	x	x	x
Spain	Large-scale experiments: Multiple forms	—	x		
Syria	Consulting	Less than annually	x	x	x
	Evaluation	6-12	x	x	x
	Pilot tests	2-4	x	x	x
	Large-scale experiments: Single form	2-4	x	x	x
Tchad	Evaluation	—	x	x	x
	Pilot tests	—	x	x	x
	Large-scale experiments: Multiple forms	—	x	x	x
Thailand	Consulting	15		x	x
	Evaluation	10		x	x
	Large-scale experiments: Single form	3		x	x
	Multiple forms	3		x	x
Trinidad	Consulting	6		x	x
	Evaluation	6		x	x
	Pilot tests	2			x
	Large-scale experiments: Single form	4		x	
	Multiple forms	2		x	
Tuvalu	Consulting	2	x	x	x
	Evaluation	2	x	x	x
	Large-scale experiments: Single form	1		x	x
	Multiple forms	Every 5 years	x		
United Arab Emirates	Consulting	—			x
	Evaluation	3			x
	Pilot tests	2		x	
	Large-scale experiments: Single form	Every 5 years	x		
West Germany	Consulting	20	x	x	x
	Approval	20	x	x	x

Almost all special groups do consultation and evaluation, and about 80 percent conduct experiments to test and improve questionnaires. Among those countries where such experiments are done, the median number of pilot tests conducted annually is two, the median number of large-scale single-form tests is two, and the median number of large-scale multiple-forms tests is one. Since we did not ask respondents to indicate what they meant by large-scale test versus pilot test, we could have some mixing here in terms of relative sizes of tests, but we feel that the terms are sufficiently evocative to describe the magnitudes of the tests in the various countries.

We asked this question in our survey because it is our opinion that only through testing of questionnaires can one really discover difficulties and explore methods for improving the results. Even experts in questionnaire construction recognize that although many improvements in a questionnaire can be made even before testing, some difficulties can only be detected and corrected after a test.

In an ideal setting, where time and resources permit, an important questionnaire, such as a census form, should undergo a series of both small pilot tests and large-scale experiments before being used for the main study. Even then, if only one version of a questionnaire is used in experiments, it is not possible to determine order or wording effects. To do this requires the use of alternative versions of the questionnaire. This is why we asked about the use of large-scale experiments with multiple forms.

Each country must make its own decisions about how much experimentation on questionnaires is appropriate given its needs and resources. However, we would urge those countries that do no experimentation to consider the value of even small experiments for improving data quality.

4. Type of Data

Where a special questionnaire group exists, its services are almost always used for all kinds of data collection: censuses, continuing surveys, and special surveys. We do not have exact counts on the total annual uses for each of these types of data collection, but if one simply counts the x's in Table 2 it may be seen that the greatest number of different kinds of activities are conducted for special surveys and the least for censuses. This is not surprising, since censuses are least frequent and census forms already exist from a prior census and from examples of model censuses such as the U.S. Bureau of the Census' POPSTAN (1979). A census form will therefore build on previous work and will as a rule need less testing. There is still, however, a need for some testing, since some questions will change from census to census and data collection methods are evolving rapidly in all countries. Special surveys, by their nature, require starting more or less from the very beginning and therefore need more testing.

5. Questionnaire Activities in Various Countries

In this section, we describe what questionnaire activities are conducted in the various countries, regardless of whether or not they have special questionnaire groups. The data are presented in Table 3. In Part A, it may be seen that about 80 percent of all countries test census forms and that most of those who test them always do so. There is no clearly preferred way for testing. Each of the three procedures mentioned – pilot tests, large-scale single-form tests, and large-scale multiple-forms tests – gets about one-third of the mentions. We were surprised to note so few countries that combine pilot studies and large-scale tests, a method we think desirable.

Part B of Table 3 shows that about 60 percent of the countries test continuing

Table 3. Frequency and Methods for Various Activities
(Only for Countries Reporting Activity)

Country	Frequency	Date of last test	Test procedure
<i>A. Census Forms</i>			
Argentina	Sometimes	Aug. '84	Large-scale/single-form
Australia	Always	July '84	Large-scale/single-form
Austria	Always	– '79-'80	Large-scale/multiple-forms
Bahamas	Always	Apr. '79	Pilot test
Bangladesh	Always	Sept. '84	Large-scale/single-form
Barbados	Always	Oct. '79	Large-scale/single-form
Belmopan	Always	Aug. '84	Pilot test
Benin	Sometimes	Mar. '79	Large-scale/single- and multiple-forms
Botswana	Always	Aug. '80	Large-scale/single-form
Burundi	Sometimes	Aug. '79	Large-scale/multiple-forms
Cameroon	Sometimes	Apr. '75	Large-scale/multiple-forms
Canada	Sometimes	Sept. '84	Large-scale/single-form
Chile	Always	– '80-'81	Large-scale/multiple-forms
Costa Rica	Always	May '83	Large-scale/single-form
Cyprus	Always	June '82	Pilot test
Czechoslovakia	Always	Nov. '80	Large-scale/multiple-forms
Ecuador	Always	Oct. '82	Large-scale/single-form
El Salvador	Always	Oct. '79	Large-scale/single-form
Finland	Sometimes	– '84	Large-scale/multiple-forms
France	Always	Oct. '80	Large-scale/multiple-forms
Gambia	Sometimes	Mar. '83	Pilot test
Great Britain	Always	Apr. '79	Large-scale/multiple-forms
Guatemala	Always	– '81	Large-scale/single-form
Hong Kong	Always	Sept. '79	Large-scale/multiple-forms
Hungary	Always	June '84	Large-scale/multiple-forms
Indonesia	Always	–	Pilot test and large-scale/multiple-forms
Iran	Always	Oct. '83	Large-scale/multiple-forms
Ireland	Sometimes	Sept. '79	Large-scale/single-form
Israel	Always	Apr. '82	Large-scale/multiple-forms
Jordan	Sometimes	Apr. '83	Pilot test
Kenya	Sometimes	June '79	Large-scale/single-form
Kiribati	Always	Dec. '84	Large-scale/multiple-forms
Republic of Korea	Sometimes	Nov. '84	Large-scale/single-form
Kuwait	Always	–	Large-scale/multiple-forms
Lesotho	Always	Apr. '75	Pilot test
Luxembourg	Always	Apr. '80	Large-scale/multiple-forms
Malagasy	Sometimes	– '73	Large-scale/multiple-forms
Malawi	Always	Apr. '77	Large-scale/single-form
Maldives	Always	Mar. '84	Large-scale/multiple-forms
Mauritania	Sometimes	Apr. '77	Large-scale/single-form
Mauritius	Always	Dec. '83	Pilot test
Netherlands	Sometimes	– '80	Large-scale/single-form
Netherlands Antilles	Sometimes	July '80	Large-scale/single-form
New Guinea	Sometimes	–	Pilot test and large-scale/multiple-forms
New Zealand	Always	–	Pilot test
Nigeria	Always	Sept. '83	Large-scale/multiple-forms
Niue	Always	Sept. '81	Pilot test
Norway	Always	June '80	Pilot test and large-scale/single-form
Paraguay	Always	Aug. '81	Large-scale/single-form
Paramaribo	Always	– '80	Pilot test
Portugal	Always	July '84	Large-scale/single-form
Rwanda	Always	Aug. '77	Large-scale/single-form
Senegal	Always	Dec. '75	Large-scale/single-form
Seychelles	Always	Mar. '81	Pilot test
Sierra Leone	Always	Apr. '73	Large-scale/single-form

(cont.)

Table 3 (cont.). Frequency and Methods for Various Activities
(Only for Countries Reporting Activity)

Country	Frequency	Date of last test	Test procedure
Singapore	Always	June '79	Large-scale/single-form
Somalia	Always	—	Large-scale/single-form
South Africa	Sometimes	Mar. '82	Large-scale/single-form
Spain	Sometimes	May '79	Large-scale/multiple-forms
Swaziland	Always	Sept. '75	Pilot test
Sweden	Always	— '80	Large-scale/multiple-forms
Switzerland	Always	May '84	Large-scale/single-form
Tchad	Sometimes	— '64	Large-scale/single-form
Thailand	Sometimes	Apr. '84	Large-scale/multiple-forms
Trinidad	Always	Sept. '79	Large-scale/multiple-forms
Turkey	Always	Sept. '84	Pilot test
Tuvalu	Sometimes	—	Large-scale/multiple-forms
United Arab Emirates	Always	Feb. '85	Large-scale/single-form
U.S.A.	Always	Apr. '85	Pilot test and large-scale/ multiple-forms
Vanuatu	Sometimes	Aug. '78	Pilot test
Venezuela	Sometimes	Oct. '81	Pilot test and large-scale/ multiple-forms
West Germany	Sometimes	—	Large-scale/single-form
<i>B. Continuing Forms</i>			
Antigua	Sometimes	Oct. '84	—
Argentina	Sometimes	Oct. '84	Pilot test
Australia	Always	Oct. '84	Large-scale/single-form
Austria	Always	Continuous	Large-scale/single-form
Bahamas	Sometimes	Nov. '79	Pilot test
Bangladesh	Always	Jan. '84	Pilot test
Benin	Sometimes	—	Pilot test and large-scale/ single- and multiple-forms
Botswana	Always	Feb. '84	Pilot test
Burundi	Sometimes	Nov. '84	—
Canada	Sometimes	Apr. '80	Large-scale/single-form
Chile	Always	— '84	Pilot test
Costa Rica	Always	Dec. '84	Pilot test
Cyprus	Sometimes	— '83	Pilot test
Czechoslovakia	Always	Jan.-Dec. '84	Large-scale/single-form
Ecuador	Always	June '84	Large-scale/single-form
Finland	Sometimes	— '84	Pilot test
France	Sometimes	June '84	Pilot test
Great Britain	Always	— '84	Varies
Guatemala	Sometimes	—	Pilot test
Hong Kong	Sometimes	May '84	Large-scale/multiple-forms
Hungary	Sometimes	Mar. '84	Large-scale/single-form
India	Sometimes	Apr. '82	Large-scale/single-form
Indonesia	Always	—	Pilot test
Iran	Sometimes	Mar. '84	Large-scale/single-form
Israel	Sometimes	Nov. '84	Pilot test
Jordan	Sometimes	—	Pilot test
Kenya	Sometimes	Mar. '81	Pilot test
Kiribati	Sometimes	Nov. '82	Pilot test
Republic of Korea	Always	Mar. '84	Pilot test
Kuwait	Sometimes	—	Large-scale/multiple-forms
Lesotho	Sometimes	— '79	Pilot test
Malagasy	Sometimes	— '80	Large-scale/single-form
Mauritius	Sometimes	Aug. '84	Pilot test
Netherlands	Always	— '84	Large-scale/single- and multiple-forms

Table 3 (cont.). Frequency and Methods for Various Activities
(Only for Countries Reporting Activity)

Country	Frequency	Date of last test	Test procedure
Netherlands Antilles	Sometimes	– '83-'84	Pilot test
New Guinea	Sometimes	–	Pilot test
New Zealand	Always	–	Pilot test
Nigeria	Sometimes	Oct. '83	Large-scale/multiple-forms
Norway	Sometimes	Nov. '84	Pilot test
Oman	Sometimes	– '84	Pilot test
Paraguay	Always	Aug. '83	Large-scale/single-form
Paramaribo	Sometimes	–	Pilot test
Senegal	Always	Dec. '80	Pilot test
Seychelles	Sometimes	Jan. '84	Large-scale/single-form
South Africa	Sometimes	Feb. '85	Pilot test
Sweden	Sometimes	– '84	Pilot test
Switzerland	Sometimes	–	Pilot test
Tchad	Always	Feb. '85	Large-scale/single-form
Trinidad	Sometimes	May '84	Pilot test
Turkey	Always	Sept. '84	Pilot test
Tuvalu	Sometimes	–	Large-scale/single-form
United Arab Emirates	Sometimes	Oct. '83	Pilot test
U.S.A.	Always	Sept. '84	Pilot test and large-scale/ single- and multiple-forms
Venezuela	Always	Mar. '84	Large-scale/single-form
West Germany	Sometimes	–	Pilot test and large-scale/ single-form

C. Special Forms

Argentina	Always	– '83	Pilot test
Australia	Always	Oct. '84	Large-scale/multiple-forms
Austria	Always	Continuous	Large-scale/single-form
Bahamas	Always	Aug. '83	Pilot test
Bangladesh	Always	–	–
Belmopan	Always	June '83	Pilot test
Benin	Sometimes	–	Pilot test and large-scale/ single- and multiple-forms
Botswana	Always	Feb. '84	Pilot test
Canada	Sometimes	Dec. '84	Pilot test
Chile	Always	– '83	Large-scale/single-form
Costa Rica	Sometimes	June '83	Large-scale/multiple-forms
Cyprus	Sometimes	– '83	Pilot test
Czechoslovakia	Always	Mar. '81	Large-scale/multiple-forms
Ecuador	Sometimes	Jan. '84	Pilot test
Finland	Sometimes	– '84	Pilot test
France	Always	Dec. '84	Pilot test
Great Britain	Always	– '84	Varies
Guatemala	Sometimes	–	Pilot test
Hong Kong	Sometimes	Mar. '84	Large-scale/multiple-forms
Hungary	Sometimes	June '84	Pilot test
India	Sometimes	Sept. '83	Large-scale/single-form
Indonesia	Always	–	Pilot test
Iran	Always	Dec. '83	Large-scale/single-form
Israel	Always	July '84	Pilot test
Jordan	Sometimes	–	Pilot test
Kenya	Sometimes	Sept. '84	Pilot test
Kiribati	Always	Aug. '83	Pilot test
Republic of Korea	Sometimes	May '84	Pilot test
Kuwait	Sometimes	–	Pilot test
Malagasy	Sometimes	– '77	Large-scale/multiple-forms
Malawi	Sometimes	Mar. '84	Large-scale/multiple-forms
Mauritius	Sometimes	Jan. '79	Pilot test

(cont.)

*Table 3 (cont.). Frequency and Methods for Various Activities
(Only for Countries Reporting Activity)*

Country	Frequency	Date of last test	Test procedure
Netherlands	Always	— '84	Large-scale/multiple-forms
Netherlands Antilles	Sometimes	— '83—'84	Pilot test
New Guinea	Sometimes	—	Pilot test
New Zealand	Sometimes	— '84	Pilot test
Nigeria	Always	July '84	Pilot test
Norway	Always	Nov. '84	Pilot test
Oman	Sometimes	— '84	Pilot test
Paramaribo	Always	— '85	Pilot test
Rwanda	Sometimes	— '84	Pilot test
Senegal	Always	Oct. '79	Large-scale/single-form
Seychelles	Always	Sept. '84	Pilot test
Sweden	Sometimes	— '82	Large-scale/multiple-forms
Switzerland	Always	—	Pilot test
Tchad	Sometimes	— '72	Large-scale/single-form
Thailand	Sometimes	Aug. '84	Large-scale/single- and multiple-forms
Trinidad	Sometimes	Sept. '84	Pilot test
Turkey	Always	Sept. '84	Pilot test
Tuvalu	Sometimes	—	Large-scale/single-form
United Arab Emirates	Sometimes	Apr. '84	Pilot test
U.S.A.	Sometimes	Sept. '84	Pilot test and large-scale/ single- and multiple-forms
Venezuela	Sometimes	Apr. '84	Large-scale/single-form
West Germany	Sometimes	—	Pilot test and large-scale/ single-form

D. Alternative Time Period Effects

Australia	Sometimes	Mid '82	Large-scale/multiple-forms
Austria	Always	Continuous	Large-scale/single-form
Burundi	Always	Dec. '84	Large-scale/single-form
Costa Rica	Sometimes	June '83	Large-scale/multiple-forms
Hungary	Sometimes	Mar. '75	Large-scale/single-form
Iran	Always	Oct. '83	Large-scale/single-form
Israel	Sometimes	Jan. '84	Large-scale/multiple-forms
Kenya	Sometimes	Apr. '83	Large-scale/single-form
Republic of Korea	Sometimes	Nov. '83	Pilot test
Kuwait	Sometimes	—	Pilot test
Netherlands	Sometimes	— '83	Large-scale/multiple-forms
Norway	Sometimes	— '79	Large-scale/single- and multiple-forms
Senegal	Sometimes	—	Pilot test
Thailand	Sometimes	Mar. '75	Pilot test
Trinidad	Sometimes	Oct. '84	Large-scale/single-form
Turkey	Always	Apr. '84	Pilot test
U.S.A.	Sometimes	Apr. '79	Pilot test and large-scale/ multiple-forms

E. Individual vs. Household Report Effects

Australia	Sometimes	— '80	Large-scale/single-form
Austria	Always	Continuous	Large-scale/single-form
Costa Rica	Sometimes	July '81	Large-scale/multiple-forms
Ecuador	Always	Aug. '79	Large-scale/single-form
Hong Kong	Sometimes	Mar. '84	Large-scale/single-form
Iran	Sometimes	Oct. '83	Large-scale/multiple-forms
Netherlands	Sometimes	— '84	Large-scale/single-form
Paramaribo	Sometimes	— '81	Pilot test
Sweden	Sometimes	— '74	Large-scale/single-form

Table 3 (cont.). Frequency and Methods for Various Activities
(Only for Countries Reporting Activity)

Country	Frequency	Date of last test	Test procedure
Turkey	Always	Sept. '84	Pilot test
U.S.A.	Sometimes	Nov. '77	Large-scale/single-form
F. Comparison of Mail, Telephone, and Face-to-Face Methods			
Austria	Sometimes	Continuous	Pilot test
Belgium	Sometimes	– '77	Large-scale/multiple-forms
Burundi	Always	Jan. '85	Pilot test
Canada	Sometimes	July '82	Large-scale/single-form
Chile	Sometimes	– '80	Large-scale/multiple-forms
Cyprus	Sometimes	Continuous	–
Denmark	Sometimes	May '84	Large-scale/single-form
Finland	Sometimes	–	–
Hong Kong	Sometimes	Apr. '84	Large-scale/single-form
Hungary	Sometimes	Dec. '84	Large-scale/multiple-forms
Israel	Sometimes	June '80	Large-scale/multiple-forms
Netherlands	Sometimes	– '84	Large-scale/multiple-forms
New Zealand	Sometimes	– '84	–
Paramaribo	Sometimes	–	Large-scale/single-form
Spain	Sometimes	May '79	Large-scale/multiple-forms
Sweden	Sometimes	– '81	Large-scale/multiple-forms
Switzerland	Sometimes	–	Large-scale/multiple-forms
Turkey	Always	Nov. '84	Pilot test
U.S.A.	Sometimes	– '80	Large-scale/multiple-forms
G. Income Measures			
Argentina	Sometimes	– '75	Large-scale/multiple-forms
Australia	Sometimes	Aug. '84	Large-scale/single-form
Austria	Sometimes	Continuous	Large-scale/multiple-forms
Burundi	Sometimes	Dec. '84	Large-scale/single-form
Costa Rica	Sometimes	June '83	Large-scale/multiple-forms
Czechoslovakia	Sometimes	Nov. '84	Large-scale/single-form
Ecuador	Always	June '80	Large-scale/single-form
Finland	Sometimes	–	–
Great Britain	Sometimes	– '79	Large-scale/single-form
Hong Kong	Sometimes	Feb. '75	Large-scale/single-form
Hungary	Sometimes	June '83	Large-scale/single form
Iran	Sometimes	Dec. '84	Large-scale/single-form
Israel	Sometimes	Apr. '82	Large-scale/multiple-forms
Kenya	Sometimes	May '81	Pilot test
Republic of Korea	Sometimes	Apr. '80	Pilot test
Kuwait	Sometimes	–	–
Lesotho	Sometimes	– '72	Pilot test
Netherlands	Sometimes	– '84	Large-scale/single-form
Norway	Sometimes	Mar. '82	–
Senegal	Sometimes	–	–
Turkey	Always	Oct. '80	Pilot test
U.S.A.	Sometimes	Feb. '84	Large-scale/multiple-forms
Venezuela	Sometimes	Aug. '84	Large-scale/single-form

forms but that about two-thirds of these countries test them only sometimes. Pilot testing is the most popular procedure for testing continuing forms, with roughly two-thirds of the countries that test using pilot tests. Large-scale single-form tests are done in most remaining countries, with only a few countries doing large-scale multiple-forms tests. This seems reasonable if a new form is being compared with an existing one.

About 60 percent of the countries test special forms (Table 3, Part C), with less than one-half of these always testing special forms and the others sometimes testing them. Special forms are pilot tested about two-thirds of the time, with the remaining about equally divided between large-scale single-form and large-scale multiple-forms tests.

6. Special Tests

We asked whether countries conducted experiments on alternative time period effects, individual versus household reporting effects, comparison of mail, telephone, and face-to-face methods, and measures of income. This is clearly a selected list of topics, and as we discuss the results in Table 3, Parts D-G, we shall explain why these topics are important.

Alternative time periods are important in measuring any kind of behavior, since memory is critically dependent on time (Sudman and Bradburn (1982)). About 20 percent of the countries report sometimes testing alternative time periods. The test procedures are evenly split between pilot tests, large-scale single-form tests, and large-scale multiple-forms tests.

Only about 10 percent of the countries are conducting studies on the differences between individual and household reporting. These effects are important because of known losses in accuracy when results are obtained from proxies. On the other hand, increasing the number of informants in a household usually

leads to an increase in the accuracy of reports for the household. The few countries testing these differences mostly use large-scale single-form procedures, since pilot tests would not have sufficient power to measure differences and multiple forms would confuse the comparisons.

About 20 percent of the responding countries are comparing mail, telephone, and face-to-face methods. Where telephone and mail are possible, these methods are far less costly than face-to-face interviewing. Although frequently differences by method are surprisingly small, it is always necessary to test for these differences before switching to a new procedure or combining methods. The most common procedure for testing these differences is with large-scale multiple-forms tests, since it is usually necessary to have different formats for different methods of administration.

About one-fourth of the countries sometimes test income measures. Income is almost always the single most difficult question to ask in government surveys, so that new procedures are always being tried. Here large-scale single-form tests are used for comparisons with existing income measures from other surveys.

7. Future Questionnaire Design Plans by Country

Table 4 outlines future questionnaire design plans by country. As with organizational structure, it is difficult to summarize this table. It can be pointed out, however, that the responses are of two major kinds: continuing activities, such as plans for future censuses and continuing sample surveys, and special activities. The only special activity that is being planned in several countries is a comparison of mail, telephone, and face-to-face

Table 4. *Future Questionnaire Design Plans, by Country*

Antigua	– Planning to conduct a Census of Population and a Household Expenditure Survey
Argentina	– Designing and testing new industrial and commercial surveys – Modifying present household survey – Testing new agricultural census questionnaire
Australia	– Comparing face-to-face and telephone procedures
Austria	– Questionnaire design by laser printer
Bahamas	– Designing a continuing household survey
Bangladesh	– Designing questionnaires for the 1986 Economic Census and for multi-purpose household surveys to be expanded in 1985
Barbados	– Designing questionnaires to facilitate processing using microcomputing hardware
Belgium	– Computer-aided design of documents and direct production of plates by photocomposition
Cameroon	– Planning Censuses of Population and Housing 1986 – Planning survey of employment
Canada	– Establishing a questionnaire design focal point to do research and development, dissemination and consultation – Testing random digit dialing and other telephone interviewing techniques
Chile	– Designing forms for optical scanning
Costa Rica	– Redesigning the Household Survey Program – Designing an Agricultural Survey Program – Planning Income-Expenditure Survey for 1986 – Planning Economic and Industrial Census
Cyprus	– To increase uniformity in questionnaire design for regular economic surveys
Czechoslovakia	– Detailed expenditure survey expansion of current family budget surveys – Preparation for 1986 microcensus
El Salvador	– Revision of forms used for vital statistics and construction
Finland	– Designing standards for forms design sheet, continuous forms, standard document layout, standard forms, layout and standard screen display based on standard document layout
France	– Comparison of mail, telephone, and face-to-face methods for surveys of shortterm economic trends – Testing the use of portable data entry devices for surveys
Gambia	– Designing a new questionnaire for Quarterly Survey of Employment and Earnings – Designing a questionnaire for a migration survey
Great Britain	– Use of automated systems including computer-assisted telephone interviewing questionnaire for use with hand-held data capture devices and self-completion questionnaires on microcomputer terminals in centralized interviewing locations – Preparing forms for 1991 Census
Guatemala	– To review and register all forms used by units of the National Statistical System

(cont.)

Table 4 (cont.). Future Questionnaire Design Plans, by Country

Hungary	– New recommendations for questionnaire design
India	– Testing of shorter questionnaire on household consumer expenditures and labor force participation – Testing alternative methods of obtaining household income
Indonesia	– Designing new forms for 1985 Social-Economic, Agricultural, Industrial, Electricity in Private Establishments, Hotel Occupation, and Intercensal Population Surveys, 1985 Economic Census, 1988 Cost of Living Survey, and 1990 Population Census
Iran	– Planning a series of household surveys in 1985-89 five-year program
Ireland	– Establishing general design standards for forms used by general public
Jordan	– Conducting various censuses and surveys in social and economic areas
Kiribati	– To establish employment survey – Conduct an income/expenditure survey to revise the Retail Price Index
Lesotho	– Designing questionnaires for 1986 Population Census, 1985 Labor Force and Migration Survey, Income, Expenditure and Savings Survey, Food Consumption Survey, Literacy, Health and Nutrition Survey, Housing, Sanitation and Energy Survey
Luxembourg	– Conduct a family budget survey
Malagasy	– Planning for family budget survey – Planning for Population Census
Malawi	– Designing first national Housing Survey 1985 – Planning 1987 Census of Population and Housing
Mauritania	– Planning for 1986 Population Census and housing, building, and transportation surveys
Netherlands	– Development of telephone questionnaires and comparison with face-to-face results – Testing of hand-held computers in surveys – Development of new procedures for income measurement – Test magnitude estimation and randomized response techniques
New Guinea	– Developing questionnaires (personal, household, and personal income and expenditures diaries) for Urban Household Survey and Rural Household Survey and a mail survey of businesses
New Zealand	– Department aims to update and systematize its approach to questionnaire design and testing
Norway	– Comparison of mail, telephone, and face-to-face methods in general and in the Labor Force Survey
Paramaribo	– Planning Industrial Census 1985, Budget Survey 1986, and 1990 Population Census
Portugal	– Tests of questionnaires for Census to determine the influence of subjective factors
Rwanda	– Use of Kinyarwanda instead of French in questionnaire design – Use of precoded questionnaires
Senegal	– Planning for National Census in 1987 – Planning 1987–1994 national demographic surveys
Sierra Leone	– Designing questionnaire for Third National Population Census

Table 4 (cont.). Future Questionnaire Design Plans, by Country

Somalia	– Planning second Census of Population due in next two years
Sweden	– Redesign of Labor Force Survey – Introduction of computer-assisted face-to-face interviewing with hand-held micros – Preparation of book on <i>How to Ask Questions in Surveys</i>
Switzerland	– Continue comparison of telephone and face-to-face methods for sample surveys
Tchad	– Planning 1987 Population Census – Planning Budget Survey – Planning Census of Agriculture
Thailand	– Development of standardized questionnaire design guidelines – Design questionnaires for Survey on Culture and Time Use 1985, Fertility 1985, Health and Welfare 1986
Tonga	– Designing questionnaires for Census of Agriculture 1985, Census of Manufacturing Establishments, Census of Population 1986, and other surveys
Trinidad	– Redesign of Household; School Graduates; Food Crop, Poultry, and Pig Survey questionnaires – Designing 1990 Population Census questionnaire
Turkey	– Use of precoded questions – Addition of indirect questions to control quality of direct questions
Tuvalu	– Planning Household Consumption and Income Survey
United Arab Emirates	– Planning for Family Budget, Labor Force, and Infant Mortality Rate surveys
U.S.A.	– Development, testing, and implementation of computer assisted telephone interviewing (CATI) methods – Preparing alternative 1990 Census forms
Venezuela	– Designing form for Census of Agriculture – Planning Industrial Survey, 1985; Construction and Housing Survey, Internal Trade Survey – Experiments on time period effects – Alternative methods of measuring income
West Germany	– Organize seminars on questionnaire design to deal with psychological aspects and to provide indications for layout

procedures. Given the continuing concerns in government statistics offices, this is not surprising.

8. Conclusion

One might ask whether the current level of activity on questionnaire design is greater than it was a decade ago. We have no hard

data, since, to our knowledge, no similar survey of government statistics offices has been conducted previously. It is our impression, however, that the level of activity seen in the responses to our survey is greater than one would have found earlier. (It must be remembered, however, that this may not be the case for nonrespondents.) The level of activity on questionnaire design and methodological

research is a function of internal funding and external support. Research in any organization is subject to the vagaries of the budget process and is often the most expendable item in a tight annual budget. As the fiscal situation in a country improves or worsens, the research budget feels the effect immediately. It is also true that in the last decade less has been done to coordinate the round of population censuses than in previous decades. In the past year, the U.S. Bureau of the Census and the United Nations Statistical Office have begun to develop a program of coordination and assistance for the 1990 international round of censuses. With the rapidly expanding use of computer resources, specialized tabulation software, and developments in field data collection methodologies, coordination of questionnaire design with these other activities and resources is critical.

We note in passing that the response rate to our survey was much lower for developing countries. We do not know the reason or whether it reflects less activity in the area of questionnaire design. It is difficult to draw any inferences about this group, even though the contrast would prove interesting. Developing countries have more assistance from organizations such as the U.N., the U.S. Bureau of the Census, and Statistics Canada, which should lead to uniformity of questionnaire design and the introduction of the latest data collection methodologies, but there is less evidence of this than expected because of the low response rate for this group.

We expect that activity related to improving the quality of questionnaires will continue to

increase as the realization of the magnitude of response errors becomes more widespread. (This study can provide a baseline for future measures of questionnaire activity.) As can be seen, there is no single organization or set of procedures used for questionnaire design activity. Although we favor a special group with responsibility for this function, such special groups are found in only about half of the countries. Almost all special groups provide consulting and evaluation services, but actual testing of questionnaires is less frequent. This is obviously because of cost, but it is only through experimentation that many major questionnaire design difficulties can be resolved.

Since circumstances differ, no country should model its activities simply on the basis of what is done elsewhere. We hope, however, that the results here will be useful to government statisticians as they plan for the future.

9. References

- Sudman, S. and Bradburn, N.B. (1982): *Asking Questions*. Jossey-Bass, San Francisco.
- U.S. Bureau of the Census (1979): *POPSTAN; A Case Study for the 1980 Census of Population and Housing*. U.S. Department of Commerce, Washington, D.C.

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