INTERNATIONAL ASSOCIATION OF SURVEY STATISTICIANS
International Statistical Institute

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INTERNATIONAL ASSOCIATION OF SURVEY STATISTICIANS

MEMBERSHIP APPLICATION FORM

I wish to enroll as a member of the International Association of Survey Statisticians.

Name: Mr./Mrs./Miss *First name:*

Date and place of birth:

Nationality:

Profession (if retired, please indicate):

Title (professor, doctor):

Business address:

Telephone and Extension:

Fax number:

Electronic Mail:

Home Address:

Country:

Telephone Number:

I am a member of the ISI ☐

My mother tongue is (please specify):

My IASS correspondence should be sent to:

- *Business address* ☐
- *Home address* ☐

The official language of my IASS correspondence should be:

- *English* ☐
- *French* ☐

Which field(s) of survey work are you especially interested in?

1. *Theory of surveys* ☐
2. *Collection of data* ☐
3. *Data processing* ☐
4. *Quality of data: errors of measurement, sampling errors, nonsampling errors* ☐
5. *Analysis of survey data* ☐
6. *Other (please specify):* ☐

Which field(s) of application are you especially interested in?

1. *Demographic statistics* ☐
2. *Housing statistics* ☐
3. *Industrial statistics* ☐
4. *Statistics of commerce and service* ☐
5. *Agricultural statistics* ☐
6. *Socio-economic studies of households* ☐
7. *Market research and opinion surveys* ☐
8. *Education* ☐
9. *Other (please specify):* ☐

I am aware that the membership dues have been fixed at 130 F. Francs (or the equivalent in other currencies) and that these dues have been reduced to 65 F. F. for nationals of developing countries.

Method of payment

☐ Check payable to the International Association of Survey Statisticians*

☐ Bank transfer directly created to the IASS bank account with the Banque Nationale de Paris, in Paris (Bank Code 30004; Agency Code 00874; Account No. 004586-32) (Mention the name and address of the establishment issuing the order and the number of the order.)

*Send directly to:

Secrétariat de l'AISE/IASS
c/o Insee-CEFIL
Att. Mme Claude Olivier
3, rue de la Cité
33500-Libourne, FRANCE
Tel: +33 5 57 55 56 00 Fax: +33 5 57 55 56 20

Date: Signature:

Letter From the President

Dear IASS Members:

Thank you for electing me as president of the IASS. I am honored by your confidence in me and look forward to working with you in serving our association.

First, on behalf of all of us, I thank my predecessor, Dennis Trewin, members of his council and the IASS secretariat for all their efforts these past two years that have made the IASS a more efficient and effective organization. The successful conferences and courses that the IASS has sponsored and organized, the improved quality of our journal, *The Survey Statistician*, distribution of the volume of IASS papers from the Beijing ISI session to all our members, and the establishment of our own web site are among the achievements of our association in these two years.

In the next two years the IASS council and secretariat, with the help of the many volunteers among our members, plan to:

1. Continue to work on our core activities - meetings, courses, *The Survey Statistician* and our web site; and on improving the services we offer our members,
2. Increasing our membership, especially in countries and groups that currently have relatively few or no members, and
3. Serving the needs of developing and transition countries better.

Let me elaborate on these goals and note the steps that are currently being taken, as well as ideas on future steps to reach these goals - ideas that have come from our members at recent meetings and in their responses to the membership survey conducted by Gösta Forsman in 1994. This report is an effort to brainstorm on these ideas with all of you.

1. Core Activities and Services to our Members

    a. Under the able guidance of Susan Linacre, the IASS Program Committee for the ISI meeting in Helsinki, 11-18 August 1999, is planning a stimulating program.

    b. A satellite meeting on Small Area Statistics, to be held in Riga, Latvia, soon after the ISI meeting in Helsinki is in the early stages of planning. Jan Kordos is the organizer of the satellite meeting.

    c. A series of short courses are being planned to be held in Helsinki and in Riga, in August 1999. Suggested topics are: New Methods in Survey Sampling; Quality Improvement in Surveys; Business Survey Methods; and Small Area Estimation Methods.

    d. Plans are in full swing for the conference on "Statistics for Economic and Social Development" in Aguascalientes, Mexico, 1-4 September 1998. This conference is being jointly organized by IASS and IAOS. Geoff Hole, the dynamic Program Chair, is in the process of finalizing the program which promises to be very interesting.

    e. Short courses in Spanish on Survey Sampling are being planned to be held in conjunction with the conference in Aguascalientes.

    f. David Binder will chair the IASS Program Committee for the 2001 ISI meeting in Seoul, S. Korea.

    g. Jan Kordos will chair the Nominations Committee for the next election of IASS officers.

    h. The IASS has been invited to organize a session related to Survey Research Methods during the ASA meetings in Dallas, Texas, 9-13 August 1998. Suggestions for topics and organizers are welcome.

    i. IASS support for a workshop on Labor Force Surveys in Libourne, France in July 1998 and for a proposed conference to be organized by Afristat in Johannesburg, S. Africa in 1999 are being discussed.

    j. Michael Brick continues to do an excellent job as editor of *The Survey Statistician*, which is published twice a year in English and French. We plan to encourage more articles from developing and transition countries; have a permanent item on benefits of membership in the IASS, and how to become a member, and publish

review articles, abstracts of articles published in journals, book reviews, bibliographies and a calendar of events - all of interest to our members.

k. Anders Christianson is coordinating compilation of the volume of invited papers from the IASS sessions, and those from the IAOS sessions that are of interest to our members from the 1997 ISI conference in Istanbul. This volume will be sent to all members.

l. Dennis Trewin has negotiated a 20 percent reduction in the price of books published by Marcel Dekker for our members.

m. Chris Skinner, Associate Editor of the International Statistical Review, welcomes papers on Survey Methods that are of a review or tutorial nature.

n. The 1997 edition of the IASS Membership Directory has been distributed to all members.

o. Fred Vogel is the editor of our home page on the world wide web. We plan to put up our membership directory on it, with adequate protection of confidentiality. Comments and new material for the home page may be sent to Fred at <fvogel@nass.usda.gov> or faxed to him at 202-690-1311. The home page is http://www.cbs.nl/iass.htm. *The Survey Statistician* is available on our home page.

p. Benoit Riandey, our Executive Director, is working on facilitating payment of our annual dues by credit card.

q. John Kovar will be the Scientific Secretary for the 1997-1999 term, replacing Jean Claude Deville who regrets that he can no longer serve in that role.

2. Increasing our Membership

Unless our members represent the different groups and countries that survey statisticians belong to, we will not be able to know and adequately serve the needs of all our colleagues. Our 1994 membership survey showed that our numbers are relatively small in developing and transition countries, among women, younger survey statisticians and those working in the private sector. While the number of IASS members has increased since 1994, the representation of different groups and areas has not changed much. We are already taking some steps to address this concern. Step (a) below is one of them. Other ideas follow.

a. A promotional brochure on the IASS to help in recruiting new members was prepared by Dennis Trewin. It has been printed by the Australian Bureau of Statistics and will be distributed to all members. Additional copies will be made available to country representatives.

b. Our country representatives play a key role in attracting new members. We plan to enlist their help in raising the profile of our association so as to attract more members. I learned that we have not heard from some of our representatives for many years. It is possible that they do not now have time needed for this activity. We plan to review this situation and ask for suggestions on suitable representatives or volunteers for this role in countries where needed.

c. We plan to devote more attention to countries where we have no members at all to try to attract members from them through some of the following means.

d. The promotional brochure on the IASS will be sent to all Government Statistical Organizations and National Statistical Societies around the world with a covering letter asking that their employees and members be made aware of the IASS. A copy of the recent issue of *The Survey Statistician* could also be included as an incentive.

e. The brochure will also be displayed at conferences, workshops and seminars of interest to survey statisticians.

f. An attractive poster on the IASS to be displayed at these meetings might be useful. Is there a volunteer to help in the preparation of such a poster? The conference at Aguascalientes would be a good place to start this initiative.

g. Benoit Riandey noted that nearly half the referees for the 1996 issues of the *Survey Methodology* Journal are not IASS members. He suggests that authors and referees of journals of interest to members, such as the SMJ, JOS, JASA could be

sent copies of our promotional brochure if they are not IASS members with a covering letter suggesting that they become members. Statistics Canada has offered to find a volunteer to take on this role for the SMJ. Similarly, volunteers will be sought from Sweden for JOS, from USA for JASA and from Poland for the journal 'Statistics in Transition'. Which other journals should we target for this effort?

h. Currently we have only 16 institutional members. Country representatives and other members could help in enrolling more institutions so that their employees become better aware of the association and get involved in its activities.

i. Students who take part in IASS sponsored workshops and courses could be offered IASS memberships for a year, with the membership fee being added to the course fee.

j. IASS statute No. 3.4 says "In exceptional cases of recognized hardship, the council may waive, reduce or postpone the payment of dues." We could offer free membership for say three years to developing and transition countries that have no IASS members. (The ISI waivers membership fees for five years to stimulate participation from developing and transition nations that have economic and/or foreign exchange problems.)

k. Every IASS member could circulate the promotional brochure among his/her colleagues in the profession and provide them with IASS membership application forms, a copy of which is available in *The Survey Statistician*.

l. I will work with the ISI appointed committee "Women in Statistics", of which I am a member, to try to attract more women to our association.

m. In order to reach more young survey statisticians, we should send copies of our promotional brochures to all Universities that have Departments of Statistics. How do we get such a list? We could offer a 50 percent discount of fees to students as an incentive.

n. All attendees at IASS sponsored sessions at the biennial ISI meetings and at other IASS sponsored meetings and workshops will be encouraged to become members of IASS.

3. Serving the Needs of Developing and Transition Countries

Many issues related to how we could help service the needs of our colleagues in these countries have been brought up at recent meetings.

a. The first task is to increase our membership in these countries. Besides benefiting from the considerable range of services that IASS offers, membership will give our colleagues in these countries a voice in our deliberations. Steps toward this have been noted under (2) and need to be pursued vigorously and consistently.

b. We will encourage regional meetings, workshops and courses in developing and transition countries. The conference in Aguascalientes, Mexico (1.d) is a step in this direction.

c. Nearly 10 years ago the IASS established a Survey Consultation by Correspondence (SCC) service to offer free advice and consultation by correspondence on issues and problems faced by survey practitioners in developing countries. It might be useful to revive this service that is now defunct. We need to discuss why it was not used much in the past.

d. David Fitch from Guatemala raised an important issue at our recent general body meeting in Istanbul. He had observed that surveys funded by some international agencies suffer from questionable sample designs that could cause severe biases in the results. Many members have had similar experiences in a variety of other surveys, especially when the surveys are contracted out, often to the lowest bidder, and when there is inadequate technical expertise at the local level. The IASS is uniquely positioned to help in promoting sound survey methods and practices. I suggest that we contact all the major

international agencies and offer our services in two areas. First, we could offer services of experts to advise on suitable survey designs and methods at the planning stage - which is ideal. We could also offer our services at the evaluation stage and suggest methods to compensate for shortcomings in the design, if any, and recommendations for future use. At the same time we could help strengthen the expertise of local staff by offering courses. Some ideas on this follow.

e. We could set up an IASS Advisory Service where volunteer members would serve as experts offering their services for free, with only their travel and basic living expenses paid, the latter perhaps by the host country. This is an ambitious program, similar to CESO, the Canadian Executive Services Organization (mainly of retired executives). A similar program is currently being proposed by the ASA. If there is support for this, we will need to find funds to pay for a coordinator (or find a volunteer) and the travel costs of experts. Donor agencies might be prepared to help with the funding needed.

f. The same program (3.e) can be extended to teach courses in developing and transition countries on topics that they need.

g. The International Statistical Education Center (ISEC) established by the ISI and the Indian Statistical Institute in 1950 in Calcutta, India, under the auspices of UNESCO and the Government of India offers an annual 10 month course on theoretical and applied statistics at various levels. Students come mainly from the Middle East, South and South East Asia and the Far East. We should explore with the ISI whether similar centers can be set up in Africa and Latin America.

h. An important initiative that has been suggested is to conduct courses for trainers in Survey Methods. These trainers would then be helped in translating the courses into their local languages, and helped with the first course they conduct, so that the teaching expertise is transferred to the country. Some years ago, Statistics Canada developed a Train the Trainer course in Survey Methods, in both English and French, for the World Bank. The World Bank could be approached for copies of the course material.

i. Developing countries need software for conducting surveys and for tabulating and analyzing the survey data, as well as technical expertise to install and use the software. Means of providing the software at reduced rates and transferring the technical expertise should be explored.

j. Information that members may have on good courses for developing countries that can be delivered in those countries could be advertised in *The Survey Statistician*. Are there any good courses available on CD ROMs?

k. The IASS could support a service for copying and mailing articles of interest to member of developing countries, on request.

l. Many members in the West have offered to give their collections of journals, proceedings of conferences, workshops and seminars etc., as well as books on Survey Methods to organizations that need them in other countries. Similarly, I was informed recently of an institution that is willing to donate 486 computers that are being replaced. In both cases funds are needed for sending the books or computers and personnel to help match the demand with the supply.

m. We could institute a prize (like the ISI's Jan Tinbergen Award) for the best paper in Survey Research Methods by a young statistician from a developing/transition country. The prize would be an expense paid trip to the ISI meeting and the opportunity to present the paper there.

I am aware that this is a long list and that these ideas are not all easy to implement. I will be involving our Vice Presidents and members of the IASS Council and Secretariat in discussing these ideas. We need your comments, ideas and involvement too in this effort. Some of you have already volunteered your services in helping us with these goals. Through this newsletter I hope to reach out to all our members and seek your

assistance also. Any comments on these ideas, positive or negative are welcome. If you wish to be involved in any of these ideas, you can E-mail me at «nach@blr.vsnl.net.in», write to me, or FAX me at 91-80-5572447. Wish you all a joyous festive season and a happy new year!

Nanjamma Chinnappa

Using a Split Questionnaire Design in Survey Data Collection

Gösta Forsman, Linköping University
Jan Wretman, Stockholm University

1. Introduction

There are several drawbacks with long survey questionnaires. For example, (i) interviewer time costs a lot, and long interviews result in high survey costs, (ii) long interviews are tiresome for the respondent, and there is a risk both of poor response quality and of respondents being less cooperative in future surveys, and (iii) long interviews are tiresome also for the interviewer and this may negatively affect the quality of the survey data.

Sometimes, however, it is deemed necessary to have a large number of questions in order to cover the subject area under study. It is then possible to reduce interviewer time and respondent burden by using a *split questionnaire design*, in which each respondent has to answer only to a specified subset of questions from the full questionnaire while still making sure that all questions are covered in the study. This way of collecting data yields an incomplete data matrix, where certain entries are empty by design.

In this paper, we discuss a simple case of split questionnaire design. We are especially interested in the possibility of utilizing auxiliary information in calculating estimates based on split questionnaire data. Some numerical examples with an empirical background are given.

Examples of split questionnaire designs have, under various names, been discussed by other authors. Wacholder, Carroll, Pee, and Gail (1994) talk about a *partial questionnaire design*, and Williams and Ryan (1996) about a design with *intentionally missing data*. Raghunathan and Grizzle (1995) use the term *split questionnaire design*. If one wants to emphasize the fact that the subset of questions for each respondent is selected at random from the full questionnaire, the procedure is sometimes referred to as *matrix sampling*; see, for example, Zeger and Thomas (1997).

2. The Split Questionnaire Technique

A simple example of a split questionnaire design in a sample survey is illustrated by the following scheme:

	Block 0	*1*	*2*	*3*	*4*
Subsample 1	×	×			
2	×		×		
3	×			×	
4	×				×

Here, the questionnaire is divided into five nonoverlapping blocks of questions, and the sample is divided into four nonoverlapping subsamples. The questions in Block No. 0 are administered to all respondents in the full sample, while the questions in Block No. 1 are administered only to the respondents in Subsample No. 1, the questions in Block No. 2 only to the respondents in Subsample No. 2, etc. Thus, if the different question blocks are of about equal length, each respondent now has to answer only about 40 percent of the questions that he or she would have had to answer in a complete questionnaire design.

The price to be paid for the reduced respondent burden is twofold. First, an estimate based on answers to a question in Blocks No. 1 through 4 has a larger variance because of the reduced sample size for that question (that is, 25 percent of the full sample, if the subsamples are of equal size). Secondly, it is impossible to cross-tabulate the results on two questions from different blocks (Blocks No. 1 - 4).

Another example of a split questionnaire design, also based on five blocks of questions, is the following one:

	Block 0	1	2	3	4
Subsample 1	×	×	×		
2	×	×		×	
3	×	×			×
4	×		×	×	
5	×		×		×
6	×			×	×

In this example, each respondent has to answer 60 percent of all the questions, which is, a somewhat higher respondent burden than in the first example. In return, each question in Blocks No. 1 through 4 is now answered by 50 percent of the full sample. Furthermore, cross tabulation of all pairs of questions is now possible, although sometimes based on data from only one subsample (that is, about 17% of the full sample).

Note that a split questionnaire design of the type shown in the second example resembles balanced incomplete blocks in experimental design.

3. Construction of Question Blocks

It seems reasonable that Block No. 0 (the block of full sample questions) should contain three types of questions: (i) questions where it is important to present estimates with as small variance as possible, (ii) questions to be used as background variables in the presentation, and (iii) questions that can serve as useful auxiliary information in the estimation process (see Section 4 below).

As for the remaining blocks (those with only subsample questions), both questions should be put in the same block (or, one of the questions should be a full sample question) if we know in advance that two questions are to be cross-tabulated.

4. Estimation

A purely model-based approach to estimation with split questionnaire data is described in Schweder (1994). A multiple imputation approach to estimation with split questionnaire data within a Bayesian framework is described in Raghunathan and Grizzle (1995). The approach used below is a more traditional design-based survey sampling approach, although the estimator (2) below may be thought of as "model-assisted," in the sense of Särndal, Swensson and Wretman (1992).

We consider a finite population of N persons, and want to estimate the population parameter N_{ij}, the number of persons in category i with respect to question A and category j with respect to question B. Question A is a full sample question with response categories $i = 1, \ldots, a$, while question B is a subsample question with response categories $j = 1, \ldots, b$. A simple random sample of size n (the full sample) is drawn from the population, and question A is answered by these n persons. Question B is answered only by a subsample of m persons, drawn by simple random sampling from the full sample.

Using only subsample data, N_{ij} is traditionally estimated by

$$\hat{N}_{ij}^{*} = \frac{N}{m} m_{ij} \qquad (1)$$

where m_{ij} is the number of persons in the subsample in category i of question A and category j of question B.

An alternative estimator that utilizes the full sample data on question A as auxiliary information is

$$\hat{N}_{ij} = \frac{N}{n}\hat{n}_{ij} = \frac{N}{n}\frac{m_{ij}}{m_{i.}} n_{i.} \qquad (2)$$

where $n_{i.}$ and $m_{i.}$ are the number of persons in the full sample and in the subsample, respectively, in category i of question A.

With the same type of reasoning as in (2), an estimator of the population marginal count $N_{.j} = \sum_{i=1}^{a} N_{ij}$, using full sample data on question A, is

$$\hat{N}_{.j} = \sum_{i=1}^{a} \hat{N}_{ij} = \frac{N}{n} \sum_{i=1}^{a} \frac{m_{ij}}{m_{i.}} n_{i.}$$

The variance of the estimator (1) is

$$V\left(\hat{N}_{ij}^{*}\right) = \frac{N^2}{m}\left(1 - \frac{m}{N}\right)\frac{N_{ij}}{N}\left(1 - \frac{N_{ij}}{N}\right)$$

Formally, the estimator (2) can be handled as an estimator in two-phase sampling with simple random sampling in both phases and poststratified estimation in the second phase. (For more details, see Wretman (1994).) The variance of the estimator (2) is then (using standard approximation for the variance of the poststratified estimator)

$$V\left(\hat{N}_{ij}\right) \cong \frac{N^2}{n}\left(1-\frac{n}{N}\right)\frac{N_{ij}}{N}\left(1-\frac{N_{ij}}{N}\right) + \frac{N^2}{m}\left(1-\frac{m}{n}\right)\frac{N_{i.}}{N}\frac{N_{ij}}{N_{i.}}\left(1-\frac{N_{ij}}{N_{i.}}\right)$$

These two variances can be estimated as

$$\hat{V}\left(\hat{N}_{ij}^{*}\right) = \frac{N^2}{m}\left(1-\frac{m}{N}\right)\frac{m_{ij}}{m}\left(1-\frac{m_{ij}}{m}\right) \qquad (3)$$

and

$$\hat{V}\left(\hat{N}_{ij}\right) = \frac{N^2}{n}\left(1-\frac{n}{N}\right)\frac{m_{ij}}{m}\left(1-\frac{m_{ij}}{m}\right) + \frac{N^2}{m}\left(1-\frac{m}{n}\right)\frac{n_{i.}}{n}\frac{m_{ij}}{m_{i.}}\left(1-\frac{m_{ij}}{m_{i.}}\right) \qquad (4)$$

5. Some Numerical Results

In order to get some idea of the usefulness under realistic circumstances of the estimator (2), as compared to the estimator (1), we calculated variance estimates (3) and (4) using data from the Swedish Survey on Living Conditions, 1990. This is a nationwide survey carried out annually by Statistics Sweden. It is a personal interview survey with a rather long questionnaire (some 200 questions in the 1990 survey). Since it is a full questionnaire survey, full sample data are available on all survey questions. The sampling design is simple random sampling from the Swedish population aged 16-84. The population size 1990 is N = 6 668 000, and the full sample size is n = 6 120.

We choose different pairs of questions from the questionnaire. Within each pair, one question was treated as a full sample question (A) and the other one as a subsample question (B). For question B, we used data only from a simple random subsample of the original sample (the subsampling fraction was 25 percent), while for question A we used full sample data. For each pair of questions, variance estimates (3) and (4) were calculated and also the ratio

$$R = \sqrt{\frac{\hat{V}\left(\hat{N}_{ij}\right)}{\hat{V}\left(\hat{N}_{ij}^{*}\right)}} \qquad (5)$$

of the estimated standard errors for i = 1, ..., a and j = 1, ..., b.

Tables 1 - 3 give ratio (5) for different pairs of questions. The estimator (2) utilizing full sample data on question A brings about at least a moderate (in a few cells more than moderate) reduction of the standard error at no cost.

Table 1. Ratio (R) of Estimated Standard Errors

	B: Frequency of damages in the area:			
	Very frequent	Rather frequent	Rather unfrequent	Very unfrequent
A: Type of residential area:				
Rural area, few houses within sight	--	1.00	.99	.62
Rural area, small village	1.00	1.00	.96	.67
Urban area, mainly houses	.98	.98	.92	.75
Urban area, both houses and apartment buildings	.99	.97	.90	.83
Densely populated area, mainly apartment buildings	.98	.97	.90	.90

Table 2. Ratio (R) of Estimated Standard Errors

	B: Choir-singing in leisure hours:		
	Every week	Occasionally	Never
A: Type of residential area:			
Rural area, few houses within sight	.81	.90	.93
Rural area, small village	.79	.88	.97
Urban area, mainly houses	.79	.88	.96
Urban area, both houses and apartment buildings	.78	.90	.96
Densely populated area, mainly apartment buildings	.78	.94	.97

Table 3. Ratio (R) of Estimated Standard Errors

	B: In an unexpected situation, could you raise USD 1250 within one week?	
	Yes	No
A: Education:		
Elementary school	.62	.98
Comprehensive school	.66	.92
Secondary school	.54	1.03
Girls' school	.50	--
Vocational school	.50	--
Upper secondary school (from 1971)	.62	.96
Upper secondary school (before 1971)	.55	.96

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IASS on the World Wide Web (http://www.cbs.nl/iass.htm)

Early this year, the IASS adopted the latest wave of technology that is literally revolutionizing how communication takes place around the world. Correspondence that can take weeks or months using conventional means now occurs almost instantly. Data and information are easily accessible and quickly available from statistical and research organizations around the world.

The challenge to survey statistician practitioners and researchers is to learn how to use this capability as a communication tool, and to improve the timeliness and quality of the products they produce.

Features on the IASS website include for example, a section containing *The Survey Statistician* and another providing information about IASS conferences. *The Survey Statistician* can be viewed and/or printed from there. Members in the near future will be asked about receiving their copy through the website or via E-mail to save the expense of mailing it. Another feature on the website is an overview of the 1998 IASS/IAOS Conference on Statistics for Economic and Social Development to be held in Aguascalientes, Mexico. The invited sessions with the organizers and their mailing and E-mail addresses are available for those interested in taking part in an invited session. The website will also be used to help program chairs seek input for future IASS meetings. A feature under development is the IASS membership directory as approved at the recent meeting in Istanbul.

We encourage members to check out the IASS website and offer ideas and suggestions about what to include on it. One new section could include news about members. Another suggestion would be to periodically highlight a statistical organization from the point of view how it uses the internet to conduct its business, and also what data products and services it provides on the web.

For more information contact: Fred Vogel, E-mail: fvogel@nass.usda.gov.

Jerusalem Meeting on Longitudinal Studies a Great Success

Frank Yu

The Jerusalem IAOS/IASS Satellite Meeting was all about longitudinal studies. The meeting was held at a hotel just outside the old city of Jerusalem, close to many historic sites. It was held following the ISI session in Istanbul, from 27 to 30 August. A good number of the 130 delegates who converged on the conference from 27 countries also attended the Istanbul meeting.

Perhaps what struck one most about the conference was the mix of people from different backgrounds. There was a good representation of papers by academics, official statisticians and survey methodologists from various research organizations.

The meeting was sponsored and supported by the International Association of Survey Statisticians (IASS), the International Association of Official Statistics (IAOS), the Israel Statistical Association, Department of Statistics of the Hebrew University, Israel Central Bureau of Statistics and the Australian Bureau of Statistics. An international committee of experts was formed to guide the development of the scientific program. Professor Gad Nathan, Chief Scientist of the Israel Bureau of Statistics, presided as Meeting Chair.

The program aimed at balancing the theoretical and practical aspects of longitudinal studies. The first two days of the seminar were devoted to a range of methodology issues, including survey planning and sample design, treatment of incomplete data and measurement errors, and analysis and modeling of longitudinal data. The last day of the meeting was devoted to presentation of case studies in different fields of application.

The conference was held at a time when interests on longitudinal surveys had increased markedly. Official statisticians who attended the meeting reported a number of major longitudinal surveys being planned or conducted. There was also a strong interest in applying methods to analyzing longitudinal data collected from repeated surveys or administrative databases.

Dr. David Binder of Statistics Canada, in his keynote address at the first session, gave a

summary of the challenges faced by survey methodologists and official statisticians when conducting longitudinal surveys. He noted that one reason contributing to the increase in the number of longitudinal studies was that administrative data sources could now be used more effectively. This theme was echoed in many presentations, with examples showing how value can be added to the studies by combining survey data with administrative data. The use of administrative data would, however, require careful consideration of issues associated with sampling frames, record linkage, weighting and estimation. These topics are the foci of many of the papers presented.

A key concern in longitudinal surveys is the inaccuracy of estimates due to missing data and measurement errors. The meeting devoted a fair amount of time on the approaches to dealing with these errors. A range of methods were presented, showing that the extent of bias can be reduced through improved design, imputation, weighting, and modeling of nonresponse and measurement errors at the data analysis stage.

The meeting was concluded by a panel discussion on the topic "where do we go from here?". The panelists were Ray Chambers, Catherine Dippo, Michael Hidiroglou, Ugo Trivellato and Frank Yu. During the discussion, there was a strong consensus on the high value of longitudinal studies. It was clear that despite the high costs associated with collecting the data and the risks of non-sampling errors, longitudinal surveys and studies will be on the rise in the future.

By all accounts the meeting was an outstanding success. The organizers had wisely decided against running parallel sessions and had allowed each speaker to take up the floor for a reasonable span of time. These steps contributed to a high quality of presentation and discussion. The Radisson Moriah Plaza Hotel provided excellent food and participant enjoyed lively discussion over coffee breaks and lunches.

As expected, the social program was a high point of the meeting. Delegates attended a reception hosted by the Israel Statistical Association, at a venue overlooking the beautiful walls of the old city. On the Sabbath, participants had to make the difficult choice between a tour to the Dead Sea or visiting the historic sites and museums in the city of Jerusalem. Those who went for the first option had the opportunity of seeing the desert of Massada and dipping into the sea at the lowest point on earth.

Although there was not a published proceedings for the meeting, the editor of *Survey Methodology* agreed to dedicate a volume of the journal to some of papers presented. Authors of the papers were encouraged to submit their work to the usual refereeing process.

For further information contact Frank Yu at the Australian Bureau of Statistics, E-mail: frank.yu@abs.gov.au.

CENVAR Software for Tabulating Sampling Errors

David J. Megill, U.S. Bureau of the Census

1. Background

In their article titled "Sampling Error Software for Personal Computers" appearing in *The Survey Statistician* No. 35, December 1996, Jim Lepkowski and Judy Bowles presented a very good overview of the different microcomputer software packages available for calculating variances from survey data based on complex sample designs (such as stratified cluster designs), including the package CENVAR (CENsus VARiance Calculation System). The purpose of this article is to provide more detailed background information on CENVAR, describe its major features, including some of its advantages and limitations, guidelines for using CENVAR, and some interesting CENVAR applications.

As indicated in the Lepkowski and Bowles article, CENVAR is a component of the Integrated Microcomputer Processing System (IMPS), developed by the International Programs Center (IPC) of the Population Division of the U.S. Bureau of the Census. The IMPS software is designed to handle all phases of data processing for censuses and surveys on IBM-compatible microcomputers, and includes the following components:

DATADICT (DATA DICTionary) - for defining dictionary of variable names and values, used by all components of IMPS

CENTRY (Census ENTRY) - for data entry applications

QUICKTAB (QUICK TABulations) - user-friendly package for quick frequency tables and cross-tabulations

CONCOR (CONsistency and CORrection) - for data editing applications

CENTS (CENsus Tabulation System) - for producing publication-quality tables

CENVAR (CENsus VARiance Calculation) - for tabulating measures of precision for survey data from complex designs

TRS (Table Retrieval System) - for data dissemination of detailed census tables in electronic format

CENTRACK (CENsus TRACKing) - for operational control and reporting

The IMPS software was developed with funding from USAID. It was designed mainly for use in developing countries with limited technical personnel and equipment. However, it has also been used to process the 1990 U.S. census data for the Pacific Insular Areas (American Samoa, Guam, Northern Marianas and Palau). QUICKTAB is being included on some of the U.S. Bureau of the Census CD-ROM data products so that users can easily generate frequency distributions and cross-tabulations using their own specifications. IMPS is currently being used by statistical offices in more than 100 countries, as well as by other government agencies, universities, and the private sector. A Windows-based version of IMPS is currently being developed, with some components already being distributed. However, it will probably be a few years before a Windows-based version of CENVAR is developed.

The CENVAR software was based on PC CARP (Cluster Analysis and Regression Program), developed by Iowa State University (ISU). The PC CARP software was derived from the ISU mainframe version SUPER CARP. When microcomputers started being used in statistical offices in developing countries, the U.S. Bureau of the Census established an agreement with ISU to have SUPER CARP converted to a menu-driven microcomputer version. The International Statistical Programs Center (currently IPC) of the U.S. Bureau of the Census and ISU were both instrumental in introducing PC CARP to users in many different countries for tabulating measures of precision for sample surveys.

After using PC CARP in developing countries for several years, the IPC staff found a need to make some aspects of the software more user-friendly and effective. One of the limitations of PC CARP was that the numbers in the output tables appeared in scientific notation, and it was very time-consuming to transform them into publication-quality tables. The front-end of the software also needed enhancements, given the lack of a dictionary to define the values of the codes for

classification variables, and the difficulty of entering all the parameter specifications and data format statement each time PC CARP was run. There was also a desire to integrate the new variance calculation system with the IMPS software.

At the same time, funding and staff time in IPC for developing a new variance calculation software package were limited. The U.S. Bureau of the Census continued to receive some funding from USAID for maintaining and improving IMPS, but the software development needs had to be carefully prioritized. As a result, IPC decided to limit the enhancements of PC CARP to the front-end and output components for the main analyses, while maintaining the original FORTRAN calculation algorithms. The resulting new software package, CENVAR, would also be made compatible with the IMPS dictionary. Because of resource constraints, it was not possible to incorporate all of the analyses available in PC CARP into CENVAR. The IPC decided that priority would be given to the analyses which are most commonly used for survey applications in developing countries: totals, means, proportions, and other ratios, including subpopulation estimates (for categories of classification variables). The PC CARP analyses which are not included in CENVAR are regression and univariate analyses.

2. Major Features of CENVAR

The CENVAR software can calculate the standard error for estimates of totals and ratios based on a stratified multistage sample design or simpler designs. The ultimate cluster variance estimator used by CENVAR is based on a Taylor series approximation. As indicated previously, the variance calculation algorithms were retained from PC CARP. This variance estimator is similar to that used by the CLUSTERS software supported by the United Nations. CENVAR produces subpopulation estimates for each category of a classification variable, and these variables can be cross-classified. For each category, CENVAR calculates the estimate, standard error, coefficient of variation (CV), 95 percent confidence interval, design effect (DEFF), and number of observations.

Some of the most important features of CENVAR are:

- Interactive IMPS-style menus
- Use of IMPS Data Dictionary
- Interaction with DOS to select files from directories; also VIEW and PRINT
- User-friendly problem and analysis specification
- Ability to specify a series of different analyses to execute all at once
- Save/load feature to recall settings previously specified
- Display of processing status
- Fast input and output execution
- Variable names up to 15 characters long
- Full labels associated with values of classification variables
- Stratum rates read directly from data file
- Meaningful error messages and a help menu
- Output report format in tabular form with conventional notation
- User-selected formats for output statistics, such as percentages and decimal places
- Output tables exportable to spreadsheet software

These features of CENVAR are great improvements over the PC CARP software, especially the formatting of the output tables. However, as indicated previously, CENVAR does not include the regression and univariate analyses from PC CARP. If users require these analyses in addition to the subpopulation totals and ratios included in CENVAR, they would need to use both packages.

3. Guidelines for Using CENVAR

The CENVAR software is menu-driven. The CENVAR manual provides thorough documentation on the different menu options, and examples for household income and expenditure, labor force, and post-enumeration surveys, using data sets provided with the software. There is also limited on-screen help. In this article we will limit the discussion to important guidelines for using CENVAR.

In order to tabulate estimates of standard errors using CENVAR, it is generally necessary to produce a new data input file from the original survey data. Since the CENVAR software will only accept one record type, it is necessary to generate one record for each unit of analysis in the CENVAR

data input file. For example, in the case of household estimates, such as household income or expenditure, it would be necessary to generate one record for each sample household. For estimates by person, such as the unemployment rate, the CENVAR input file should have one record for each in-scope sample person. Each record in the CENVAR data input file should include fields for the stratum, cluster and weight, in addition to the classification and analysis variables which are required for the particular CENVAR analyses. The classification variables are used to produce subpopulation estimates for all their respective categories. The analysis variables are generally continuous variables, such as income or hours worked, or count variables, which are equal to 1 if the unit has a certain characteristic and 0 otherwise. CENVAR automatically creates a count variable named INTERCEPT, which is equal to 1 for each record. The INTERCEPT variable can be used to obtain the estimate of the weighted total number of units (for example, the total number of persons or households), or it can be used in the denominator of a ratio in order to obtain a mean or proportion. In generating the CENVAR data input file, sometimes it is necessary to transform some variables, such as recoding individual ages into age groups. The CENVAR data input file needs to be sorted by stratum and cluster.

Because of an IMPS requirement, the ASCII input file has to be zero-filled (that is, any spaces have to be replaced by zeros). CENVAR does not accept any blanks in the file, and it does not have the capability to filter records with special nonresponse codes; it inherited this limitation from PC CARP. In the case of classification variables, any record with a blank should be imputed with a special code to identify "missing" or "not applicable." The CENVAR output will include estimates for these categories, which can then be deleted from the tabulations which will be published. For analysis variables, CENVAR assumes that any missing values are imputed. Once the file is zero-filled, CENVAR will treat any missing value as 0, thus introducing a downward bias in the estimates of means when missing values are not imputed.

An IMPS data dictionary needs to be created for each CENVAR data input file. The DATADICT component of IMPS is very easy for users with limited computer experience. The dictionary can define variable names up to 15 characters long. It is recommended that the user enter a value name for each category of classification variables. Another user-friendly and very useful component of IMPS is QUICKTAB. Once the data dictionary is developed, QUICKTAB can be used to quickly produce frequency tabulations for each classification variable in order to verify the categories and distribution for each variable, and to produce cross-tabulations to check for consistency.

4. Interesting Examples of CENVAR Applications

One of the largest-scale CENVAR applications was for the tabulation of measures of precision for the 1991 Philippines Census of Agriculture and Fisheries (CAF) estimates of total area in different crops at the provincial level. The 1991 CAF was conducted by the National Statistics Office (NSO) in the Philippines. Given that a major objective of this agricultural census was to provide agricultural data down to the municipality level, a very large one-stage stratified cluster sample of more than 50 percent of the *barangays* (smallest administrative areas) was selected. Within each municipality, the *barangay* with the largest area in farm land (identified from the 1981 CAF) in each municipality was included in the sample with certainty. The remaining *barangays* within each municipality were ordered by area of farm land, and a systematic 50 percent sample of *barangays* was selected. All of the farm households within each sample *barangay* were interviewed for the 1991 CAF.

In the CENVAR application for the 1991 CAF, the municipality was identified as the stratum and the *barangay* was identified as the cluster. Given the high sampling rates, the first stage probabilities of selection were included in the data file for a finite population correction factor. In the case of the certainty *barangays*, the first stage probability of selection was 1, so the variance component from such *barangays* was correctly calculated as 0. However, the data from the certainty *barangays* were included in the estimates of the total crop area, so the coefficients of variation were calculated correctly.

An interesting aspect of this CENVAR application for the 1991 CAF was that other components of the IMPS software were used in an automated system to generate the CENVAR tables for each province.

The NSO wanted to calculate the standard errors for the total area in production for the ten major crops in each province (in terms of area). Therefore it was necessary to produce an individual data dictionary for each province, which also had the names of the municipalities corresponding to the geographic codes within that province. An automated system was developed to determine the ten major crops by sorting QUICKTAB summary data for the province. The resulting ASCII file was run through a CONCOR program together with a geographic reference file to generate the data dictionary for the province. A total of 10 microcomputers (IBM-compatible 486, with 66 MHZ speed) were used to systematically run this system to produce the data dictionary and then the CENVAR results for each province. This illustrates the advantage of integrating the variance calculation software with a processing system such as IMPS.

Another interesting CENVAR application was the study of the effect of implicit stratification of PSU's on the efficiency of master sample designs in Peru and the Philippines. The implicit stratification was derived from ordering the PSU's within each stratum in the master sampling frame geographically and by socioeconomic indicator, and selecting the PSU's systematically (with probability proportional to size) within each stratum. For each country application, the stratum in the CENVAR data input file was coded in such a way that either the explicit or implicit strata could be used for the CENVAR analyses. The explicit strata were based on the original geographic strata in the sampling frame (for example, province, urban and rural). Then implicit strata were identified by subdividing the sample PSU's within each stratum into groups of two or three PSU's each, in the same order in which they were selected. An implicit stratum code was generated, which had the explicit (geographic) stratum code embedded. The CENVAR analyses were then run separately using the alternative sets of stratum codes. In comparing the CENVAR results based on the explicit stratification to those based on the implicit stratification, the percentage difference in the design effects was used as a measure of the gain (or loss) in the efficiency of the master sample design from the implicit stratification.

The NSO in the Philippines has been using CENVAR for systematically tabulating the standard errors and other measures of precision for each quarterly Labor Force Survey. The processing system for producing publication-quality standard error tables is made more efficient by using standardized data dictionaries, CENVAR settings files for running the analyses programs, and CONCOR programs for generating the CENVAR input files. They import the CENVAR output files into spreadsheets and use macros for the final formatting of the tables to be published.

5. Obtaining the IMPS and CENVAR Software and Documentation

The IMPS software, including CENVAR, and the corresponding manuals, can be downloaded from the internet at the following site: http://www.census.gov/ipc/www/imps.html. Installation instructions are also provided at that site. If IMPS installation diskettes are required, a request may be sent by E-mail to imps@census.gov. That address can also be used regarding questions or problems with CENVAR or other IMPS software. The following mailing address can be used:

Technical Assistance Staff
International Programs Center
U.S. Bureau of the Census
Washington, D.C. 20233-8860

A Windows version of IMPS is currently being developed. Some components of IMPS 4.0 for Windows have already been released, and can be downloaded from the same web site. However, CENVAR is still only available in the DOS version, which requires the IMPS 3.1 (DOS) version of the dictionary.

Question/Answer

As always, we welcome alternative views on the issues raised, comments on the answers provided, and especially other good practical questions. Please send questions and observations to:

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E-mail: vjverma@essex.ac.uk

A number of good questions have been proposed and some are listed below. If you have expertise in these areas and would like to propose a response to one of these questions we would appreciate your contribution. Please send your contribution directly to me at the address above. An answer is proposed below for one question.

Proposed questions:

1. Suppose we have selected a self-weighting sample of households or persons. The distribution of the sample by basic characteristics (such as age, sex, household size) may depart more or less seriously from the 'standard' from some other more reliable source. Are there guidelines (tolerable limits, rules of thumb, etc.) that could assist in deciding whether or not to apply weights to correct the sample? And advice on the procedures to be used if such weights are to be applied?

   (Godfrey St. Bernard, Trinidad and Tobago)

2. For the last year or two only, I heard about "benchmarking." What does it mean? How does it differ from "auxiliary" and "ancillary" variables in statistics? And from "ratio estimation" and "poststratification"? Even from "standardization", or from "calibration"? Is there indeed a difference, and where do we need a new term?

   (Leslie Kish, University of Michigan)

3. I would like some advice on how to deal with PSUs of greatly differing sizes. In Poland, for instance, communities (defined as the lowest administrative self government unit managing the local population register) may be used as PSUs. However, these units differ greatly in size, from 5-10,000 to almost a million inhabitants in large city communes. Can we use these kind of units as PSUs without serious loss in sample efficiency, and if so, how?

   (Jaroslav Gorniak, Poland)

4. Can we combine two or more variables to form one measure of size for PPS sampling? If so, how? When can it be appropriate and advantageous?

   (Jiancheng Pan, SSB China)

5. What procedure is the best compromise in sample size allocation for the purpose of producing national estimates and separate aggregates for provinces, when the individual provincial sizes differ greatly, especially in terms of economic indicators such as GDP or number of firms in an establishment survey? If we have large samples for satisfying the reporting needs of small provinces, is it necessary to reduce those sample sizes for the production of national level estimates in order to achieve proportional allocation?

   (Jiancheng Pan, SSB China)

6. When and how should we design a pilot study to obtain information on the measures to be estimated in the main survey so as to improve the design for the latter?

   (Inscok Jeong, Republic of Korea)

7. Most of the sample surveys in Nepal, except a few standard ones, provide no information on variance, defts, rohs, and confidence intervals for the estimates. How can we improve the situation?

   (Bhim Suwal, Nepal)

Q37.1 In interviewing persons, we normally select a sample of households. What are the factors determining choice among the following options for the final sample: (a) selecting all eligible respondents in the household; (b) selecting only one person per household; or (c) selecting a specified number n > 1 per household?

(Godfrey St. Bernard, Trinidad and Tobago)

Answer by Vijay Verma

Household surveys normally involve the collection of information on different types of units. The basic units are households and persons, though information pertaining to other units, such as families, spending units or other groupings of persons within households, may also be involved. It is useful to distinguish types of units according to several criteria: (a) units of analysis; (b) units of observation, i.e. units which are interviewed or otherwise provide the information; and c) ultimate units in the selection of the sample.

Analysis units. Information pertaining to the units of analysis may arise in different ways. For instance, data on households as the units of analysis may be (i) obtained directly on the household as the unit of observation; or (ii) aggregated from information on its individual members to construct household-level variables. Household size and type are simple variables of the second type. A much more complex example is the construction of total household income on the basis of personal incomes reported by its individual members. A mixture is also possible: for example, some components of income common to all members obtained at the household level, supplemented by personal incomes reported at the individual level. Similarly, information on persons as the units of analysis is normally (iii) obtained directly at the personal level, but it may also include (iv) common household-level variables 'ascribed' to each household member. Sometimes we are also concerned with (v) specific relationships between persons, such as comparing the family planning behavior of sexual partners, or mutual attitudes and perceptions of parents and children within the household.

Responding units. These variations represent a diversity of possibilities in the choice of the observation units, a major factor determining the choice being the type and complexity of the information to be collected. When the information involved is simple, non-attitudinal and non-controversial, it may suffice to have one *arbitrarily chosen person* (such as any adult member) provide information on the household as well as, by 'proxy,' on all its members. This may be acceptable, for instance, if the required information is confined to physical characteristics of the accommodation or to listing and enumerating basic demographic characteristics of household members.

In surveys involving more complex information, however, it is normally desirable to designate a *specific type of person* as the respondent for information on the household, such as the household head or similar 'reference person' designated in some objective way. The most appropriate choice depends on the subject matter involved and also on considerations of convenient and consistency. For instance, surveys on household income may choose the main earner or the person responsible for the household's accommodation as the respondent, though many surveys also accept the self-designated 'household head.' Where detailed personal interviews are also involved (as for instance in fertility and health surveys like the WFS and DISS), it is normally convenient to conduct the household interview with one of the personal interview respondents. For panel or longitudinal surveys involving repeated interviewing of the same units, it is desirable for consistency to retain the same respondent across waves to the extent possible. And so on. Indeed, some surveys may require contacting more than one type of persons for the household interview: for instance, the main earner for the income part and the main 'home-maker' for the expenditure part in an income-expenditure survey. Also, many surveys benefit from the supplementary information provided by members other than the main respondent(s) to the household interview.

Person-level data. For data at the personal level, we have to consider two important issues. Firstly, whether the information can be obtained from another household member by proxy, or must be provided by the person concerned. Secondly,

whether from the substantive point of view, it is permissible to obtain the information on a subsample of members in the household, or it must be obtained for all eligible members.

Depending on the nature and complexity of the person level information to be collected, many complex surveys do not allow proxy responses, and insist that in each case, the information be obtained from the person concerned. Detailed fertility and health surveys provide a good example. The study of relationships between individuals (data type (v) above) would also normally preclude proxy interviewing. To achieve better response rates, some such surveys do allow proxy, but only in exceptional circumstances and often using a simplified (reduced) version of the survey questionnaire. Somewhat less complex surveys may allow proxy responses more freely, but with instructions to avoid them when possible. This is the case in some labor force surveys. In the simplest situation, it is possible to have a single person provide the information on all members of the household.

As regarding subsampling within the household, it is clear that household-level variables involving the aggregation of person level values can be constructed only if all (eligible) members are included. The example of total household income was given above. This requirement has become more common with the increasing emphasis on studying individuals within the context of their family or household. For instance, traditionally many labor force surveys have used only the individual person as the unit of analysis in reporting activity and unemployment rates by age, sex, etc. But the increasingly precarious employment situation in many societies is making it important to bring into analysis the circumstances of the whole household, i.e. the activity status of *all its members.*

Sampling within households. The above considerations have a bearing on the issue of the sampling of persons within households. When substantive requirements dictate the need to obtain information on all members (or all members considered eligible for the purpose, such as all persons above a certain age), there is no question of sampling within households. However, when proxy information can be accepted, we may consider selecting or designating respondent(s) for the purpose of actually collecting the information. In most situations, the choice will be determined by practical considerations (who is most suited to provide the information, is available for the purpose, and is actually willing to cooperate, etc.), rather than by random selection. The same considerations apply in the selection or designation of respondent(s) for the household-level interview as noted above.

Now we consider the situation where there is no substantive restriction on subsampling persons within the household for the person level data collection and analysis. This of course does not preclude the common practice of including in the survey all (eligible) persons from the sample households. Including all eligible elements (eligible persons) from each larger unit (sample household) has the advantage of simplicity and economy. No selection is involved, avoiding the need for prior listings for the purpose, and also possible selection errors and biases. The elements retain the selection probabilities (and weights) of the parent units. As noted by Kish (Survey Sampling, Section 11.3), this choice is appropriate when *any* of the following conditions exit: (i) units containing more than one element are rare; (ii) information about all elements in a unit can be obtained simultaneously and cheaply; or (iii) the intraclass correlation among elements with the same units is negligible or negative. Condition (i) often holds in surveys aimed at special populations: a good example being fertility survey of ever-married women in the child-bearing ages — there are few households with more than one such woman, though a significant minority may have none. Condition (ii) holds in situations where the information to be collected is relatively simple and brief, and especially if proxy response is accepted. As regard (iii), in many surveys the characteristics of interest are closely related to age and sex, which in turn tend to be negatively correlated among individuals within the same household.

This is good, practical advice, applicable in many circumstances. Of course, it has to be applied flexibly taking into account specific circumstances, and there can be exceptions. For example, for some topics, the danger of 'contamination' between interviews may be so serious as to preclude multiple interviews from the same household, even though one or more of the above conditions is satisfied. Excessive response burden in very detailed inquiries such as time-use surveys has

also been used as a reason for avoiding multiple individual interviews per household. We can find examples where the survey's particular circumstances and arrangements meant that subsampling within households could be implemented easily, with little additional cost or inconvenience, thus presenting a more serious alternative to take-all sampling.

Sometimes it is also worth considering some modifications to the 'take-all' scheme. For instance, while households containing more than one eligible person may be rare, a considerable proportion may contain no eligible person at all. Prior identification and exclusion of such households from the personal interview survey is then likely to be economical. At the other end, units containing a very large number of eligible elements, even if rare, may be too inconvenient and disruptive for the fieldwork. It would then be appropriate to put a limit on the maximum number of elements to be taken from any one unit, such as maximum of 2 or 3 household to be taken from any dwelling in a survey using the latter as the ultimate sampling units.

Country Reports

AUSTRALIA (from Geoff Lee)

A recent Australian Government initiative will have a profound effect upon the design and implementation of business surveys. Following a recommendation by the Government's Small Business Deregulation Task Force, the Australian Bureau of Statistics has established the "Statistical Clearing House". Over the next 18 months, review and approval by the Clearing House will become a condition for the introduction or continuance of any survey affecting 50 or more businesses conducted by or on behalf of any Australian Government department. Information describing approved surveys will be recorded in a Register of Surveys, available via the Internet.

The primary objective of the clearing process is to reduce the load placed on business respondents by eliminating duplication and ensuring quality in the development and conduct of business surveys. Clearing House staff will promote general best practice in survey design and operations as well as identifying specific improvements to individual surveys. And the clearing process will have other benefits. Via the Register, each department will, for the first time, have access to a list and details of the business surveys that it and all other Government departments conduct. The descriptions in the Register will provide practical guidance in the development of new surveys. More details of the clearing process are available via E-mail to statistical.clearing.house@abs.gov.au

CANADA (from Gordon Brackstone)

Statistics Canada launched a new Retail Commodity Survey (RCS) in January 1997. The survey, whose purpose is to provide estimates of retail trade sales by commodity, is based on a two-phase sample design. The first phase sample is the Canadian Monthly Retail Trade Survey, which has been in place since 1988. Information from the first phase is used in all steps of the commodity survey in order to maximize the efficiency of the design. For instance, a multivariate allocation method based on total monthly sales as reported in the monthly survey has been used. Variance estimation methods have been developed for a two-phase stratified sampling design where the second phase sample is selected from a restratified first phase sample.

The first set of quarterly estimates from the survey should be available in the spring of 1998. For further information, please contact Marie Brodeur, Business Survey Methods Division, Statistics Canada, Ottawa, Ontario, K1A 0T6. Tel.: (613) 951-3027. Internet : broderm@statcan.ca.

The Self-Sufficiency Project is a longitudinal social experiment designed to test the effectiveness and use of a temporary earnings supplement in helping social assistance recipients make the transition to economic self-sufficiency. The study includes survey data over a five year and administrative data over a twelve year period. With the study in the final stage of survey collection for the last of four surveys, Statistics Canada will be making available a complex and comprehensive micro-data file that will provide a unique opportunity to analyze data from 9600 randomly selected single parents on social assistance in two Canadian provinces. This micro-data file will contain the baseline and first follow-up survey data plus administrative data for the recipients' first four and a half years in the study. The file contains data on household and family composition, marital history, education, employment history, housing, attitudes towards work and welfare and use of government transfer programs and the earnings supplement. Weights will be included so that provincial level estimates may be produced. The planned availability date is the fall of 1998. This complex data set will be useful for analysts of topics such as welfare dynamics, labor market attachments, and family formation for income assistance recipients. This study is funded by Human Resources Development Canada and is managed by the Social Research Demonstration Corporation. For more information contact Richard Veevers or Ann Brown, Special Surveys Division, Statistics Canada, Ottawa, Ontario, K1A 0T6. Tel.: (613) 951-4617, or (613) 951-2898, by fax: (613) 951-0562, or by E-mail: veevers@statcan.ca or browna@statcan.ca.

The Redesign of the Canadian Family Expenditure Survey: In the past, the Canadian Family Expenditure Survey was conducted once every four years. A primary goal was to collect information on expenditures to update weights for the basket of goods used in the Consumer Price Index. The survey is now undergoing a major redesign and

from the 1997 reference year will be an annual survey renamed the Survey of Household Spending.

Under the current methodology, information on expenditures for a one-year period is collected in a retrospective interview. The major problems with this collection methodology are the high response burden resulting from the lengthy interview, and the possibly large response errors due to the difficulty of recalling all expenditures over a year. A new collection methodology with different reference periods for different types of expenditure is currently under evaluation. Frequent expenditures would be collected from a diary and infrequent expenditures by a recall interview with a reference period of three months for most expenditures.

For more information contact Johanne Tremblay, Household Survey Methods Division, Statistics Canada, Ottawa, Ontario K1A 0T6. Tel. (613) 951-0682, by FAX (613) 951-3100.

ESTONIA (from Imbi Traat)

The university town of Tartu, Estonia, was the venue of the Summer School on Survey Sampling Theory, Methodology and Practice from June 26 to July 2, 1997. The idea of the Summer School arose from the needs of the Baltic Countries. The Summer School had the following objectives:

- to promote interest in theoretical and practical problems of survey sampling among young statisticians in the universities, national statistical agencies and other institutions in the Baltic countries;
- to enhance their theoretical, methodological and practical skills in survey sampling;
- to stimulate scientific research in survey sampling and to give research students from different universities in the Baltic and Nordic countries the opportunity to report and jointly discuss their research results on survey sampling problems;
- to provide the opportunity for survey practitioners to discuss their problems and to learn from the experiences of other countries, including Nordic countries with excellent statistical practice;
- to establish contacts and promote closer co-operation between researchers, students and official statisticians from different Baltic and Nordic countries working in the area of survey sampling theory, methodology or practice.

The Summer School was organized by the University of Tartu, the University of Latvia and the University of Umeå (Sweden) in co-operation with the Statistical Office of Estonia, the Central Statistical Bureau of Latvia, the Lithuanian Department of Statistics and Statistics Finland. The Organizing Committee consisted of Imbi Traat, Janis Lapins and Gunnar Kulldorff from the above mentioned universities. The financial and other support was received from the University of Tartu, the University of Umeå, Statistics Finland, the Phare Multi-Country Cooperation Programme and the Research Triangle Institute.

The program of the Summer School consisted of four different blocks – invited lectures, contributed lectures, computer classes and round tables. The main topic of the invited lectures was analysis of survey data. Professor Gunnar Kulldorff, University of Umeå, gave an introductory lecture on the general methodology of sample surveys, with the basic sampling and estimation procedures. Professor Carl-Erik Särndal, Statistics Sweden and the University of Montreal in Canada, spoke about statistical inference from survey data, putting emphasis on calibration estimators and surveys with non-response. Corresponding software CALMAR and CLAN was demonstrated by Dr. Kari Djerf, Statistics Finland. Dr. Risto Lehtonen, Statistics Finland, gave an intensive course on the analysis of survey data covering variance estimation for complex surveys, design-based analysis of two-way tables and multivariate survey analysis, bringing examples from Finnish Socio-economic and Educational Surveys. Dr. Imbi Traat drew attention to the special features of survey data in her lecture.

Contributed lectures were either case studies or lectures about research results. Representatives from the statistical offices of the three Baltic Countries described their efforts and results on designing the first sample surveys in these countries. Danute Krapavickaite presented a lecture on the estimates in the Lithuanian Labor Force Survey. Janis Lapins gave a lecture on the sample design and estimation procedures of the Latvian Household Budget Survey. Ebu Tamm spoke on wages statistics in the Statistical Office of

Estonia. In addition to this, research students and young statisticians from the Baltic and Nordic countries contributed many other interesting case studies or research results.

Lectures on the analysis of survey data were supported by practical exercises on PCs, supervised by Kari Djerf. He taught participants to analyze data from complex surveys with the special program package SUDAAN. Descriptive statistics, analysis of two-way tables, and regression analysis with SUDAAN were performed. Two simultaneous Round Table meetings were held during the Summer School. One was lead by Carl-Erik Särndal and was devoted to the methodological issues of practical surveys. In addition to what the participants brought up, Carl-Erik Särndal contributed with his experiences at Statistics Canada, describing also interactions between the Canadian Universities and Statistics Canada. The other Round Table, lead by Gunnar Kulldorff and Imbi Traat, was mostly devoted to education and research issues in survey sampling. The following topics were considered: the profession of survey statistician, university education in survey sampling (theory, methodology and practice), interactions between universities and statistical agencies, textbooks for courses in survey sampling, journals with papers on survey sampling, current research areas in survey sampling, the International Association of Survey Statisticians (IASS).

Busy working days were complemented with some social events – welcome and farewell parties, walking tour in historic Tartu (its University was founded in 1632), bus excursion to the beautiful countryside in southern Estonia (including a country-lunch in a tourist farm). Joint lunches during working days helped people to better communicate with each other.

The Summer School had 49 participants (including teachers). Among them, 29 came from the Baltic countries (14 from Estonia, 9 from Latvia, 6 from Lithuania) and 20 from the Nordic countries (2 from Denmark, 9 from Finland, 2 from Norway, 7 from Sweden). There was a good distribution of practical statisticians (10), research students (17), university teachers and others (7).

Participants and organizers evaluated the Summer School very successful. The overall opinion was that analogous events, with varying topics are needed and are also very welcomed in the future.

For more information, please contact Dr. Imbi Traat, Institute of Mathematical Statistics, University of Tartu, 2 Liivi Street, EE 2 400, Tartu, Estonia.

GABON (from Jean Pierre Zima Mefe)

Proceedings of the Seminar on Poverty in Gabon, held in Libreville July 1-4, 1997: Poverty is not a new word in our society anymore. It is a source of concern for the major powers as much as it is for the developing countries. There is urban poverty and there is rural poverty. For many years Gabon has been open to any policy aimed at improving the living conditions of its people. Devoting the necessary resources to alleviating it is one solution, but understanding the extent of the phenomenon is another. It is hard to define poverty if we do not have the criteria to measure it. In every society there is a hierarchy: there are the wealthy, those who are less well-off and the poor. But it is the poor that seem to be the target of social policies.

In order to measure poverty in Gabon, the World Bank, the Gabonese Government and the donor agencies initiated a survey in 1995-1996 whose final report was released in March 1997. The survey's conclusions on ways to reduce poverty are: reduction of unemployment, increasing the revenues of small farms, improved efficiency in the health system, cleaning-up of the urban environment, redirection of the social policies and development of a reliable statistical system for the analysis and monitoring of poverty.

There was a significant decrease in poverty during 1968-1994 (from 56% in 1968 to 11% in 1994), as a result of economic growth. But efforts still need to be made. Concerned by conditions, the three stakeholders mentioned above held a seminar in July 1997 to consider the necessary ways and means to improve the living conditions of the most disadvantaged segments of the Gabonese society. From a national interest perspective, this seminar was to lead to the development of a consistent and reliable statistical system of monitoring poverty. Discussions took place in three workshops: the Statistics Workshop designed to "Identify the Problems Facing the Development of a Statistical

System of Poverty Analysis and Monitoring", the Education Workshop designed to examine "How to Improve the Education of the Poor", and the Health Workshop designed to discuss "The Problem of Basic Health Care for the Have-Nots."

At the opening of the seminar, the Statistics Workshop was to "identify the main problems preventing Gabon from accessing reliable data on poverty". In order to address these problems extensively, the group had first to think of a consistent and stringent methodology approach. Defining this methodology was of great interest as it demanded blending the projects of different departmental statistical services as well as understanding the great difficulties encountered in the development of these projects. This gave us an idea of the problems undermining the Gabonese statistical system.

The participants thought it necessary to make a list of the apprehensions and expectations regarding the seminar. These apprehensions and expectations allowed the group to identify the major problems in order to help develop an action plan.

The Statistics Workshop acknowledged the difficulty in developing and implementing poverty-alleviating policies without reliable information that spans all sectors. The major part of this information ought to be provided through an *efficient national statistical system.* The current situation of the Gabonese statistical system is such that it is impossible to concentrate on poverty monitoring only.

Having noticed the general weakness of the system in terms of human, physical and financial resources, the Workshop participants identified three major problems that led to identifying secondary problems, and to the development of an action plan. Some of the problems include a legal framework not adequate to develop and disseminate statistical data, lack of communication between providers and users of statistical data, and a shortage of human, physical and financial resources.

For more information, please contact Mr. Jean Pierre Zima Mefe, Chef de service, D.G.S.E.E., B.P. 2119 Libreville, Gabon. Tel.: 241721369, Fax: 241720457.

ITALY (from Claudio Quintano)

In 1995 the National Accounts and Economic Analysis Department at ISTAT published a new productivity indicator constructed within the context of the National Accounts. It is a total factor productivity indicator that refers to the overall market sector calculated on an annual basis for the years 1980-1994. The three major areas of economic activity are covered - agriculture, industry, services - and there is also a disaggregation into five branches for the industrial sector and four branches for services. This new indicator is defined as the difference between the rate of change for product and that for total factors employed in the production process (both primary and intermediate inputs). Productivity changes are expressed using the Tornqvist index whereby the weights used when aggregating single factors are the average share of factor cost in production for the two periods compared. The output concept adopted in constructing the indicator is that of net output at constant prices. Each sector is treated as a single, vertically integrated enterprise, therefore, all exchanges taking place between production units classified in the same sector are not taken into account. Intermediate inputs at constant prices include raw materials, intermediate goods, purchased services, (operating) leasing payments with regard to capital goods, etc. Intra-sectoral exchanges of intermediate goods are treated in a manner consistent with that adopted for output.

Primary factors are capital and labor. Capital input is defined as the flow (in real terms) of services deriving from the capital goods' stock employed in the production process. In the approach followed when constructing the productivity indicator, the flow of services is considered to be proportional to net stock, classified according to ownership sector for the capital goods concerned. The weight for the capital factor in the formula used is obtained in a residual manner, subtracting values for labor and intermediate costs from the output value. Two categories of labor input have been identified for each economic activity considered: employees and self-employed. A distinction has been made for each category between regular employment (employment positions concerning which prescribed fiscal and contribution requirements are met) and

non-regular employment (includes all other types of situations). Labor input is defined as volume of labor at constant remuneration. This is estimated by aggregation data relative to "full-time labor units" (the concept used in Italy's National Accounts - also foreseen in the new 1993 version of the SNA) with reference to each of the branches of economic activity and according to the four types of employment position considered. This aggregation was carried out using the relative per capita wages as weights and by imputing a wage for self-employed categories.

For further information please contact Luisa Picozzi or Stefano Pisani, ISTAT, National Accounts and Economic Analysis Department, Via Depretis 74/B, 00100 Rome, Italy - Telephone 039-6-46733151, Telefax 039-6-46733157.

JAPAN (from Chikio Hayashi)

Sample Survey of Public-interest Corporations in Japan today: As public-interest activities in Japan have expanded and become increasingly diverse, the private nonprofit sector no longer has a monopoly on these activities. The government and business sectors are both increasing their involvement and undertaking cooperative efforts.

The aim of this survey was to provide an account of the current status of the nonprofit or public-interest sector in Japan by elucidating the actual nature and conditions of public-interest corporations (koeki hojin) established and regulated under sections of the Civil Code pertaining to nonprofit activities. In particular, the survey focused on public-interest corporations that are incorporated foundations (zaidan hojin) and incorporated associations (shadan hojin). This is the first ever detailed statistical survey to cover the full spectrum of public-interest corporations in Japan.

The total number of incorporated foundations and incorporated associations set up was 25,216. The survey sample was determined through sampling with equal probability one eighth of the corporations from a simple list of them in which only name, address and telephone numbers are published. The questionnaires were sent out to the selected organizations. The recipient organizations were then reminded of the questionnaire occasionally by telephone. The total number of responses received was 1,620 or 51.4% of the total number sent out. The organizations that did not respond were of three types: those that simply chose not to respond; those that responded when contacted by telephone but failed to return the questionnaire; and those that could not be contacted. It is presumed that organizations that could not be contacted were "dormant", that is, corporations which for some reason or other had suspended their operations but had not yet been officially dissolved. It is estimated that dormant corporations comprised 2.6% of the number of organizations from which responses were not received.

In order to evaluate the quality of the data obtained, which is the most crucial point in such a survey, the accuracy of the questionnaire responses was confirmed by cross-checking answers given to several questions (money amounts, number of people, etc.).

A procedure was also carried out to elucidate the characteristics between response and non-response corporations. The names of the response corporations had been compiled into a register at the time the questionnaires were returned. First, the names of corporations which did respond to the survey were identified and, by inference from their names, classified into groups of seemingly similar organizations, within each of which the distribution of organizations by types, which had been determined by the response pattern, was obtained. The non-response corporations which did not respond were also classified into groups only by the inference from their names and then their distributions by type were estimated in the same way. The distributions by type in response and non-response corporations were then compared. This revealed that, within the respective corporations, returned questionnaires (response group) and unreturned questionnaires (non-response group) had more or less the same characteristics. For this reason, it was felt acceptable to apply the findings of the former to the latter, and the accuracy of the survey is confirmed.

For the details of sample design and analysis, contact Chikio Hayashi, Institute of Statistical Mathematics, Sakuragaoka Birijian no. 304, 15-8, Sakuragaoka, Shibuya-ku, Tokyo, 150, Japan, Fax: 81-3-3496-4680, E-mail: kazue@med.teikyo-u.ac.jp.

NEW ZEALAND (from Denise Grealish)

The Classifications and Related Standards System (CARS) is a central on-line computer system for the storage of all economic, social and geographic classifications data used in Statistics New Zealand. The data stored includes standard classifications, historical classifications required for the analysis of historical data, and survey specific classifications which are not standard. CARS provides common procedures to update and access classification data thus benefiting the survey development process. It also provides for time series analysis through the storage and updating of concordances which show the changes between versions of a classification. A computer-assisted-coding facility is also linked to CARS. This enables a coding consistency amongst surveys which code to the same version of a classification using the same source code files. A central storage system for classifications facilitates the use of standard classifications in surveys. This assists the department in meeting our customers' needs for more integrated and comparable data overtime and between Statistics New Zealand surveys. (Andrew Hancock, E-mail: andrew_hancock@stats.govt.nz).

Manufacturing Business Practices Survey collected qualitative and quantitative data on business practices from a sample of manufacturers. Using respondent-contact methods not previously used within Statistics New Zealand, a response rate of 84 percent (from a sample of 1454 units) was achieved within eight weeks of the post out. This method involved contacting respondents by phone, describing the survey and telling them that they would receive a short report summarizing the results of the survey as feedback. The questionnaire was then addressed to the contact person and posted to them within three days after the initial contact. (Sean Keefe, E-mail: sean_keefe@stats.govt.nz).

On the 1st of September, Statistics New Zealand introduced a re-engineered system for processing External Migration Statistics. The previous process used physical arrival and departure cards to determine classes or types of passenger movements, i.e. permanent/long term and short term movements for visitors and New Zealand residents. The characteristics of all permanent/long term movements and a selected sample of the short term movements were then input from the cards for the in and out movements. Though the new process still incorporates a sample regime, it is the first time that biographical data for all passenger movements over the New Zealand border has been delivered electronically. The data include movement direction, passport number, citizenship, date of birth, and sex. This information allows Statistics New Zealand to match the in and out movements for almost 90 percent of short term movements, therefore allowing the automatic class/type determination for all second or return legs. This represents a significant productivity gain for Statistics New Zealand. Another effect of this new data source is that Statistics New Zealand has a greatly enhanced information-base for demographic analysis and external clients such as the tourism industry. (Neil Martin, E-mail: neil_martin@stats.govt.nz).

Several supplements to the Household Labor Force Survey have been developed within Statistics New Zealand during the past year. These supplementary questions are added to the 'core' questions for the purpose of in-depth research on particular issues relating to the labor market. In the September 1996 quarter, questions on education and training were asked and the results from these questions are now available. Questions on income have been developed and these will be asked in the June quarter every year, with the first results from the June 1997 quarter available in late 1997.

Questions on child care are also currently being developed for the September 1998 quarter. (Education and Training supplement, Fiona Smillie, E-mail: fiona_smillie@stats.govt.nz; Income supplement, John Scott, E-mail: john_scott@stats.govt.nz; Child care supplement, Jenny Mason, E-mail: jenny_mason@stats.govt.nz).

PHILIPPINES (from Gervacio G. Selda, Jr.)

The National Statistics Office (NSO) recently came up with a new methodology for its monthly Survey of Key Enterprises in Manufacturing (SKEM), a major source of flash indicators to monitor developments in the manufacturing sector. The development of the new methodology involves: (1) updating the base year from 1985 to 1994 (the designated base year for statistical series); (2) updating industry coverage to reflect current structures of the manufacturing sector in terms of

production, employment and compensation; and (3) updating sample establishments to include the major trend-setters of the industry in terms mainly of production. However, as a result of the recent consultative meetings with data users and the private sector, the SKEM will, in addition, be modified to allow for reconciliation with the Department of Trade and Industry-Management Information Services (DTI-MIS) Survey, which similarly provides flash indicators on the economy's performance. As such, the SKEM questionnaire will be revised to include data items that are in the DTI-MIS Survey such as volume of sales and inventory of finished products and raw materials. Collection and processing will be done by the NSO while validation of results will be done jointly by the two agencies. The DTI-MIS will further process the SKEM results to produce special industry reports. For more information, contact Adm. Tomas P. Africa of NSO by E-mail: t.africa@ mail.census.gov.ph.

The Asian Development Bank recently approved a Technical Assistance (TA) for the Philippines to implement and institutionalize the 1993 System of National Accounts (SNA) in the National Statistical Coordination Board (NSCB). The Philippines has been selected as the pilot country in the Asia and the Pacific Region for the operationalization of the 1993 SNA. To realize the objective of the project, the following strategies have been identified: (1) upgrading the capability of the compilers of the accounts and enhancing the participation of data producers in the Philippine SNA; (2) development of computerization methodology and establishing a network system to support the 1993 SNA; (3) producing 1993 SNA comparable estimates for selected pilot years; and (4) documenting the experience into manuals and handbooks that can serve as reference not only for the Philippines but for other countries as well. The TA is jointly supported by ESCAP and UN Statistics Division. The TA started with a country course on the 1993 SNA, which is being conducted, from October 13-November 14, 1997. For more information about the project, contact Dr. Romulo A. Virola of NSCB by E-mail: nscbsg@mozcom.com

In early 1995, the Philippines, through the NSCB, piloted the UN System of Economic and Environmental Accounting (UN SEEA), a satellite account of the 1993 System of National Accounts (SNA). Under the SEEA, environmental costs, such as depletion and degradation, are estimated to derive indicators that can lead to measures of sustainable growth. To date, the project, funded by UNDP Manila under the Fifth Country Programme, has produced significant outputs. The asset accounts of five natural resources: fishery, forest, minerals, land/soil, and water, have been developed, with some limitations on scope and coverage, by the NSCB. Likewise, the effects of selected economic activities on the environment have been estimated. The different economic activities include mining, electricity, transport, agriculture (palay and piggery), manufacturing (tuna canning, leather tanning, paint textile) and government and private services. One important finding of the study is that the concepts, procedures and methodologies to measure the effects of economic activities on natural resources and the environment as suggested in the UN SEEA can be operationalized using available data from the current statistical system of the country. Other observations from the Philippine experience include: (1) the Philippines is the first among developing countries to comprehensively operationalize the UN SEEA - it did not focus on just one resource; (2) unlike other environmental accounting projects, the actual compilation of the Philippine SEEA was mostly done by local staff with supervision from the UN and local consultants (through discussions in workshops and meetings), a set-up which strongly ensures the sustainability of the activity; and (3) the very satisfactory performance of the pilot study contributed to the institutionalization of the system through an Executive Order signed by the President of the Philippines, leading to the creation of environmental units in the concerned agencies with the necessary budgetary allocation from the government. For more details, contact Dr. Romulo A. Virola of NSCB by E-mail: nscbsg@mozcom.com

UNITED STATES (from Daniel Kasprzyk)

A large and comprehensive data system about scientists and engineers (S&E) is now under development at the National Science Foundation (NSF) in the United States. The system, termed SESTAT, contains records for over 100,000 college graduates with an education and/or occupation in a life, physical, social, or mathematical science, or in an engineering field. The system represents the

scientist and engineer population in the U.S. of over 12 million people.

The SESTAT data come from 3 surveys that cover different groups in the scientist and engineering (S&E) population. These surveys of individuals share a common reference date of April in odd numbered years, beginning with 1993. The Survey of Doctorate Recipients covers persons earning a research doctorate in an S&E field from a U.S. institution. The National Survey of College Graduates and the National Survey of Recent College Graduates cover those whose highest degree is a baccalaureate or masters in an S&E field. Also covered are individuals with S&E doctorates earned from non-U.S. institutions and persons working in an S&E occupation without a commensurate S&E degree. The combined coverage of the surveys is virtually all scientists and engineers living in the U.S. who hold a baccalaureate or higher degree.

By design, the surveys share many common questions with much of the data focusing on labor force participation and other workforce issues. The work force data available range from the more standard variables such as occupation and salary to less typical data such as detailed work activity. The system also contains information on the educational background of the individuals, including degrees earned and fields of study. The combination of educational and labor force data permits a wide variety of research on the relationship between these two important areas. SESTAT also contains data on the demographic characteristics of the scientist and engineering population - variables such as age, race, citizenship status. Also available from NSF, for 1993 only, are similar data for college graduates in non-science and engineering fields.

The SESTAT data are housed in a large data base system maintained at NSF and accessible through the world wide web. Software functions include access to prepared tables, a table generation function permitting custom designed tables, and extraction and downloading of subsets of the data. CD versions of the data system will also be available. To find out more about SESTAT and other information available at the NSF (Division of Science Resources Studies), visit us at http:www.nsf.gov/sbe/srs/stats.htm, or E-mail: rwilkins@nsf.gov or call 703-306-1776.

Reports From IASS Meeting in Istanbul, Turkey August 1997

The International Association of Survey Statisticians

The International Association of Survey Statisticians (IASS - AISE) was founded in 1973 as a section of the International Statistical Institute. It aims to promote the study of development of the theory and practice of sample surveys and censuses. It also aims to increase the interest in surveys and censuses among statisticians, among governments and the public in different countries of the world.

The IASS carries out its aims by means of:

- International meetings held every two years in conjunction with the International Statistical Institute. These meetings provide a forum for discussion of survey statistics. They include a number of sessions on recent advances in survey and census methodology, and their applications.
- Regional meetings or seminars devoted to specific aspects of surveys.
- Publications distributed to members on a regular basis or on request, and the opportunity for members to subscribe to certain journals at reduced rates.

Membership

Persons interested in becoming members of the IASS should write to:

C. Olivier
c/o Insee-CEFIL
3, rue de la Cité
33500-Libourne, FRANCE

The dues amount to F.F. 130 or the equivalent in other currencies. They are reduced to F.F. 65 for members from developing countries. Members living in some countries with nonconvertible currencies can obtain UNESCO coupons which can be used to pay IASS dues.

President Report by Dennis Trewin

1. Introduction

This report is in respect of the activities of the IASS during my period of President from August 1995 until now.

During this period IASS has continued to develop the services it provides to members. *The Survey Statistician* has become a high quality publication, disseminated regularly at 6 monthly intervals. All members have also received copies of IASS papers from the Beijing Session. We have been vigorous in our conference organization activities. In association with the International Association of Official Statisticians, we have organized a Conference on Longitudinal Studies at Jerusalem, Israel in August 1997. Plans are well advanced for another joint IASS/IAOS meeting in Aguascalientes, Mexico in September 1998. Furthermore, preliminary plans have been made for a satellite meeting either before or after the 1999 ISI Session in Helsinki. It may possibly be held in Riga, Latvia. Also, a series of short courses have been organized immediately prior to the Istanbul ISI Session.

A major new development has been the establishment of our own web site. More details of all these activities are outlined below.

2. Survey Statistician

Mike Brick of Westat, Inc. has been a very effective Editor of *The Survey Statistician* during this period. *The Survey Statistician* has been distributed regularly every six months and to a high quality. We have actually been able to implement the plans for improving the publication which were developed under Lars Lyberg's presidency.

Our thanks should go to Mike for his fine efforts and Westat for making his time available. We are also indebted to Vijay Verma and Leslie Kish for their interesting and informative Question and Answer Session, which has continued to attract a lot of interest.

During this period, Australian Bureau of Statistics took responsibility for the printing and distribution of *The Survey Statistician*, and we are very grateful to them for their generosity.

We are also very grateful to David Binder and Statistics Canada for organizing the French translation of *The Survey Statistician*. This is an invaluable service to our French-speaking members.

3. Short Courses

The program is organizing a program of short courses in Istanbul immediately prior to the ISI Session.

The courses will be:

- Workshop on Survey Sampling in Developing Countries; Instructors; Graham Kalton and Colm O'Muircheartaigh
- Variance Estimation in Complex Surveys; Instructors: Wayne Fuller, Kirk Wolter and Jay Breidt
- Continuous Quality Improvement in Statistical Agencies; Instructors: David Marker and David Morganstein

We are very grateful to all instructors for their time and expertise which they have provided free of charge.

We have been assisted by very generous financial assistance from the UN Statistical Office which will enable eight participants from developing countries to attend the courses.

IASS is also greatly indebted to our Scientific Secretary, Fritz Scheuren, for his fine efforts in organizing the short course program. We also owe thanks to Hasibe Dedes and his Turkish team for all the local arrangements.

4. Conferences

IASS was one of the major sponsors and organizers of the International Conference on Survey Measurement and Process Quality held in Bristol in April 1995. The volume of monographs has now been published by John Wiley, Inc. and is an essential reference for IASS members.

IASS was also a sponsor for the International Conference on Computer-Assisted Survey Information collection in San Antonio in December 1996, which I understand was an extremely successful conference.

In conjunction with the International Association of Official Statisticians, a satellite meeting is being held in Jerusalem, Israel at the end of the Istanbul ISI Session. This also looks like being an extremely successful conference. The program is excellent and there is a lot of interest. We are very grateful to Gad Nathan and his very capable team.

Our next major conference activity will be another joint effort with the International Association of Official Statistics. The theme will be "Statistics for economic and social development" in Aguascalientes, Mexico from 1-4 September 1998. We are indebted to Carlos Jarque, President of INEGI, for his generosity in hosting the conference. Geoff Hole of Statistics Canada has taken on the job of Program Chair which he is tackling enthusiastically. Plans are well advanced, and we are hoping to have Bulletin No. 1 available for distribution at the ISI Session.

Finally, we are making tentative plans to have another satellite meeting in association with the Helsinki ISI Session in one of the Baltic countries, possibly in Riga, Latvia.

There was another important Section activity. The American Statistical Association is holding a joint meeting with other associations at their August meeting. The organizers have accepted a proposal from the IASS to hold panel discussion on "What role should methodologists have in national statistical agencies?" which I chaired.

5. Publications

In addition to *The Survey Statistician*, the association uses its column in the ISI Newsletter to inform members of upcoming events and other activities of interest.

It is also able to offer the *Journal of Official Statistics* and *Survey Methodology* to members at

reduced prices. It has recently come to an arrangement with Marcel Dekker where members can get a 20 percent discount on its books.

We have upgraded our Membership Directory, particularly with E-mail addresses, which is now the most common form of communication between members.

The *International Statistical Review* is the premium journal of the ISI and its Sections. Chris Skinner has kindly agreed to be Associate Editor looking after IASS interests. We need to ensure that we give the *International Statistical Review* sufficient support.

With assistance from the Australian Bureau of Statistics, we were able to print and distribute a volume of IASS papers from the Beijing Session.

6. World Wide Web Site

One of our major achievements has been the setting up of a home page which we hope will be a valuable service to members as well as bringing us up-to-date with the technology age. The ISI Permanent Office will be managing the home page for us to save the expense of establishing our own operation. Fred Vogel of the US National Agriculture Statistical Service has agreed to be the editor for the home page and any material should be submitted through him. The address for our home page is http:/www.cbs.nl/isi.iass.htm.

We will be considering during the General Assembly whether we should provide membership details on the home page. It would certainly be a service to members but there are privacy aspects that have to be considered.

7. Committee Reports

Anders Christianson, Chair of the 1997 Program Committee, with the support of his committee members, has done a fine job, and we are very grateful for his efforts. Unfortunately, Anders was ill at the time of the Beijing Session but Mike Hidiroglou capably filled his shoes on the ISI Program Committee.

Susan Linacre has agreed to chair the 1999 Program Committee and has started work already. We are hoping we can get more slots on the 1999 program with an ISI Program Chair who is more sympathetic to the interest of survey statisticians.

Xavier Charoy, Chair of the Nominations Committee, and his committee members deserve a hearty thanks for their efforts in developing an excellent slate of candidates for the election of IASS officers.

8. IASS Secretariat

The IASS remains extremely grateful to INSEE for providing a home for the IASS Secretariat. INSEE provides financial support for the IASS Secretariat and arranges the printing and distribution of the French version of *The Survey Statistician* to French-speaking members. INSEE's generosity not only enhances the services we can provide to members, but allows our subscriptions to be considerably lower than any other IASS Section.

The IASS Secretariat is now located in Libourne where it is headed by Mme Claude Olivier. She has proven to be an extremely competent administrator of the Secretariat.

Benoit Riandey of INED has been our Executive Director over the last 2 years. He has been fantastic - a great support to me, with lots of new ideas and very prompt in dealing with issues that I have raised with him. I hope Benoit can continue to play this important role.

Ann-Marie Vespa-Leyder has continued to hold the position of Executive Secretary. She again has shown her competence and experience in managing the affairs of the IASS. We remain very grateful for her efforts, particularly on the Membership Directory.

9. Promotion

We have made every effort to promote the IASS at conferences. Benoit Riandey has been particularly active in this regard. Also, we have designed new promotional material for the IASS with the support of the Australian Bureau of Statistics.

Gordon Brackstone has continued to effectively manage the list of Country Representatives. We should use our Representatives more. It is one area I wish I had given more attention over the last few years.

Our membership in developing countries is too low, and we must find new ways of attracting members from these countries.

10. Conclusions

I would like to express my extreme gratitude to those IASS members who have helped out in various ways during the course of the year. This takes many forms - committee membership, country representatives, conference organization, preparing material for *The Survey Statistician*, etc.

We are a voluntary organization which can only work effectively through the support of it members. We are fortunate that we have so many members who are prepared to make a contribution.

It has been an honor to serve as President. I have tried to do my best within the time I had available for IASS activities. It has been testing at times, but I believe our association is in good shape. I wish my successor, Nanjamma Chinnappa, the very best over the next two years.

Executive Director Report
by Benoît Riandey

Since the creation of the IASS, the secretariat of the association has been provided by the French "Institut National de la Statistique et des Etudes Économiques" (INSEE) in Paris, and since September 1994, in its regional office of Bordeaux.

From next September, the IASS will benefit from new opportunities offered by the CEFIL, the new International Center for Statisticians Training in Libourne, just between Bordeaux and Saint-Émilion.

At the last ISI Conference in Beijing, in August 1995, I was appointed Executive Director of our Association (General Assembly, August 22nd, 1995) taking over Alain Charraud. On this occasion, Ms. Anne-Marie Vespa was confirmed as Executive Secretary.

1. Activity Report

In a letter dated May 9th, 1994, the INSEE renewed its promise to provide in Bordeaux all the resources previously available to the association. I confirm that the association has benefited from excellent facilities in Bordeaux, and I do appreciate the new opportunities that the association will find in Libourne where Ms. Olivier, the INSEE Secretary in charge of the IASS since 1994, will move on September 1st, 1997.

This new center, managed by Mr. Behmoiras will receive workshops of 60 people and seminars and a first short course on sampling has already been attended in June 1997 at the CEFIL by 20 French-speaking statisticians from developing countries as suggested by the IASS. I congratulate Mr. Brion and Mr. Peronnet from INSEE for their efficient work, and I wish to thank Mr. Franchet, Head of Eurostat and Mr. Simonpietri from the World Bank for the financial subsides their institutions provided.

Mr. Behmoiras suggested that an IASS seminar could be organized at the CEFIL each second year between two ISI conferences, offering rooms, computers, translation equipment and the very cheap CEFIL private hotel. To initiate the process, he suggested holding an IASS workshop on Labor Force Surveys in July 1998 in Libourne. In Istanbul, the IASS Council could discuss the scientific program of this conference. The Council may suggest some topics for a workshop to be held in the year 2000 in Libourne if, as I suppose, it is interested in the new commodities offered by the INSEE in Libourne.

On behalf of the association, I would like to take this opportunity to thank INSEE and in particular, its Director General, Mr. Champsaur, its General Secretary, Mr. Consolo, its Regional Director in Bordeaux, Mr. Tregouët and Mr. Behmoiras, the Director of the CEFIL for their help and support.

I also wish to congratulate President Dennis Trewin and the Australian Bureau of Statistics for their support to the association particularly for the printing and mailing of the proceedings of the IASS papers of the Beijing Conference and the English

version of *The Survey Statistician* and paying the President's travels.

I am pleased to welcome the incoming President, Nanjamma Chinnappa, and I am looking forward to cooperating with her from today.

I would like to thank Anne-Marie Vespa and Claude Olivier for their efficiency in their tasks and their devotion to the association.

At the last General Assembly in Beijing, the weak activity of our association in Africa and Latin American was deplored. For this reason, I suggested that the French-speaking Conference on Sampling held in Rennes (France, 19-20 June, 1997) with the participation of the IASS be an opportunity for short courses such as at each ISI Conference. My suggestion has been taken up by the organization of the short course by INSEE and by the attendance of its 20 participants at the Rennes Conference.

The hope of the Assembly concerning statisticians from Latin American will be fulfilled with the Conference of Aguascalientes (Mexico) organized by INEGI in September 1998. The IASS Secretariat expresses the wishes that this conference be very successful.

We regret very much the canceling of the Hungarian Conference on Sampling in Transition countries because of financial difficulties. I hope many statisticians from European Transition Countries could attend this conference in Istanbul and as well the next one in Helsinki, and I hope that we will have a new opportunity to organize the Hungarian project for our Association.

Since the ISI Conference in Beijing, the IASS has supported the conference on Demography, Statistics and Privacy organized in Paris by the French National Institute of Demographical Research (INED), the CASIC Conference organized by ASA in San Antoino (USA) and the French-speaking conference on Sampling in Rennes (France).

Let us congratulate Malka Kantorovitz and Gad Nathan for the good organization of the satellite conference in Jerusalem on Longitudinal Surveys, just after this conference.

Our association should be active in each part of the world. Actually, the vectors of the development of the IASS are International or Regional conferences, local representatives and the relationships with the national associations of statisticians. For this reason, Gordon Brackstone and I examined the distribution of the IASS network of local representatives and found it lacking in some countries. In Annex 1, you will see where new local reps are needed and candidates for this task are requested.

The new web home page of the IASS is becoming a very efficient and cheap way of communication among survey statisticians. The assembly would like to thank very much Dennis Trewin for his dynamism in developing it and Fred Vogel for accepting to be our Web Editor, and the ISI Secretariat for receiving our home page and helping the IASS in developing and maintaining it. For its success as a means of communication amongst IASS members, access to the electronic addresses are useful on this home page but we have a moral duty to protect the confidentiality of these addresses. Thus, an INED trainee developed an application allowing users to send secured messages based on an idea suggested by ASA. This application will be improved with the help of the computer team of the CEFIL.

2. Membership Report

On May 30th 1997, there were 1244 members, among them 296 were also ISI members; the latter are exempted from membership dues, unless they belong to more than one section or choose to pay the IASS dues as well. Four hundred ninety-five IASS members live in developing countries or transition countries. The geographical breakdown is included in the Membership Directory.

There are also 16 Institutional Members, the majority being national statistical bureaus. Their membership contribution to the IASS amounts to FF 2000 (FF 800 for Institutional Members from developing Institutional Member dues).

Spontaneous new membership has to be encouraged in each country by the action of the local reps and of other members, particularly in national conferences, in survey offices and amongst authors of articles dealing with surveys. The IASS

Secretariat is careful in helping the local reps (Annex 1) by furnishing them updated lists of names and addresses of members living in their country.

The IASS Council could have a special role in the IASS recruitment of the most active statisticians. For instance, I noticed that almost half of the referees listed in 1996 by *Survey Methodology* did not join the IASS. The Council could nominate someone to face this kind of problem.

The Conference of Aguascalientes will be a good opportunity for increasing the membership in Mexico and in South America. The absence of the IASS in Russia and in some neighboring countries must be examined within the council before the next ISI Conference in Helsinki. Strengthening the IASS membership and the IASS activity in Africa and in the large Asian countries would be a useful task with the regional or local reps and their national associations of statisticians. The IASS is interested in the project of an African Conference in Johannesburg organized by Afristat in 1999.

3. Financial Report

The 1995 and 1996 accounts are shown in tables 1 and 2. Regarding the receipts, the major element is the higher level of the interest of the securities: the low receipts in 1994 (FF 10 347), have been compensated by the excellent level in 1995 (FF 48 781) and a relatively good in 1996 (FF 31 954) in spite of the decrease of the interest rates.

The expenses from 1995 are linked with the expenses of the ISI Conferences. In 1996 the web development and updating led to new and very useful expenses. Also, in 1996, FF 15 000 have been saved from the IASS budget to sponsor the Budapest Conference which has been canceled. This amount remains available either to sponsor the same conference in the future or to pay the expenses of a few transition countries' statisticians for attending scientific meetings.

Actually, the 1995-1996 balance is just positive when this amount and the expense of the 1996 ISI Newsletter (paid in March 1997) are included in it. But the real value of the IASS assets has been depreciated by 23 695 French Francs (about 4000 US dollars) because of inflation (3.6% from January 1, 1995 to January 1, 1997).

An important aim of the IASS is helping more statisticians from developing countries in meeting foreign colleagues. Therefore, it would be appropriate to increase the level of the membership fee from FF 130 to FF 150 (from FF 65 to FF 75 for colleagues from developing countries). For instance, it would be an excellent action if the investment of the short courses could have a regional follow-up in an international language (such as Spanish in 1998 or Russian perhaps in 1999, and so on). As a conclusion, I wish that the IASS activity improve in the whole community of the statisticians.

Table 1
1995 IASS ACCOUNTS
(expressed in French Francs)

Expenses

Secretariat current expenditures	7538.20
President expenditures	4153
Printing of the L. Kish Questions/Answers book	39 560
IASS logo	9 081
Meetings travels and expenditures	
Voorburg	7 820
Bordeaux	4 711
Subventions to members from developing countries:	
Purchase of Survey Methodology	2 910
Purchase of Journal of Official Statistics	2 210
ISI Conference Beijing expenditures	
(travels, per diem, meeting expenditures)	57 552
ISI Newsletter (paid only in 1996)	0
Sponsoring of members from transition countries to the	
Paris Conference on Sensitive Topics	5 576
TOTAL	141 111.20

Receipts

Membership fees only	72 820.54
Interests on securities	48 781.60
TOTAL	121 602
BALANCE	
(difference between receipts and expenses)	
121 602 - 141 111,20	-19 509.06

Assets

Securities	613 842
Bank account	63 192.74
Postal account	5 034.98
TOTAL	682 069.72

(1 French Franc = 0.17 US dollar)

Table 2
1996 ACCOUNTS
(expressed in French Francs)

Expenses

Secretariat current expenditures	3 621.60
President expenditures	
(travel to the Paris Conference, 1995)	4 934.22
Meeting with the IASS Secretariat in Bordeaux	3 413.60
Subventions to members from developing countries:	
Purchase of Survey Methodology	1 980
Purchase of Journal of Official Statistics	1 430
1995 ISI Newsletter	18 655.11
Web development	7 955.01
Sponsoring the CASIC Conference	13 613.38
Sponsoring the Jerusalem Conference	8 016.63
Sponsoring statisticians from transition countries	
(travel to the Paris Conference, 1995)	1 480
TOTAL	65 099.55

Receipts

Membership fees only	90 792.26
Interests on securities	31 954
Royalties	963.83
TOTAL	123 710.09
BALANCE	
(difference between receipts and expenses)	
123 710.09 - 65 099.55.	+58 610.54

Assets (at 01 01 97)

Securities	645 796.00
Bank account	85 265.28
Postal account	9 618.98
TOTAL	740 680.26

Table 2 (continued)
1995-1996 BALANCE
(expressed in French Francs)

1995 Balance	-19 509.06
1996 Balance	+58 610.54
1995-1996 Balance (Total)	+39 101. 48
Saved subvention for Transition Countries' Statisticians	15 000
Saved amount for 1996 ISI newsletter	23 241.21
Total saved	38 241.21
Modified 1995-1996 Balance (FF 39 101.48 - FF 38 241.21)	+860.27
Inflation depreciation	-24 555
Real Economic Balance (FF 859.85 - FF 24 555)	-23 694.73

(1 French Franc = 0.17 US dollar)

Annex 1
Country Reps Location

Africa
Northern Africa: Algeria, Libya, Morocco, Tunisia
Western Africa: Ivory Coast, Ghana, Cape Verde, Mali, Mauritania, Nigeria, Senegal, Togo
Eastern Africa: Comoros, Kenya, Malawi
Middle Africa: Cameroon, Central Africa, Gabon, Chad
Southern Africa: Botswana

America
North America: Canada, U.S.A.
Central and Caribbean America: Cuba, Haiti, Mexico, Panama and Central America, Trinidad-Tobago
South America: Argentina, Brazil, Peru

Asia
South-west Asia: Israel, Lebanon, Syria, Turkey
Ex-URSS Asia:
Southern Asia: India, Pakistan, Philippines, Vietnam
South-East Asia: Indonesia
Eastern Asia: China, Japan, South Korea

Europe
Northern Europe: Denmark, Estonia, Finland, Latvia, Norway, Sweden
Western Europe: Belgium, France, Germany, Luxembourg, Netherlands, Switzerland, United Kingdom
Eastern Europe: Hungary, Poland, Czech Republic, Russia
South Europe: Italy, Portugal, Spain

Oceania
Australia, New Zealand, Papua-New Guinea

IASS Scientific Secretary Report
by Fritz Scheuren

The IASS has developed a successful history of organizing workshops and short courses as satellite events to the biennial ISI sessions. My principal activity as Scientific Secretary has been to help the IASS President organize three courses on survey methodology prior to the 1997 ISI session at Istanbul. This program will take place at the Hotel Yenisehir Palas - one of the conference hotels in Istanbul.

As in the past, the subject matter of the courses was chosen to give priority to the needs of IASS members in developing countries. Two of the courses: Survey Sampling in Developing Countries and on Variance Estimation in Complex Surveys have been run successfully by IASS at earlier sessions. The other course, on Quality Management in Surveys, is new and designed to appeal to statisticians from both developing and developed countries.

Participation of members from developing countries is very dependent on financial assistance, and so I sought funding from a number of national and international agencies to support the course. At the time of writing, the main source of funds is the U.N. Statistical Office, in particular Hermann Habermann, who allowed us to pay for the attendance of 8 people at the short courses and the ISI meetings themselves. Funds were also provided by the U.S. National Science Foundation and some of those so funded may also be attending one or more of the short courses.

The IASS is also indebted to Hasibe Dedes for helping with the local organization of the short course program and to the short course instructors for contributing their expertise at no fee.

As to supplementary activities, I have been involved in the early preparations for the Helsinki IASS program for 1999, being ably organized by Susan Linacre, my successor. The satellite program on longitudinal surveys being run after these 1997 meetings in Jerusalem has also been a treat to be involved with Gad Nathan, who has led an outstanding Program Committee for those sessions.

Finally I have contributed to discussions for various other IASS matters, which I shall leave the President, Dennis Trewin, to report on.

IASS Program Committee Report
by Anders Christianson

The chairperson of the committee was appointed during the ISI meeting in Florence in 1993. A list of suggested topics, ranked by priority was available from the start. This list, the result of a survey of members and country representatives, carried out by Nanjamma Chinnappa before the ISI meeting in Florence, proved to be very helpful.

A call for further suggestions was published in the ISI Newsletter 1994:3. In a dialogue with IASS members, a tentative invited papers program including 10 topics were prepared, and a preliminary organizing committee was set up before the Beijing meeting in 1995. Unfortunately, I was not able to present those suggestions myself in Beijing, due to illness.

Only five topics were accepted for the IASS invited papers program. In early 1997, the invited program was published on the IASS home page http://www.cbs.nl/isi/iass.htm, and an article describing the program appeared in *The Survey Statistician* No. 36, July 1997.

The task of organizing the program has been a rewarding experience for me. I want to express my thanks to colleagues from all over the world who participated in this process by communicating their comments and suggestions. In particular, I want to thank the session organizers: H. Öztac Ayhan, David A. Binder, Cathryn S. Dippo, Antonio Giusti, and Jon N.K. Rao.

IASS Nominations Committee Report
by Xavier Charoy

Members of the Committee:

X. Charoy (France), President
I.P. David (Philippines)
L. Diop (Senegal)
A. Gonzalez Villalobos (Argentina)
G. Hole (Canada)
J. Kordos (Poland)
L. Lyberg (Sweden)

The setting up of the committee faced some difficulties and suffered some delay because of the unexpected inability of its foreseen chairperson to fulfill the mandate. I have been asked by the IASS President to take the post in March 1996, which I accepted in April. By that time, only three out of the other six members of the committee had been appointed. The completion of the committee, with a view to ensuring a good geographical representation, took some time; mainly because of the difficulties of communication with Africa.

Each member of the committee was requested to propose a list of potential candidates to the council. Thus, 7 names were suggested for the position of President-elect, 16 for the 2 positions of Vice President, 7 for the position of Scientific Secretary, 35 for the 6 positions of Council Member. Then they were asked to rank the potential candidates according to their preference. The global ranking for each type of position was obtained by giving 1 point to a potential candidate ranked n°1, 2 points to one ranked n°2, etc. The one who got the lowest number of points was finally ranked n°1, etc.

The last step consisted in ascertaining that the best ranked potential candidates would accept to be actual candidates. Most of them accepted, one refused, two did not reply. Finally, 2 candidates were shortlisted for the position of President-elect, 3 for the positions of Vice President, 2 for the position of Scientific Secretary, 9 for the positions of Council Member. On the whole, there were 13 males and 3 females.

As a conclusion to this report, I would like to mention two issues. The first one is that many persons initially suggested as potential candidates by a given Committee Member are unknown to the others, especially for the positions of Council Member, so that their ranking has little meaning after n°10 or 12. As a result, the final ranking may appear to some extent to be a random one. The second one is that the selection procedure does not ensure a good geographical representation of the shortlisted candidates. I would suggest that the incoming council considers these two issues during 1997-99, so that the procedures can be improved in the future.

Benefits of Membership in the International Association of Survey Statisticians (IASS)

1. Members may attend:

   - The International meetings held every two years in conjunction with the International Statistical Institute. These meetings provide a forum to discuss survey statistics and include sessions on recent advances in survey and census methodology and their applications.

   - Regional meetings and seminars devoted to specific aspects of surveys.

2. Members receive publications on a regular basis or on request without charge and have the opportunity to subscribe to certain journals at reduced rates.

   All members receive the following publications free of charge:

   - *The Survey Statistician*, the newsletter of the Association, which is issued twice a year in English and French. It includes general information about the activities of the Association (meetings, seminars, etc.) and about meetings arranged by other organizations around the world that are likely to be of interest to members. It also includes various technical sections on issues related to surveys (e.g., short technical papers, survey terminology, bibliographies, reviews of computer software, and country reports).

   - *International Statistical Information*, the newsletter of the International Statistical Institute and its five sections. This newsletter is issued three times a year.

   - "Short Book Review" of the International Statistical Institute.

   - Proceedings of papers relating to surveys and censuses presented at sessions of the International Statistical Institute.

   - *International Statistical Review*, the journal of the International Statistical Institute. The journal covers all branches of statistics.

   - A Directory of the members of the Association.

   - The pamphlet *42 Questions/Answers*, which contains Leslie Kish's contributions to *The Survey Statistician* from 1974 to 1994.

   The members are entitled to reduced subscription rates for the following journals:

   - *Survey Methodology/Techniques d'Enquêtes*, which is published twice a year by Statistics Canada in both English and French. The Journal publishes articles on the theory and practice of surveys.

   - *Journal of Official Statistics*, which is published four times a year by Statistics Sweden. The journal publishes articles on the methodology and policies associated with all aspects of official statistics.

   - "A Celebration of Statistics," which is a special volume published in 1985 to mark the centenary of the International Statistical Institute. The discounted price is US $26 (instead of US $39).

3. IASS members can obtain expert technical assistance on surveys and censuses from IASS experts by submitting questions to the "Question and Answer" section of *The Survey Statistician*.

Election of IASS Officers and Council Members

Report on the counting of votes

Ballot papers received:	373
Null:	-23
Counted votes	350

Elected persons:

President-elect

K. WOLTER (USA)

Vice Presidents

V. VERMA (India)
C. ARRIBAS (Spain)

Scientific Secretary

J.C. DEVILLE (France)

Council Members
(4 years)

E. DE LEEUW (Netherlands)
F. VOGEL (USA)
D. PFEFFERMANN (Israel)
O. SAUTORY (France)
O. AYHAN (Turkey)
R. RECIDE (Philippines)

INTERNATIONAL ASSOCIATION OF SURVEY STATISTICIANS

The Survey Statistician

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Gordon Brackstone .....Country Reports
Vijay Verma ..... Question/Answer
James Lepkowski.....Software Review
Ann Marie Vespa-Leyder.....Circulation
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1650 Research Blvd., Room 490
Rockville, MD 20850 USA

Conference on New Methods for Survey Research, Southampton, U.K. August 21-22, 1998

IASS is sponsoring this two-day conference organized by the U.K.-based Association for Survey Computing (ASC) as a satellite meeting to COMPSTAT '98. The latter meeting will take place in Bristol, from 24 to 28 August.

The conference will continue the tradition of two 'International Conferences on Survey and Statistical Computing', run by ASC in the U.K. in 1992 and 1996. The meeting is aimed at the survey professional working in the commercial or public sector. It aims to present methods (generally relatively new methods) which are widely used in specialist areas but have not made their way into everyday use in survey research or analysis.

The conference program is divided into four half-day sessions:

1. The Impact of Computer Technology on UK Survey Data Collection (keynote speakers: Martin Collins and Wendy Sykes);
2. Survey Data Collection Technology For The 21st Century (keynote speaker: Bill Blyth);
3. Developments in Weighting: Using Auxiliary Information to Improve Survey Estimation (keynote speaker: Graham Kalton); and
4. Models and Graphs: Finding and Presenting the Message in the Data (keynote speaker: Paul Harris).

Contributed papers are also sought and abstracts (up to 2 pages) should be submitted by 31 October 1997.

A program of training workshops is also planned for 20 August.

Further information may be obtained by E-mail from ASC@Essex.ac.uk or by writing to ASC C98 conference, PO Box 60, Chesham, Bucks, HP5 3QH, United Kingdom.

In Other Journals

Journal of Official Statistics

An International Review
Published by Statistics Sweden

JOS is a scholarly quarterly that specializes in statistical methodology and applications. Survey methodology and other issues pertinent to the production of statistics at national offices and other statistical organizations are emphasized. All manuscripts are rigorously reviewed by independent referees and members of the Editorial Board.

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