

INTRODUCTION TO THE PROCEEDINGS

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This volume brings together the invited and contributed papers presented at the International Conference on Establishment Surveys (ICES) held in June 1993 in Buffalo, New York. The monograph papers presented at the Conference will be published separately as a book by Wiley. This introduction is adapted from the Opening Remarks I made at the Conference.

ICES was sponsored by the American Agricultural Economics Association, the Survey Research Methods and Business and Economics Statistics sections of the American Statistical Association, the International Association of Survey Statisticians, the National Association of Business Economists, the Statistical Society of Canada and Statistics Canada. Twenty organizations from around the world representing government and private organizations as well as universities made contributions to support the Conference.

This Conference is actually part of two conference series of two of its principal co-sponsors, Statistics Canada and the American Statistical Association (ASA). It is the tenth in Statistics Canada's series of annual International Methodology Symposia and the first to be held outside Ottawa. This series will continue in the Fall of 1994 with a Symposium on Re-engineering in Statistical Agencies to be held in Ottawa.

This Conference is also the fourth in a series of international conferences sponsored by the Survey Research Methods section of the ASA, each of which, like this one, resulted in a Wiley book. That series has addressed Panel Surveys (1986), Telephone Surveys (1987), and Measurement Errors (1990). The next conference in this series will be on Survey Measurement and Process Quality to be held on April 1-4, 1995 in Bristol, U.K.

The Conference title

The Organizers of the Conference wrestled with alternative titles for it trying to find one that fully reflected the range of issues and applications they wanted to see covered. In the end they settled on ICES - a very succinct acronym for a wide range of topics.

In this title, "Establishment" is to be broadly interpreted to cover at least Businesses, Farms, and Institutions - one might say anything other than individuals, families or households. Equally, the word

"Surveys" is to be broadly interpreted to include Censuses, which we often need, and the use of administrative records, in addition to sample surveys. "International" is reflected in the wide variety of countries represented here.

The Conference theme

This Conference grew out of a perception that Establishment Surveys were not getting their fair share of attention in the activities and literature of statisticians, relative to household and population surveys. Perhaps "fair share" is not the right phraseology - a share commensurate with their importance might be more precise. Because important they are. Indeed, in most countries Establishment Surveys (using our broad definition) underly most of the key economic indicators that inform government economic policy and business decision-making - one exception, of course, is the unemployment numbers which in many countries are based on household surveys. And in recent years, in several countries, it has been economic statistics, based largely on establishment surveys, that have come in for some degree of criticism and attack for their lack of reliability and timeliness. These are sufficient reasons for statisticians to be paying at least equal, if not disproportionate, attention to issues of Establishment Surveys.

It is probably true that in many statistical agencies, statistical survey methods, starting with sampling, were developed and applied first in the domain of household surveys and then in population censuses, particularly for census evaluation purposes, and only later for agriculture surveys and business surveys, and maybe later still to surveys of other kinds of institutions. This was certainly the approximate chronology in Statistics Canada. As a result, the literature on household surveys is more mature and coherent than it is for business surveys.

There are some basic differences between household surveys and business surveys. Consider sampling for example. There used to be perhaps an impression among survey statisticians that the problems of Establishment Surveys were less interesting or less challenging than those of household surveys. After all, household surveys often involved multi-stage area samples selected with probability proportional to size, whereas Establishment Surveys were just stratified samples from lists - that was the

perception. Of course, agriculture surveys and surveys of small businesses, such as retail, fell somewhere in between these extremes, but in general this distinction was true. What is not true is that the problems of such designs are less interesting or less challenging. Anyone who has grappled with the task of keeping a frame of businesses up-to-date and of dealing properly with births, deaths and restructuring among a population of establishments, would probably yearn for the simplicity and purity of a nice multi-stage area sample. Establishment Surveys provide different types of challenge.

One could go through most other aspects of survey methodology and make the case that quite different approaches are required for establishment surveys than for household surveys, and that the latter are more developed.

As a statistician I thought I should look at some empirical evidence about the alleged imbalance between the attention paid to household surveys and establishment surveys respectively. One convenient source of literature on survey methodology was *Survey Methodology*, the journal published by Statistics Canada. It so happens that we recently published an index of the first 18 volumes of this journal, one of the features of which is the categorization of papers by areas of application. On examination I found that, for every paper classified to economic or agriculture statistics, there were 2.6 papers with application to population or socio-economic statistics. This doesn't prove anything, but it does lend credence to the notion that more could be done to address issues of Establishment Surveys.

In the United States the Federal Committee on Statistical Methodology set up a subcommittee on Measurement of Quality in Establishment Surveys which reported in 1988. You may recall ASA sessions in which this report was discussed. One of their observations was that, despite the very long history of establishment based data series, (and here I quote) "in contrast with household surveys, for which a rich literature has emerged over the past 5 decades, very little in the way of theoretical or evaluative work on survey quality has been published for establishment surveys".

Conclusion

The aim of this Conference was to help rectify the imbalance which I described earlier by providing the opportunity to focus exclusively on Establishment Surveys. The fact that it attracted over 400 registrants of whom about 100 were from countries other than USA and Canada representing about 30 countries, and more than 250 papers from around the world is evidence enough that its Sponsors and Organizers had accurately identified an important topic. The papers are impressive both in scope and quality.

I believe that the Conference has proved to be a landmark event in the evolution of survey methods for Establishment Surveys, and that this proceedings volume and the forthcoming Wiley book will make a significant contribution to the literature on this subject.

BUILDING A SUCCESSFUL ECONOMIC STATISTICS PROGRAMME
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Introduction

When I was asked to give this address I was told I was chosen because I met several criteria.

First, I had to be internationally known to you, although my staff think notorious might be a better description. Second, I had to be knowledgeable about the problems establishment surveys face, but I am sure some of my colleagues in the United Kingdom (UK) and Australia might dispute that. Third, I had to be sufficiently entertaining so that you would not be put into a deep sleep for the rest of the conference; that, of course, is a daunting task given that this is a brunch session.

What are my credentials? Currently I wear two hats: I am Director of the UK Central Statistical Office, which produces most of the macro economic statistics for the UK, and I am Head of the UK Government Statistical Service, a very decentralised statistical system. Formerly, for many years, I was the Deputy Australian Statistician in the Australian Bureau of Statistics. Therefore, I have experienced both centralised and decentralised statistical systems.

Why am I talking about "building a successful economic statistics programme"? After considering the topics and issues to be discussed at the conference, which are very wide-ranging and comprehensive as well as being very interesting, I gained the impression that most will focus on what I would call mechanics; by that I mean on specific issues relating to collection, processing, estimation, analysis, output, etc. However, the wider issues faced by managers of a group of statisticians working on an economic statistics programme are equally important, and will not be covered so well during the conference. The organisers agreed that my choice fitted in well with the theme of the conference.

Economic Statistics Programme

What do I mean by 'economic statistics programme'? As this can mean various things to different people, I would like to discuss this question under four headings:

- . customers/users

- . priorities
- . outputs
- . clients

Customers/Users

In developing a statistical programme the obvious place to start is with our customers. Who then are our customers and what do we **KNOW** about their requirements? Although this perhaps should be the first question asked, it is not one which statisticians always ask, or if they ask the question, do they obtain firm answers to their queries. In my view it is one of the great weaknesses of the statistical profession in government.

I was very impressed with an article I read many years ago by A. Ross Eckler, which was published in the March 1970 in the Journal of the American Statistical Association, which was entitled

Statisticians and Shoemakers - "Who is Worse Shod Than The Shoemaker's Wife?", from Heywood's Proverbs

I never met Ross Eckler, but the article is extremely perceptive and if I do nothing else today than stimulate one or two of you to read this article, or read it again, I will consider my talk a success.

There was one particular quote in the article which I thought was very significant:

"... there is no doubt in my mind that statisticians, for all their emphasis upon the art of measurement, have largely failed to apply their skills to measuring demand ... for their own product - statistical data".

Unfortunately 23 years later, this comment, in the main is still true, and statisticians, I believe, must face up to this. Very few of us, have actually tried to measure the demand for our product, or employed others, such as market researchers to do it for us.

Ross Eckler also commented on the supply side of the issue, but I have to say that over the last 23 years, statisticians have used their skills much better in this domain.

To measure the demand for our product is not an easy exercise. As Ross Eckler mentions, there are a number of problems in doing so. The identification and listing of users are not easy tasks, tracing end-use is difficult, and it is difficult to determine how much bearing a particular item of information had on an individual decision. These three points have at least one common thread running through them, and that is the use made of our statistical output; I think this is a very important matter as after all unless we get our statistics used and, I believe that implies knowing who uses our statistics and for what purposes, all our efforts at improving the process of collection, processing, estimation and analysis, are possibly wasted, but I will come back to this issue later on.

The message I wish to give is that we, and particularly the leaders of teams of statisticians, must devote more effort to fully understanding, and hopefully measuring, users' requirements, and in doing so we must be aware that this is a complex and difficult process.

Priorities

Once we have established who our users are, and how our statistics are used, we are then faced with a very difficult job of forming a relative assessment of the value of our output against the costs incurred in producing it. This is difficult enough when deciding whether or not a single collection will go ahead. However, in real life we often have competing demands made of us, and often judgements have to be made between and across collections.

Even given all the help a statistician can receive from market research, users groups and discussion with others, I have no doubt the final decision on priorities must be judgemental based on a wide variety of inputs as well as on our own perception of future statistical requirements. We must be prepared to accept, therefore, that these decisions are never 'perfect'; they are merely judgements at a particular point in time and like all aspects of planning our views on them will change over time.

Where have we got to? Put simply, I have argued that it is difficult to determine the uses to which statistics are put and that priority decision making is judgemental. This means that we must continually monitor and update our position on these important

issues in order to make sure our statistical collections are relevant and appropriate.

Outputs

Given that we have made some decisions about what collections we might want to include in an economic statistics programme, we still have to consider what our outputs might be.

I am raising this matter here not so much to consider the outputs required from a particular statistical collection, but to consider what outputs are required from an economic statistics programme. We have a responsibility, I believe, to ensure that the data we produce 'hang together' or at the very least are reliable from one set of collections to another. Similarly, we have a responsibility to ensure consistency in the data both across time and across collections. Also we would be strongly advised to look at how to ensure that early estimates are good enough to minimise the need for revisions as new and final data become available.

Ensuring coherence and reliability across the outputs of an economic statistics program is certainly a big challenge. It is a big challenge whether government statistics is centralised or decentralised. Interestingly, it is also a very big challenge for any federal system like the one that is being built at the moment to meet the statistical needs of the European Community.

Let me refer to some UK experiences to show the type of issues I feel need to be addressed. The UK Central Statistical Office has 33 targets, set by government and made publicly known, which it is expected to meet. These targets relate to seven central aspects of performance, such as coherence and consistency of outputs, revisions to key economic statistics, and compliance costs on businesses.

With the coherence and consistency of the UK national accounts, over the last few years several steps were taken to improve matters, including extending some statistical inquiries, making some inquiries statutory, and launching new ones. In addition, methodological changes and organisational improvements were made. In total these have had a very positive impact on the quality of the published accounts. Specifically, the balancing items in the

sectoral accounts have fallen quite remarkably from high levels in the mid to late 1980s to very low levels more recently, as is shown by the graphs attached. I have no doubt that these significant improvements have made the UK accounts much more reliable and useful to our customers; likewise the perception users have of the Central Statistical Office, and of its products generally, has improved.

Clients

The major clients of our collection processes are our respondents. Issues relating to them such as data availability, business unit definitions, forms design, collection methodologies and rotation patterns are well covered in the conference papers and I will not pursue them here, although don't assume from that I consider them unimportant. I will, however, make some comments about respondent load as this is a very topical issue worldwide at the moment.

Where response load has been measured, as it has in a number of countries, it always shows that the load government statisticians place on businesses is generally low, around 2% or less of all the government paper work load. In some instances, where it has been found that the burden on particular types of businesses, perhaps larger businesses, might be higher than that, it is nevertheless not very significant in the overall context.

Why then all the concern? I believe it is a question perception. How businesses perceive the statistical forms they receive, the information requested and the possible importance of the resulting output is the important issue. Unfortunately that perception, in my experience, is not always good, and because it is not good, quite often respondents approach politicians to remove this load from them. I believe we must do more to monitor and possibly change these perceptions.

It is crucial, I believe, for us to consider very carefully the impact our programme will have on respondents, and particularly on their perceptions of what we are trying to achieve. We must go out of our way to explain what we are doing and why it is important; we must "sell" our programme and must never assume it will "sell" itself.

Successes

I would now like to comment very briefly on how we should judge whether the economic statistics programme we have developed has been a success.

In my view there is only one criterion and that is have our statistics been used? I can almost hear you saying he is at this theme again! Yes, I am, as I think this is fundamental to running a successful economic statistics programme.

As an example, let me share with you the mission statement of the UK Central Statistical Office

"Our mission is to improve decision making, stimulate research and inform debate within government and the wider community by providing a quality statistical service".

Our mission is not simply to provide statistics, nor to provide the best statistical service in the world. It is focused on improving decision making, stimulating research and informing debate; the emphasis is on getting our statistics used by government and the wider community. If we do that, of course, we will be providing a good statistical service.

There are numerous approaches one can adopt to achieve this, but I would like to comment on just two of them.

The first is marketing, and is one which statistical agencies must devote more effort to. Obviously we, as statisticians, do not necessarily have all the skills to be good at marketing and it would probably be wise, therefore, if we employed a small number, at least, of professional marketing experts. Their skills would help us to concentrate our minds on providing the right product at the right time to the right people and at the right price.

Pricing also raises some contentious and debatable issues, but I will simply say that in my experience the pricing of statistical products has a very valuable and significant impact. This impact is not on raising revenue, although that follows. It is on giving very effective and direct feedback to the producers of statistics about the requirements of users.

If the users will pay a reasonable price for your statistics, you can be very sure they are using the product, and to the contrary, if they are not willing to pay for them one can be very confident that the statistics are not of much use to those users. The messages one receives via this process are sometimes very hard ones, but in the longer term very necessary ones to ensure that our statistics programmes are oriented in the right direction. An automatic feedback process on the success of our efforts, which comes from implementing an appropriate pricing policy is extremely valuable to ensuring an effective statistics programme.

The second is our statistics must be trusted by users if our programme is to be successful. What does this really mean? Well, users don't actually have any way of knowing whether the statistics we produce are any good. As Ivan Fellegi, Chief Statistician, Statistics Canada pointed out in his Presidential Address to the International Statistical Institute several years ago, our statistics are judged by the view users have of the statisticians who produce them.

I will take this slightly further to suggest that the view users have of the organisation to which the statisticians belong is equally important. Again we have a question of perception; in this case the perception users have of both statisticians and statistical organisations. As managers of economic statistics programmes we must be acutely aware of this, and take all necessary steps to improve and maintain the view users have of us.

Building

In some ways the building of a successful statistical programme may be the most important and perhaps even the most difficult task. It requires managing the operation including the training of staff in all facets of the process. It puts a premium on team work and the onus is on the manager to ensure that the team operates effectively. Issues of leadership and empowerment, including the need to make people feel they are contributing as a part of a team, that their work is significant, and that there is an emphasis on problem solving rather than placing blame are all quite important. We need to be able to create an environment where our staff are prepared to take creative risks.

Although I have not been able to devote much time to this aspect of the topic, I would like to stress that team, and people, management generally are vital if we wish to develop and implement a successful programme.

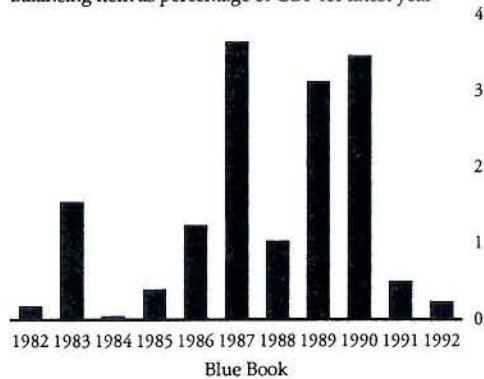
Conclusion

I have painted a picture, I think, whereby you, as a statistician, need to exhibit a lot of characteristics in order to be successful. You need to be a leader, a good manager of people, a technician, street-wise, investigative, and in some sense a clairvoyant. Then and only then, can you really get on with being a statistician! It is without doubt true that building a successful economic statistics programme is a significant and challenging task. I wish you all well in your discussions and deliberations over the next few days.

UK Sectoral Accounts - Balancing Items

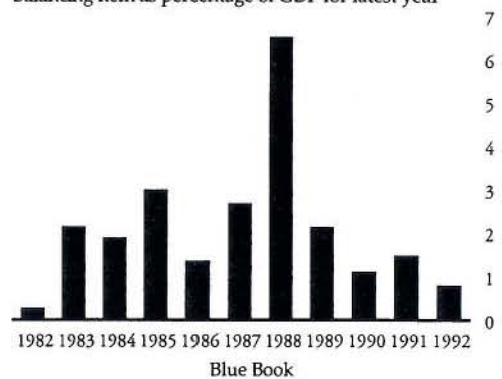
Overseas sector balancing item

Balancing item as percentage of GDP for latest year



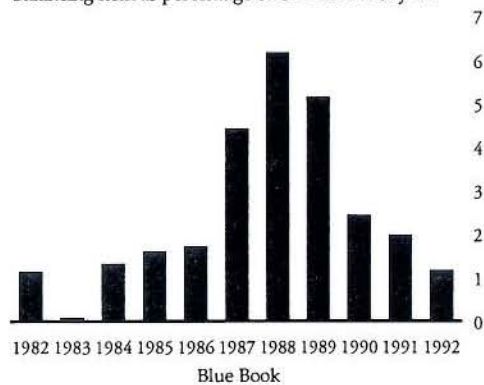
Company sector balancing item

Balancing item as percentage of GDP for latest year



Personal sector balancing item

Balancing item as percentage of GDP for latest year



Public sector balancing item

Balancing item as percentage of GDP for latest year

