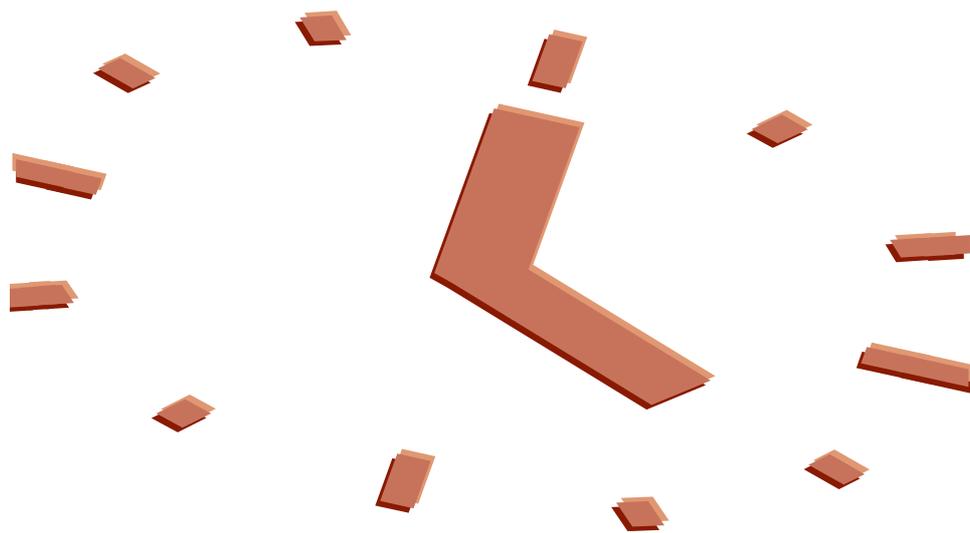


Official Statistics in the New Millennium

Seminar - June 1999



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Preface

Seminar proceedings

The present publication contains the proceedings of a seminar entitled “Official Statistics in the New Millennium”. The seminar was held on the afternoon of 11th June 1999 in Dublin Castle to mark the 50th anniversary of the founding of the Central Statistics Office.

The seminar was one of a wide variety of events organised throughout the year by a special 50th Anniversary Committee under the capable chairmanship of staff-member Liam Hogan. I would like to place on record my thanks to Liam and to the other members of the committee for the invaluable input they made in ensuring that 1999 was indeed a year to remember in the history of the Office.

I am especially grateful to Mr Séamus Brennan, TD, Government Chief Whip and Minister of State at the Department of the Taoiseach for officially opening the seminar on a day of major political significance i.e. polling day for the Local Authority and European Parliament elections.



The Government Chief Whip and Minister of State at the Department of the Taoiseach, Mr Séamus Brennan T.D. (second from right) with (from left) Mr Donal Murphy, Dr Garret FitzGerald and Mr Bill McLennan, prior to the Seminar in Dublin Castle.

We were fortunate in having Professor Kieran Kennedy, former Director of the Economic and Social Research Insti-

tute, to chair the seminar proceedings. His undoubted experience contributed in no small way to the success of the event.

...distinguished contributors...

My fellow contributors to the seminar are both persons with very distinguished track records. Bill McLennan has been Australian Statistician since 1995. As such he heads up the Australian Bureau of Statistics, one of the foremost statistical institutes in the world. He was formerly Director of the United Kingdom Central Statistical Office. Bill ranks among the most experienced Government statisticians in the world and his presence at the seminar added a very important international perspective to proceedings.

Dr Garret FitzGerald needs no introduction. A former Taoiseach, he is currently Chancellor of the National University of Ireland and by his own admission a voracious consumer of CSO's output. No one is more qualified than he to give a user's perspective on official statistics.

...open discussion of issues...

Following the presentation of the three invited seminar papers there was an open discussion of the issues raised. The main contributions to this discussion are reproduced in the final part of the publication.

The 50th anniversary seminar afforded CSO a unique opportunity to critically examine its past and to explore options for the future as we move towards the new millennium.

Donal Murphy
Director General
Central Statistics Office

October 1999

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Official Opening

*Mr Séamus Brennan TD, Government Chief Whip
and Minister of State at the Department of the Taoiseach*

Mr Chairman, Ladies and Gentlemen

50th anniversary

It gives me great pleasure to be here today at this official seminar to mark the 50th anniversary of the founding of the Central Statistics Office.

The venue for today's seminar is particularly appropriate as Dublin Castle provided the location for the fledgling CSO when it was created in June 1949. The office has changed location on a number of occasions since then, the most noteworthy being the relocation of the bulk of the staff of CSO to Cork as part of the Government's decentralisation programme on 1 January 1994. Since its foundation the office has preserved and enhanced its reputation for impartiality, objectivity and effectiveness. The importance of the CSO to the country would be difficult to overestimate. It is on the statistics produced by it that the Government builds its policies, and private enterprise plans for the future.

**...Directors of the
highest quality...**

The integrity and commitment of the staff who served in the office during the course of the fifty years of its existence has been a key element in its success. The Office has been particularly fortunate in attracting, over its history, directors of the highest quality.

In the Dáil debates of 20th July 1949 relating to the setting up of the CSO the following reference was made:

"We are fortunate in having a Director at present who himself is outstanding in his profession. We were fortunate also in securing the services of a professor of University College Cork who gave up his chair to become Deputy Director of the Statistical Office".

The Director referred to was none other than Dr Roy Geary, a statistician and econometrician of international repute. He was followed as Director by Dr Donal McCarthy who subsequently went on to become President of UCC. I am particularly pleased to announce that the CSO, as part of its anniversary celebrations, is inaugurating an annual post-

Official Opening

graduate research scholarship tenable at UCC named after Donal McCarthy.

For close on half of the period of its existence (from 1966 to 1991) the office has been under the capable stewardship of Tom Linehan. In fact Tom, along with three other colleagues, joined the CSO as a Statistician on 1 June 1949 - the first day of its existence. I would like to pay special tribute to him for the valuable role he played in the development of the Office over such a prolonged period of time.

The present Director General, Donal Murphy, continues this fine tradition.

National Statistics Board

Two events in particular have consolidated the independence and effectiveness of the CSO. The first of these was the setting up of the National Statistics Board in 1986 at the instigation of the then Taoiseach, Dr Garret FitzGerald, who is one of the keynote speakers in today's conference. Dr FitzGerald's initiative in setting up the Board has been fully vindicated as the Board has played and continues to play a major role in guiding the strategic direction of CSO and setting priorities for statistics. The success of the Board has been due in no small part to its chairpersons, first Professor Paddy Geary of NUI Maynooth and latterly Professor Frances Ruane of Trinity College. Our positive experience is one which a number of other countries have been anxious to emulate.

Statistics Act, 1993

The second major development worthy of mention is the Statistics Act, 1993. The Act formalises the institutional structure of the CSO and obliges CSO to protect the confidentiality of information provided by individuals or concerns. This guarantee in law is fundamental to the acceptance of CSO as a body independent of Government and free from any outside influence.

The title for today's seminar - "Official Statistics in the New Millennium" - is appropriate. It is widely accepted that high-quality statistical information is indispensable for the formulation, implementation and monitoring of policy both at national and international level. Quality data in this context means impartial, relevant, comprehensive and timely information.

The CSO has, since its inception, been noted for its impartiality. This is a tradition it inherited from the organisations which preceded it and a tradition which, no doubt, it will proudly guard into the new millennium. At the most fundamental level, the public has to have confidence in the impartiality of statistics such as employment/unemployment, consumer prices, the growth rate of the economy

and the balance of payments. It has to retain this confidence in good times and bad. I am glad to say that this is indeed the case.

The CSO will continue to monitor the relevance, comprehensiveness and timeliness of the statistics it produces. This is a matter which I know it takes very seriously and which is at the heart of its Statement of Strategy, 1998-2000. That strategy in common with those of other Government Departments, has been produced as part of the Government's Strategic Management Initiative for the Civil Service.

It only remains for me to declare this seminar officially open and to wish the CSO well as it faces into a new Millennium.

An International View

William McLennan, CBE, AM, Australian Statistician

What are official statistics?

UK White Paper

Before proceeding to discuss change, I think it is wise to consider what I mean by official statistics. A formal answer to the question was given in July 1993 in the United Kingdom White Paper on Open Government¹ where it said:

Official statistics are collected by government to inform debate, decision making and research both within government and by the wider community.

They provide an objective perspective of the changes taking place in national life and allow comparisons between periods of time and geographical areas.

Open access to official statistics provides the citizen with more than a picture of society. It offers a window on the work and performance of government itself, showing the scale of government activity in every area of public policy and allowing the impact of public policies and actions to be assessed.

Reliable social and economic statistics are fundamental to ...open government (and) it is the responsibility of government to provide them and to maintain public confidence in them.

I like this description, which is not surprising, as I had a hand in writing it!

...love-hate relationship...

In considering what official statistics are, it must always be remembered that politicians the world over have a love-hate relationship with official statistics, and hence with statisticians. This is perhaps not surprising because official statistics are used by governments both for support and for illumination, and by others to judge the performance of govern-

ments and their programs. In this complex relationship it has been said that an indicator of how well a democracy is working is shown by the degree of independence the official statistical agencies are accorded, and by their performance in producing relevant and timely statistics. I support this view.

I will now discuss official statistics systems and then official statistics. I will conclude with some observations on current and development issues in the ABS.

Official statistics systems

The UK experience

I will discuss the UK experience first because it is close to home for you and I have been personally involved in some of the changes. These comments draw heavily on three papers I had a significant hand in writing: the Journal of the Royal Statistical Society paper “You can count on us - with confidence”², an unpublished paper “The future of official statistics”, and my response to the UK Government Green Paper “Statistics: A Matter of Trust”³.

As you would realise, in the UK the Government Statistical Service (GSS) staff are employed on statistical work across all agencies of UK government; their output provides the United Kingdom with most of its official statistics. Each department is responsible for its own work program, under the direction of its statistical director, or head of profession. On the other hand, the Head of the GSS, who is also the Director of the Office for National Statistics (ONS) has, as the government’s chief adviser on statistics, overall responsibility for maintaining the integrity and validity of official statistics, and, as head of profession for statistics, for the maintenance of an effective professional staff. It is a very British construct, with responsibilities for management widely dispersed, but with the centre having some crosscutting policy responsibilities.

...well-earned reputation...

The ONS is now responsible for most of the economic and household based statistics produced in the UK statistical system. It has a well-earned reputation for integrity and quality, and employs around 2,500 staff out of about 4,880 overall in the GSS. The statistics in the remainder of the GSS are in the main derived as a by-product of administrative systems of

government, although some major collections are conducted by various departmental statistical units. The exception to this is in Northern Ireland where the statistics are produced by a centralised statistical office in their Civil Service.

...considerable consolidation...

In the space of less than ten years, considerable consolidation and centralisation of the UK statistical system has taken place from a system which was predominantly decentralised, with about only 1,000 staff in the Central Statistical Office. This change was aimed at achieving:

- greater integration between social and economic statistics;
- improved access to official statistics, especially through the database of key statistics;
- combining the advantages of a decentralised system with a strong and independent co-ordinating agency; and
- providing benefits for all users, both government and non-government.

...establishment of ONS...

In 1980 statistics had been identified, alongside many government activities, as something to be scrutinised to establish value for money in meeting the government's policy agenda and scaled down to a "core" of activity. In accordance with this logic the service was reduced under the Rayner doctrine⁴. In 1993 the Open Government White Paper raised statistics to a different level by noting that reliable statistics are fundamental to open government. They exist in part to assess government action and therefore must be seen to be independent of government manipulation. From being a service ancillary to other "core" activities they have become a crucial element of that "core". Learning to appreciate this was a painful process during the 1980s, and understanding how to live with it is still a challenge for statisticians in the 1990s. The latest organisational change resulting in the establishment of the Office for National Statistics (ONS)⁵ recognises the need, yet again, for a greater coherence in Government statistics, and for the improved availability of reliable statistics for public use. The importance of statistical standards and common practices received due attention as well. Statis-

tics are not only seen as a “core” activity, their value in the public arena has been accepted as well. Fulfilling this extended role will call for a further shift in both attitude and approach for the GSS leading into the 2000s.

**...independent
statistical service...**

The most recent thrust for change came in 1997 when the United Kingdom elected a new Labour Government and on its agenda was the establishment of an independent statistical service. In early 1998, it issued a Green Paper “Statistics: A Matter of Trust”⁶ seeking the views of the public. This paper raises many issues of importance, including the scope of official statistics, accountability, integrity and governance issues. The importance of devolution, and the impact international issues have, in particular the European Union, are also mentioned. How the UK Civil Service works, and the attitude and practices of its senior staff, are not irrelevant considerations.

I put in a submission³, which reflects my interest and desire to see change take place. The question I addressed, based, in part, on the comments of the Prime Minister and the Economic Secretary in the Green Paper, was:

As the Government is pledged to establish a new relationship between itself and citizens based on openness and trust, how should the UK statistical service be organised, managed and funded to produce high quality and trustworthy statistics, which meet the requirements of all users?

**...changes need to be
made...**

I concluded that changes need to be made to the scope of official statistics, the arrangements to assure the independence of the statistical service, the management responsibilities within the national statistical service, and legislation arrangements.

My suggestions built on the changes which have taken place over the last 30 years in an incremental fashion working towards a service which is slightly more centralised but where the Director of the ONS is in a more independent position, particularly with respect to determining statistical priorities. I did not suggest a complete centralisation of the statistical service as that is not appropriate in the UK environment.

**...integrity....the
more dominant
factor...**

However, I did suggest that one person, the Director of the ONS, should be responsible for the publication of the most important statistics used to judge the performance of government. I put forward a list of suggestions of statistics produced in the remainder of the GSS, where, based on the Government's policy agenda, integrity might be considered to be the more dominant factor; included were statistics on the waiting time for hospitals, which is not to say they are not relevant to policy, as in fact detailed data below the national level may be very much so.

Many, or all, the suggestions I made, such as a fixed term appointment for the Director of the ONS, could be implemented by either administrative changes or government decision, and indeed should be. However, to ensure these changes stand the test of time, the best solution would be to make legislative change. I have no way of knowing, of course, whether or not any of these suggestions will receive serious consideration let alone be implemented. I am looking forward to reading the White Paper when it is published, where I expect it will incorporate moves towards more independence and improved performance in producing relevant and timely statistics.

**The Asian
Experience**

In Asia a number of countries are considering very carefully whether the organisation of, and the role given to, their official statistics systems are still appropriate. For example, the Japanese Government is having a fundamental review of its departmental structure, and some significant changes have been announced in terms of reducing the numbers of agencies and changing responsibilities, Department of Finance to Treasury.

As a part of this process, the arrangements for producing official statistics are receiving a wide-ranging examination. Historically, the Japanese statistical system has been decentralised. It is similar to the older British system, and the Japanese bureaucracy has many similar characteristics to the British bureaucracy as well. In an effort to take advantage of these current administrative reforms, the Japan Statistical Society conducted an International Symposium on Official Statistics late last year in Tokyo. I participated in that Symposium⁷, at their invitation, to describe developments in the official statistical system in the UK and Australia. The dis-

cussions at the Symposium were reported fully in the press, the NIKKEI, and in the Association's monthly magazine. The Association stated it was working towards "a more powerful statistical system in Japan", and is leaning towards establishing a more centralised system. I do not know what progress has been made in this direction, if any.

...consolidation of responsibilities...

Another example is China, where again the overall structure of the government's agencies has been reviewed, with a general consolidation of responsibilities taking place to match the move towards a market economy and consequently a reduction in the overall number of agencies. The official statistical system, which was partially centralised, has been moved further in that direction, and the Chinese National Bureau of Statistics has been set up with enhanced and wider coverage of statistical issues and a stronger coordinating role.

A further example is India. Here we have a federation with official statistics systems at both the federal and state levels, all of which are decentralised and often decentralised in different ways. These structural differences really complicate matters. The Indian Government has established a Statistical Commission, chaired by a Governor of a state who is an ex-Governor of their central bank, to look into how their statistical system might be strengthened and made to operate better. The problems are large, and I expect the solutions not easy to achieve. Recently I was in Delhi signing, with my counterpart from the Indian Department of Statistics and Program Evaluation, a Memorandum of Understanding for future cooperation between our agencies. At that time, I also participated in some discussions⁸ on these possible structural changes.

...more independence...

It is interesting to note that many countries in the Asian region are moving to realign their official statistics services and are by and large following, or may follow, the change process used in the United Kingdom. Again, the direction of change seems to be towards more independence, increased centralisation and improved performance.

International aspects

An important component of the official statistics systems is the international one. What is it, and how does it operate? As I see it there are three components based on the United

Nations, international agencies and supranational arrangements.

...in reality an advisory body...

The United Nations dimension is a reflection of the structure of that body with a UN Statistical Commission, which reports to the Economic and Social Council of the UN. UNSC's role could be seen as being paramount, but in reality it is merely an advisory body to the UN Statistical Division, the statistical arm of the UN Secretary-General. The statistical arms of other UN bodies, such as ILO, FAO, WHO and UNESCO, sometimes are involved, but not always; unfortunately there is never any joint involvement aimed at setting the world statistical agenda. In this sense, the role of the Commission is much narrower than it should be, but even in this narrower role, it has not always been effective. More recently, though, much effort has gone into improving the meetings.

...NSOs must take lead in research...

Of particular importance in this process was the realisation in 1997 by the countries which are active in this international forum, in the context of examining critical problems in economic statistics⁹, that the secretariat groups supporting the international bodies in UNSD, OECD, Eurostat, IMF, WB etc did not, in general, have enough of the skills and experience required to undertake research and development activities aimed at taking the world statistical system into the next millennium. The group said "since detailed technical expertise - particularly concerning questions of data compilation - resides with national statistical offices, such offices must take the lead in technical research activities. The Expert Group recognised the need to create forums in which national statistical agency experts can address technical issues, and emphasised that informal ad hoc groups comprised of representatives of a small number of countries - can play an effective role in addressing such technical issues due to their greater flexibility compared to intersecretariat groups". The Working Group said these groups should "have a clearly specified focus" and they should "make their workings open and transparent". It was felt that such groups must satisfy three essential criteria in order to succeed: there must be a host country willing to take the initiative, in order to maintain its focus each group must have a specific mandate to pursue and the results of the work of each group must be disseminated. Thus the broader based groups, the so called city groups, came into being, and not only in relation to economic issues; one im-

portant one is the Rio group which examines the statistical problems relating to the measurement of poverty issues.

**...industry
classification
out of date...**

This step has not solved all the problems. The issue of developing or altering statistical standards to meet contemporary or emerging needs is still a vexed one. Two examples will suffice. First, in my view the world's industry classifications are in the main out-of-date, being primarily based on the structure of manufacturing processes, rarely have an activity or other dimension to them, and there is little facility for identifying emerging industries (say technology). This has been a pressing and long term problem which only now is being scoped, and the prospects for quick, not even rapid, progress are slight. Second, the current employment and unemployment concepts and definitions seem no longer to be quite relevant for most countries, and have been so for some time. Is anything being done about it? Where is the statistical leadership coming from? (This is a rhetorical question!)

**...mired in
administrivia...**

Another strength of the United Nations system should be its regional presence. In the European region it is the Economic Commission for Europe which holds the annual Conference for European Statisticians (CES) (next week!). However, in terms of the development of statistical policy, as opposed to the administration of the ECE staff, the CES always seemed to me to mainly provide a forum for the ECE and Eurostat to debate which was responsible for what, with the OECD angling to stay in the same game. This competition may be healthy but hardly inspirational. In my region, the Economic and Social Commission for Asia and the Pacific (ESCAP) holds a biennial Committee on Statistics. It seems always to be mired in administrivia and UN bureaucratic processes with statistical issues coming a distant last. Not all regions of the world have similar meetings of their countries statisticians. In my experience, unfortunately, these bodies contribute little in a strategic sense.

On the supranational dimension, in this region, the EU reigns supreme and many comments, I am sure, will be made about it today in the other presentations. I will say very little about it as my first hand observations are four years old. My predominant impression though is that there is no real attempt being made to create a federal statistical system for Europe to produce compatible, accurate and timely statistics for most of

the important areas of economic and social concerns. Rather it seems, in the main, Eurostat seems to react to EU political pressures and decisions. This should not be really surprising, given how the senior staffing decisions are made in that organisation.

The statistical arm of the OECD is also a significant player in the field, and although it is an active attendee at international gatherings it is not now a driving influence. It represents the developed countries mainly, but keeps, or is kept, a wary distance from European matters. It is currently doing work on sustainable development indicators, and is prominent in the development of statistics on technology and innovation.

**...concerns about
PPP program...**

However, we in the ABS have had concerns about the OECD Purchasing Power Parity (PPP) program and the broader International Comparison Program (ICP) of which the PPP program is an important component¹⁰. The original concerns related to the quality, and hence the credibility, of the outputs from the PPP program, as we do not subscribe to the view that errors in component data will necessarily offset at an aggregate level. None of the statistical prerequisites required for a successful ICP, (i.e. high, and equal, quality national accounts data, and baskets of price data which are both representative of national transactions, and comparable across countries, and priced to constant quality) are being achieved. These data quality concerns have, in turn, led us to seriously question why users appear to be accepting data that, in our view, contain inaccuracies and are produced on an untimely basis. Why are users not vigorously complaining as they clearly would in relation to national statistics of such a standard? In fact, what are the key public policy uses made of the ICP outputs and how disadvantaged would communities be if the program did not exist?

**...results seem
implausible...**

As a light-hearted example of our concerns, which in the main are many and serious, in the most recent PPP exercise the per capita alcohol consumption (in *volume* terms) for the UK is shown as over five times greater than that for Australia. Indeed, the Australian per capita *volume* of alcohol consumption is shown as only about half of the OECD average. These results seem implausible. In addition, some of the relationships between European countries are difficult to comprehend. For example, the results for Luxembourg and Swit-

zerland seem to be unrealistically high at about three times, and double, the OECD average respectively. On the other hand, the results for Italy, Ireland and Russia seem very low being less than two thirds of the OECD average. Can you make any sense of this mess?

...influence is significant...

On the international agency dimension the two significant players in the statistics field are the International Monetary Fund (IMF) and the World Bank. There is no need for me to comment on their roles in the world's economic affairs, or on their effectiveness in those roles, and I simply note their influence is significant. However, the IMF in particular has had a profound, and in some ways unfortunate, impact on statistical priorities, especially of the developing countries¹¹. It has done this through its Special Data Dissemination Standards. Its aim is to enhance the availability to the public of comprehensive, timely, accessible and reliable economic and financial statistics so as to contribute to the pursuit of sound macro-economic policies and to the improved functioning of financial markets. It was introduced as one of the responses of the international financial community to one of the recent financial crises.

...highly prescriptive document...

All this sounds well and good, but the SDDS has emerged as a highly prescriptive document that ranges across the stated requirements of diverse financial market participants. However, those requirements may not be presented in a balanced way. No attempt is made to reflect the materiality that users would normally bring to bear in the analysis of economic and social data, depending on the country in question. Instead, the simplest one size fits all approach has been adopted, specifying range, frequency, timing and detail which should apply to each data set. An attempt has been made to address this problem through "flexibility" options. However, this may or may not be suitable or relevant for a country depending on the nature of the economy. National statistical authorities in some countries may well find themselves diverting resources away from the important relevant statistical work program for their countries so that the requisite number of ticks can be obtained on the IMF SDDS scorecard. The implementation of the SDDS, in developing countries at least, has meant changes to statistical priorities, which may not reflect national ones. I wonder whether this outcome, and its

impact on the independence and relevance of the statistical agencies of the less developed countries, is appropriate.

**...solution in our
own hands...**

The conclusion I reach is that the international scene is at best chaotic and at worst very ineffective. One significant reason why this is so, I believe, is that the chief statisticians of the countries of the world recently have not played an important enough role, often none at all, in the development, and management of international statistics policy. The solution is in our own hands.

Official statistics

Statistical topics

There are many fundamental changes taking place, or should take place, in official statistics, but here I will cover just three topics. The first relates to national accounts, and I am not going to talk about the implementation of the SNA93 however important that may be. Rather I wish to raise the issue which has been discussed for many years that GDP is not really a measure of economic welfare, let alone of national progress; it is simply a measure of the level of market based economic activity. I raise this question because GDP is often the surrogate measure governments use, incorrectly as it happens, to judge how “well” they have performed overall, and often society, particularly the media, use the same measure to judge government’s overall performance.

I raise the question because in my view official statisticians and the world’s statistics systems, are not paying very much attention to providing statistics and statistical frameworks which will support the very important and detailed analysis which is required of the complex relationship between economic performance, social well being and environmental sustainability. Indeed, in the main we are not even trying to give an approximate answer to this appropriate question, rather we are more and more focused on giving an accurate answer, in SNA, to a question which is not very approximate at all. Don’t get me wrong, GDP is widely understood, has high international acceptance, and is supported by an underlying international framework; it serves its objective of measuring changes in market based economic activity well.

...develop a set of indicators...

In this the ABS is no exception, in that little real progress has been made. In our view¹², though, one should be wary of placing too much importance on a single indicator. As the welfare of a society is determined by a complex set of economic, political, social, and environmental factors any single indicator of national progress or welfare needs to identify the economic, political, social, and environmental factors driving the indicator if it is to be acceptable and understood by the public at large rather than become just another “headline grabber”. For this reason, we aim to develop a set of indicators (rather than a single composite indicator) to measure national progress, within a coherent framework. We will use the SNA93, extended by its satellite accounts and possibly social accounting matrices, as the framework upon which to build a set of economic, social, and environmental indicators of national progress. The extensions will concentrate on the economic, social and environmental issues of most concern. This development would include the underlying data sets which would support more detailed analysis, as well as providing the basic data from which the indicators would be derived.

...most misused statistics...

Second, I would like to discuss price indexes as I believe they, and in particular the consumer price index, are the least understood and most misused statistics produced by official statisticians. I am sure that is the case in the Australian context, and I think it is as well in the UK context. (Their use in the EU context is suspect as well.) Indeed more often than not, users have chosen to use the wrong index for the task in hand, e.g. CPI as a measure of inflation. Given that price measures are used for a wide variety of purposes including analysis of inflation, indexation, contract escalation, derivation of constant price value estimates and international studies, the selection of the most appropriate measure(s) for any given application is particularly important.

The problem is that most official statistics agencies produce a wide range of separate consumer, producer and international trade prices indexes, all of which are partial indicators in that they relate to a particular segment of economic activity. Each has been developed to meet specific requirements. Further, there is by-product price data contained in all national accounts releases. Given the differing principal objectives of the various individual price measures, there is scope, and a

great need in my view, to enhance the analytic value of the information through drawing the series together and presenting them as a system or family of price indexes. Indeed this may help the increasing international attention devoted towards developing new approaches to the measurement of inflation. The ABS produced a discussion paper “An Analytical Framework for Price Indexes in Australia” in 1997 on this topic, which is based on a “market transactions” approach where a whole-economy price index model is presented, but embraces both an aggregate measure and component indexes. A number of countries are looking at similar proposals, and the topic is receiving attention at the international level as well, but as yet not much action.

**...issue of
globalisation...**

Third, I would like to raise the issue of globalisation, which has both direct statistical implications and impacts on the system of statistics official statistics agencies compile. Businesses and other organisations increasingly transcend national borders in their production, sales of goods and services, and financial activities. The emergence of trade areas is removing conventional trade barriers and hampering the collection of trade statistics: multinational enterprises operate and produce in many countries. Thus there is a need for new legal and practical arrangements for the collection and preservation of information in this new environment. Existing statistics can provide some insights, and can assist governments, businesses and the community to evaluate its impact. However, it is widely recognised that these statistics do not go far enough. They also fail to address the social cohesion issues which have arisen in many countries as economies have become more global.

Globalisation is a central concern of economic debate, and statisticians worldwide, particularly in the international agencies are addressing how to provide statistical measures. Not surprisingly, given the complexity of the issues involved, and the rapidly changing character of the phenomenon, no clear consensus has yet emerged. It is unfortunate that even defining foreign ownership needs considerably more attention, and no workable set of globalisation indicators has emerged.

One must wonder how big a role did our lack of understanding of the globalisation issue have in countries not being prepared for the financial crises which recently befell parts of the

world's economy. One should also wonder about simple matters like allocating accurately the economic activity of multilaterals to specific countries, i.e. how does one arrive at profit. It also makes one think there might be a need for an international statistics agency given the task of keeping the statistics for the world in order; this is marginally more than a rhetorical statement.

Australian Bureau of Statistics (ABS)

The ABS currently has about 3200 staff with about half the staff in the State Offices, and an annual budget of \$AUS 250 million. I will now briefly consider its performance and its aspirations.

...ABS established in 1975...

All States had separate statistical bureau which had been set up, from around 1855, when the colonies were given self government. The Commonwealth Bureau of Census and Statistics was established by the Census and Statistics Act 1905, soon after the colonies of Australia were federated in 1901. An amalgamation of these bureaux took place in 1957 to create an integrated statistical service operated by the Commonwealth. In 1975, the ABS was established by the Australian Bureau of Statistics Act as an independent statutory authority, with the responsibility, amongst other things:

- to constitute the central statistical authority for the Australian Government and, by arrangements with the Governments of the States, provide statistical services for those Governments;
- to collect, compile, analyse and disseminate statistics and related information.

The Australian Statistician was given a secure and fixed-term appointment of 7 years, and made responsible for controlling the operations of the Bureau. Further the Statistician was given the powers of a Departmental Permanent Head in respect of the Public Service Act.

At the same time, an Australian Statistics Advisory Council was established as a separate statutory authority and with an independent Chairman, to advise on long-term statistical pri-

orities and strategic issues. Its members are widely representative of users and suppliers of statistics and include representatives of the Premiers of the States.

**...census every
five years...**

In 1981 the Census and Statistics Act, 1905, was significantly amended. A Population Census has to be conducted every five years, but the Statistician determines what other statistics would be collected, when and how often. It also provides that the Statistician can direct a person to supply information requested, and institute legal action if necessary which carry possible substantial penalties for non-observance. It also places an obligation on the Statistician to maintain the secrecy of all the information collected, and to compile and analyse the information collected and to publish and disseminate it. The independence of Australia's statistical service was thus well and truly established. The Minister's only power, other than through the budget, is to direct that a collection be undertaken, but that power has never been used.

**...high quality
statistical service...**

Turning now to the relevance dimension, the ABS today provides a high quality, objective and responsive national statistical service. It exploits many avenues for the dissemination of its statistical information but, in line with client preferences, printed publications remain the main first release medium. It publishes over 350 different publication titles each year, comprising around 1300 separate releases, or about 6 per working day. In addition, the ABS operates an information consultancy service, the ABS web site, and disseminates information using computer-readable media (floppy disk, CD-ROM, magnetic tape) and electronic on-line access.

The ABS meets its public interest obligations by ensuring that at least basic statistics are both readily available and affordable. To do so, publications are made available on a complimentary basis to parliamentarians, major news media organisations and parliamentary, public and tertiary institution libraries. The ABS web site provides free access to the main findings of all releases. The Telephone Inquiry Service answers enquiries from the general public with figures sourced from current publications. In addition, about 550 of the major public libraries are provided with free ABS publications and some electronic services to meet the needs of local communities.

Consistent with the Government's user pays policy, the ABS charges for its products and services regardless of whether they are being provided to governments or the community generally. The aims of this policy are to encourage users to identify and address their real needs for statistics, to enable the demand for ABS products to be used as an indicator of how ABS resources should be used, and to offset the cost of production of the statistics. About \$25 million, or about 10% of the budget, is raised in revenue each year.

**...reliability of
ABS statistics...**

Looking at the reliability of ABS statistics, this aspect of quality is closely related to the application of good statistical methods. We must make sure that the best statistical techniques are applied to our collections and compilations, and that they are consistently applied. Methodologists in the ABS not only have responsibility for developing effective methodologies, but also corporate responsibility for their application right across the ABS. Our methodologists have always been encouraged to take a holistic view of quality in their work, and to develop relevant and practical solutions. They have been integral to the improvements we have been able to make in the coherence of our statistics, and to many of our statistical and technological developments.

Many new developments have occurred over the last two years. On the population front, a diverse range of information products have been released from the 1996 Population Census. Planning is well under way for the 2001 Census, and wide public consultation has commenced. In fact this year, following extensive testing, a decision was taken to implement Intelligent Character Recognition, Automated Coding and Imaging technologies for the data input for the next Census.

**...many new
publications...**

On the social and labour front, a new quarterly wage cost index has been implemented to measure changes in wages and salary costs for employee jobs. It is the first stage in the development of a full labour cost index, which will cover other costs such as employer funded superannuation, workers' compensation, and paid leave. Many new publications have been released including on the health and welfare of children, and mental health and well-being.

On the economic front, the production of national accounts based on the SNA 93, including annual chain volume measures, the release of several environmental satellite accounts, the redevelopment of multi-factor productivity statistics, the development of productivity measures for the health and education sectors and many developments in services and information technology statistics stand out. Many new publications in these fields have been issued. In addition, the releases relating to the latest series consumer prices index and to the developments in producer prices indexes are worth mention.

**...sophisticated user
of technology...**

The ABS is a sophisticated user of technology. We have a large mainframe, with an associated cartridge tape storage system, 7 mid range UNIX servers mainly used to support Oracle, and each of the 3200 staff in all the offices spread over Australia has a Pentium PC based on the Lotus Notes environment. All PCs are networked using Banyan/Vines over 35 network servers and each staff member can access any authorised service anywhere on the network.

**...information
warehouse...**

One of the more significant recent achievements was the development of the ABS information warehouse which is now in production providing facilities to store the output from ABS statistical collections, together with detailed metadata describing the statistics and the underlying statistical concepts and methodologies. The aim is for all regular, sub-annual collections and many annual collections to be produced from it using a specially developed publications system. This, when it is functioning fully, will represent a major achievement, increasing the effectiveness of client and information services and positioning the ABS to be able to quickly take advantage of emerging dissemination technologies. Another area of significant advance is the building of modular systems to collect, process and analyse data, which support best practice methodologies on a consistent basis across our survey activity.

On the management front, the most significant change has been the Government's decision to have each agency head accept responsibility for managing all salary and conditions of service for the staff of each agency; no longer will these matters be tied to a Public Service wide system. Each agency has entered into collective or individual agreements with staff

which define these matters as well as emphasising a performance culture. This has been a large and important change for the management and staff of the ABS, but the change seems to have been beneficial.

I think the above comments show that I can claim the ABS measures up well on the relevance axis.

...still much to do...

However, the world is changing quickly, so there is still much for us to do to ensure that our product remains relevant, is of high quality and is disseminated in the form required by our users. We need to ensure that our statistical infrastructure remains in good shape, and the efficiency of our operations continues to improve. Also, it is vital that our relationship with providers remains sound and we reduce their cost of completing statistical returns. Most importantly, we must continue to improve the capability and performance of our staff. In short, the job is still ahead of us all!

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Challenges for Irish Statistics

Donal Murphy, Director General, Central Statistics Office, Ireland

Historical Perspective

Introduction

This seminar marks the 50th anniversary of the foundation of the Irish Central Statistics Office (CSO). During those fifty years a pretty robust national statistical system has been developed. The CSO is responsible for producing the bulk of Ireland's official statistics, but a range of education, health, housing, energy, crime and other statistics are compiled by the relevant Government Departments. The anniversary, falling as it does in the last year of this century, prompts us to speculate on how well we will meet the statistical needs and challenges of the next century. Indeed, as the second millennium draws to a close, it is becoming quite popular in statistical¹ and other fields to look into the future to anticipate likely developments, identify needs and gauge how they will be met.

The future facing national statistical services differs depending on their existing operational capacity, the environments they operate in, and the specific challenges they face. In this paper I focus on the organisational and statistical challenges that face Irish statistics.

**...statistics ...
an important role to
play...**

The start of the new millennium signals an age where information technology and electronic communications will be the main driving forces of the economy. Success in this knowledge-driven economy will depend on how well information is accessible and exploited. Statistics, therefore, will have an increasingly important role to play. Kettenring (1997) in his Presidential address to the American Statistical Association aptly described this by referring to statistics as the "*data science of the 21st century – essential for the proper running of government, central to decision making in industry, and a core component of modern curricula at all levels of education*"

Statisticians know that it is rarely possible to predict the future with any degree of certainty. However, we can be certain about two things in our business, namely:

- the current pace of economic/social change will continue for the foreseeable future;
- the increasing difficulty of statistical measurement will be further exacerbated by the continuing shift in the mix of output from material goods to services and to intangibles that are characteristic of the rapidly emerging information society.

**...more challenging
than in the past...**

This means that the work of national statistical services like the CSO is going to be far more problematic and challenging than in the past.

Developmental Phases

Before looking to the future I will first put matters in perspective by quickly reviewing the historical development of Irish statistics. Linehan (1998) has already done this comprehensively. I will only summarise the main features to show the stage that has now been reached.

Irish statistics have a long history. This can be divided into 4 distinct phases:

Early Years (Pre – 1922)

During this period Irish statistics were compiled as part of the UK system. Censuses of Population were held every ten years from 1821. An annual series of Censuses of Agriculture was introduced in 1847. Statistics on marriages are available since 1845 and those of births and deaths since 1864. These were the responsibility of the Registrar General's Office which became the principal source for official statistics by the end of the century.

Early Statehood (1922 – 1949)

Following the establishment of the State in 1922, the existing statistical units in the Department of Agriculture and Technical Instruction and in the Irish Department of the Ministry of Labour in London were merged to form the nucleus of a *Statistics Branch* in the newly established Department of Industry and Commerce. This Branch had responsibility for compiling most official statistics up to 1949.

An important early development was the enactment of the Statistics Act in 1926. This provided a solid statutory basis for Irish statistics for 68 years up until 1994 particularly in providing for the protection of the statistical confidentiality of the data collected and their use for statistical purposes only.

This early period was characterised by some major statistical developments. The first Census of Population for the new State was taken in 1926. Censuses of Industrial Production were undertaken in 1926 and 1929 and continued on an annual basis from 1931 onwards. The first Census of Distribution was taken in 1934. This was a pioneering exercise claimed to be the first in Europe. Quarterly industrial production series and six-monthly earnings and employment series were introduced in the early 1940s. A significant development was the compilation of the first official estimates of National Income and Expenditure for the period 1938 – 1944.

**Early CSO Years
(1949 – 1972)**

The CSO was established in June 1949 as a separate office in the Department of the Taoiseach. The main reason for this change was to ensure the independence of the statistical service². This predated UN recommendations (1954) in this regard.

The 1950s was an expansionary period. National accounts were compiled on an annual basis, five yearly Censuses of Distribution were introduced with sample inquiries during intervening years, the first large-scale Household Budget Survey was conducted during 1951-52, and a comprehensive National Farm Survey was undertaken covering the period 1954-56. This favourable environment did not last too long. The 1960s was largely a decade of consolidation. It also marked the start of an escalating demand for quantitative information that always exceeded what available resources could meet.

**Recent Years
(1973 onwards)**

Accession to the EEC in 1973 marked a watershed in the development of Irish statistics. Since then they have been driven and shaped by the requirements of the European Statistical System (ESS).

The impact has been very demanding on the CSO. Requirements have continually increased over the years. They par-

ticularly intensified in the lead-up to the completion of the Single Market in 1993 and the establishment of the EMU. The CSO and its staff have shown considerable ingenuity and innovation in meeting these demands. Originally EU requirements were mainly met by adapting and expanding existing national systems. However, as the ESS expanded it became more practical to adapt it as the national system with particular Irish requirements being met as a by-product.

Noteworthy national developments in recent years include the establishment of the National Statistics Board in 1986, the new Statistics Act 1993, and the decentralisation of the bulk of the CSO's activities to Cork in January 1994.

Notable Features of the CSO's First 50 Years

The CSO's first 50 years have mainly been characterised by the following features:

Economic and Social Change

The period was principally characterised by a significant change in the economic and social environment. The pace of change accelerated during the past decade with the economic success of the so-called "Celtic Tiger", the advent of deregulation and globalisation, and the emergence of the Information Society. This has particularly complicated the CSO's work environment.

Expansion in the Range of CSO Statistics

The range of statistics produced by the CSO expanded consistently during the first two decades following the setting up of the Office in 1949. The pace of expansion increased dramatically following accession to the EC in 1973. In 1998, for example, the CSO issued:

- 266 Statistical Releases (e.g. CPI, RSI, etc.), and
- a total of 91 statistical publications.

Impact of Information Technology (IT)

Statistical activities have been greatly facilitated by the advent of the computer and the dramatic increase in its functionality and power over the years. Considerable efficiency and productivity gains have accrued in all stages of the statistical process from data capture, to editing/correction, analysis and dissemination. This is difficult to quantify. However, IT productivity is the main reason why the CSO has been able to:

- 1) maintain its statistical services despite the budget constraints under which it, in common with other Government Departments/Offices, has operated for the past two decades (the discontinuation of the annual small-scale Household Budget Survey in the early 1980s was the only major casualty);
- 2) cope with the cumulative impact of 2% annual budget cuts as part of the efficiency dividend provisions of its 1991-93 and 1994 -96 Administrative Budget Agreements;
- 3) undertake a range of new ongoing statistical activities, equivalent to about 7% of the Office's current budget, for which additional resources were not sought.

There is, therefore, a huge return on investment in IT in the CSO.

Increasing CSO Staffing and Resources

The scale of the development in the provision of statistics since 1949 is readily seen in the staffing and resourcing of the CSO over the years as shown in the following table.

Total staffing levels increased from about 176 in 1950-51 to some 560 currently. These are predominantly general service grades. There are currently 54 professional statistician posts (i.e. 36 Statisticians, 14 Senior Statisticians, 4 Directors, 1 Director General) compared with 6 (i.e. 4 Statisticians, 1 Deputy Director and 1 Director) in 1949.

Despite this expansion there was little change in the percentage of the total Civil Service annual budget allocated to the Office. This remained relatively constant at around one tenth of 1%. The impact of accession to the EU on the scale of the CSO's activity is, however, noticeable.

CSO Staffing and Annual Budget, 1949 - 1999

Year ³	CSO Staff		Annual Gross Budget		
	Total Staff	Statisti- cian Grades	CSO	% Civil Service	% GNP
	No.	No.	£ million	%	%
1950-51	176	6	0.1	0.12	0.025
1954-55	249	7	0.1	0.09	0.019
1959-60	236	8	0.1	0.08	0.016
1964-65	266	9	0.2	0.10	0.022
1969-70	346	16	0.3	0.08	0.020
1974-75*	419	25	0.9	0.12	0.029
1979**	537	31	4.6	0.17	0.060
1984	556	37	5.7	0.09	0.038
1989	495	40	9.0	0.13	0.040
1994	723	44	14.2	0.15	0.044
1999	560	55	19.8	0.13	0.038

* Government accounting changed from the financial year to the calendar year in 1976

** Limited Census headcount undertaken following cancellation of 1976 Census

Dominating Impact of EC Accession

Accession to the European Community has had a dominating impact on the development of Irish statistics since 1973. This has been very beneficial for statistics, but, like everything in life, there are also some disadvantages.

Benefits

The benefits of EC membership are readily seen in the increase in the range, quality and international comparability of Irish statistics. A particularly valuable benefit is the direct involvement of CSO statisticians with colleagues from the statistical services of the other Member States in the discussion and development of statistical methodology over the full range of economic and social statistics. The scope of this involvement is extensive. For example, during 1998 CSO staff were involved in some 230 EU statistics-related meetings abroad. Although very demanding this involvement ensures that the Office is active at the forefront of statistical

issues and benefits from direct contacts with experts from other European NSOs.

Disadvantages

The downside is that compliance with Community statistical requirements falls particularly heavily on small Member States such as Ireland. For example, they must survey proportionally larger samples to achieve the same level of statistical accuracy and detail as the large Member States. This, coupled with the insatiable demand of the Commission (and now the ECB) for very detailed statistics, gives rise to national funding problems and to heavy reporting burdens on business enterprises. It is not possible for us to meet these requirements through marginal adaptations of national systems and this necessitated a reorientation of priorities at an early stage (i.e. EU requirements come first with national needs an add-on).

The main difficulty here is that the Commission effectively has a “blank cheque” in setting its statistical requirements. Excessive demands at national level are automatically restrained by budget limitations. This control does not operate at Community level since, other than the provision of some limited initial developmental financial assistance, the ongoing statistical costs are borne entirely by member states. This is a special feature of *statistical subsidiarity!*

...direct Commission funding...

Quality statistics are essential for the effective management of the EU and the EMU. However, national inputs to Community statistics will continue to vary in quality and timeliness because of national budget variations and constraints. Because of this the only effective way of achieving a high quality Community Statistical System (ESS) is the direct Commission funding of national agencies to provide statistics of a common high standard. The costs involved would be negligible in the context of the overall Community budget.

An alternative proposal made by Henning Christophersen (1998), admittedly following his retirement as EU Commissioner, was that EU national statistical services and EUROSTAT “*should have an own-resources-system based upon an annual transfer defined as a percentage or per mille of GDP fixed by legislation for a reasonably long period (10 years)*”. This funding arrangement would, if it were adequate, certainly keep national statistical agencies happy, but some extra provision would still have to be made for the pro-

portionately higher costs borne by the smaller Member States.

Organisational Challenges

General Appraisal

...independent assessment...

Deloitte & Touche Consultants provided an independent assessment of the CSO's organisational performance and capability in a May 1997 report. This was commissioned by the National Statistics Board. The survey team included representatives with senior management experience in Statistics Netherlands and Statistics New Zealand, which are generally regarded as two of the leading statistical services in the world. The ten main recommendations are summarised in the Appendix to this paper. The main shortcomings identified were:

- the lack of external focus and the need to develop a more complete and pervasive customer orientation in the organisation;
- the necessity to improve the planning, use and deployment of IT with the emphasis on integration – integrated networks, databases, and processing systems.

These issues are currently being addressed.

...SWOT analysis...

A broader and more critical assessment of the CSO's capability to face future challenges is provided by the following SWOT analysis. This is a standard business tool for sizing up an organisation's situation in the environment in which it operates. Strengths (S) and Weaknesses (W) relate to *internal* factors within an organisation influencing its performance. Opportunities (O) and Threats (T) are *external* factors impinging on it.

Internal Organisation Issues

The CSO's main *strengths* are:

- **Statutory Authority:** This is the CSO's main leverage. It is a statutory body. It has the legal authority to require members of the public and business enterprises to provide the information it requires.

**...confidentiality
guaranteed...**

- **Proven Competence:** It has a national reputation of proven professional competence, statistical independence and objectivity, and enjoys the general trust and confidence of the public. The confidentiality of the information it collects is also guaranteed in law.
- **Partner in the European Statistical System (ESS):** Community statistical requirements will continue to ensure the development of a quality Irish statistical system at a rapid pace.

However, *weaknesses* that may limit or over-extend the CSO's capability include:

**...always
catching up...**

- **Small Size:** Its relatively small size and the extent to which its resources are always stretched to meet existing national and EU requirements constrains the CSO's capacity to adequately prepare for future demands and to cope with the increasing complexity of the statistical environment. In a nutshell, we are always catching up.
- **Postponement of IT Upgrading:** The upgrading of the CSO's IT environment to a modern distributed PC-based architecture, scheduled for the early 1990s, had to be postponed because of relocation to Cork and the consequential loss of most of our serving IT staff. This upgrading is now in hands, but may take some time to complete unless there is significant up-front investment in the short term.
- **Insufficient Data Integration:** Statistical activities in the CSO (e.g. monthly, quarterly and annual industrial inquiries) are still largely organised in the traditional manner as separate operations. Other statistical agencies have achieved a major "*synergistic gain in information content*" (Colledge, 1999) by standardising statistical units, classifications, definitions, etc. used in their various surveys and incorporating this structured data and related metadata (i.e. information about the data) into electronic data warehouses. This type of data management and integration strategy is necessary for providing general WWW access to statistics.

...registers generate
a wealth of data...

- **Limited Statistical Potential of Irish Administrative Records:** Deriving statistics from administrative sources avoids the cost and reporting burden of direct statistical inquiries. Other statistical agencies are able to derive far more statistics in this manner than the CSO. This is particularly true of Scandinavian countries. One of the best examples is Statistics Finland, which gets 94% of its data stock from administrative sources and only 6% from direct inquiries! This is possible because official identification numbers are assigned to all persons, business undertakings, dwellings etc. and generally used. The corresponding registers and cross linkages generate a wealth of data for statistical purposes. This set-up, which is enviable, from the statistical perspective, is unlikely to be accepted in Ireland in the light of the controversy that arose some time back when the RSI number was proposed as a personal identification number for official purposes.
- **Inflexibility of the Current Civil Service Environment:** A particular weakness of the CSO compared to most other NSOs is its inability to implement changes quickly because of the inflexible nature of the civil service environment in which it operates. Central budgetary and staffing controls, grade demarcations, promotions still based largely on seniority, and the time required to consult/negotiate with unions on the implications of change for their members are very constraining and time consuming.

External Factors

The CSO can clearly benefit from a range of *opportunities* likely to arise in the future, for example:

...productivity gains
to be tapped...

- **IT Developments:** Information Technology (IT) has already made significant contributions to the operational effectiveness of the CSO. The prospects for the future are tremendous. Continued IT-related productivity gains are there to be tapped in the data capture (i.e. imaging, CAPI, EDI), processing (computerised coding and automatic editing/correction), analysis (integration of databases) and dissemination stages of the statistical process.

- ...CSO has already benefitted considerably...
- **Pervasiveness of the Information Society:** This holds considerable benefits for official statistics through the general availability and increased use of information in electronic form. However, this opportunity may not be as easy to exploit as people expect because of privacy concerns, data protection legislation, and practical problems of electronic access.
 - **Scope for Technology Transfer:** The international statistical community provides smaller statistical agencies like the CSO with an invaluable opportunity to keep abreast of technological developments through the transfer of advances made by others. The CSO has already benefitted considerably from this strategy. Recent examples include Australian computer assisted occupation coding software which significantly speeded up the processing of the 1996 Census of Population and the acquisition of a sophisticated computerised Business Register System recently developed by Statistics New Zealand (SNZ). This potential is now being more generally recognised internationally. For example, EUROSTAT is organising a special conference titled “*ETK99 – Exchange of Technology and Know How*” later this year and proposals were made at a recent meeting of leading statistical agencies in Australia for collaboration in the development of Output Databases and WWW-based dissemination
 - **Modernisation of the Civil Service:** Government initiatives through the Strategic Management Initiative (SMI) and the Delivering Better Government (DBG) programmes offer the prospect of improved efficiency and greater flexibility for the management of change in the public service. However, it is essential that we progress from the aspirational to the effective implementation stage quickly.

There are also *threats* that could arise in the future to constrain the effectiveness of the CSO. No doubt the bulk are well hidden from sight at the moment. The more visible ones are:

- **Resource Constraints:** This is probably the main threat to all national statistical services. However, we strongly argue that official statistics should not be treated as

marginal or discretionary, but recognised as an essential tool for policy and planning. As such statistics should be treated as part of the national infrastructure to be protected and invested in for the future.

...minimising data demands...

- ***Downturn in Business Response Rates:*** This is a real threat that the CSO has actively tried to counter. Our strategy principally involves highlighting the importance of statistics for the management of the economy and for business planning, minimising data demands on respondents, accepting best estimates when exact information is not available, and protecting the confidentiality of all information we collect. Reasonably high response rates are still eventually achieved in business inquiries, but there are often long delays in the receipt of completed returns which lead to the much-criticised delays in the publication of results. SMEs particularly are actively objecting to the burden of information demands from the CSO. EU demands for excessive detail is the principal threat here and the Office is very active in this regard on the Community front. Furthermore, although the Commission is committed to reducing the burden placed on SMEs, this policy is not yet adequately reflected in the ESS.
- ***Escalating Privacy Concerns:*** Privacy concerns are continually increasing and have already adversely impacted on the operations of other national statistical services. The emergence of the Information Society, and the perception that all information held about individuals and businesses can be readily linked and accessed, will further increase these concerns – *all the marvels of the information age come with a hefty but probably unavoidable price: the loss of privacy*⁴. The CSO has a long-established record in protecting the confidentiality of the data it collects. However, one inadvertent slip could undermine its position. Fortunately, response to CSO household inquiries continues to be quite high. For example, a response rate of nearly 95% is consistently achieved in the Quarterly National Household Survey (QNHS) and there has effectively been a 100% response to the 5-yearly Census of Population. However, as the Household Budget Survey shows, response can drop to as low as 60% when participation is demanding (e.g.

maintenance of personal expenditure diaries for 14 days) and sensitive topics (e.g. income) are surveyed.

...timeliness the principal requirement...

- **Failure to Meet Demands for Improved Timeliness:** Timeliness is the principal requirement of most statistical users particularly those in the economic field. They are increasingly critical of existing publication delays and are demanding improvements. With their ability to electronically receive, analyse and act upon information with ever-increasing speed, it is inevitable that these demands will intensify. Indeed, a major threat presented by the information superhighway is that analysts and economists, who are able to tap instantaneously into databases world wide, will simply not accept current time lags. As Groves (1994) points out "*this is an example where the weights placed on different attributes of statistical data may change, less weight placed on completeness and measurement error properties; more weight on timely estimates*". User frustration in this regard is a big threat to the public image of statistics. However, it is a dimension of its work that the CSO will find very difficult to improve because it is ultimately dependent on the speed and quality of returns from survey respondents.

Critical Success Factors for Improving CSO's Capability

...need for longer term evolving strategy...

To survive and prosper, every organisation should prepare for the future by improving its operational capabilities and shaping environmental developments to its advantage. We do this in the context of our 3-year Corporate Plans. However, I feel that we should also have a complementary longer-term evolving strategy specifically focussed on improving the operational capability of the CSO in a structured manner over time. The following framework of 11 Critical Success Factors (CSFs) could guide this type of capability development strategy over the next five to ten years.

- **Maintenance of a Modern CSO IT Environment:** The CSO will continue to operate under resource constraints. IT productivity is the principal way that it can free up resources internally to meet new demands since almost all its existing activities are mandatory under EU legislation. It is, therefore, essential for it to maintain an up-

to-date IT environment and internal technological capacity so that it can fully avail of the productivity benefits of technology developments and be in a position to import advanced statistical applications from other statistical agencies. This requires continued investment. However, the return is substantial. Once the current upgrading programme is completed no slippage should be allowed to occur in the future.

...no emphasis on official statistics...

- **Increased Focus on Official Statistics in Universities:** Ireland is fortunate in having strong and active statistics and economics departments in its Universities. However, none put any major emphasis on statistical methodology or on the compilation of official statistics either in their teaching or research programmes. The CSO suffers from this on two main fronts, namely:

- applicants for the post of Statistician generally have little or no exposure to the practicalities and complexities of compiling official statistics (e.g. few would have covered index number theory or the compilation of national accounts!);
- few Irish academics specialise in the methodology of official statistics and as a result the CSO has no locally available experts to go to for specialist advice (e.g. the CSO had to consult a UK/Australian academic to advise it on the rotating sampling design for the Quarterly National Household Survey (QNHS)).

In other countries NSOs and academia mutually benefit from close contact (ISI, 1997). A leading European example is the networking arrangement that Statistics Finland has developed with local Universities involving the shared funding of some academic posts, long term research contracts, joint research projects, fellowships and post-graduate programmes (Lehtonen and Pahkinen, 1997).

...CSO offering its services...

The CSO must encourage a greater focus on official statistics in both statistics and economics university teaching programmes. It could support this by offering its services for the provision of lectures or regular seminars in Dublin and Cork (it currently responds to ad hoc requests). Encouraging academics to become more active

in research relating to the methodology of official statistics is a more difficult matter. However, a start has been made. As part of its 50th anniversary celebration programme the Office has made arrangements to annually fund a postgraduate scholarship on official statistics related research in University College Cork. This type of initiative could be extended and, for example, sabbatical academic placements in the CSO could be considered to promote academic interest and research in official statistics.

**...copies of
anonymised
microdata...**

The CSO is already encouraging academic researchers to make greater analytic use of the information it collects by providing them with copies of anonymised microdata from its household surveys⁵. It is also facilitating their analysis of other microdata sets within the Office by appointing researchers as Officers of Statistics subject to the confidentiality and other provisions of the Statistics Act, 1993

- **More Specialist Statistical Methodological Expertise:** A critical requirement for a national statistical service facing the next millennium is assurance that the methodological basis of its work continues to be sound and that it can cope with measurement difficulties in an increasingly complex economic and social environment. CSO statisticians, as in other national statistical services, now come from a wide range of disciplines (mathematics, statistics, economics, social science, geography, etc.) because of the diversity of skills required. One danger of this, particularly in a small agency with a common recruitment process, is that the number of specialist methodological statisticians becomes too few in number.

**...more
methodological
statisticians...**

This shortcoming was identified in the report (Turnbull and King, 1999) on the recent investigation into the problems (e.g. sampling, grossing, treatment of extreme values) that led the UK Office for National Statistics (ONS) to temporarily suspend its average earnings series in November 1998. A major recommendation was that the ONS should increase its complement of methodological statisticians so that they can be involved in all updating of statistical series, the introduction of new surveys, and any changes having major statistical im-

pact. As a result the ONS is expanding its *Methods and Quality Division* and has also invited tenders from organisations and individuals to enter into partnership contracts to exploit best statistical methodology.

**...major
contribution...**

The CSO currently maintains a small *Statistical Methods & Development Division* consisting of 1 Senior Statistician and 2 Statisticians which, despite its small size, has made major contributions on a number of fronts in recent years. The aim should be in the short term to at least double the staffing of this unit to achieve a minimal critical mass. There should also be a number of specialist Methodological Statisticians distributed amongst the operational statistical Divisions.

- **Enhanced Management Training:** The effectiveness of any organisation depends on the skills of its staff, particularly the expertise at management levels. Although “on-the-job” continues to be the main training emphasis, the CSO has in recent years also developed extensive staff training and development programme based on in-house and external courses amounting to approximately 3% of total salary budget. However, a more structured development programme is needed for managers at all levels to improve their management expertise, leadership and change management skills in order to develop a more proactive innovative management culture throughout the Office.

**...import rather
than build...**

- **Technology Transfer:** Since only advanced national statistical services and commercial organisations will generally have the resources and expertise to develop leading edge statistical applications, a logical strategy for the CSO to follow is an *import rather than build* policy. To be successful this policy requires the maintenance of close contacts with other national statistical services to identify possible transfer opportunities. Efforts could be particularly focused on establishing this type of relationship with the UK Office for National Statistics (ONS). Following recent reorganisation the ONS, formed by the amalgamation of the former CSO, BSO, and OPCS, is now a muscular organisation with over 3,000 staff and is placing considerable emphasis on methodological and technological developments. Bill McLennan might expand on the benefits of the relation-

ship operating along these lines between Statistics New Zealand (SNZ) and his Australian Bureau of Statistics (ABS), which are similar close neighbours.

...re-profile staffing complement...

- **Staffing Re-profiled as Technology Usage Enhanced:** With the increasing automation of statistical process and improved productivity from continued investment in IT and technology transfer it will be more necessary, based on the experience of other national statistical agencies, to re-profile the staffing complement of the Office. This re-profiling should be based on an assessment of the skills and competencies required at different levels.
- **Simplification of Statistical Reporting by Business:** Because of EU and other user demands, the statistical reporting requirements on the business sector will continue to increase. This will inevitably intensify existing complaints about the time and cost of responding to these demands. It will also lead to increased non-response and delays in making returns unless some action is taken. The reporting burden will also fall increasingly on SMEs that characterise the continually expanding services sectors of the economy. Their complaints have attracted political support and solutions must be found to their particular difficulties.

Ideally, what is required is a computerised process whereby business enterprises can automatically extract statistical requirements from their databases and return them to the CSO via email or EDI. In principle, technological developments should make this possible. However, the coverage of a large number of enterprises with IT systems of different types and sophistication makes it a difficult proposition. Another difficulty is that statistical demands do not always correspond to the information that businesses maintain for management and accounting purposes.

...electronic questionnaire...

The CSO must actively pursue all technological possibilities. Indications from the US and elsewhere are that the best option at present is the use of *the Computerised Self-Administered Questionnaire (CSAQ)*. This is an electronic questionnaire that respondents install and run on their PCs. It controls the flow of survey questions, provides on-screen instructions and help, includes edit

checks and reconciliation of data as it is entered by the respondents. It can be returned by post or electronically.

**...reduce information
burden...**

There is a commitment in the Partnership 2000 Agreement to reduce the burden of all information demands by public bodies. In this context, the Government might be encouraged to fund the development of free software that could be used by businesses, in particular SMEs. This software could be used to directly compile or be easily programmed to extract from their computer systems, the information requirements of the CSO and other public bodies for encrypted return by email, EDI or by post on diskette.

- **Administrative Statistical Potential should be Further Pursued:** Although the Irish potential may not be as great as that of other countries the CSO must persist in exploring the possibility of developing further administrative data sources and in influencing the design of new or updated administrative systems to ensure that the statistical dimension is taken into account. It is also opportune to look again at the following systems:
 - PAYE & VAT records as the Office of the Revenue Commissioners is completing a major project (CONTAX) in which all business undertakings are uniquely identified for each tax regime;
 - Social Welfare records where the earlier problem of duplicated records appears to have been largely eliminated.

In addition the Department of Agriculture and Food support and control records for individual farmers have been extensively computerised in recent years and should have considerable statistical potential.

- **Commitment to the Civil Service Modernisation Programme:** The Government's SMI/DBG modernisation holds out considerable prospects for significant improvements in the effectiveness of the Civil Service. The CSO must continue to be fully committed to supporting and implementing this programme so that it has the operational flexibility to manage change and to cope with the challenges of the future.

...centralised
statistical system...

- **Enhancement of the Statistical Capability of Government Departments:** In establishing the CSO in 1949 the Government opted for a centralised statistical system. This has many advantages in terms of co-ordination, the maintenance of statistical, high effectiveness, etc. and is particularly suited to a small country. However, one shortcoming of the Irish centralised system is that there is no statistician presence in Government Departments with the exception of one statistician post in the Department of Health and Children and another in the Department of Education and Science.

The statistical system as a whole would benefit significantly if the statistical expertise in individual Government Departments was enhanced. This would improve the statistical analyses these Departments currently produce, provide Departmental policy makers and statistical users with local professional advice, and help to enhance the statistical potential of their administrative systems. In practice, this could be achieved in a variety of ways such as the establishment of closer/collaborative relationships with the CSO, temporary secondments of CSO statisticians (i.e. the French model), establishment of Departmental statistical units (i.e. UK approach), etc.

- **Development of an Integrated Quality Management Policy:** People may be surprised at the inclusion of this factor since quality is at the heart of the work and culture of the CSO. This is reflected in our 1998 – 2000 Corporate Plan where “*continued improvement in the quality of our statistics*” is highlighted as one of our four high level goals”. We devote considerable effort and resources to the implementation of the principle in practice.

...concept of quality
has changed...

However, the concept of quality has in recent years changed in both the statistical and general contexts and this development should be reflected in our operations. In the past quality in statistics was generally synonymous with *accuracy*. Accuracy is, of course, fundamental but statistical quality is now generally accepted to be a much wider multi-faceted concept including relevance, timeliness, coherence, completeness, comparability and continuity. Cost is also a determining factor. Ultimately, statistical quality depends on what users

consider to be important. However, there are different types of users and this gives rise to conflicts between competing requirements – for example accuracy *versus* timeliness, accuracy *versus* relevance, continuity *versus* change, or quality *versus* costs. This shows that statistical quality is a principle that must be carefully managed.

...TQM...the best approach...

There has also been a shifting private sector emphasis in quality thinking and practice during the past decade to the *total quality* concept in the sense of involving everybody in the organisation in an enterprise-wide integrated effort towards improving performance at every level. Furthermore, there is an increasing emphasis on transferring and adapting business quality assurance practices to the public sector. In this regard *Total Quality Management (TQM)* is one, and many would argue, the best approach. Coincidentally, this has strong links to official statistics through one of its earliest gurus W. Edwards Deming, who worked in the US Bureau and whose sampling textbook is still widely referred to in university courses.

The CSO should in the years ahead develop a more integrated quality management policy embracing all levels of the organisation. This would be opportune as some EU statistical services (i.e. Sweden and Finland) have already adopted the TQM approach and others (Spain and Portugal) are experimenting with it. Eurostat has also adopted the TQM concept and also intends to spread the philosophy through the ESS network (Eurostat, 1998). The first concrete step in this process has been the quality reporting requirements associated under legislation with new statistical initiatives and the formation of a *Quality Leadership Group (LEG)* spearheaded by Statistics Sweden. Many of the basic principles have traditionally been applied by the CSO and others have been introduced in the implementation of the SMI. However, a focused integrated quality management approach is needed to optimise the benefits of our present approach. In practice, this would be a natural extension of the SMI process.

Statistical Challenges

Macro-Economic Statistics

National Accounts

The introduction of quarterly National Accounts later in the year will mark the continuation of a major programme of developing Irish macro-statistics involving the change-over to ESA95 and full compliance with GNP Regulation 89/130 which is the basis of Ireland's contribution to the EU budget. At a time when our economy is booming and becoming increasingly complex, the more comprehensive accounts that are part of ESA95 will provide data to help our understanding of the various factors involved. The GNP Regulation requires strict adherence to very high standards and it is essential that these are maintained to satisfy the rigorous annual examinations by EUROSTAT.

Balance of Payments (BoP)

Irish BoP statistics have been considerably improved during recent years following the adoption of a survey approach as opposed to a bank settlement basis. This was in retrospect the correct decision as the systems used by many other EU countries using bank settlement data are encountering increased difficulties following deregulation and the introduction of the Euro. The CSO has made a major investment in changing and extending its existing BoP surveys and has also put in place a range of additional surveys covering the financial sector. The challenge is not only to introduce the results from the new system but also to continue to maintain it in a rapidly changing environment.

Increased Use of Macro-Economic Statistics for EU Administrative Purposes

National statistics are already used for a range of important EU administrative purposes. Examples include the use of GNP for determining national contributions to the Community Budget, GDP for assessing eligibility for Objective 1 Community support funding and the Maastricht EMU economic/fiscal performance criteria. The political sensitivity of these types of issues, the monetary magnitudes that can be involved, and the fact that the statistics in question are compiled within a general framework not specifically designed for such purposes, expose us to scrutiny and pressures not primarily driven by statistical imperatives and, therefore, would adversely impact on our independence.

A particular danger in this regard is the Commission plan to introduce a new EU VAT system that would involve sub-

stantially less administration for businesses. It proposes that VAT would be charged in the country of origin (rather than the country of destination) with the revenue being shared out between countries of destination based on a macroeconomic statistics clearing system. This has the following very serious implications for national statistical services:

- Huge sums of money would be involved. What would be regarded in statistical terms as a small estimation error could have very serious implications for the national finances.
- Substantial developments with regard to the detail and accuracy of the national accounts, consumption, production and trade statistics would be required; in a somewhat similar but much simpler situation Statistics Canada's annual budget was increased by 13%.
- Very accurate and detailed statistics on intra-EU trade would be needed although the proposed new VAT system would eliminate the register and estimation basis used for the existing survey of intra-EU trade (INTRASTAT).
- The existing VAT administrative requirements on traders would be replaced by increased statistical reporting requirements which traders will find more difficult to comply with as has already happened with the replacement of Customs declarations by the Intrastat inquiry for the compilation of intra-EU trade.

The "fall guys" under this proposal will, as in the case of the INTRASTAT inquiry, again be the national statistical services who will be criticised by users for not producing the statistics with the required accuracy, detail and timeliness and by the business community for imposing additional statistical reporting demands. The main difference in the case of this VAT proposal is that the stakes, in terms of the national finances, will be far higher.

Other Challenges

A range of other major challenges in the macro-economic statistical domain remains to be faced in the short to medium term. These include:

- continued attention to the consistent treatment of the contribution of the *multi-nationals* to the open Irish economy;
- improved *deflation and volume estimate of high tech activities* as required under Community Stability and Growth Pact (Commission Decision 98/715);
- developing environmental, labour and social *satellite accounts* (we have recently made a start by publishing Pilot Environmental Accounts compiled by the ESRI);
- the full EU harmonisation of the *Harmonised Index of Consumer Prices (HICP)* including the extension of coverage to include health, education and owner occupied housing;
- deciding whether a fully harmonised HICP should be adopted as the national index in place of the Consumer Price Index;
- the need to compile a more general *economy-wide* indicator of inflation as, for example, in the UK and Australia.

Social-Demographic Statistics

2001 Census of Population

The 1996 Census was completed in an exemplary manner and the full range of results were published in a far speedier manner than on previous occasions. The challenge now is to continue this success into the efficient and timely completion of the 2001 Census. A difficulty here is the fact that the five-yearly Irish Census cycle gives little time or scope for implementing major developments. Once we finish one Census we are right into the next one!

However, improvements are planned for the 2001 Census. A large-scale pilot survey is being undertaken in the Autumn to test new questions proposed by an Advisory Committee (e.g. ethnicity, disability, income level, PC ownership, Internet access), the reintroduction of the former fertility question and the remodelling of the education question. The redesign of the Census questionnaire to facilitate data capture by imaging is also being tested, as is the practicality of having completed Census questionnaires returned by post because of the diffi-

culties that may arise in recruiting sufficient Census enumerators in 2001 due to the continued tightening of the labour market.

Quarterly National Household Survey

This continuing survey of a rotating sample of 39,000 households each quarter is a major new statistical resource. Our priority is to ensure that it is exploited to the full, particularly in relation to the early publication of results (made possible by the use of computer assisted interviewing methodology) and that special social modules (nursing, housing and crime covered to-date) are covered on a rotating basis. Advisory groups of relevant experts are being used to advise on the content and analysis of these modules.

Other Social-Demographic Challenges

These include the possibility of:

- conducting the first *Irish Time Use Survey* (essential for the estimation of unwaged work),
- completing the *Household Budget Survey* on an annual rather than 5/7 year cycle (required for updating the weighting basis of the EHCP), and
- developing a wide series of social indicators proposed by EUROSTAT.

Business Statistics

...information on earnings crucially important...

The impact of wage pressures on inflation is a central part of an ongoing political debate. Comprehensive information on earnings is considered to be crucially important at both national and EU (mainly ECB) level. However, national and EU priorities do not fully overlap and these competing priorities are likely to give rise to resource pressures in the CSO.

At national level the particular requirement is the development of an economy-wide earnings series to meet a range of priorities identified by the National Statistics Board – in particular this means developing well based earnings information for much of the services sector. The competing priority at European level is the compilation of an EU Labour Price Index series using a resource intensive CPI-type methodology for a representative sample of occupations, enterprises and sectors.

Another important priority is the extension of the existing range of annual structural business inquiries and short-term business inquiries to cover all sectors of the economy in compliance with recent EU Regulations 58/97 and 1165/98. The recent Government decision in relation to regionalisation has quite an impact here since some of the statistics are required at the level of NUTS 2 and this necessitate increased sample sizes. There are also emerging requirements to improve energy statistics and to collect expenditure on environmental protection investment from business undertakings despite the reporting burden involved.

...gaps in tourism statistics...

There are other important policy areas which need to be supported by better statistics, for example tourism and transport. There are significant gaps in particular in tourism statistics. Attempts currently in progress to improve the information are bedevilled by tardy returns and non-response.

A major innovation is the conduct of the Census of Agriculture in 2000 on a postal basis using a Farmers Register compiled from the administrative records of the Department of Agriculture and Food. This will result in considerable resource savings (about £2.5m) compared with the approach used for the previous census in 1991.

Statistical Gaps

Despite the significant improvements which have been made to the corpus of Irish statistics in recent years there are also a number of important areas where the available statistics lag well behind other countries. Examples of this are the social, environment, crime and energy fields.

There are also other emergent statistical areas. One such is *globalisation* where we are fortunate to have a lot of relevant information including nationality of ownership from the annual Census of Industrial Production, detailed Balance of Payment Surveys, EU pilot Foreign Affiliates Trade Statistics (FATS) surveys, etc. Another is *the Information Society* where work should be commencing. Despite other pressures resources must be found to fill these gaps in our statistical landscape.

Electronic Dissemination

...Internet an effective tool...

Although printed publications will continue to have a role the electronic medium is quickly becoming the principal mode for statistical dissemination. In a relatively short space of time the Internet has, in particular, become an effective tool that is revolutionising the process. The CSO is well placed for this development as it has a sophisticated desktop publishing system integrated with its computer network. However, the Office must keep pace with this fast moving specialist field to ensure that:

- an appropriate range of modern electronic dissemination services and products are available and thereby maintain public confidence in the technological competence of the Office;
- its WWW site and dissemination services are on a par with those of other NSOs and thereby maintain the international image of Irish statistics;
- users have the fastest possible electronic access to statistics once they are released and thereby go some way to addressing the timeliness complaints.

This will require the development of an output database or warehouse and the provision of user friendly access facilities through its WWW site. The likelihood is that it will be possible to acquire and adapt a suitable system developed by another statistical agency. However, the current priority requirement is to develop and manage our electronic metadata (i.e. information about our data) before we can provide direct electronic access to all our statistics.

A Final Word

Access to information and objective statistics is a lynchpin of a democratic society. Democracy demands that politicians, interest groups and the man in the street have unbiased, relevant, accurate and timely statistics on which to base their decisions and test policy outcomes.

The EU political system has for some time been shifting the burden of political decision making onto formulae based on statistics. I have already referred to examples of hugely im-

portant issues handled in this way such as national contribution to the Community budget, criteria for membership of the EMU and the qualification of regions for EU structural funding. The emerging discussion around the proposed new VAT system is a critical case in point because it has significant financial ramifications for the country.

**...too much expected
from statistics...**

However, the political process sometimes expects too much from statistics. I have already referred to the EU political system shifting the burden of decision making onto formulae based on statistics and particularly referred to the macro-economic clearing system proposed for the VAT system that has significant national financial ramifications. Although existing statistics are not designed for such purposes we are faced on the Community front, whether we like it or not, with what the US economist James Bonnen has described as “*a growing, intimate embrace between statistics and public policy decision making*”. However, in this context it is somewhat ironic that it is difficult to get across the need to properly resource the statistical system to support such critical demands being placed on it.

In a similar vein there is a view that statistics can be produced without collecting too much information from business enterprises and the general public. Indeed, there are increasing pressures on Government by the business sector to reduce the statistical demands being placed on it. In my view this is an essential discussion, but I am unsure whether it is always properly focussed. There must be a clearer understanding that reducing the statistical reporting burden may involve a trade-off with being prepared to do without certain statistics which both Government and business interests might consider to be essential.

**...dedicated members
of staff...**

The CSO has many achievements to its credit over the past fifty years. For that we must thank the dedicated members of our staff over this period. The Office has helped inform the nation on government and societal performance. As the Information Society gathers pace, statistics will be even more in the spotlight. We are committed to developing our statistical infrastructure and upskilling our staff to meet the new challenges to ensure that our statistics are widely available, are recognised as quality products and, above all else, are used by decision makers at all levels. I am convinced that, as it embarks on the second half-century of its existence, the

Challenges for Irish Statistics

CSO will face with confidence the many challenges that lie ahead.

Footnotes

1. A detailed analysis of ways for improving statistics produced by international statistical organisations, national statistical services and businesses to ensure better decision making in the 21st century has been undertaken by Duncan and Gross (1993). Other interesting contributions are also available from Grove (1994), Kettenring (1997), Wilson and Davis (1997), Holt (1998), Cook (1998) and Fellegi (1998).
2. Dáil Debates, column 1354, 20 July 1949.
3. The years ending in 4 and 9 have been selected to negate the impact of the additional temporary staffing and funding provided for the 5-yearly Censuses of Population undertaken in the years ending in 1 and 6. It has not been possible to consistently to eliminate the effects of other temporary statistical operations like the 7-yearly Household Budget Survey. The year 1950 - 51 has been included as a reference base because the budget allocation for 1949 - 50 only covered operations for part of a year.
4. Cover design, leader and feature article (page 19-23) of May 1st 1999 issue of *The Economist*.
5. The CSO is also fully supportive of current efforts to establish a National Micro Data Archive for Irish researchers and has made a commitment to deposit anonymised Labour Force Survey, Household Budget Survey and Sample Census of Population micro data files in the archive when it is established.

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Appendix

Recommendations of Deloitte & Touche Consultants on the Organisational Performance and Capabilities of the Central Statistics Office (May 1997)

1. External Focus

The CSO lacked a sufficient external focus. To move from being production driven to customer driven, a senior executive at Director level should be given responsibility for developing a more complete and pervasive customer orientation in the organisation.

2. Structural Change

The CSO should move from the traditional Product Model towards a Process Model encompassing the three major product families:

- Social and Demographic Statistics
- National Accounts and Balance of Payments Statistics
- Business Statistics.

3. Information Technology

The use of IT should permeate all of the Offices relevant activities, from data capture to the processing and analysis of statistical data and the publication of results in electronic form. This requires a cultural change to a modern end-user computing environment and means that IT skills will need to be enhanced at all levels of the organisation. A senior IT specialist be appointed on a consultancy/contract basis to join with the IT Director to drive an IT strategy that should address:

- the installation of a fully integrated, comprehensive, computer network;
- the establishment of a business register based on database technology;
- the provision of on-line services to customers;
- systems development methods, resources and skills.

4. Appropriately Skilled Staff

The limitations imposed on the CSO as part of the Civil Service place unusually severe restrictions on recruitment of senior executives with appropriate skills. These limitations have severely affected the ability of the CSO to respond to a dynamic external environment. The recruitment and promotion of staff within the CSO should be on a skills required and merit basis. The CSO should have the freedom to select the appropriate individual for the task without constraint.

5. Benchmarking

There were indications that the Irish CSO was not as efficient or effective as many of its counterparts. In particular, a modernisation of the CSO's IT function and the streamlining of its administrative functions would lead to substantial efficiency gains.

6. Internal Audit, Value for Money and Quality Assurance

An internal audit function be established reporting to an audit committee including a member of the National Statistics Board. A full-time internal/VFM Auditor was not considered necessary and the function should be subcontracted to an external provider. A quality assurance function be established to review statistical methodologies, research and standards, and to act as a support/research service to all surveys.

7. Skill Mix of Senior Personnel

In future the emphasis should be on recruiting and promoting those with management potential and experience who have particular specialisations (e.g. economists, sociologists, accountants, IT professionals, statisticians). The more senior management positions should be filled primarily on the basis of management ability.

8. Interaction and Communication with more Junior Staff

A communication gap has developed between the Statisticians and other grades in the CSO that consider that they have a lack of adequate involvement in decision-making. To become a world class statistical office the CSO requires a culture that is conducive to change.

9. Cork/Dublin Split

The CSO needs to have a Dublin presence in order to communicate with its main customers and some key suppliers of data. In line with existing policy, all future developments in the CSO should be based in Cork and no new activities should be based in Dublin.

10. Role of the Board

The Board should continue to be more strategic in focus, while encompassing an ongoing assessment of the CSO and its role as provider of relevant/timely statistics.

11. Revenue Generation

The CSO should be permitted to dispose of the net revenues generated by sales and work under contract to meet current needs subject to the approval of the Board. Revenue raised in this way would be spent as part of an overall strategic plan.

12. An Independent Agency

In the medium term the CSO should continue to attempt to find a way of harnessing the current Strategic Management Initiative to work for it. The emphasis should be on improving the operational capacity of the CSO within the existing structure. The Strategic Management Initiative should be used as the mechanism for resolving the personnel and cultural problems in the organisation. However, if significant improvements are not achieved in the medium term, it would then be appropriate to reconsider the agency option.

A User's Perspective

Dr. Garret FitzGerald, Chancellor of the National University of Ireland, former Taoiseach

Introduction

Voracious consumer

I am delighted to have been asked to join as a consumer of its output in celebrating this Golden Jubilee of the Office with which, for my part, I have had a long and a fruitful association throughout the past half century in all my careers - as an airline official, economic researcher, writer on economic affairs, university lecturer, Opposition politician, Minister, Taoiseach, and, latterly, newspaper columnist. At the heart of everything I have attempted has lain material provided by the CSO, of which I have been a voracious consumer and inveterate collector.

Huge progress made by the CSO - new up-to-date data

...sincere tribute to the CSO...

At the outset I would like to pay a most sincere tribute to the CSO for the great progress it has made in recent years. The range and quality of its data have been enormously improved; the presentation of most of its material is now first class and the speed of publication has been accelerated to an extent that has given its material a new utility.

To give just one example, the annual Census of Industrial Production publication, which had been running as much as six-and-half years behind, is now being published just twenty-one months after the end of the year to which the data relate. Thus, data formerly useful only to historians has now been converted into material valuable for – and currently being widely used for – current research.

Similarly, the annual publication of detailed migration data from the Labour Force Survey is now transforming our understanding of this crucial demographic phenomenon, and in particular of the new pattern of inward migration.

Moreover, the ready availability to researchers of a whole range of detailed material from the Labour Force Survey in the form of microdata provides up-to-date material of great importance.

I want to put all this firmly on the record at the outset so that the few criticisms and suggestions that I believe I am expected as a consumer to make later on in my remarks will be seen in context.

Politics and Statistics

...independence of the CSO...

Let me say something first of all about the independence of the CSO: please excuse the partly anecdotal character of some of what I shall be saying in this context.

So far as I am aware, there is no record of attempts by Irish governments to interfere with the working of the CSO. A crucial factor inhibiting such a malpractice here has been the high personal standing of successive Directors – starting with Roy Geary and Donal McCarthy. Any politician contemplating trying to influence the CSO improperly would have known what the consequences would have been: the immediate resignation of the Director.

In fairness I should add that I don't think any of our political leaders has in fact been seriously tempted in this way – although there was a story some thirty or forty years ago that a Taoiseach might have been interested in a three-week postponement of the publication of Census figures – which under one interpretation of the Constitution would have avoided a need to undertake a further revision of Dáil constituencies. If the Taoiseach of the day ever did have any such ideas, Donal McCarthy would have disabused him of them very quickly (some say he did!). Neither the content, not the timing of publication of our statistical data are for turning.

...decision to cancel the 1976 Census...

On the other hand it may well be that a similar concern to avoid a further redrawing of the constituencies had some indirect influence upon the decision to cancel the 1976 Census. It is my recollection that this proposal came before the Government as a cost-saving proposal from the less-enlightened Department of Finance of the early 1970s – at a meeting from which the Minister himself was absent. Had he been there, I

think he would probably have himself opposed this cost-cutting measure.

The proposal was, however, accepted with alacrity by most of the Cabinet, despite objections from certain members, myself included. And this alacrity seemed to me at the time to owe something to fears on the part of some members of the Cabinet that, if the Census took place, the publication of its provisional results in September 1976, or perhaps of the final total in July 1977, might be judged to make necessary, on one interpretation of the Constitution, a further pre-Election revision of the constituencies – replacing at a late stage in the life of that Government the constituency plan that had become known as the Tullymander!

...1979 Census was a poor substitute...

Given that our population had been enumerated quinquennially since 1936, with actual Censuses carried out every five years from 1946 onwards, the loss of that 1976 Census was a serious blow. The belated 1979 Census was a poor substitute, although the increase of 390,000, or 13 per cent, in our population during the eight-year period which it revealed did lead to the addition of 18 seats to the Dáil. And, momentarily re-donning my former political hat – I have to say that, while some may feel there was poetic justice in the way in which the Tullymander intensified the scale of the defeat of the National Coalition Government in 1977, this large addition to Dáil membership later greatly facilitated me in winning an additional 22 seats for my party in the June 1981 General Election!

The need for more resources for the CSO

...CSO has increased its productivity...

Turning back to the CSO, however, Donal Murphy has told of how aided by IT developments, the CSO has increased its productivity significantly. But he has rightly added that there is a limit to the Office's capacity to provide with its existing resources all the data sought nationally and internationally. It is a striking fact that since 1973 the CSO has succeeded in handling the increased growth of demand for statistical data emanating from the EU as well as domestically, with virtually no increase in its share of the civil service budget.

I think the Department of Finance, and its Minister, are bound to take very seriously the point made here today by Donal Murphy about the increasing extent to which EU finances are both raised and then allocated on the basis of statistical data, the accuracy of which can thus have huge financial implications. We have recently seen how the CSO calculations of Gross Value Added per person have determined – by a quite narrow margin – the areas to be accorded Objective 1 treatment for the next round of EU Structural Funds, just as, of course, the CSO GDP figures determine how many hundreds of millions we have to pay each year to the Community Budget.

**...strong case for
direct Commission
funding...**

Of course, given the phenomenon of EU “statistical subsidiarity” - as described by Donal Murphy - the fact that EU requirements come first, with national needs an “add-on”, the fact that these EU requirements are “insatiable”, and the fact that these costs bear disproportionately heavily on smaller countries, there is clearly a very strong case for direct Commission funding with a view to providing statistics of a common standard – or, even better, for the Christofferson suggestion of own resources financing of EU statistics. The Minister for Finance might perhaps consider at some point raising this issue with colleagues from other smaller countries – one of which might, in view of current negative sentiments towards Ireland, be better placed than he to make such a proposal formally to the Council of Ministers.

Department Statisticians

Other points made by Donal Murphy which deserve to be actively pursued within our own political system include the need for a radical improvement in the statistical capacity of Government Departments, for an expansion of the Office's Methods and Development Division, and for close links with our universities.

**...need for improved
statistical expertise
in Government
Departments...**

Improved statistical expertise in Government Departments is urgently needed – as indeed is a general enhancement of the economic expertise available there. As well as improving decision-making capacity, such changes could also permit very large savings in the use of expensive consultancy. Consultants are currently employed by Departments on a massive scale not just for specialised tasks which no Government De-

partments could be expected to undertake internally, but also for routine assessments of projects and policy alternatives which every Department ought to have the internal capacity to undertake.

Similarly, greater statistical resources at the level of individual Government Departments would facilitate the derivation of much more statistical data from administrative sources, which in some cases could substitute for expensive surveys undertaken by CSO.

The role of the universities

**...need for close links
with Universities...**

Donal Murphy's reference to the universities particularly concerns me. It is disturbing to be told that none of our seven universities "put any major emphasis on statistical methodology or on the compilation of official statistics either in their teaching or research programmes". On the latter point, I should perhaps say that, recognising this need, in the 1960s in UCD I initiated and taught a fairly rudimentary course on Statistical Sources, which did not, I think, survive my departure on leave of absence in 1973.

As Chancellor of the NUI I shall draw this comment to the attention of the Heads of the Economics Departments in the four NUI Universities.

Issues needing ventilation

I shall turn now to some aspects of national and international statistics which, as a consumer, have raised questions in my mind.

Population Census

(a) Fertility

**...reintroduction of
former fertility
question...**

First, on the Population Census, I am delighted to hear of the belated decision to reintroduce the former fertility question. Given the scale of the changes that have taken place in Irish fertility since the 1960s, it is absolutely astonishing that we should have had to wait twenty years for an update on the 1981 fertility analysis.

(b) Continuity in Classification e.g. Religion

**...more attention
should be paid to
continuity...**

Another point I should like to make is that more attention should be paid to continuity in the presentation of Census data. Changes in presentation sometimes make it impossible to trace crucially important developments in our population over time.

A good example of this is the Religion Volume, the occupational data in which was drastically reduced in 1961 and even further in 1971, making meaningful comparisons very difficult. In 1991 there was further compression, from 40 down to 24 categories, the data on which were incidentally rendered non-comparable with all earlier data by the extraction and separate enumeration of unskilled workers – who for some reason were given a category of their own in these summary 1991 tables.¹

Given the obvious importance of these occupational data as key indicators of the fortunes of the Protestant community in our State, this inconsistent and minimalist treatment of these data is difficult to understand.

Incidentally, given the classification problem raised by the fact that by 1991 the numbers disclaiming or omitting any religious affiliation already exceeded the number of non-Roman Catholics, is there perhaps something to be said for introducing a sub-question to the “No Religion” heading asking those so describing themselves to state whether their background is Roman Catholic or Other (although in this part of Ireland the distinction between Catholic and Protestant agnostics/atheists is, of course, much less significant than in the North!). I believe this is being done in Northern Ireland.

I believe that similar inconsistent handling of other data as between Censuses has also created comparability problems,

¹ *The 1991 data was in fact prepared in much greater detail for my benefit, with some 300 occupational headings as against the miserable 40 of 1971 and 1981 – back to the 1946 level of detail, in fact, although the sub-division of non-Roman Catholics into Church of Ireland and Other Stated Religions, was dropped. Because of their reduced numbers Methodists and Jews had disappeared in 1961, and Presbyterians in 1971.*

by no means all of which are accounted for by the introduction of new and improved classification systems.

(c) Postal or house-to-house collection of forms

...doubts about substituting postal returns...

My final point about the Population Census is to express grave doubts about substituting postal returns for house calls, although I suppose it is possible that a request for a postal return *backed up by* house calls on those who have failed to post the forms back might work.

Annual Household Budget Survey

I note the proposals to hold the Household Budget Survey annually rather than at intervals of 5 to 7 years. But are the year-on-year changes in the weighting of purchases significant enough to make annual surveys necessary? Would surveys at intervals of two or three years not be sufficient – past intervals of 5 to 7 years have, of course, been too long?

Tourism data problem

As for problems with the Tourism data, may I mention a particular concern of mine? It is my understanding that data on tourist expenditure is supposed to include pre-paid hotels and internal travel. On that basis, is it credible that – to give but one example – the average North American visitor to this State in 1998 spent in this country only £46 per day including pre-payments, on accommodation, meals, internal travel and purchases. If this is the case, they must all sleep in tents and live on sandwiches!

Price Indexes

...concern with the price index issue...

I note and share Mr McLennan's concern with the price index issue. First of all there is the unresolved problem of identifying and providing for the increasingly significant factor of improvement in the quality of products – under-estimation of which, if I recall correctly, has been assessed in the United States as having led to a significant exaggeration of price rises, in excess of 0.5 per cent a year. Clearly the accelerating pace of technological change has increased the significance of this factor in recent years.

But, as Mr McLennan points out, there is the further problem of the appropriateness of particular price indexes for particular purposes. In this connection as a guide to good practice it could be helpful if the CSO were to publish more detailed information on its own methodology of deflating National Accounts data.

National Accounts

(a) Estimation of Volume Increases – output and expenditure

**...welcome for
quarterly National
Accounts...**

The imminent publication of quarterly National Accounts data is, of course, very much to be welcomed.

But I have a difficulty with the manner in which our volume increases for GDP and GNP are currently calculated. During the past twenty years, and in particular since 1998, the price-deflated changes in Gross National Product calculated on an expenditure basis have regularly exceeded those calculated on an output basis: this was in fact the case in 14 of the 18 years to 1997, including *every one* of the last 8 years of this period. The average annual differential between expenditure and output growth rates during these last 8 years has been 1.15 percentage points.

The cumulative increase in the volume of expenditure during these eighteen years is shown to have been 90 per cent, but output is shown as having increased by less than 67 per cent. These two sets of figures are then averaged to arrive at our rate of economic growth. This arbitrary procedure is quite unsatisfactory.

I wonder whether I might be right in thinking that the expenditure data are more solidly based than the output data? For over 56 per cent of the total value of domestic output consists of services, in respect of many of which relatively little data exists in relation to productivity increases

To give just one example of how this factor might distort official estimates of domestic output volume, the 1997 output data for "Other Services" shows an increase of just under 12 per cent for the value of these services, and a volume increase of 5.1 per cent. This implies a price increase of 6.5 per cent.

Now, for a sector with a high labour component, that seems a very high price increase in a year during which private sector pay increases seem to have been around 2-3 per cent generally and when wholesale prices for goods actually fell slightly.

If the price increase in services in that year was in fact around 2.5 per cent rather than the imputed 6.5 per cent, then the total volume of domestic output would have been about one percentage point higher. And that would have accounted for the whole of the difference of between the reported 7.2 per cent GNP output volume increase and the 8.1 per cent GNP expenditure volume increase.

I should be interested to hear comments on this point later.

(b) Backward revision of National Accounts figures

...more retrospection required...

On a quite separate issue I have difficulty with the fact that when revisions of National Accounts figures take place, these are not brought back for more than a few years. Thus the only series with continuity back to 1960, is that for GDP – a series which in the Irish case is not the most useful, and which, I understand, is not in fact based on a backward revision of the individual components, but only on year-to-year backward linkage of the totals.

Now that we are moving to ESA95 the need for a full revision of earlier data to ensure comparability of particular data is particularly important and is, I understand, urgently needed in order to provide a basis for the econometric work involved in the preparation by the ESRI of its next Medium-Term Review.

More guidance needed on interpretation problems

...problems interpreting labour force data...

Recently, arising from the transition to a quarterly Labour Force Survey, problems have arisen in relation to the interpretation of the labour force data on employment. These problems have led the Central Bank and the ESRI to draw from these data for the year 1998 figures for employment and unemployment that differ substantially from each other. For example, the average 1998 unemployment figure derived by

the ESRI from this material is 23 per cent higher than which the Central Bank has derived from the same data!

The information *published* by the CSO has gone only a certain distance towards explaining the nature and extent of the problems with these data – but informal briefing by the Office has provided a much fuller explanation. This suggests, *inter alia*, that the figures for the first three-month period of the new series have serious deficiencies and that for practical purposes the series might best be treated as starting with the second three months, i.e. the period from November 1997 to February 1998.

Given the serious discontinuity between the old annual and the new quarterly employment data the wider publication of fuller and more explicit information would have been helpful.

Comparability of North/South data

Before concluding with some references to international statistical data and to Mr McLennan's comments on this aspect of the subject, I should like to stress the need for co-ordination between the CSO and the Statistics Division of the Northern Ireland Ministry for Finance. Since I published in *Studies* in 1956 a detailed comparison of the economics of the North and the Republic, based on the Carter estimates of Northern Ireland output, I have remained very interested in the – now much changed and still changing – relationship between these two economies.

**...North/South
comparisons
difficult...**

But North/South comparisons are made difficult by the very different ways in which much of the data is prepared and presented in the two parts of the island. Some of these differences, attributable to the fact that the Northern Ireland statistics are prepared on the basis of British criteria, would be difficult to overcome, but, given the new relationship about to be established, if all goes well, between the Republic and Northern Ireland, every effort must surely be made to overcome these problems.

In some instances additional breakdowns of data on either side could facilitate future North/South comparisons; in other cases it might be possible, with support from the new Scottish and Welsh administrations, to persuade the UK authorities in

future to prepare comparative UK material submitted to bodies such as OECD and the EU on a basis that would show UK data broken down between the four developed areas.

I am a little surprised that no reference was made to this topical issue in Donal Murphy's paper and I hope that work is in fact now under way along these lines.

International comparative data

**...critical comments
on PPPs...**

I found Mr McLennan's remarks on international statistics extremely interesting. I note in particular his critical comments on the PPP National Accounts data published by the EU and the OECD. I too have found extraordinary apparent anomalies in these figures. This matter requires much more discussions at international level.

His remarks about the problem of allocating the economic activity of multinationals to particular countries have a special interest for us in Ireland – but perhaps we also have special reasons not to look too closely into our own data on this subject! He is indeed right to suggest, in view of the scale of the activities of these enterprises, that there may now be a need for an international statistics agency – a need that is not, and as things stand cannot be, fulfilled by the United Nations Statistical Service.

Discussion

Professor Frances Ruane

As chairperson of the National Statistics Board I am particularly delighted for the opportunity to respond to the papers presented. I would also like to congratulate the CSO on its 50th birthday and to wish it well over the next 50 years. Indeed it is a great tribute to the emphasis of CSO staff on timeliness that a seminar of this type has been organised so close to the actual date of its birth in 1949.

I found much of interest in each of the three papers, and I would like to comment on just some of the points made. Bill McLennan's paper emphasised for us the huge challenges that face the collection of official statistics as we enter the next century. Important concepts in economic statistics, which seemed to stand the test of time well, are rapidly becoming inadequate to meeting today's needs. Obvious examples of these are

- (a) the product emphasis in industrial statistics;
- (b) the absence of adequate methods of capturing meaningfully the international activities of multinational companies; and
- (c) the growing irrelevance of the traditional dichotomy of employment/ unemployment.

Let me touch very briefly on each of these.

...importance of technology change...

We all recognise the importance of technology change and yet we continue to use measurement concepts which are insufficiently refined for the manufacturing sector and which are extraordinarily weak for the services sector. We recognise the international fragmentation of production, which is part and parcel of the process of globalisation, and the growing emergence of different forms of international business; neither of these can be handled readily by the traditional concepts and measures. (An example of this close to home is the International Financial Services Centre in Dublin; during the past couple of years the CSO has had to expend very considerable resources on trying to measure appropriately its activities.) In the context of the world in which we now operate, the standard employment/unemployment concepts seem totally naïve, as we deal increasingly with different ways of working and new patterns of hours of work which are *à la*

carte for the individual rather than set by Victorian methods of organising work. Unless important concepts such as these are refined, statistical agencies risk producing data that will increasingly fail to capture properly what is happening in the modern economy.

...better statistical leadership needed...

The difficulty here is that no one country (perhaps with the exception of the United States) has an incentive to set out to define the required new concepts; since international comparisons are crucial, a guarantee is needed that such concepts will be adopted by others. What is required is international co-operation across statistical agencies. However, as Bill's paper makes clear, there is little hope here in a situation where international arrangements are currently "*at best chaotic and at worse very ineffective*". Bill is forthright when he says that we need better statistical leadership – failure of such leadership will lead to the growing irrelevance of the official statistics produced to the new century. Alternatively, and maybe this is the issue which statistical agencies should address, we may find ourselves adopting the US approach, whether it be right or wrong, in a manner akin to the adoption of Windows technology in the world of work.

Turning now to Donal Murphy's and Garret FitzGerald's papers, I find myself sharing many of their concerns in terms of issues relating to local statistics. In the case of Donal's paper this is not surprising as many of these issues have had lengthy discussions at the National Statistics Board over the past four years. In the case of Garret's, I would share his interests as a user of statistics in my own research. Let me now mention just a few issues in which I have a particular interest.

...reduce burden on SMEs...

The first of these is the need to reduce the burden of collection of statistics, especially on small and medium-sized businesses (SMEs). We all know that average firm size has fallen and that many of the businesses in Ireland today are classic SMEs. For these firms the burden of collection of statistics is huge. We need to find ways to include them in the data without overburdening them. One way to do this is to sample more selectively and to tailor the data demands to the relevant data for enterprises of these types. This is already underway. However, I feel that the longer-term solution must lie in the use of technology that will allow these firms to generate the data required with minimum effort. As mentioned in Donal's paper, there are plans (under the auspices of the Taoiseach's department) to investigate the demands on busi-

ness generated by the whole state system. I believe that there is an urgent need to do this and to generate through this process a practical solution. Such a solution would be in the form of a system of software that would allow SMEs not only to generate readily their returns to the CSO, and the Revenue Commissioners, and any other state agencies, but which would also give them a clear picture of how their business is doing.

...statistical literacy...

The second issue that I would like to mention is statistical literacy. There is much discussion today of the need to have students at second level become computer literate – a view I share. However, it seems to me that we have long needed an increased level of statistical literacy in the country if the average citizen is to be able to take an interest in the performance of our economy and developments in our society. This raises two types of needs for students at second level. The first is language – introducing students to some of the key measurement concepts, e.g., GNP. If all citizens are to develop some literacy in this context, these concepts must be introduced to all students and not simply to those small number of students who take Economics at second level. I would suggest that these concepts could be introduced into the Geography Curriculum in the Junior Cycle, building on what is there already. The second need relates to statistical concepts themselves. To my knowledge, students taking Maths at Leaving Certificate (LC) take no statistics whatsoever – they certainly do not arrive in third level with any grasp of such simple concepts as the relationship between the mean, mode and median. It seems to me that if statistics were to become a small part of the LC mathematics curriculum (at both honours and pass levels), it would be to the long-term benefit of the adult population, helping them to understand changes in our society and economy which are expressed in statistical terms.

Donal rightly pointed to the limited role of statistics in the university curriculum – and I would have to agree with him. In his address Garret mentioned his own course in statistics (which I attended in 1969 by coincidence). In my view, the way to progress the increased use of and understanding of official statistics in the university curriculum is through project work - to have students work with the data, which is now becoming readily available from the CSO in very usable form. The fact that the data are increasingly up-to-date and that we have an economy where year-to-year changes are

quite dramatic make this more attractive again to students. This approach would, I believe, attract the interests of students much more than a straight traditional course on statistics.

**...availability of
administrative
statistics...**

In conclusion, I would like to come to two issues that were raised by all three speakers. The first is the question of the quality, availability and use of administrative statistics. I believe that this part of the system needs urgent development in Ireland – I think that I am correct in saying that it is the part of the NSB’s responsibility which has progressed least to date. There have been two alternative possibilities mentioned as ways to deal with this – centralising the production of all such statistics in the CSO and placing CSO staff in all of the relevant departments. Frankly I do not see either as a realistic option in the short to medium run, and indeed I would think that the centralisation approach is fundamentally inappropriate, in that it creates too great a separation between the data source and the policy maker. I would like to suggest a way forward, through the preparation of a training programme, designed specifically for those involved in the collection of statistics in other departments. Through such a programme it should be possible to ensure that the standards which CSO staff believe are appropriate and on a par with best practice elsewhere could be up-held throughout the public service. In the context of the increased recognition for the need for training in the public sector, it seems to me that the CSO could offer a unique service in providing such training. Furthermore, its own tradition of having its staff exposed to training from outside experts (from the universities, institutes and Statistical Offices in other countries), would provide a good background for developments of such training courses.

Finally, I would like to raise the issue of data continuity touched on by all of the speakers, and in particular the frustration of researchers at discontinuities, as expressed so strongly by Garret FitzGerald. We all accept the desirability of refining concepts over time – the plea of the research community is that we are provided with the information which allows us to use intelligently data straddling the different definition points. Without this, it is impossible to carry out serious statistical research on the Irish Economy. My first published paper (in the *Economic and Social Review*) in the 1970s was on “Revisions to the Irish National Accounts”. I examined how the estimates (originally published by the Department of Finance) were revised over time. (Back then the

Department of Finance was, as now, very conservative in its estimates!) Such work could not have been done if account could not have been made for changes in definition. So the request is not for a veto on redefinition – it is simply for enough information to allow us to deal with the changes in definition.

Let me end by reiterating my congratulations to the CSO on its contribution to the State over the past 50 years and my best wishes to the organisation as we face the new millennium.

Mr. Tom Linehan

While the seminar theme is forward looking, the fact that it is in celebration of fifty years of CSO naturally permits a strong historical content which provides me with an opportunity to intervene briefly. I join the other speakers in congratulating CSO for its achievements over that period and in particular for the way in which, in this decade, it not only survived the unsolicited move to Cork but seized the opportunity to introduce and manage change in many aspects.

Mention has already been made of the fact that I started a career in CSO on the very first day of its official launch, June 1st 1949. I did so as one of the four appointees to the newly created grade of Statistician, the others being Brendan Broderick, the late Bill Hyland, and Patricia McHenry. For three of us our introduction to the “new life” was considerably eased by the presence of Dr Donal McCarthy, our erstwhile Professor in UCC under whom we had been following a postgraduate course in statistics, and who had been appointed to the new post of Deputy Director in CSO.

**...commitment of
many officers at all
levels...**

Because of their central position specific reference has been made to some of the personalities involved over the years and to the expansion and the importance of the professional staff. It is for me essential to put on record as well, in this forum, an acknowledgement of the unselfish commitment, far beyond the call of duty, of many, many officers at all levels that I personally experienced in the CSO. Without them continued survival of the reliable statistical system would have been virtually impossible.

I would also like to put on record my view that the setting up of the Statistics Board was a significant step forward. As Dr FitzGerald knows, his initiative in this regard was fully accepted by CSO, and at the time of the publication of the 1984

White paper “A New Institutional Structure for the Central Statistics Office” I clearly recall explaining the developments to every member of staff in mass meetings called by me.

Provision for such a body, called a Statistical Council, was made in the Statistics Act, 1926. In this context my historical research has revealed two interesting facts which I had not known previously. In the initial draft by Statistics Branch of the Statistics Bill, 1925, the creation of a Statistical Council was mandatory, but this did not find favour with the Department of Finance, whose advice to go for an optional position was adopted. Secondly, the same Government decision in early 1949 which established the CSO also embodied a decision to create a Statistical Council and this was announced in an official press release but was not carried into effect at the time.

**Mr. Edgar
Jardine**

On behalf of the Northern Ireland Statistics and Research Agency (NISRA) I congratulate the Central Statistics Office on attaining its 50th anniversary. Coming from an Agency which has just celebrated its third birthday, to have reached the 50 years milestone does indeed constitute a fine achievement. Few Departments of Government enjoy such longevity, and it is therefore a testament to the wisdom of the initial decision to establish the Office that it continues today. We in NISRA enjoy very good relations with Donal Murphy and his senior colleagues in the CSO and I have no doubt that new areas for co-operation will open in the future. It is also a real pleasure to renew my acquaintance with Bill McLennan who was a most helpful and supportive colleague as Head of the UK Government Statistical Service.

A wide range of issues was raised in the three stimulating and thought provoking papers presented this afternoon. I want to comment briefly on just four. These are the concept of independence, the need for a greater focus on methodology, the use of administrative records and, finally North-South comparisons.

Independence

I fully endorse the importance of statisticians being demonstrably independent in terms of the methods used, the inferences made about the data and the release of results. However, I believe that we need also to be policy relevant. Our experience in NISRA is that out-bedding staff in Depart-

ments has worked well in this respect. While the two issues - independence and policy relevance - do need to be held in tension, I believe that with a clear professional Code of Practice, accepted by statisticians, Ministers and senior officials, coupled with strong central management a satisfactory accommodation can be achieved.

Methodology

**...more resources to
methodological
development...**

I welcome the emphasis placed by a number of speakers on improving methodology. The pressures in recent years have been to produce more statistics in response to demands for increased monitoring of economic, environmental and social conditions and the need to assess the impact of policies. I expect that the balance may need to be redressed with more resources being devoted to methodological development. The UK White Paper on Statistics which is due shortly is expected to bring quality issues into much sharper focus and I believe this is a positive development. A recently established small methodology unit within NISRA is already proving a key asset to the Agency.

Administrative records

**...administrative
source more
important...**

Information technology has had an enormous impact on the ability of Statisticians to exploit administrative records for statistical purposes. This is particularly important as customers are demanding more up-to-date data at lower levels of disaggregation and at lower costs. Furthermore as it becomes increasingly difficult to maintain high response rates to social surveys, administrative sources become correspondingly more important. A particularly rich source of statistical data derives from the geo-coding of social security benefits. By linking these with data from the 1991 Census of Population the information can be analysed spatially using Ordnance Survey maps thus creating an extremely powerful tool for small area analysis. For relatively small populations such as the Rol or Northern Ireland, where sample surveys are disproportionately expensive, the exploitation of administrative systems assumes even greater importance.

North-South Comparisons

Dr FitzGerald noted the difficulty with North-South comparisons. While there are already examples of effective co-operation, for example on demographic statistics, I think that the proposed creation of North-South bodies and the widening scope of EU statistics will inevitably lead to greater harmonisation of North-South statistics.

Finally, I wish the Central Statistical Office well for the new Millennium. You can be rightly proud of your achievements over the past 50 years under the leadership of successive Directors. The CSO is clearly well placed to meet the challenges which lie ahead.

**Professor Jerry
Sexton**

I would also like to join with other speakers in congratulating the CSO on its fiftieth birthday.

There are two aspects on which I would like to comment. The first relates to the question of soliciting the views of users of official statistics - a feature that did not receive mention from any of the speakers. In saying this I am conscious of the additional steps which have been taken by the CSO in this area in recent years. I am also aware that extended consultation raises fears of being inundated by demands and suggestions of which, realistically, only a few can be accommodated. Nevertheless, I consider that it is an issue that requires some further consideration in the context of a changing society in which the concepts of inclusion and transparency are assuming greater importance.

**...useful feedback to
the CSO...**

Consultation involves more than listening to demands for extra information. It can be organised so as to provide useful feedback to the CSO on changing patterns in the economy and in society in general. The process can, thus, in a general way, contribute to the production of a better or more relevant product. There have been occasions in the fairly recent past (the Balance of Payments and the National Accounts spring particularly to mind) when such an ongoing engagement with users could have caused a somewhat different approach to be taken, and might have helped to offset the effects of misconceptions or misunderstandings, before rather than after the event.

My second question relates to Mr MacLennan's comment that the IMF coerces underdeveloped countries into produc-

ing inappropriate statistics. I am somewhat intrigued by this observation, and perhaps he would elaborate on the activities which he has in mind.

**Professor
Brendan Whelan**

As Director of the ESRI, one of the most voracious consumers of the CSO's output, I would like to add my congratulations and thanks to those of other speakers. Irish statistics are generally of very high quality and we particularly appreciate the unfailing helpfulness of CSO staff in explaining their intricacies to users. One recent innovation which has not yet been mentioned is the practice of making micro-level datasets available. The datasets so far provided (from the Labour Force Survey and the Household Budget Survey) have proved most useful to us in our work.

As I once heard Roy Geary remark "gratitude is the expectation of future favours" and I would strongly encourage the CSO to extend the provision of micro-data, especially in the context of proposals for an Irish Data Archive.

Gary Dunnet

As a representative of Statistics New Zealand, currently on secondment to the CSO, I would like to join the other attendees in acknowledging the CSO reaching its 50th birthday.

I think one of the important roles that the CSO Director General must play in "Official Statistics in the New Millennium" is that of guardian of the official statistical system. Under the distributed statistical system that the Irish government operates under it is important that all Irish citizens are served by a complete system. This role falls upon the CSO Director General through the independence as stated in the Statistics Act. Being seen to be active in taking on the role should also strengthen the independence of the Director General. The Director General must ensure that the producers and the consumers (including politicians) understand where the statistic fits within the complete statistical system.

This is true for both CSO and non-CSO produced statistics. Take for example, the Health statistics that are currently compiled by the health sector. If the sector was privatised, it is possible that public good statistics would be considered expendable. If the state was unable to get good quality health sector statistics much public policy would be affected, particularly during the immediate period of change following

Discussion

privatisation. To assist in the 'role of guardian' perhaps the CSO could take the lead, examples being:

- (1) Hosting non-CSO published statistics on its website;
- (2) Providing aspects of CSO infrastructure to non-CSO statistics producing agencies; e.g. classifications.