

nesc

National
Economic and
Social Council

An Chomhairle
Náisiúnta Eacnamaíoch
agus Sóisialach

Information
for Policy

NATIONAL ECONOMIC AND SOCIAL COUNCIL

Constitution and Terms of Reference

1. The main task of the National Economic and Social Council shall be to provide a forum for discussion of the principles relating to the efficient development of the national economy and the achievement of social justice, and to advise the Government, through the Taoiseach on their application. The Council shall have regard, inter alia, to:

- (i) the realisation of the highest possible levels of employment at adequate reward,
- (ii) the attainment of the highest sustainable rate of economic growth,
- (iii) the fair and equitable distribution of the income and wealth of the nation,
- (iv) reasonable price stability and long-term equilibrium in the balance of payments,
- (v) the balanced development of all regions in the country, and
- (vi) the social implications of economic growth, including the need to protect the environment.

2. The Council may consider such matters either on its own initiative or at the request of the Government.

3. Members of the Government will meet regularly with NESC on their initiative or on the initiative of NESC to discuss any matters arising from the terms of reference and in particular to discuss specific economic and social policy measures and plans and to explore together proposals and actions to improve economic and social conditions. Any reports which the Council may produce shall be submitted to the Government, and shall be laid before each House of the Oireachtas and published.

4. The membership of the Council shall comprise a Chairman appointed by the Government in consultation with the interests represented on the Council, and

Five persons nominated by agricultural organisations,

Five persons nominated by the Confederation of Irish Industry and the Irish Employers' Confederation,

Five persons nominated by the Irish Congress of Trade Unions,

Five other persons appointed by the Government, including two from the National Youth Council of Ireland,

The Secretaries of the Department of Finance and the Department of the Public Service.

Any other Government Department shall have the right of audience at Council meetings if warranted by the Council's agenda, subject to the right of the Chairman to regulate the numbers attending.

5. The term of office of members shall be for five years. Casual vacancies shall be filled by the Government or by the nominating body as appropriate. Members filling casual vacancies may hold office until the expiry of the other members' current term of office.

6. The numbers, remuneration and conditions of service of staff are subject to the approval of the Taoiseach.

7. The Council shall regulate its own procedure.

NATIONAL ECONOMIC AND SOCIAL COUNCIL

Information for Policy

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by
John Blackwell

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PART I

**THE COUNCIL'S COMMENTS ON
INFORMATION FOR POLICY**

COUNCIL COMMENTS ON INFORMATION FOR POLICY*

Background

1. The Council has frequently drawn attention in its reports to deficiencies in the provision of information for policy (most recently in Appendix I of NESC Report No 70). The deficiencies which exist have been highlighted not only by the NESC but also in other reports, most notably in the 1974 Report of the Committee on Statistical Priorities. The Council believes that much improved information is necessary for policy makers to adequately discharge their functions and for the Council to fulfil its function of providing policy advice to Government. The Council, in consequence, considered it desirable to examine how the deficiencies in information provision could be remedied.
2. Against this background, the Council in 1983 commissioned the study, "Information for Policy" by Mr John Blackwell, which is published as Part II of this Report. In preparing his study the consultant was assisted by a Steering Group (the membership of which is shown in Appendix A, Part I). He also had extensive discussions with the relevant bodies. The terms of reference for the study were:

"to make recommendations on the principles which should guide the collection of information for public policy, on the analysis and dissemination of the information and to consider the implications in terms of manpower and costs".

It was not intended that the study should provide detailed costings which an O&M (organisation and methods) study might include, partly because of the prior existence of such a study of the Central Statistics Office by the Department of the Public Service.

3. In the following paragraphs the Council outlines its views on how the information requirements of policy making might be met more effectively. Successive sections deal with the nature of information provision, the planning and coordination of statistics provision and

*Following discussions in the Council, these comments were drafted by Mr James Raftery of the Secretariat of the National Economic and Social Council and the final text was approved by the Council.

the potential of computerised administrative records. The final two sections deal respectively with improvements in the provision of information and the resource implications of the various recommendations.

The Provision of Information for Policy

4. The information required for public policy making is extensive, including up-to-date data on the main economic and social trends as well as more detailed statistics on particular public programmes. The primary and most comprehensive set of statistics on national economic developments is provided in the National Accounts and the Balance of Payments Accounts, supplemented by a range of statistical series. Demographic trends are indicated in the various population censuses and labour force surveys. Government Departments have information on the programmes administered by them, with some of this information being made available in published form.
5. Because of the "public good"¹ characteristics of information, it is unlikely that a market structure can be used to equate its provision (supply) with the demand for it. The result is that information on a wide range of topics is, in most countries, produced by government agencies and generally published either free or at low cost. While the pattern of demand for publicly provided information is likely to be stable in the short run, it may alter significantly in the medium term. Unless demand is carefully monitored and evaluated, the priorities in the production of information may come to be based more on precedent than need, with the result that the information provided may become outdated and inappropriate.
6. Priorities in the public production of statistics cannot, however, be determined entirely by demand, since demand is inflated by the low prices and users lack incentives to minimise their demand. The Council believes that the entire system of provision of public statistics must be planned in a way which sets priorities and assesses the changing structure of demand. The Council considers that reorganisation of this system should merit priority and that, unless structures are developed to meet these objectives, the deficiencies which have been referred to will persist.

¹The characteristics of a pure public good are non-excludability and non-rivalness. Non-excludability means that it is technically difficult to exclude people from using or benefiting from the good concerned. Although it is possible to exclude people from possession of information, technological developments have made this more difficult and have also made possible fast copying of documents. Non-rivalness means that use of the good by one person does not prevent others from also using it. Information clearly satisfies this criterion.

The Planning and Coordination of Statistics Provision

7. The consultant in his report, identified a lack of any central focus for decision making in relation to statistics as a whole which could set standards, monitor performance, help allocate resources and give policy advice across the range of statistical output. He found few indications of any rational system of assigning priorities in relation to statistics provision. The need for improved planning and coordination of statistics has been underlined in recent years by several developments, including a proliferation of sources, constraints on public expenditure and little remedial action in relation to the identified deficiencies. Many Government Departments now publish statistical information of one type or another, as do many of the State agencies involved in the provision of goods and services. One, albeit crude, indicator of the range of information sources is provided by the fact that the consultant's list of CSO publications covers over two pages while his list of principal non-CSO data sources covers over seven pages.
8. Yet there is no single coordinating body to ensure data sets are compatible, let alone to plan the system of information. The planning of statistics necessarily involves coordinating the various sources and deciding how resources should be allocated across sources.
9. The Council considers that priority should be given to improving the existing system of information provision through development of the role of the Central Statistics Office in coordinating and presenting public statistics in a manner that involves improved planning to meet anticipated statistical requirements and greater responsiveness to users' needs. The following paragraphs highlight particular recommendations which, in the Council's view, should be afforded priority. These relate broadly to the issues of appropriate planning structures, the coordination and dissemination of statistics, organisational flexibility and finally, mechanisms for enhanced user orientation.
10. The Council recommends that the Central Statistics Office (CSO) should prepare both a short-term programme and also a longer term rolling programme to provide a coherent planning framework. Such programmes should lay down standards to be achieved, the requirements (including costs) to achieve them, and should also include, *inter alia*, a ranking of the main priorities. Under these proposals the Department of the Taoiseach would continue to have responsibility for the allocation of resources to statistics but

in discharging its responsibility it would have the benefit of the CSO's detailed work programmes and the comments thereon by the Statistical Council.²

11. The Council agrees with the consultant that the necessary central coordinating role for the range of public statistics would best be carried out by the CSO. A prerequisite for such coordination is the itemisation by each Department of its unpublished material. Such a guide to unpublished material could prevent duplication in researching these issues and could also encourage the analysis of policy related data which might, in turn, help illuminate policy formulation. Coordination would include the setting of guidelines on data protection, the safeguarding of confidentiality and the standardisation of data from all public bodies.
12. The Council believes that the organisational structures of the CSO should be made more flexible in regard to acquisition of equipment, recruitment of trained personnel and deployment of existing personnel. At present the CSO has little autonomy in the deployment of its resources. Greater flexibility would also involve improved training for recruits and the development of improved career structures including staff exchanges. The CSO and the Department of the Public Service might usefully explore the possibility of improved organisational arrangements within a minimal cost framework.
13. The Council considers that since the adoption of a more user-oriented approach is desirable, means should be found to bring a greater input from users into the work programme of the CSO. In addition the Council sees merit in the consultant's suggestion that a series of users' seminars should be organised on particular topics and series.

Computerisation, Administrative Records and Potential Sources of Information

14. The advent of computer technologies provides scope for progress but can also give rise to difficulties. The major difficulty has to do with the lack of coordination among the various computerised information systems which are proliferating in the public sector.

²Under the provisions of the Statistics Act, 1926, the Government established the Statistical Council in 1984, "to give advice and assistance in regard to the execution of this Act and any other matters relating to statistics". Upon the formation of the Statistical Council, it was stated that it would assist in securing the reliability, timeliness and accessibility of statistical information.

Unless these information systems are closely linked to the planning functions, both within and across departments, the information provided may be of little relevance except for routine administration. Further, a clear relationship between information systems and information sources outside Departments is required as well as a policy of disseminating information to the relevant bodies.

15. The ability of computerised systems to process rapidly large amounts of data greatly enhances the potential for using administrative records in providing valuable information which might otherwise be available only at considerable cost. Both the Revenue Commissioners and the Department of Social Welfare, for example, have in their administrative records a vast amount of data on incomes and patterns of employment. The Council has previously drawn attention to the lack of information on the changing distribution of income and also on the altered structure of employment, particularly in respect of the services sector. There is clearly great potential in using administrative records to provide comprehensive and up-to-date information for policy, particularly by the Revenue Commissioners and the Department of Social Welfare. It should be possible to adopt such an approach without compromising principles of confidentiality. The Council recommends that such an approach, as outlined by the consultant, should be initiated and that it should be carefully monitored to assess the degree to which the data provided is adequate. In the longer run it may be necessary to follow the experience of many other countries and develop an earnings survey in order to provide a fuller picture of the pattern of earnings. This may be necessary since the use of administrative records may provide limited information due to the different definitions used, and also because information may be deficient in relation to both very low and very high incomes.

Improving and Presenting the Information Available

16. The Council believes that there is a need to improve the information available, principally in three areas: national accounts/balance of payments, data on firms and data on households.
17. Both national accounts and detailed balance of payments data are available only on an annual as opposed to a quarterly basis. The CSO has, however, in recent years succeeded in reducing the time lags associated with providing preliminary estimates of both these sets of accounts to around six months. The published balance of payments accounts has, in recent years, misclassified significant flows of funds with serious implications for the main economic

aggregates and for policy analysis. The commercial State-sponsored bodies, despite the magnitude of their transactions, not least in the estimation of the Public Sector Borrowing Requirement, cannot be readily identified in the national accounts as they are allocated to the private sector.

18. The Council considers that short-term improvements in these accounts should be accorded priority and that a more comprehensive programme should be considered in the light of both the progress of the above recommendations and the revenue constraints on Government. Short-term improvements might cover mainly three items; in order of priority:
- a further reduction in the time lags for the dissemination of national accounts data;
 - quarterly balance of payments statistics;
 - the separate identification of commercial State-sponsored bodies in the national accounts.

A more complete programme, the consultant suggests, would involve inclusion of expenditure data in the national accounts by means of a household survey (see below) and the initiation of an annual stocks survey.

19. The Council has previously noted the weakness of data on industrial and commercial companies. The consultant's detailed proposals include measures to reduce the delays in filing company returns at the Companies Office, the sending of a copy of each return to the CSO, the publication by the CSO of aggregated data on company returns, including State-sponsored bodies, and the use of Corporation Tax records as a guide to profit rates. The Council recommends that these proposals (which have minimal cost implications), be adopted by the CSO and the Companies Office.
20. The production of data on industries is hampered by the lack of concordance between CSO requirements and company account requirements, with the result that companies often have difficulties in meeting the CSO requirements. The consultant proposes that the CSO, in consultation with the CII, should engage in a pilot experiment to encourage and influence the development of a software package which would bridge the gap between the two sets of requirements. Efforts should, the consultant suggests, be concentrated on improving the data on the larger firms. The Council recommends the adoption of these proposals, which, if carried out as a pilot project, should have minimal cost implications.

21. The Council in previous reports has drawn attention to the need for more detailed information on the redistributive effects of public policies; information which necessitates data at a household level on living and occupational conditions as well as usage of public services and taxation burdens. The main source of such information is the Household Budget Survey which is carried out by the CSO at seven year intervals. Due to the limitations of the Household Budget Survey and the extra resources required by a general household survey, the consultant proposed exploration of the scope for obtaining the required information by expansion and coordination of existing surveys such as the EEC consumer survey and the Farm Management Survey. The Council believes that the next Household Budget Survey, due in 1987, should be adapted as far as possible to provide improved data on households and that, in addition, the scope should be explored for the similar use of other surveys.
22. The Council recommends that the CSO should appoint an editor of publications and that there should be a switch to publication of series by subject (as an alternative to the present compendium approach of the Irish Statistical Bulletin) as well as publication of an index of public statistics. The Council also recommends that there should be more background provided on the sources and methods of the statistics that are produced.

Costing the Council's Recommendations

23. The Council's recommendations as regards the priority issues are summarised in Table 1, along with the estimated resources required to implement each proposal. The Council considers that particular urgency should be attached to improving the planning and co-ordination functions, to encouraging the use of administrative records and, in the shorter term, to the less costly means of improving the information provided.
24. Five recommendations have been made in relation to organisation and coordination, three of which have cost implications: preparation of a formalised CSO work programme (0.5 staff), coordination by the CSO of all public statistics (1.0 staff) and appointment of a publications editor within the CSO (1.0 staff). Thus a total of 2.5 extra staff would be required in the CSO.³

³These costs were estimated by the consultant following discussion with the relevant bodies. The bodies concerned do not necessarily agree with these recommendations.

25. The recommendations on administrative records centre on improved coordination between the Revenue Commissioners and CSO. Valuable extra information could easily be produced on a number of tax-related topics, according to the consultant who also suggests that, were the basic data "cleaned", much more policy-relevant data could be produced. Significant short-term improvements could be effected at an initial cost of some £43,000 in revenue followed by an ongoing cost of some £6,000 per annum. The potential use of the administrative records of the Department of Social Welfare is limited by the restricted amount of information entered on computer files. Nonetheless the consultant suggests ways in which the information available could be improved at minimal cost.
26. The Council's recommendations on improving the information provided have focussed on the short-term, minimal cost proposals for improving the national accounts and balance of payments and also on improving the data on both companies and households. The Council believes that more thorough-going improvement of the national accounts by the provision of expenditure data is desirable in the longer term. The total cost of the entire set of short-term recommendations is 2.5 extra units of staff in the CSO along with an initial cost to Revenue of some £43,000 and ongoing costs of some £6,000 at 1984 prices.
27. Although it would be desirable to set these resource requirements against the total presently committed to the entire system of public information provision, the latter total is unavailable, due largely to the fact that public agencies outside the CSO do not provide any breakdown of the resources that they devote to information provision. Some idea of the order of magnitude of the information budget may be gleaned from the fact that the CSO budget in 1984 was £5.6m, with a staff of over 450.
28. Regardless of whether the total public information budget is of the order of one, two or three times that of the CSO, the extra resources entailed by the Council's recommendations are small; less than 1% in relation to the CSO budget. The Council is not in a position to assess the degree to which an increment of this size could be met by a redeployment of existing resources. The Council believes, however, that given the existing resource constraints, these recommendations should be met by a reallocation of existing resources within the public sector and preferably within the public information budget. Finally, the Council believes that these pro-

posals provide the basis for the improved provision of information which is, in turn, the prerequisite for a general improvement in public policy making.

Table 1

The Council's recommendations and estimated costs¹
(the full list of the consultant's recommendations is provided)

	Recommendations	Consultant's estimated costs
A. <i>Organisation & Coordination</i>	(i) a formalised system of allocation of resources to statistical information involving preparation by the CSO of detailed work programmes including priorities and budgetary data	0.5 staff in CSO
	(ii) CSO to coordinate all public statistics, including establishing guidelines on data protection, and standardising data in all public bodies	1.0 staff in CSO
	(iii) CSO to appoint a publications editor, with tasks to include production of index to statistics collected and publication of series by subject	1.0 staff in CSO
	(iv) development of statistical user's seminars and linking CSO statistics to the policy process	minimal
	(v) more flexible organisation within the CSO	minimal
B. <i>Administrative Records</i>	(i) improved data on employment and incomes by non-CSO bodies, particularly the Revenue Commissioners with the possibility of developing an earnings survey in the longer run	£43,000 unit initially in Revenue and £6,000 p.a. thereafter
	(ii) each department to itemise unpublished materials	minimal
C. <i>Improved Information</i>	(i) improvements in national accounts and balance of payments data	at minimal cost via specified improvements over 2-3 years
	(ii) improved data on firms via linking CSO and Companies Office data	minimal
	(iii) improved data on households by adaptation of the Household Budget Survey and exploration of the use of other existing surveys	minimal

Notes: 1The costs were estimated by the consultant following discussion with the relevant bodies. The bodies concerned do not necessarily agree with these recommendations.

APPENDIX A

MEMBERSHIP OF THE STEERING GROUP

The membership of the Steering Group was as follows:

Mr Peter Cassells (Chairman)
Irish Congress of Trade Unions

Mr W.J. Hyland
Department of Education

Mr Brian MacCaba
The Confederation of Irish Industry

Mr Nicholas Murphy, later **Mr John Corrigan**
Department of Finance

Mr John O'Leary
Central Bank of Ireland

Professor Brendan Whelan
The Economic and Social Research Institute

Mr M. Whelan
Department of Health

Mr J. Raftery
National Economic and Social Council

PART II

INFORMATION FOR POLICY

by

John Blackwell

ACKNOWLEDGEMENTS

A report such as this is unusually dependent on getting information and comments from a wide group of people. Many people helped in numerous ways – in a number of instances, more than once – and, without exception, gave generously of their time. The Steering Group (the membership of which is given below) which met regularly and commented on drafts was of invaluable assistance and, in addition, individual meetings were held with members of the Group. Further meetings were held between the Steering Group and, successively, the Central Statistics Office (Mr T. Linehan, Director; Mr A. Doyle, Mr F.A. Embleton and Mr D.C. Murphy, Deputy Directors) and the Revenue Commissioners (Mr John Flood, Mr Frank Cassells, Mr Sean Connolly and Mr Denis McGillicuddy).

Staff of the Central Statistics Office gave help at all stages; particular acknowledgement should be made of time spent by Aidan Doyle, Eric Embleton, Brian Geoghegan, William Keating and Donal Murphy. A number of meetings were held with Government Departments: with Ray Bates, John FitzGerald and Nicholas Murphy of the Department of Finance; Paul Cassidy, Brian Lenehan, Liam McLoughlin and Donal O'Connor of the Department of the Public Service; Fergus Glavey of the Department of the Public Service; Michael Buckley and Julie O'Neill, Maurita O'Donovan and Paul Wilson of the Department of Social Welfare. At the Central Bank a meeting was held with Kevin Barry, Tom O'Connell and John O'Leary.

Meetings were held at the UK Central Statistical Office with Sir John Boreham (Director and Head of Government Statistical Service), K.G. Forecast (Deputy Director) and A.G. Tebbutt; at the Cabinet Office with Ian Beesley; and with Sir Claus Moser (N.M. Rothschild & Sons Ltd., formerly Director of the Central Statistical Office).

Meetings were held with David Allen (Economic and Social Research Council), Ross Cooper (National Board for Science and Technology), Catherine Earley, Miss E.M. Fisher (National and Local Government Statistical Liaison Committee), Michael Harkin (An Foras Talúntais), Dr Pat Frain (National Board for Science and Technology), Philip Kelly (Coras Tráchtála), Frank Kirwan (University of Strathclyde), Ian Maclean (Standing Committee of Statistics Users), Con Power

(The Confederation of Irish Industry), Lesley Rimmer (Family Policy Studies Centre), Professor J. Sexton (The ESRI), Marcia F. Taylor (Deputy Director, ESRC Data Archive, University of Essex), Ray Thomas (The Open University) and Malcolm Wicks (Family Policy Studies Centre).

Helpful comments on drafts were made by Frank Convery, Jim Fitzpatrick, Patrick Honohan and Alan Matthews and by the members of the NESC secretariat – Gerard Danaher, Jim O’Leary and James Raftery.

Grateful acknowledgement is made for the help received from all these people and from all those who answered queries and sent material. Any errors which remain are solely the writer’s responsibility.

The membership of the Steering Group was as follows:

Mr Peter Cassells (Irish Congress of Trade Unions) – Chair
Mr W.J. Hyland (Department of Education)
Mr Brian MacCaba (The Confederation of Irish Industry)
Mr Nicholas Murphy, later Mr John Corrigan (Department of Finance)
Mr John O’Leary (Central Bank of Ireland)
Professor Brendan Whelan (The Economic and Social Research Institute)
Mr M. Whelan (Department of Health)
Mr P. Turpin Secretary to the Group
Mr J. Raftery (National Economic and Social Council)

CHAPTER 1

INTRODUCTION

1.1 The origins of this report lie in part in a number of National Economic and Social Council reports which have commented on the difficulties of policy analysis in Ireland arising from inadequacies in data. These difficulties were felt all the more keenly because a Committee on Statistical Requirements and Priorities, set up in May 1968 to examine official statistics, had reported in 1974 and had been followed by action on some of the recommendations. While many NESC reports have adverted to deficiencies in data, some of the main instances in recent years have been as follows:

- a report which addressed itself specifically to statistics for social policy (NESC, 1976) and made recommendations, most of which have not been implemented;
- a report on policies for industrial development which contained Council recommendations on data provision and collection for the industrial sector (NESC, 1982);
- a report on social planning which spoke of “the need for greatly improved information . . . on the workings of policies and their relationship to objectives” (NESC, 1983a, p. 13);
- a report on economic and social policy which contained a detailed appendix on the main data deficiencies for the social services, together with a chapter on social policy which noted “with disquiet” that in general the information available was insufficient for the application of principles of analysis for social policy (NESC, 1983b).

1.2 The terms of reference which were set for this report are as follows:

“to make recommendations on the principles which should guide the collection of information for public policy, on the analysis and dissemination of this information, and to consider the implications in terms of manpower and costs.”

1.3 These terms of reference are interpreted as applying to statistical information for economic and social policy. With regard to manpower implications, the concentration on principles rules out a detailed assess-

ment of numbers and grades. However, the criteria against which the use of personnel should be assessed are laid out, and the general manpower implications of the key recommendations are assessed. With regard to the implications for costs, the level of principles means that a minute appraisal of the costs of implementing particular proposals cannot be made. It is possible, though, to set out certain principles which would ensure cost-effectiveness in providing public statistics. It is also possible to indicate what it would be possible to achieve without committing a material amount of extra resources.

1.4 On the latter point, there is need to raise the relation between manpower savings, cost-effectiveness and efficiency. In this report, *efficiency* is used to denote the most efficient use of resources for any given level of statistical output, the maximising of output for any given level of resources devoted to statistics, and – most importantly – the attainment of the optimal amount of statistics provision for the community as a whole. By contrast, cost-effectiveness is a narrower concept, which connotes the provision of a *selected* level of statistical “output” in the least-cost way. Hence, the quest for efficiency leads one to go beyond the seeking of staff savings.

1.5 In August 1981, the Management Services Unit of the Department of the Public Service began a survey of the Central Statistics Office. That work was completed in June 1983. This report is different in character from that detailed study of the CSO. First, this is not designed to go into details on “organisation and methods” and on the labour and capital requirements for each of the “outputs” of the Office. Second, the focus is not solely on the Central Statistics Office. All the main providers of economic and social data come within its scope, although inevitably a good deal of attention is paid to CSO.

1.6 Some time after work commenced on this report – in May 1984 – the Government set up a Statistical Council (for which provision was made in the *Statistics Act, 1926*). This was set up to advise the Taoiseach on how the reliability, timeliness and accessibility of statistical information on the economy and society could be improved. In this report, therefore, the opportunity has been taken to recommend how the Council, or a like body, could function best in relation to the main providers of statistics. The report is in two broad parts. In the first part (Chapters 2 and 3) the central question is: whether it is possible to arrive at a set of principles which would indicate how much resources should be put into the provision of information. In order to answer this question, there has to be some sense of who uses the information and for what purposes. Hence, Chapter 2 outlines the main users of infor-

mation, the reasons why they need information, and the extent to which data which are collected may or may not be disseminated widely. Chapter 3 asks whether it is possible to estimate the benefits and the costs of statistics when making decisions on whether to put resources into information.

1.7 In the second part the sequence of chapters takes up the principles of the early chapters and asks: what information is being collected, to what extent does it meet current requirements, and how could the main weaknesses in information provision be remedied. Chapter 4 provides an overview of the main data which are publicly provided and of who provides the data. The strengths and weaknesses of the data, using criteria such as timeliness and frequency are assessed. Chapter 5 complements that chapter by taking up the ways in which data are collected. One of the issues which arises in asking whether more effective methods could be used is the extent to which the use of administrative records rather than surveys would provide useful data in a most cost-effective way. This is the subject of Chapter 6. The question which complements those of collection and analysis is the one of dissemination. This is the subject of Chapter 7. Chapter 8 examines the system of planning for statistics. In doing so, it takes up some key issues on the use of resources within the Central Statistics Office, the role of the Statistical Council, and the co-ordination of public statistics. It also takes up the issue of cost and resource implications of recommendations. Finally, Chapter 9 summarises the report.

CHAPTER 2

INFORMATION AND POLICY-MAKING

Introduction

2.1 This chapter is concerned with the role of information in policy-making. The principles which are discussed would apply to all types of information but the emphasis is on statistical information. The latter consists both of "raw" data which may be the by-product of administrative processes, and of measurements which are carefully selected or fashioned — for example, from surveys, or by processing raw data.

2.2 First, we consider who the main users of information are. These users are both in the public sector and in the private sector. Their different requirements for data are in part a result of their respective jobs. Second, for the public sector, the extent to which information is gathered in a logical sequence in order to answer particular policy problems is briefly examined. Also for the public sector, some of the attributes which matter, such as timeliness, are linked to the nature of the job. Third, some key features of private sector demand for statistics are pointed up. Not all of their demands are met by public provision. Private firms will have their own implicit value on the attributes such as timeliness and quality depending on their particular uses of statistics. Fourth, there are close links between the demand for information and both the nature of the economy and society and the way in which policy-making is organised. This two-way interaction is highlighted. Finally, the dissemination of public information is considered.

The Users of Information

2.3 The main users of information and some of the purposes to which the information may be put are as follows:

- (i) Government bodies, and within them both policy-makers and administrators, in order to carry out the functions of policy formation, monitoring and co-ordination which are described below;
- (ii) firms, to trace out the activity of their particular sector or sub-sector or to use as a basis for forecasting;
- (iii) trade unions, representative bodies, interest groups, for appraisal of the outcome under different policies and in order

- to make submissions to Government;
- (iv) the Oireachtas;
- (v) universities and research institutes and individual researchers, for use in research and policy advice;
- (vi) communication media, as a regular background to features;
- (vii) individuals for all types of non-specialist uses.

This is aside from the specialist use made by international organisations, particularly the Statistical Office of the European Communities, for statistical compendia.

The Use of Information for Public Policy

2.4 In this report, (public) *policy* refers to either courses of action or written official statements of Government which are used to guide decisions and people's actions. These written statements can take the form of legislation, regulations or documents.

2.5 The "classic" perception of the way in which information is gathered and organised has often centred on the following decision-making sequence:

- identification of a problem;
- collection of appropriate data;
- identification of feasible solutions, employing the data;
- choice of a best solution from the alternatives.

2.6 However, in practice, this logical sequence is not always followed. Information may be gathered only *after* a proposal has been decided on, either to monitor the implementation of policy, *or* to co-ordinate activities across Departments, *or* to serve as a back-up for particular cases which a public body may wish to make. These same points could also be made, to some degree, with regard to the use of information in areas other than the public sector.

2.7 Why does the classic model not apply? In part because of the fluctuating pressures for decisions, often made under time pressure. There is inevitably a time lag before information can be gathered, by which time decisions may have been made. In part it reflects the lack of a clear set of signals from users of data to the producers.

2.8 Moreover, there may not be a simple causation flowing *from* the attempt to solve a problem *to* the collection of information. In many instances, the very act of carrying out policy can serve as a potential source of information. For example, the implementation of many

public regulations is such a source, even though it can be distorted by the nature of the regulations. Thus, for example, the implementation of pollution regulations may give information about those who are caught polluting, without telling anything about those who are dissuaded from polluting due to the regulations.

2.9 There can be quite a difference between the information needs of the policy-maker and those of the administrator. The policy-maker may concentrate on how policies can be quantified, and on the impacts of policy on efficiency, on equity, on particular groups, on particular regions. In doing this, the effectiveness of policies may be measured by considering the present position, the changes which have occurred in outcomes, and why they have occurred. By contrast, the administrator will be concerned with executive decisions, which are applications of principles of policy. He/she will use information in order to monitor the day-to-day operations of services, such as how resources are used, and how much is being spent. He/she will also need to co-ordinate activities with other Departments or agencies. Both policy-makers and administrators may also use what have been called "statistics for enlightenment" (Nissell, 1974). These give the background information which is used by policy-makers, by administrators and by other people in assessing whether Government policies are "working" effectively.

2.10 Public sector firms will put a value on attributes such as frequency and timeliness of statistics. For short-term economic policy, timeliness is most important for entities such as output, employment and unemployment. However, with regard to frequency there is a danger that, in a perverse way, an over-concentration on frequency could slow up decision-making, especially if estimates are subsequently revised to a marked extent. Policy-makers might continually defer decisions since there would always be another batch of data about to be released which would confirm or deny a decision. For social policy-making, the time-scale is different. Here, large data sets, gathered at longer intervals, concerned more with details at the household or family level are often needed.

2.11 In summary, therefore, information is used in a number of different ways in public policy:

- (a) by policy-makers, as a means of assessing the outcomes under different alternative policies, at a time when choices between alternatives are being assessed;
- (b) by administrators, once policy has been decided on, to monitor the outcomes during the carrying out of policy

- decisions and to control expenditure;
- (c) by administrators, to facilitate co-ordination, e.g., between Departments;
- (d) as background data for both policy-makers and administrators, which are also used by people to assess the success or otherwise of Government policies;
- (e) as an inherent part of the policy process — that is, administrative records are provided as a by-product of administration; this is aside from their use under headings (b) to (d).

The Use of Information by Private Sector Firms

2.12 While there are many types of users of information outside Government (listed above from (ii) to (vii)), this section concentrates on private sector firms. The points made above, about the lack of a neat line running from problem identification through to data collection, also apply in the private sector, for the same reasons.

2.13 Industrial firms use information to answer particular questions such as arise when potential investment projects are assessed. Industrial statistics can be used to answer questions on market trends, on productivity and on market share. Statistics on retail sales, on demand and on population are of interest to wholesalers and retailers. Those in the financial sector use a wide range of economic and financial statistics.

2.14 Not all of the statistics which are used come from public sources. Industry associations collect a certain amount of information, but this is of limited importance in Ireland. Firms are particularly interested in comparisons of labour costs (in the widest sense including fringe benefits) and of working conditions, between sectors and within sectors. To some extent, the demand for these statistics is met within the private sector, often through limited circulation. For instance the Federated Union of Employers collects earnings data by means of surveys. In the UK, Incomes Data Services provides a range of data on earnings and associated issues.

2.15 Private firms have, in fact, a dual role. Many of them provide raw data to the Central Statistics Office, which are subsequently transformed into industrial statistics. This is the case, for example, with the Census of Industrial Production. In principle, competing firms in a sector could supply data to a third party which aggregated and disseminated the data for the benefit of all the firms. Such action is rare, however.

Other Users of Information Outside Government

2.16 This section covers the users which are listed above under (iii)

demand is related in part to the division of responsibility between different authorities. In some other countries (the United States and the UK would be examples) there are relatively strong local authorities which play an important role in governing the supply of education, housing, health, personal social services, police and transport. In these countries there has been a good deal of work on developing analytical or so-called "objective" indicators which would guide the provision of funds from central to local Government. In the United Kingdom, attempts have been made to develop indicators such as population, and labour force at sub-national level, in order to provide indications of "need" which would point to a required reallocation of resources (assuming that the objective is to provide a certain minimum level of service across local authorities). There is a demand for information at sub-national level on the part of central Government, in order to guide its dealing with local authorities. There is also a good deal of statistical effort on the part of local authorities. Indeed, there is a local Government statistical liaison committee which mediates between the local authorities and the central statistical services and provides a channel of communication on statistical matters.

2.26 Ireland has, by contrast, a relatively centralised State, and the degree of centralisation has been increasing. Local authorities have virtually no independent source of revenue and are responsible for only a limited range of services. As a result, statistical indicators are not used to affect the location of resources at sub-national level. Admittedly, under the physical planning legislation the local authorities have a statutory obligation to produce development plans at regular intervals. This means there is a demand for sub-national statistics to serve as a basis for these plans. A deficiency of such plans is their omission of broader social and economic dimensions with consequent implications for the nature of statistics which are demanded. Similarly, the housing authorities must produce estimates of housing requirements for the Department of the Environment at five-yearly intervals. And there are occasional studies, such as the Settlement Strategy Study for the Eastern Region by the Eastern Regional Development Organisation, published in 1985, which should ideally be based on a firm set of indicators of sub-national trends.

2.27 A final example of the links between the demand for information and the nature of society is that the more rapid the pace of social change, the greater the likelihood that official statistics will lag behind what would be needed to monitor change. An instance of this is the change in women's role which has occurred both within the home and at work outside the home. This has led to demands for statistics on

labour force participation which show the effects of family size and structure. It also casts doubts on the relevance of existing classifications both by head of household and by socio-economic status. Another instance is the increased numbers of lone-parent families, the number of which are difficult to pick up in the conventional household and family categories of the Census of Population. Yet this is a group which raises a number of social policy problems about employment, housing and income support.

Dissemination of Public Information

2.28 Information which is collected by public sector agencies may not necessarily be disseminated. Herein lies the source of some of the concern about the lack of availability of information which would help the appraisal of policies. It has been said that "information is the currency of democracy" and that it makes for a better-informed electorate. Similarly, one of the "outputs" of the education system, which is used to justify the State subsidisation of education is the conservation of knowledge and this knowledge includes the set of economic and social statistics.

2.29 Yet the political aspect of information, along with the power which it conveys, have a number of implications. There is no necessary consensus that more information is unequivocally a good thing – even at a low cost of provision. Although information is essential for policies to be evaluated, some policy-makers may not be particularly keen to see all policies evaluated, and hence may not be enthusiastic about the releases of information. What compounds this is that, as pointed out by Convery (1983), politicians and civil servants often work to a "hidden" agenda where the success of a policy depends in part on the fact that the full implications are not made clear to all parties concerned. Further, there has never been a strong tradition of explicit policy formulation in Ireland (with some exceptions). Instead, particular services have been delivered without account of the effects on ultimate goals.

2.30 An example of the lack of an explicit set of policies with a consequent lack of data which could be used to measure outcomes is in regard to the Government provision of goods and services. This provision occurs either in response to some "market failure" (i.e., for social efficiency reasons) or in order to affect the distribution of income. In some cases (e.g., transport) the services are marketed with money prices, which provide a set of market data. Yet it is striking that much of the information which would be needed for an evaluation of these services is either not available or, if available to policy-makers,

is not disseminated. For instance, data on the social benefits or social costs of particular actions (this is, those which are respectively received by, and borne by, the community at large) are typically not collected or made available. And, as has often been pointed out in NESR reports, policy-makers in Government bodies have been notably unaware of the income redistribution consequences of policy actions.

2.31 Similarly, State regulation (in everything from pollution control to traffic regulations) is one type of response to market failure. An evaluation of the efficacy of regulations requires some information on social benefits and social costs, which again is typically not collected or (if collected) not disseminated.

2.32 An example of a large-scale survey which has use both for Departmental policy-making and for outside policy analysis is the housing conditions survey. Surveys were undertaken in 1973 and in 1980, and have not been disseminated outside the Department of the Environment. The information from these surveys would complement the Census data on housing and, in the areas of unfitness and obsolescence, provide information for policy which is more relevant than could ever be obtained from the Census. A considerable expenditure on direct costs (without any attribution of overhead) occurred on the 1980 survey. Elsewhere, the results of housing conditions surveys are published as a matter of course, with the results of the 1984 survey in Northern Ireland due out with a time lag of about a year, following on the dissemination of the results of their previous surveys in 1974 and 1979.

2.33 Government Departments contain much information which is of interest to policy analysts. There are a number of reasons why information may be refused to outside researchers (as discussed in Allen, 1970): confidentiality, political-cum-administrative "sensitivity" about certain issues, paternalism about what people "should" be told, inadequate resources available to be put to the provision of information, and sheer disorganisation. The three issues of confidentiality, sensitivity and paternalism are taken up briefly below. On the question of resources, in many cases there would be a negligible amount of extra resources involved in making information available to outsiders. On the issue of organisation of data, while one cannot expect Government bodies to be finely tuned archives, the lack of archival awareness, or of modern means of information retention and retrieval is palpable. The result is that researchers and policy analysts may at times either be unaware of relevant work which has been done by official bodies or may have to replicate work which has already been done.

2.34 To what extent should information which is central to the evaluation of public policy by outside agencies or individuals and which is collected by public bodies and is capable of dissemination, be available for public use? One cannot touch on this issue without adverting to the lack of openness in public administration in Ireland.

2.35 At the moment, the formal position is that the public is only entitled to whatever Departments and Government agencies are statutorily obliged to release – which comprises a small part of their information. Indeed, a strict interpretation of Section 4(1) of the *Official Secrets Act*, 1963 is such that, apart from material which must be divulged under statute, civil servants are obliged to divulge almost nothing to outsiders:

"A person shall not communicate any official information to any other person unless he is duly authorised to do so or does so in the course of and in accordance with his duties as the holder of a public office or when it is his duty in the interest of the State to communicate it."

2.36 While a full consideration of these issues which relate to freedom of information would break the bounds of this report, they must be raised as key questions which are related to its main theme. To what extent is there need for the setting out of principles of access to Government data? There is a danger that the mere setting out of principles of access would lead to access on a more limited basis than currently enjoyed, on the grounds that the informal channels would dry up. This risk would have to be balanced against the greater equality and greater degree of transparency in access, together with the changed relationship between user and supplier whereby the user would no longer be beholden to the latter.

2.37 If the release of information were to occur on a routine basis across Departments and public agencies, this would help to mould a more open attitude on the part of those in the public sector to information provision. There would then be no implication that a particular Department or agency was being singled out for attention. However, unless there were legislative action, there are distinct limits to the extent to which a greater degree of openness could be expected.

Concluding Remarks

2.38 This chapter has pointed up the varied users of public statistics. Not all of these uses are for public policy-making; private decisions are also based on public statistics. A critical issue is the terms under which

people can get access to the considerable amounts of data which are held by public bodies. This topic is taken up in Chapter 8 with some specific recommendations.

CHAPTER 3

RESOURCE ALLOCATION

Introduction

3.1 To what extent is there production of statistics in response to expressed demands? Would it be possible to put in place a formal system of planning the provision of statistics which would be responsive to demands and which would take account of different intensities of demand? How should priorities be set over the coming decade? These questions are addressed in this chapter.

3.2 The chapter is organised as follows. In the first section the two main channels of public statistics provision are identified and the influences which determine resource allocation within these two channels are briefly outlined. The next section documents the difficulties which are inherent in trying to allocate resources in view of the "public good" aspects of statistics, in the absence of a functioning market for statistics and in the absence of sufficiently strong links between producers and users of public statistics. The following section outlines the features which ideally a planning and appraisal system should have.

Channels of Provision

3.3 Two broad channels through which public statistics are provided can be identified. First, there is the outlet of the Central Statistics Office. Second, there are other public sector outlets, in particular, Government Departments and State-sponsored Bodies.

3.4 Taking the first channel, decisions on the amount of resources to be given to the collection, collation and dissemination of statistics are taken by the Government. In the case of the main statistical series and the large-scale censuses and surveys, the Central Statistics Office consults with some of the main users – such as Government Departments – in order to elicit comments on design of the statistics. Hence, the main internal influences on the direction which statistical output will take are (i) Government decisions on resources to be given to the task; (ii) the CSO, with its limited discretion on expenditure and on the deployment of staff, in the light of the comments from users. Over the past decade, the content of statistics has also been influenced by two

particular reports: that of the Committee on Statistical Requirements and Priorities (CSO, 1974) and that of the Interdepartmental Study Group on Unemployment Statistics (CSO, 1979). There is one other major influence, which is external. Over the past decade, EEC statistical requirements have brought about much of the changed use of resources within the CSO.

3.5 Matters are less clear-cut with regard to decisions on statistics provision through the second channel, i.e., other public sector sources. In many cases, the public sector bodies concerned began to collect and disseminate data as a result of internal management needs, including the need to co-ordinate activities across agencies and departments. These data enable policies to be evaluated and the effectiveness of policies to be monitored. There can be external effects from the dissemination of these data, in the sense that policy analysis by outsiders then becomes possible.

Resource Allocation

3.6 One of the key issues in statistics provision is how much more, or how much less, resources should be devoted, at the margin, to producing particular data series. This is, in a sense, a problem of providing a surrogate for the market system in guiding resource allocation to the provision of public statistics, in the absence of a well-functioning market in statistics. This is where difficulties abound in assessing the intensity of user preferences. The users themselves are a varied group, ranging from Government bodies, private firms and representative bodies to academic researchers. As mentioned in Chapter 2, these users will have different preferences — for example, with regard to timeliness or disaggregation.

3.7 Another reason for the difficulty in estimating demand is that information has some of the attributes of a "public good". That is, information which is made available to one person (through say, published sources, in the widest sense) can be made available to the community as a whole, and one person's consumption of information does not "take away" from the consumption of another person. However, in contrast to a pure public good, information can be withheld from certain consumers and can be bought and sold on the market.

3.8 A number of these statistics are provided at close to zero price, which gives rise to difficulties in assessing the intensity of preferences among actual and potential users. There will tend to be a chronic excess of user demands over the supply of publicly provided statistics when statistics can be obtained by users at zero marginal cost.

3.9 In these circumstances a number of problems arises in deciding on how much information should be provided. Market tests, judging by ability to pay, can be difficult to use, given the difficulty of knowing the true underlying demand. It is difficult to get people to reveal their true intensity of demands. If asked, they will be tempted to overstate their preferences, in the knowledge that if information is provided by somebody else, they in turn can benefit. People can obtain information at no cost to themselves, even though, if they were confronted with the stark alternative of "pay up or do without it" they would be prepared to pay something. This is a simplified picture, as to some extent it is possible to levy a charge and to exclude some people from consumption.

3.10 The question arises whether it would be possible to decide on allocating resources to statistics by using formal criteria such as cost-benefit analysis? The answer is "no". While it is possible to estimate costs, the diffuse nature of the uses of statistics would make the estimation of benefits extremely difficult. Except in a few particular cases, the money value of statistics will be almost impossible to compute.

3.11 The imputed value of statistics will depend on how sensitive the decisions are to the flow of information. At one extreme, decisions could be taken in isolation from the information. In this case, there would in practice be no "return" to be obtained from providing better information. There would, however, be a *potential* return, if the provision of data were linked to the taking of decisions.

3.12 This can be illustrated by reference to the Census of Population. The cancellation of the 1976 Census had some direct effects on the provision of other data — it led to increasingly inaccurate estimates of population and of the labour force and consequently of employment and national output in subsequent years. At the same time, there seems to be almost no means of accounting for the individual decisions, including those on physical planning, which would have been affected. But the estimated size of these effects will depend on how responsive the decisions were to this gap in information. In this sense there are interaction effects which complicate any attempt to ascertain a pure return to statistics.

3.13 It is difficult, in fact, to point to particular policies which were critically influenced by the provision of certain data. There are a number of reasons for this. First, the provision of data *per se* is sometimes best seen as contributing to the understanding and explanation of economic change and social processes. Second, even if a starkly empirical view

were (mistakenly) taken – that the matter begins and ends with gathering “the facts” – the dissemination of data would have its effects in a diffused way. There would be time lags before action would occur. Third, there are usually time pressures on policy-makers. Research findings and associated data must be speedily available, and this is not always possible. Fourth, it is difficult to predict data needs ahead of time. The focus of policy attention tends to change over time, while the provision of statistics lags behind. Finally, there may be insufficient contacts between researchers and policy-makers together with ineffective dissemination of findings. And there is certainly too little interaction between the three groups of policy-makers, researchers and producers of data.

Appraisal and Planning

3.14 It is possible to outline some of the desirable characteristics of a public planning system for statistics. Ideally, the method of allocating resources should be one which:

- takes account of user demands and of the benefits to be obtained, at the margin, from additional statistics;
- recognises that the beneficiaries of data produced by Government extend beyond the public sector and that there are substantial spillover benefits to users such as private firms;
- is sensitive to the likely changes in user demand in future years;
- takes account of the respective costs of collecting data by different means;
- recognises that many public sector bodies are collecting data and seeks to avoid undue waste and to achieve co-ordination in their activities;
- takes account of the possibility for the cost-effective collection of statistics by means of administrative records.

Concluding Remarks

3.15 This chapter has pointed up some of the difficulties which lie in the way of allocating resources to statistics by means of formal criteria. However, it *is* possible to get a feel for the value of statistics by asking in any particular case: what are these statistics for, and who is using them? In answering these questions, due account should be taken of the nature of the benefits, many of which are indirect. The answers should not solely reflect the specific uses of those who decide on public policy. And the answers should take account of the benefits which are obtained by users outside Government.

3.16 In particular, there is need to concentrate on decisions at the

margin – what additional information should be provided, and what should be dispensed with? This would enable the data which are most crucial to policy decisions to be identified. It would also facilitate the identification of those pieces of information which are redundant, or where a lowering in frequency or a disimprovement in timeliness could be tolerated, especially if this meant that resources would be freed to devote to the provision of information where they would yield a high return. This approach needs to be tempered given the political aspects of information (Chapter 2): a pure technocratic approach will not be appropriate. These principles are later applied in Chapter 8.

CHAPTER 4

PUBLIC STATISTICS: RESOURCES, COVERAGE AND ASSESSMENT

Introduction

4.1 This chapter is in three parts. The first outlines the content and the methods of dissemination of the public statistics which are produced regularly – many of them by the Central Statistics Office but some by other public bodies. The amount of resources being devoted to the CSO is outlined along with an overview of the main changes in the production of statistics which have occurred over the past decade. The second part discusses the deficiencies in the coverage of public statistics with a view to formulating recommendations. The third and final part assesses the set of public statistics against the criteria of timeliness, frequency, accuracy, level of detail, provision of long and consistent time series, and presentation.

Output and Resources

Output and Dissemination of Published Statistics

4.2 Details of the CSO publications, including the frequency and numbers issued are provided in Appendices 1 and 3. The current range of statistics which are produced outside the CSO are indicated in Appendix 2 with publications ranging from Government Departments to State-sponsored bodies and research institutes.

4.3 There are five main types of dissemination used by the CSO (or by international organisations which use CSO-provided data):

- published volumes (whether periodic or Census – and survey-type reports which appear at longer intervals);
- regular mimeographed series (usually issued monthly or quarterly);
- data on Ireland which appear only in publications of international organisations such as the EEC, OECD and the United Nations, some of which are derived from additional questions asked in the Labour Force Survey;
- data, particularly small area data from the Census of Population, which are disseminated directly to the users;

requests, for example, pertaining to the Labour Force Survey and the Household Budget Survey.

4.4 A wide range of data are published by bodies outside the CSO, which in the main complement the existing range of data from the CSO. Most CSO data would fall into one of the following categories: national accounts and related aggregates; output by sector; trade; population and vital statistics; labour force, employment and unemployment; earnings and prices. In addition, there are occasional special analyses such as the redistribution analyses based on the Household Budget Survey. The monetary and public expenditure data, produced by the Central Bank and the Department of Finance respectively, can be grouped with the national accounts as the basic raw material for macroeconomic analysis. Much of the information on the following are produced by a variety of bodies in the public sector outside the CSO: education and manpower flows; science and technology; transport; energy; tourism; education, health, housing and social services; and taxation.

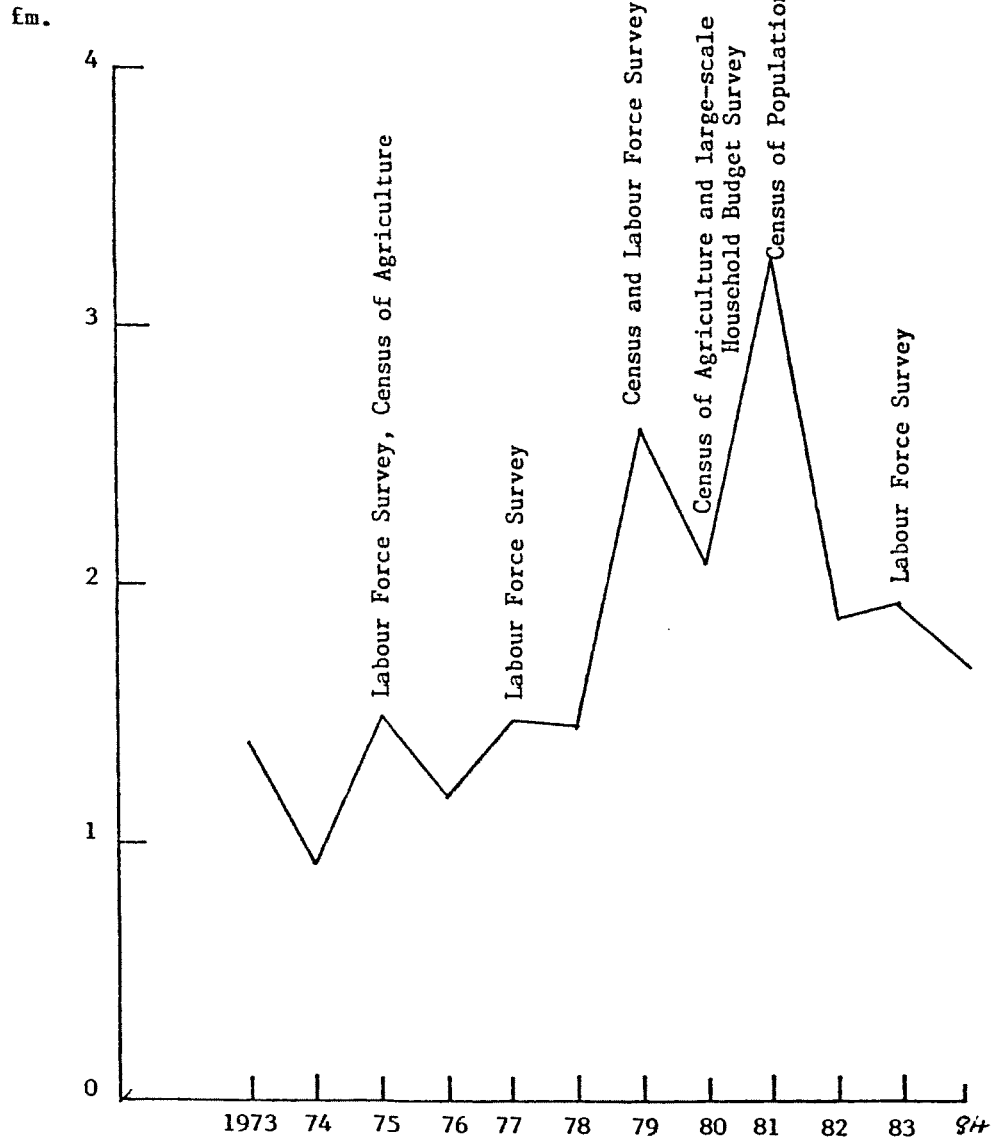
Resources

4.5 One crude way to look at the change over time on the supply side of official statistics is to estimate the volume of current expenditure of the CSO in the period since 1973 (Chart 1 and Table 1). Of course, this is a flawed measure of output for two reasons. It uses inputs in order to measure CSO output, and by definition it excludes non-CSO sources. Chart 2 and Table 2 show the change since 1973 in staff numbers at the CSO, distinguishing between statistician and allied grades, and other grades. The charts cover the period when EEC requirements had their effect – the main requirements are given in Appendix 8. Between 1973 and 1984, the real volume of expenditure on the CSO increased by 24 per cent or by 2.0 per cent per annum, on average. The number of serving staff peaked in 1981, and has fallen by 29 per cent since then. Since mid-1981, following directives involving the absorption of unfilled vacancies (July 1981) and the non-filling of two out of every three vacancies, together with levies on staff numbers to meet the needs of the Revenue Commissioners and the Department of Social Welfare, staff numbers have been falling.

4.6 In the light of the data in Chart 1 and Table 1, the increase in demand made by the EEC on the CSO must have been such as to lead to a diminution in the volume of resources which were available for allocation to other areas.

Chart 1

Expenditure of Central Statistics Office at constant (1975) prices, 1973-1984



Source: Table 1

Table 1

Total expenditure of Central Statistics Office, 1973-1984(a)

Year	£000	
	At current prices	At constant (1975) prices(b)
1973	951	1384
1974	704	908
1975	1500	1500
1976	1372	1183
1977	1969	1495
1978	2116	1459
1979	4291	2554
1980	4305	2108
1981	8014	3299
1982	5183	1902
1983	5845	1941
1984	5596(c)	1713

Notes: (a) Some expenditure is recovered in EEC receipts which in 1981 were £272,000. For 1975, figures cover Labour Force Survey and full census of Agriculture. A further Labour Force Survey was conducted in 1977 and 1979-82 figures reflect the 1979 Census of Population and Labour Force Survey, the 1980 Census of Agriculture and large-scale Household Budget Survey and the 1981 Census of Population. A Labour Force Survey is also covered in the 1983 data.
 (b) Deflator used in implicit deflator for net expenditure by public authorities on current goods and services.
 (c) Provisional.

Sources: CSO; National Income and Expenditure.

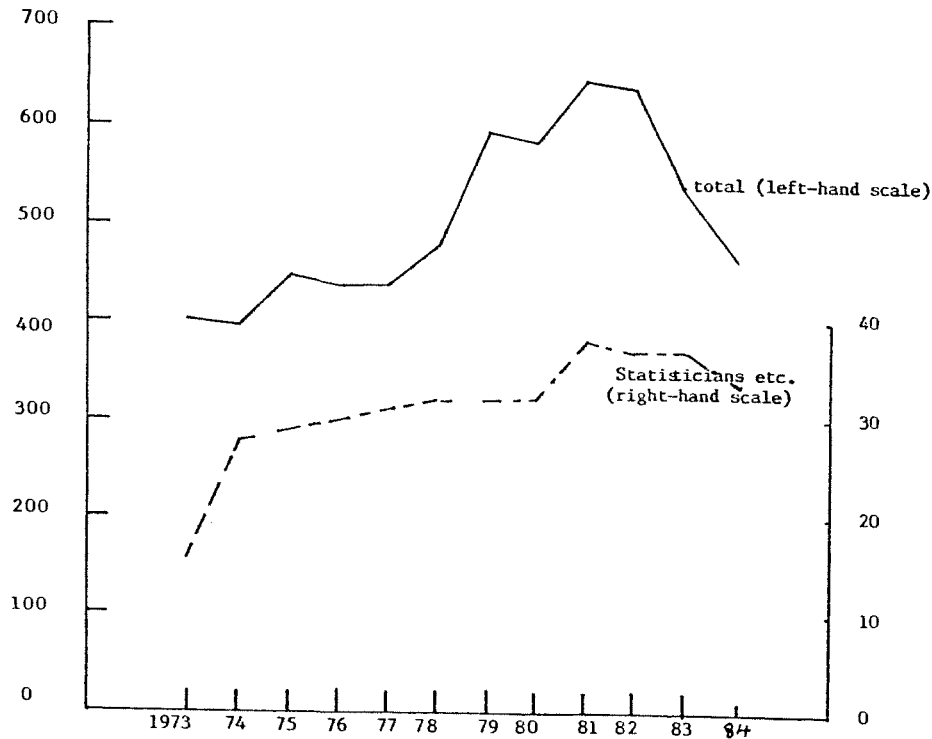
Overview of Changes in Provision

4.7 An overview of some of the main changes in provision of statistics over the past decade can be given. In November 1974 the *Report of the Committee on Statistical Requirements and Priorities* was issued – its recommendations and the follow-up in terms of corrective action are outlined in Appendix 6. Five years later, the 1979 *Report of the Inter-departmental Study Group on Unemployment Statistics* was issued. It is clear from Appendix 6 that, partly in response to EEC demand and partly in response to the reports, the coverage and quality of some of the CSO statistics have improved. In particular, unemployment data have improved. The dissemination of Census results has been speeded up with the publication of the sample of 1981 Census results and an annual Labour Force Survey has commenced (from 1983).

4.8 Looking outside the CSO, there have been improvements in banking statistics, related to the new return which the commercial banks make to the Central Bank; and in recent years there has been better

Chart 2

Staff numbers employed in Central Statistics Office, 1973-1984



Source: Table 2

Table 2

Numbers employed in Central Statistics Office, 1973-1984

Year	Number of serving staff (end-year)	of which: Statistician and Allied Professional Grades (end-year)
1973	400	16
1974	395	28
1975	445	29
1976	437	30
1977	439	31
1978	475	32
1979	595	32
1980	583	32
1981	649	38
1982	640	37
1983	531	37
1984	464	34

Sources: CSO; State Directory.

information on manpower supply and on flows through the education system.

4.9 By contrast, in subjects where it has been recognised for some time that existing coverage is fragmentary, there has been little or no improvement. Examples here include: stock changes; earnings; output in building and construction; output, employment and trade in services; public expenditure; profits; and the personal distribution of wealth.

4.10 There is great variability in the quality of the statistics produced outside of the CSO. While the amount of information in annual reports of Government Departments has declined, the provision of data through statistical bulletins, such as those of the Departments of Environment and Health, has filled a number of gaps. There has been a marked variability in the standards of provision of information across Departments and Government agencies. A notable addition has been the *Quarterly Bulletin of Housing Statistics*, which has gradually extended its coverage and would score well on timeliness. It is produced in a modest format and through the commitment of a relatively small amount of resources by the Department of the Environment. By contrast, the Departments of Energy, Industry, Trade, Commerce and Tourism do not even produce annual reports and the energy statistics bulletin of the Department of Energy has scored poorly on coverage (such as the lack of price data) and timeliness. While the Department of Labour produces the *Manpower Information Quarterly*, this has suffered from timeliness problems in recent years. AnCO statistics leave a lot to be desired: no

regular series on apprenticeship statistics or on course attendance or on post-training work, broken down by sex are published; the apprenticeship statistics which it has produced have not been broken down by sex. Moreover, its Manpower Survey is taken irregularly and uses occupational categories which are not linked with those used by CSO or the National Manpower Service and have been changed over time, which means that comparisons over time are not possible.

Coverage of Public Statistics

4.11 The range of the existing CSO series, as outlined in some detail in Appendices 1 and 3, extends across some 30 main publications plus a similar number of mimeographed releases. This section examines the coverage of the main sets of series and proposes remedial action where required.

National Accounts and Balance of Payments

4.12 The national accounts (*National Income and Expenditure*) are the central set of data on aggregate economic performance. They comprise data on aggregate economic performance. They consist of data on output, income and expenditure, although the output and expenditure data (with the exception of agricultural output) essentially derive from the income data. There was a set of fundamental revisions to the balance of payments in May 1984, which involved revised estimates for remittances of profits and associated net flows, and consequential revisions in capital flows (Central Statistics Office, 1984).

4.13 One palpable weakness of the national accounts is that data are presented on output and employment for the heterogeneous services sector as a whole, when sub-sector details are required. This is all the more necessary in view of the increasing importance of services in the economy. Services now account for about 50 per cent of national output.

4.14 On the national accounts it is recommended that the following improvements should occur. All of these improvements should be possible with existing resources in terms both of persons employed and capital employed although they could only be effected gradually:

- an increase in sectoral output detail including a disaggregation for commercial State-sponsored Bodies, which are currently absorbed within the private sector in the sectoral tables;
- an increase in the level of detail for capital formation, giving investment in agriculture and by type of industry and service,

(much of which is already done for the UN, OECD and the EEC);

- a greater disaggregation of public sector output in the output tables which currently show only "public administration and defence".

4.15 It would be desirable to move towards an independent set of estimates of output/income on the expenditure side. Among other reasons this would provide the basis for the estimation of the size of the "informal economy" (which in broad terms could be estimated by examining the extent to which aggregate expenditure exceeded aggregate income) and could also lead to more reliable estimates of personal consumption and personal saving. However, this would require the reinstatement of the annual Household Budget Survey and a comprehensive annual stocks inquiry covering non-agricultural stocks and hence a greater commitment of resources.

Labour Force and Employment

4.16 With the recent move to an annual Labour Force Survey, there has been a distinct improvement in the information on the labour force and employment. However, the existing data are often inadequate to answer the analytical and policy questions which arise. This is partly because most of the labour force data are given in terms of stocks. Many of the questions raised, e.g., on the changing nature of unemployment, or on the relation between social welfare payments and both employment and unemployment, need an analysis of flows between states. Another reason for the difficulty is that existing data in part come from self-description of states which are inherently ambiguous, such as "unable to work due to disability".¹

4.17 Ideally, flow data by sex would be required, which would enable a table to be constructed showing transition rates between labour force states (the proportion of people who move from one state to another over a period of, say, one or two years). These would show entry rates into a particular state from all types of states, together with exit rates, and continuation rates (the proportions of people who remain in particular states between one period and another).

¹An instance of this from the Irish Labour Force Survey is that in 1977 a category "unable to work due to permanent sickness or disability" was introduced, which led some people who described themselves as "unemployed" in 1975 to opt for this new category. There is an interplay between disability, sickness, unemployment and disengagement from the labour force. This is seen for example, by the well-established links for other countries between unemployment and disability, and between retirement and disability.

4.18 In Ireland there is already one survey which in part can be used to provide flow data: an annual survey of school-leavers undertaken for the Department of Labour (Department of Labour, 1984). This is an example of a survey which would provide the answer to a number of policy questions if there were access to the basic data.

4.19 In the case of employment, a major deficiency is the lack of coverage of the service sector apart from the Labour Force Survey. This sector now accounts for over half of employment. Worst of all is the information on private services.¹ In the Labour Force Survey, a number of more detailed questions for those employed in services should be added. Admittedly, the move to an annual Labour Force Survey should provide more regular information on services but the opportunity should be grasped to acquire more detailed information on service employment.

4.20 To some extent, the classifications used in the Labour Force Survey reflect an earlier economic structure and one in which there was a lower proportion of women in the labour force. Since many women work in clerical occupations one needs a more detailed clerical employment classification if one is to trace out the changing patterns of employment by sex. The CSO should examine such a possibility for the Labour Force Survey.

4.21 There is another way in which the Labour Force Survey should be used. Further questions on matters such as education, training and work history should from time to time be added to the basic core of questions. Furthermore, the Labour Force Survey should begin to use rotating sub-samples, with a sub-group of households being re-interviewed in a number of consecutive years. This could yield longitudinal data and information on people who had changed their labour force position. One other possibility is to ask different questions of different sub-samples while asking certain core questions of everyone: in this way the burden on household respondents can be minimised.

4.22 The potential exists to present CSO data in ways which are more useful for discussion of policy issues. This would not require any marked addition to the volume of resources devoted to statistics. Some examples of the types of table which should be provided on a regular basis are given below.

¹Much of the CSO upward revision of 80,000 in employment in December 1980 was in private services. Revisions of this size show the inherent weaknesses in these statistics.

4.23 The classifications of the data in the Census of Population and in the Labour Force Survey fail to reflect all the changes in the patterns of work within the household and within the family which have occurred in recent years. Increasingly, the pattern is not one of an economically active husband and economically inactive wife (using activity to denote being in the measured labour force). The pattern is increasingly one where both are active.

4.24 One of the questions about labour force participation rates which has become increasingly germane is the impact of family characteristics and of the number of dependants within the family on the work patterns of the family as a whole. For instance, one would be interested in the relation between the economic activity of husband (wife) and the labour force status of wife (husband) — for example, the extent to which the unemployment of one person would affect the activity of the other person. Equally, what is the relation between the presence of dependent children and participation in the measured labour force?

4.25 Related to this, the potential for useful cross-tabulation has not been fully explored up to now. For example, it would be most helpful to know, from the Labour Force Survey:

- (i) the number of husband-and-wife families where both husband and wife are in the labour force;
- (ii) the economic status (e.g., whether in the labour force, and if in the labour force whether employed) of males and females respectively, classified by
 - (a) marital status and both the number and the ages of children,
 - (b) the economic status of other members of the family, including (if employed) whether employment is full-time or part-time;
- (iii) the number and economic status of lone-parent families, classified by sex and by the number and ages of children;
- (iv) for those who are not in the labour force but who have worked before, information on the previous work — such as when the person last worked, the nature of the job and the reason for leaving, cross-classified by household type.

4.26 An example of the potential riches of such cross-tabulations can be seen in Garvey (1983), which cross-classified private households by household size and the number of unemployed persons in the household, showing that there were almost 10,300 private households who had two unemployed persons, and that about half of the unemployed persons

were in households having no person at work. This shows the varying degrees of economic hardship which can occur from unemployment across households.

4.27 At the moment, a number of these tabulations can be provided on request by CSO, especially from the point at which 1983 Labour Force Survey results become available. It should, however, become the norm in published volumes to move towards publication of these types of tabulation. The constraint up to recently has been the inflexibility of the standard program used by CSO to produce cross-tabulations, especially in the case of the Census of Population and the Household Budget Survey. From now on, with more widespread use of programming packages, such cross-tabulations will be more readily available, including cases where tables are available on request.

4.28 In the absence of tailor-made longitudinal studies, it is important to present data in a form which is suitable for longitudinal work, which can be done by recasting the existing Census and Labour Force Survey data. For example, cohort data (say, for people born in particular decade) on labour force participation need to be related to variables such as sex, marital status, number and ages of children, occupation, industry, education and training. It would also be possible to derive "proxy" longitudinal data by suitable cross-tabulations, if done at regular intervals. For example, a cross-tabulation of number of children aged 0-15 (distinguished by age of children) against current whereabouts of children (e.g., in the household with both parents) would yield useful insights.

Census of Population

4.29 The Census of Population is the basis for much of the data on the labour force and on employment. It is a basis for the national accounts and is of central use to those who are concerned with physical planning due to its spatial detail. The Census is on a *de facto* basis (based on the population actually resident on Census night), rather than on a *de jure* basis (based on the usually resident population). The Irish Census is one of the few, across countries, which is collected in this way. A move to a *de jure* Census would have a number of advantages:

- a more comprehensive count of the indigenous population;
- a greater ease in relating the data from the Census to the Labour Force Survey data which are already on a *de jure* basis,
- a better measure of the number of lone-parent families; however, a good count of these families would not occur unless there were additional questions which sought to identify families

consisting of an unmarried parent and child which currently are often "submerged" in the household classification.

At the earliest opportunity, the Census of Population should be moved to a *de jure* basis. In order to maintain continuity with the current *de facto* Census, the data on this basis could be retained, at least for some time.

Public Sector Employment

4.30 Data on public sector employment by type are needed for a number of purposes: for example, to give up-to-date information on employment trends and on the changes in employment structure, and to test the outcome of employment equality provisions. One of the most startling omissions by Government is the failure to publish a regular series on public sector employment. It has taken an outside body, the National Economic and Social Council, to produce some annual summary tables on this matter (NESC, 1983b), inevitably somewhat dated and dropped from subsequent reports by NESC on economic and social policy (e.g., NESC 1984b).

4.31 Without committing extra resources, the public service could provide some of the required information. This is through the employment of statistics which are already being compiled by the Department of the Public Service (Appendix 4). In the case of the Civil Service, these data include age, length of service, grade and sex. However, these data have a number of weaknesses, the main ones which are as follows.

- (a) Only a limited time series is available for the Civil Service.
- (b) Although the public sector outside the Civil Service (including local authorities and State-sponsored Bodies) employs far more than the Civil Service, there is less coverage in terms of data than in the case of the Civil Service, with simply a count of numbers employed being available in some cases. There is also a shorter time series of data and there are gaps in the coverage over time.
- (c) There is no standard definition for coding and classifying, as shown by the fact that the Department does not use the categories which are available in the Census of Population, the Labour Force Survey and the national accounts.

4.32 The Department of the Public Service should consult with the CSO with a view to achieving a data base on public sector employment that was fully compatible with CSO codes and categories. It would ideally be consistent with definitions of the public sector in the national

... The deficiencies in coverage in the Department of the Public Service data, mentioned above, should be remedied, with the aim of achieving a consistent series across the whole public sector.

4.33 There should be a regular publication on public sector employment, by full-time, part-time employment, full-time equivalents and by sub-sector, categorised by sub-sector, sex, grade and length of service. This could be disseminated regularly in a modern bulletin format, on the lines of the *Quarterly Bulletin of Housing Statistics*. Chapter 6 discusses the extent to which Revenue Commissioners data could be used for deriving employment statistics.

Public Expenditure

4.34 In view of the relative size of Governmental expenditure and the problems of the public finances, there is a pressing need for adequate data on public expenditure. By this one means data which would enable that expenditure to be monitored and evaluated. Yet the data are quite deficient for these purposes. The main shortcomings are as follows.

4.35 First, there is need for information classified by programme in the *Estimates for Public Services* (on current expenditure), in the *Budget* booklet and in the *Public Capital Programme*. Information classified by programme (for example, industrial training or manpower rather than on the basis of traditional accounting conventions (which have governed the data up to now) is necessary if programmes are to be monitored and evaluated. Admittedly, there is a table in the *Pre-Budget Tables* which gives a "functional classification" of current Government expenditure (e.g., economic services and within that, industry and labour, for example). But this one page of data is not the answer to the problem. Similarly, the "functional" breakdown in the *Public Capital Programme* is merely a subdivision into sectoral economic investment (and within that, industry, for example), productive infrastructure and social infrastructure. Up to 1983, the only instance of a breakdown of expenditure by programme was in an NESC report (Wiseman and Stafford, 1976). In 1983 the Department of Finance published its *Comprehensive Public Expenditure Programmes* followed by a 1984 volume (Department of Finance, 1983, 1984). This work should be developed further and it is understood that more work of this nature is in progress.

4.36 Second, there is little indication of the output or return to the community from public expenditure. Admittedly, in most cases it is easier to establish the costs of programmes than it is to estimate the output or return which results from the expenditure. The weakness of *Comprehensive Public Expenditure Programmes* lies in the paucity of

such output data. Third, there is little information in the *Estimates* volume on sums which are disbursed by means of grants-in-aid.

4.37 Fourth, there is need for clear information to be given on the types of charges which are levied and the extent to which they finance particular expenditure programmes. At the moment, these are disguised under "appropriations in aid". An example would be the case of charges for local authority services.

4.38 Fifth, in the past, data in the *Budget* booklet have been supplemented by information which appears in the form of a Government Information Service press release. This has been the case in relation to public sector pay. Another deficiency of the *Budget* booklet is a lack of detail on certain aspects of debt service payments. Some of the national debt service consists of inter-Departmental transfers, but no mention is made of this.

4.39 Sixth, no data are given on "tax expenditures". These are departures from the generally accepted or normal tax structure which gives a favourable tax treatment to particular types of activities or groups of taxpayers by reducing their tax liability (Owens, 1984). While there are a number of different ways of estimating the costs of tax expenditures, in general their effects on the Exchequer is similar to that of cash outlays. For a full appraisal of fiscal policy, therefore, the presentation of cash expenditure by programme needs to be supplemented by an estimate of tax expenditures by programme. This is not done. Indeed, the only information on tax expenditure has come from answers to *Parliamentary Questions* (e.g., the data reproduced in NESC, 1984b) and recently in the Annual Reports of the Revenue Commissioners.

4.40 Seventh, between the annual Budgets it is difficult to monitor Government expenditure by type of expenditure. The data in *Iris Oifigiúil* are on a cash basis and cover only part of the public expenditure. The weekly Exchequer Returns give data on expenditure on Supply Services (that is, expenditure both capital and non-capital, the money for which is voted by the Dáil on an annual basis) and of cash flows. This does not enable a cogent appraisal of expenditure trends. These returns are subject to a seasonality pattern which does not seem to have been constant over time, and within which there has also been random movement. The unpublished monthly returns on expenditure to the Department of Finance show when money is drawn down rather than when it is spent.

4.41 As is the case of the *Budget* booklet, there is the unsatisfactory

feature that published data are supplemented by those given elsewhere. The publication of quarterly Exchequer Returns is typically marked by a Government press release with a discussion of budgetary trends. Moreover, data on Government borrowing and debt repayments are given at press briefings but such data are not even contained in the press release.

4.42 Eighth, a good deal of expenditure, including capital expenditure, is carried out by local authorities and State-sponsored Bodies. Non-Exchequer financed capital expenditure by such agencies is the subject of monthly reports on a standard format, but this is solely for internal use.

4.43 To sum up on public expenditure, the main data which are desirable on a regular basis are as follows:

- a functional classification of expenditure (health, education, industry, etc);
- data by programme classification, showing significant activities and bringing together relevant expenditure from whatever source, as in *Comprehensive Public Expenditure Programmes*;
- the identification of current expenditure on goods and services, capital formation and capital payments to the private sector, on a national accounts basis;
- the identification of grants, subsidies and lending;
- data on tax expenditures, that is the financial costs of tax allowances and reliefs;
- the assembly of at least minimal time series with revised out-turn numbers;
- expenditure in both money and volume terms, to enable changes in the provision of services to be estimated and the "relative price effect" (changes in the relative price of Government services) to be identified.

An improvement in these areas would contribute not only to "outside" policy analysis, but to "inside" monitoring and management.

4.44 This would enable more accurate assessment of the effects of public expenditure on the economy to be undertaken than is possible at the moment. It would also help in the appraisal of Budget documents and statements. In addition, a common reporting standard on expenditure and revenue should be enjoined on all public bodies which obtain more than a certain minimum proportion of their finance from Government. The constraints here are not essentially ones of resources or of

lack of computerisation of data, but have to do with the way in which the work is organised and a lack of incentive to change the existing system.

Industrial Output

4.45 A remarkable amount of structural change has taken place in Irish industry in recent years whether pictured in terms of industry sector, nationality, size of firm, or techniques of production. This can be exemplified by the rapid growth of electronics and data processing. As a result, there is a certain duality in Irish industry. On the one hand there is a fast-growing sector based on export growth with a certain amount of sales occurring between associated companies in trans-national group. By contrast, certain indigenous firms, selling mainly on the home market, have suffered losses in market share. Up to date data on the nature of that structural change are not available. Nor is there any regular information on job gains, job losses and job turnover in industry, and of the extent to which these reflect new firm formation and plant closures as distinct from expansions and contractions of existing firms. Nor is there sectoral information in intra-firm trade or on the diffusion of innovation. Recently published work relating to industrial policy has used IDA employment survey data rather than CSO output and employment data (Blackwell, Danaher and O'Malley, 1983; O'Farrell, 1984). That survey is essentially designed for internal IDA purposes rather than as a statistical source for outside use. Of course, the size and structure of the economy is such that CSO will be unable to disclose certain data in order to protect the identity of individual firms.

4.46 Industrial statistics classified by size of firm and information on firm ownership should be provided, building on the size data in the *Census of Industrial Production 1980*. These actions should be possible within existing resources. As a general principle, it would be desirable to concentrate efforts to improve industrial statistics on the largest firms.

Trade

4.47 Little improvement in recent years has occurred in price and volume data for trade, despite the increasing importance of trade to the economy and the near total computerisation of the data. In particular, relatively little is available in the form of volume and price indices for imports and for exports by type of product. While there are some difficulties in disaggregating the "unit value" indices for trade (i.e., where price quotations do not provide the basis for the data), these can be overcome. It would also be useful to have a regular

breakdown of imports by the following categories: consumer goods; producers' capital; goods and materials for further production in agriculture and in industry, respectively. A breakdown has been given in the Central Bank *Quarterly Bulletin* based on a CSO categorisation which CSO itself does not release, but no time series is made available. This information is useful for analysing investment trends, among other things. It would be a straightforward task for CSO to publish imports according to this breakdown.

4.48 There has been considerable interest in recent years in measures of *trade competitiveness*. While nothing of this nature has been produced by CSO, the Central Bank has compiled indices and indices have been compiled by O'Leary (1981). There are various measures which are used in other countries, among them relative export prices, relative producer prices, and relative unit labour costs (i.e., labour costs per unit of output). The International Monetary Fund publishes (in *International Financial Statistics*) indices of relative unit labour costs for the large countries. This is relative to a composite index for other countries and includes an adjustment for the effects of cyclical swings in labour productivity. This could serve as the basis for a regular series on relative unit labour costs. There is need for consultation between the interested public sector bodies (the Central Bank, the CSO and the Department of Finance) in order to agree on the best set of indicators and to avoid duplication.

4.49 There are a number of possible uses which require trade and production data to be brought together, among them the following.

- The calculation of import penetration ratios, that is the ratio of imports to home demand where the latter comprises sales of manufactures *plus* imports *less* exports. These would give the share in the home market for each product group.
- The study of export performance, using the proportion of output which is exported for each product group.
- Analysis and forecasting for individual sectors.
- The construction of input-output tables.
- The calculation of concentration ratios (the proportion of industry output which is accounted for by, say, the four largest firms). Such ratios would indicate the extent to which there may be monopoly power in particular sectors. However, unless there is an allowance for exports and imports, the concentration ratio will give a misleading signal. Little monopoly power is likely if a large portion of domestic output is exported by the largest firms or if a large part of home market sales comes from competing imports.

4.50 The main problem which arises when combining trade with output data is that they employ two different classifications by sector. Currently, there are two different international commodity classifications for production and trade, respectively. There is need for a link between the two by, for example, allocating single headings in the trade statistics to a number of different industrial groups. This would mean allocating every commodity heading in the trade statistics to the industry of which the commodity is the principle product. A reconciliation of industrial production data with trade data will only come after considerable work involving skilled expertise in commodity classification. While a harmonised classification is currently being developed at UN level, its implementation nationally will involve painstaking work.

4.51 The following would require some increase in commitment of resources which should be planned for, to be achieved when resources permit:

- (i) the linking of data on production with data on exports at the category level;
- (ii) the provision of this linked set of data by size of firm and firm ownership, in view of the relatively small proportion of firms which account for the bulk of industrial exports.

Item (i) would involve introducing a product nomenclature in industrial inquiries which would be compatible with the trade nomenclature. This would require a detailed investigation of the products produced by each industrial sector, consultation with individual firms regarding the specification of their products and agreement on the new product listings to be incorporated in both the monthly and annual questionnaires used for each of the 110 or so separate three-digit NACE industrial sectors.

Building and Construction

4.52 There is little up-to-date information on output in building and construction, for example:

- there are no reliable data on work in progress;
- there are no data on housing starts.

This partly reflects the difficulty of covering an industry where there is a large number of small firms and where the population of firms is not even known. There is also the problem of getting output (as distinct from turnover) data at individual firm level.

Transport

4.53 There has been an improvement in data availability on road freight, with an annual survey of road freight and also quarterly data on road freight. While there has been a hiatus in the production of road traffic data (in terms of vehicle-km.), this is expected to be remedied from early 1986 onwards. Although the Department of the Environment has now got a computerised vehicle file, this is not used to produce regular data on the fleet by age, make and type of fuel used. The Department can provide tabulations on an *ad hoc* basis, but is not committed to a regular publication as a matter of routine. It would be worthwhile if the Department produced a regular bulletin on transport along the same modest lines as the *Quarterly Bulletin of Housing Statistics*. The proposed transport bulletin need not come out quarterly but should include the data on road expenditure by county which the Department currently makes available in the form of a stencilled release.

4.54 The biggest gap in knowledge about transport has been the lack of data on passenger travel, although a recent survey (Feeney and Hynes, 1984) has filled part of the gap insofar as it gives data on the ownership of cars and use. However, there remains a blank in knowledge about trips by transport mode. The main gap in relation to public transport is the lack of passenger-km. data. Some data in the *CIE Annual Report* are in terms of passenger journeys while An Foras Forbartha data are in vehicle-km. The data are not presented in a market-orientated way, taking account of the fact that the railways compete in various markets. What is needed is data by mode (rail, road) in terms of passenger-kilometres, for the urban market and for the inter-urban market.

Service Sector Output

4.55 Under the heading of the national accounts, above, there has been some discussion of service output. In Chapter 6, the extent to which the Revenue Commissioners records should be developed to provide data on turnover of the service sector is explored. There is little possibility that professional and trade bodies could supplement the existing information.

4.56 One other possibility, however, should be actively pursued with a view to improving the data on the service sector. It is possible that support would be forthcoming from the EEC for extending the CII/ESRI business survey to the retail sector. However, the efficacy of such a move would be enhanced by strengthening the existing CII/ESRI survey and improving its weighting procedures. There would also be need to overcome the inherent problems of collecting data from small businesses in the retail sector.

Agriculture

4.57 The main sources are the CSO data on output and employment, together with sample surveys of agricultural holdings which have been undertaken at regular intervals since 1975, and the Farm Management Survey of An Foras Talúntais. In recent years, however, there has been a cut-back in the level of detail, at county level, of the CSO data. EEC requirements mean that the current set of output statistics is now close to the minimum required.

Banking and Finance

4.58 Banking statistics are provided in the Central Bank *Quarterly Bulletin*. In addition, the Central Bank makes available for limited circulation a folder of economic statistics with time series (Central Bank of Ireland, 1984), but much of it is not concerned with monetary statistics. Information could appropriately be provided in the *Quarterly Bulletin* as follows:

- more details on the sources of growth in bank resources and on the uses of those resources, e.g., the sources of deposits and the sectoral distribution of bank credit;
- more data on the borrowing of State-sponsored Bodies, including a breakdown between borrowing for working capital and for fixed assets, including full data on foreign borrowing; together with a reconciliation of the disparities between data from the Department of Finance which include internal borrowing through Irish banks and the Central Bank data (which exclude borrowings through Irish banks), with preferably the borrowing to be shown on the former basis;
- for the State-sponsored Bodies, a distinction between financing of expenditure from internal resources (such as operating profits, depreciation) and external financing (Government grants, net borrowing domestically, net borrowing abroad, leasing);
- information after the event on the management of liquidity by the Central Bank;
- data on deposits and loans at Trustee Savings Banks and the other State banks which would be comparable with the data given on the commercial banks;
- more information on the liabilities and assets of the building societies.

4.59 The Central Bank is dependent on regular returns from the building societies. Since the building societies dominate the market for housing finance, it is unfortunate that these returns give far less information (on matters such as details of liquid assets, loans outstanding,

sources and uses of funds, flows into and out of shares and deposits, changes in mortgage commitments, and make-up of advances) than the UK Building Societies Association itself gives in the *BSA Bulletin* every quarter.

4.60 The *Quarterly Bulletin of Housing Statistics* provides some additional information (essentially on flows in and out of shares and deposits) which is gathered from a different group of building societies. It would be desirable if the two sources were made compatible. If the building societies are not persuaded of the usefulness of moving towards providing the range of statistics that their UK counterparts provide, leverage should be exerted by the authorities (i.e., the Department of the Environment and the Department of Industry, Trade, Commerce and Tourism).

4.61 For many subjects of investigation, considerable use could be made of household balance sheet data, based on a survey designed to get stock data on savings and on the composition of net worth at household level. Potential users might include independent policy researchers as well as the Central Bank in relation to monetary policy. Such a survey, which could be combined with a survey of the various uses of consumer credit, would have to be at least facilitated by the Central Bank. Among the uses of such a survey are the following:

- it could show the effects of credit controls, the effects of interest rate changes on consumption and on personal investment and the effects of asset levels on consumption; it would therefore be of use in assessing the impact both of monetary policy and of housing finance;
- both because of the last point and its aid in reconciling “flow” data on savings and “stock” data on the composition of net worth at the level of the household, it would help the forecasting and policy simulation of personal consumption;
- it would help to build up data on the flow of funds in the economy;
- it would provide some data on the personal distribution of wealth;
- it could indicate whether a change in the savings ratio meant a change in savings propensity or the effects of inflation on net monetary assets of the household sector (there is an example, from a series of EEC studies, on this use of balance sheets in Wittelsberger, 1984);
- it could indicate the effects of inflation on assets and liabilities and areas where new savings media might be developed.

It should be possible to market the results of such a survey to banks and other financial institutions. It is recommended that the authorities pursue the feasibility of mounting such a survey.

Companies

4.62 The data which relate to industrial and commercial companies in Ireland are markedly poor, particularly in relation to profits; the sources and uses of funds; the financing patterns of investment; changes in inventories; dividends, and repatriations abroad. This to some degree reflects the fact that basic company data on sources and uses of funds are not available from existing sources. For a number of reasons, Irish company accounts are not as useful a source of information as they could be. This is partly due to delays in filing returns on the part of companies at the Companies Office and partly due to the non-implementation – at the time of writing – of the EEC fourth directive on the disclosure of company accounts. There are a number of methods by which improvements should be made:

- penalties for non-compliance in filing returns should be increased and enforced;
- when a return is filed at the Companies Office, a copy should be sent to the Central Statistics Office (as suggested by Stewart, 1984); such an arrangement is currently being investigated;
- the CSO should explore the possibility of publishing aggregated data in relation to the companies who do file returns together with the State-sponsored Bodies;
- in conjunction with the CSO, the Department of Finance should design a standard for the annual reports of State-sponsored Bodies which should become mandatory for these bodies;
- when the Corporation tax records are computerised at the Revenue Commissioners, they should be used as a source of information on profits.

4.63 No worthwhile data are available on a timely basis on *profits*, and there is only a small breakdown by sector. Time-lags result partly from the fact that many companies themselves do not supply profit numbers before an appreciable time-lag. Moreover, the structure of industry in Ireland is such that public companies amount to only a small proportion of the total number of companies. A further reason for the inadequate profit data is that many companies which operate in Ireland are not obliged to publish accounts. This is a direct result of the Government's failure to implement the EEC Fourth Directive on company accounts. Related to this, there is little knowledge of the financing of industry and trade and specifically of investment –

whether from retained profits, domestic financial sources, or external financial sources.

Social Statistics

4.64 Social statistics are produced only through the data for individual social services: education, health, housing and social welfare. Virtually no social statistics are published by CSO, with the exception of housing statistics, although the *Statistical Abstract* does collate some social statistics which are produced by Government Departments. Indeed, the only, although uneven compendium of social statistics together with commentaries, is in an unrepeated NESC report (NESC, 1977). Invaluable though that report was, it is now out of date. The weaknesses identified in that report remain. The basic information required would include:

- measurement of the basic social changes which occur over time;
- data on the coverage and usage of social services offered;
- the public expenditure implications of social policies;
- the social consequences of Government policies, including their effects on income distribution;
- some attempt to measure the changes in the quality of life and standards of living enjoyed by the community as a whole and by different social groups within it.

4.65 The need for such an account has not diminished in the years since it was pointed out by the NESC. Two examples are available from other countries of valuable compendia of social statistics which portray the changes which occur over time in living standards and in quality of life. One is *Social Trends* (Central Statistical Office, 1985), which brings together data on matters such as population, households and the family, education, income and wealth, health and personal social services, housing, leisure. The other is the *Social Report on Inequality in Sweden* (National Central Bureau of Statistics, 1981) which gives a summary presentation of the distribution of well-being and of inequality, covering (with commentaries) topics such as education, employment and working hours, working conditions, standards of living, housing, leisure, social relations and health.

4.66 Efforts at developing social indicators have been made through the OECD. This has in part been in an effort to replace the existing measure of output of social services, based on inputs, with measures which are correlated with the "true" outputs. In Ireland, the Department of Finance was involved in OECD work on developing social indicators; the OECD agreed list of social indicators was published in 1982 and a

compendium of social indicators for the OECD countries has been prepared for publication. Viewed against the aim, the outcome has been disappointing. This points up the difficulties of trying to come to terms with the impact of social policies by means of statistical measures. Attempts at integrating systems of social statistics (Stone, 1973; United Nations, 1975) have had little impact on the production of data. Apart from the inherent difficulties, one reason for the relatively primitive state of social statistics is the lack of a clear client group which uses statistics for policy formulation or for monitoring, such as is evident in the case of the national accounts. The users of social statistics are more diffuse.

4.67 The weakness of the current reliance on individual reports from social service Departments is that it misses out on the interconnections which are crucial to policy. For example, little is known about the links between employment status, household composition, housing conditions, education, and the use of medical services.

4.68 There is no substitute for household survey material. There has been a good deal of reliance on the Household Budget Survey by users, in the absence of a general purpose household survey which would collect data at the household level on living standards, education, health and housing. While the Household Budget Survey was originally designed as a basis for the Consumer Price Index, it has become the most important single source of information on household well-being and on the redistributive consequences of Government policy. There are many instances where that survey has been used for social policy issues, e.g., for work on the personal distribution of income (Nolan, 1978), the redistribution of household income by taxes and benefits (Nolan, 1981; O'Connell, 1982; Central Statistics Office, 1983); distribution of income and social class (Rottman *et al*, 1982); poverty (Fitzgerald, 1983); poverty among the elderly (National Council for the Aged, 1984). Hence, this information source has added greatly to knowledge about the success or otherwise of Government policies in changing the distribution of income and in alleviating poverty. However, the next Household Budget Survey will not be held before 1987.

4.67 In order to answer questions on social policy, the ideal solution would be to move towards a general household survey which would ask questions on household composition, labour force status, employment, education, housing conditions, use of health services, among other things (and custom-built questions such as, for example, the incidence of smoking). It could be used to illuminate a wide variety of policy issues, such as family formation, labour migration, labour force

participation, employment and unemployment, social mobility, health care, and absence from work. Experience in other countries is that many policy issues are illuminated by the use of such basic data. Such a survey would require more resources. The alternative might seem to be to build on an annual Household Budget Survey¹ by adding appropriate questions. However, even if the annual Household Budget Survey were to be resumed, it is overloaded and there is no prospect that it could be expanded to include data such as those mentioned above.

4.70 In a general household survey, there could be a basic set of "core" questions, with a further group which varied from survey to survey (or between sub-samples in any one survey). Such a survey could be quite cost-effective. This is because already – in the absence of a general survey – various bodies in the public sector have been engaging in surveys, such as An Foras Forbartha and the Health Education Bureau. One good general survey could substitute for a number of such individual surveys.

4.71 In the interim, exploration of the following possibilities might provide a means of going some way towards filling the gaps.

- (i) The EEC consumer survey, a quarterly survey which covers both urban and rural areas (and which is summarised in Appendix 4) could be used. The extra costs of using this survey to elicit information would be far less than the cost of setting up an inquiry from scratch. If this survey were as a by-product to be used for Household Budget Survey-type data, there would be need for the EEC survey to use the more rigorous standards adopted in the HBS in getting household particulars. In addition, there would need to be more data collected in the survey, with an increase in sample size. This would involve an increase in costs. Some costs would be recovered, at least in part, by charging firms for asking particular questions on the survey and for doing special tabulations.
- (ii) The Farm Management Survey of An Foras Talúntais, which currently concentrates on production activity of the farm, could be expanded to include more information about the farm household. To some extent this is happening already. For example, in 1983 a question was asked about off-farm work of the operator, and regular although unpublished

¹The annual urban Household Budget Survey, which was carried during the late 1970s has been dropped by the CSO which plans to continue the national Household Budget Survey on the existing seven year cycle (1966, 1973, 1980 and 1987).

information is collected about household and housing characteristics in that Survey.

In addition, as a continuing measure, the potential for using the farm accounts part of the Farm Management Survey in order to cover the rural part of the next Household Budget Survey, thereby saving on costs, should be explored.

4.72 There is also need for CSO to publish a greater variety of cross-tabulations from the Household Budget Survey, as follows:

- (i) what percentage of men/women working are the sole income earners in the household;
- (ii) the proportion of households in various income groups which consist of more than one income earner.

The proportion of low income households where there is more than one income earner would shed light on poverty issues since it is likely that additional earners are an important source of income in low-income households.

4.73 One question which arises is the extent to which families with young children are more vulnerable to poverty. However, there is need to reconsider the definition of a child in the Household Budget Survey, where a child is aged 0-13. For purposes of dependency, one needs to use the age up to the point at which full-time education ends. This would put the cut-off point at around 16 or 17.

4.74 In the case of *health care*, there is a multiplicity of bodies which compile and use statistics but there are difficulties in co-ordination of these statistics and in making them mutually compatible and relating them to CSO data. Little is disseminated to outsiders apart from the data in the Department of Health bulletin. The bodies include the Department of Health, Health Boards, General Medical Services (Payments) Board, Voluntary Health Insurance Board and the Medico-Social Research Board. There is need for a set of compatible data available to both the Department and to the Health Boards, organised on a small area basis with a standardised definition of areas. The deficiencies in coverage and in dissemination of health statistics have already been pointed out in NESC (1983b) and NESC (1984a). As a result, not only does "outside" analysis suffer, but the management information available to those who run the health services has been poor.

Earnings and the Distribution of Income

4.75 The *earnings* data now comprise one of the weakest areas in Irish statistics. The only regular earnings series is on transportable goods industries which cover only a fifth of total employment. Virtually nothing is known about earnings in services. Little is available on a regular basis on the distribution of earnings. The EEC structure of earnings survey has filled some of the gap left by the quarterly earnings inquiry by giving earnings by occupation, age and length of service, overtime earnings and by covering part of the service sector. However, it has the following drawbacks:

- (i) it is only available for 1979 – an earlier survey for 1974 did not cover manufacturing;
- (ii) it did not collect data on education, training or trade union membership.

The latter information (under (ii)) would be needed for a study of questions such as the reasons for inequality in earnings, the elements which underline earnings differences between men and women, and the extent to which education and training make a difference to the life-time earnings of people.

4.76 Unfortunately, a proposed repeat of the EEC Structure of Earnings Survey is up to member States to finance and is not being planned in Ireland. The aim should be to move towards a regular structure of earnings survey, augmented if possible to show more data on characteristics of firms and of individuals. This could be linked to the EEC structure of earnings survey, should that survey be resumed. Chapter 6 discusses the possibility of using Revenue Commissioners' data to provide information on earnings.

4.77 While there are Revenue Commissioners' data on *income distribution* in their Annual Report, to which can be added the unpublished Revenue data (Appendix 9), these data have rarely been used for policy analysis. This partly reflects the incomplete coverage of the data, partly the current lack of availability of individual characteristics which could be used to explain income differences, and partly the need for data at household level for some purposes. Hence, most of the studies of income distribution and poverty have used the Household Budget Survey (discussed above).

Assessment of Public Statistics

The Criteria

4.78 The set of existing statistics can be usefully assessed against the

following criteria:

- (i) timeliness
- (ii) frequency
- (iii) accuracy of estimates
- (iv) level of detail
- (v) provision of long and consistent time series
- (vi) presentation of data.

There are trade-offs between a number of these dimensions, for example between spending time on ensuring greater accuracy at the expense of timeliness, or diminishing the level of detail in order to ensure greater timeliness, or between disaggregation of data and timeliness. We now assess the main statistical outlets, using the criteria which are given above, in the same order in which they are listed above.

Timeliness

CSO statistics

4.79 Appendix 7 gives details of timeliness, with regard to some current CSO series. In the case of CSO statistics, the principal failings with regard to timeliness arise in the case of the Census of Industrial Production and the national accounts. There have, however, been improvements in the time-lags in publication of the results for the Census of Industrial Production of 1980 and the Census of Production 1981. In the case of the national accounts, the sectoral data on fixed capital investment are so dated as to be of very limited use, but are the only available data on this important matter.

4.80 A reduction in the time lag for dissemination of the national accounts should be a priority. To some extent, lack of timeliness in the national accounts has been partly due to poor response on the part of suppliers of raw data. There have been delays in the provision of basic local authorities' data which are used to compile the national accounts.

4.81 Problems of non-response and of slowness in response in part account for time lags in issuing CSO industrial statistics. The time-lag in the publication of Census of Industrial Production results should continue to be shortened. This has been occurring, with the CSO aim being to reduce publication delay by three months each year with existing resources.

4.82 The degree of computerisation also affects timeliness for most of the statistical series. However, the link between computerisation and timeliness of the national accounts is not straightforward. These accounts

are not computerised, though there has been a recent installation of a micro-computer. This will not be the sole solution to timeliness for the accounts, as they depend on a wide range of sectoral statistics. It should, however, release the time of statisticians in that section for more complex work.

Banking statistics

4.83 Improvements in timeliness have occurred with regard to banking statistics with the production of more frequent *Statistical Supplements* by the Central Bank of Ireland. These relate to a number of the series in the Central Bank *Quarterly Bulletin*.

Department and agency publications

4.84 Appendix 2 indicates the timeliness of public statistics outside those of the CSO. In the case of the main Departmental bulletins, timeliness has been particularly good in the case of the *Quarterly Bulletin of Housing Statistics*. In the case of *Manpower Information Quarterly* and *Energy in Ireland*, however, it has deteriorated markedly from time to time, as evidently other tasks in the respective Departments were given priority. This illustrates the conflicts which can arise within Departments between administrative exigencies and the provision of regular data. Up to recently, timeliness was poor in the case of Department of Social Welfare data, with time lags of 2-3 years, but this is being improved as mentioned below in Chapter 6. Two publications which contain important information and which have not been timely are the annual Report of the Revenue Commissioners and the Statistical Report of the Department of Education. In each case, the time lag is about two and a half years.

Frequency

4.85 By contrast with other "industrial market economies", there is a relative paucity of quarterly data in Ireland. No quarterly national accounts are available, for example. However, in view of the glaring gaps in coverage in the annual data, the production of quarterly national accounts data should receive a lower priority than an improvement in the gaps which are pointed out elsewhere in this chapter. On the balance of payments, there should be quarterly balance of payments estimates, ideally within 3-4 months after the quarter in question. This should also be possible with existing resources.

4.86 No useful data on fixed capital formation are available on a sub-annual basis. Nor is there a quarterly series on stocks, or on profits, although it should be said on the latter point that many firms are unlikely to value stocks quarterly or to have quarterly profits data.

The only short-term series on employment covers the transportable good industries and building and construction. Health service data are available only in annual form, as are social welfare data. Unlike many other countries, a monthly consumer price index is not available. Given the costs of moving to a monthly price index, and the pressing priorities in improving annual data (mentioned above), a move to a monthly price index should not take priority over the other tasks.

Accuracy of Estimates

4.87 The various statistical series will necessarily differ in their potential for error. For example, the balance of payments deficit on current account, which comprises a residual between two large numbers, is inherently prone to a large margin of error.

4.88 It is not suggested that a detailed labelling of different series according to their susceptibility to error is practical. Nevertheless, there is scope for more indication to the reader of where series are subject to a relatively high margin of error. At the moment the only such indication occurs in cases of surveys such as the Household Budget Survey where estimates of sample error are given.

4.89 In the case of the national accounts, their accuracy is almost solely dependent on the accuracy of the basic income numbers. Rather than using a three-way check by means of income, output and expenditure, respectively, the estimates are essentially obtained by the income method. This means that an explicit balancing item is not shown. It also means that personal consumption, which accounts for about 40 per cent of GNP, is obtained as a residual, as also are personal savings, with a large error in estimation likely for the flow of personal savings. Unfortunately, the dropping of the annual Household Budget Survey has removed the main source of cross-check on the expenditure side. The retail sales index is a lone indicator at the moment on expenditure. The accuracy of the adjustment for the "informal economy" would be enhanced if there were expenditure side estimates. Currently CSO does not disclose the magnitude of the adjustment in respect of the informal economy.

4.90 The course of events that gave rise to recent substantial changes to the balance of payments statistics (Central Statistics Office, 1984) exhibited a number of deficiencies simultaneously – the restricted data on profits, the absence of timely and effective coordination between agencies, and, insufficient liaison between producers and users of statistics which are commented on later. A final problem relates to the lack of quality control across the range of non-CSO statistics. In view

of the many agencies which are collecting and disseminating statistics, using different methods, the need for some form of quality control is manifest.

Level of Detail

4.91 By level of detail, one means the extent to which there are tabulations which give a satisfactory level of detail (e.g., on sub-sectors) and which can be used to show the relationship between entities. This has already been discussed under coverage.

Provision of Long and Consistent Time Series

4.92 Much of the work on economic trends, including statistical analysis, requires the availability of a consistent series of data over a time period of at least, say, fifteen years. Consistency here means that the same sector or entity is covered over the whole period. Very few time series of this nature are available, outside some which are available in limited circulation: the Central Bank (1984) Folder and FitzGerald *et al* (1983). There are a number of instances where the assembly of such a series is only possible with a lot of work. An example would be the effort which would be required to compile a series of quarterly earnings statistics from the *Irish Statistical Bulletin* over a fifteen year period, taking all the revisions to the data into account.

4.93 Some of the main cases where long and consistent time series are not available in one place are as follows.

- (i) Industrial output, a reflection of a change in classification which went back to 1973.
- (ii) Industrial earnings and hours of work, which are scattered through the *Irish Statistical Bulletin*.
- (iii) Data in the *Budget* booklet which give only a provisional outturn for the previous year and which is not subsequently revised. It is most unsatisfactory that the only place where one can find a (short) time series of Government expenditure and revenue is the Central Bank *Quarterly Bulletin*. The *Public Capital Programme* has a short time series. The *Budget* booklets make little reference to the difficulties which can arise in comparing numbers over time due to the shifting of certain expenditure items between current and capital expenditure. Typically, where such shifts occur, the data on the new and the old bases are given for only one year. When responsibility for the postal and telecommunications services passed to An Post and Bord Telecom in 1984, the data in the *Budget* booklet were adjusted for 1983 only.

- (iii) Data on assets and liabilities of the commercial banks, as a result of the new banking return which gives data back to end 1982.

Presentation of Data

4.94 One of the most important aspects of presentation is the extent to which there is adequate documentation of *sources and methods*. While this may seem to be an issue for specialists, the correct interpretation of data can be greatly hampered by poorly documented series. Short-term series, such as are published in the *Irish Statistical Bulletin* contain a reference to an article on methods. In addition, published reports contain methodological descriptions (for example, the Household Budget Survey). The weaknesses of these arrangements are as follows.

- Often the original methodological article may have been written many years ago and may not be easy to find.
- In some cases the source material has been published only by international organisations, often based on material supplied by CSO: Eurostat (1982a) on definitions of the registered unemployed, Eurostat (1982b) on vacancies and Walsh (1983) on methods of measurement of the duration of unemployment.
- The source material is not integrated in a composite booklet or series of booklets, available domestically, although some of the raw material is in the *Sources and Methods* booklet for Ireland in the OECD *Main Economic Indicators* series (OECD, 1975).
- There is a marked lack of "sources and methods" material in the national accounts and in the balance of payments tables – all the more notable because of the importance of these statistics. In *National Income and Expenditure* the tables are accompanied by a series of brief notes. Again, one has to go to an externally published source for more details on the methodology of the balance of payments: Eurostat (1980).

In other countries, the practice of providing "sources and methods" for official statistics is much more widespread. There have been recent improvements in this area in Ireland. The *Census of Industrial Production 1979* of April 1984 contains worthwhile sections on background, scope and coverage, and historical development.

4.95 There is need for more "sources and methods" documents. The fact that many descriptions of sources and methods for Irish data are in publications of EEC and OECD (even though some of them are in

fact based on material supplied by CSO) speaks for itself. It would be much more satisfactory for CSO itself to produce and publish this information.

4.96 One possibility would be a booklet which covered the main series. This would be all the more logical as the national accounts and the balance of payments statistics are dependent upon many other official statistics. A related possibility would be one booklet covering national accounts and balance of payments statistics, and another booklet or two covering other statistics.

4.97 Once again the public expenditure data score poorly. The *Budget* booklet and the *Public Capital Programme* contain almost no notes which would help the reader to interpret the data. Indeed, at a time when there has been a marked change in the monetary and institutional framework, these documents have retained their broad format (with some changes, admittedly, in the *Public Capital Programme*).

4.98 There is need for an adequate set of notes to accompany the *Budget* booklet and the public expenditure tables. These would describe the main statistical series and their characteristics. For example, there is need for a full explanation of the treatment of national debt interest.

4.99 The other aspects of presentation relate to layout and graphics. As these are linked to the dissemination of statistics, they are taken up in Chapter 7 on dissemination.

Concluding Remarks

4.100 With regard to the resources devoted to official statistics, as measured by the admittedly partial index of expenditure by the CSO, it seems clear that the increase in demands made upon the CSO by the EEC, combined with a fall in staff numbers since 1981, has resulted in a diminution of the volume of resources available for other users. While the coverage of some series has improved, notably those to do with unemployment and banking, many other series remain fragmentary in their coverage.

4.101 A detailed examination of the coverage of the statistical series led to recommendations for improvements in the following broad subject headings.

- (a) National accounts and Balance of Payments, mainly involving more detailed disaggregation.
- (b) Employment and labour force data, particularly the produc-

tion of information on "flows" as well as "stocks", more detailed employment classifications and cross-tabulations with household types and the adoption of a *de jure* as opposed to a *de facto* Census of Population.

- (c) Public sector employment, through the provision of a regular publication with a consistent and comprehensive time series.
- (d) Public expenditure, mainly to do with more consistent data on a programme basis along with expenditure series in both money and volume terms and data on tax expenditures.
- (e) Industry and trade statistics including further improvements in timeliness for the Census of Industrial Production, greater disaggregation of the international trade data and linking of the trade and industrial data. Recommendations and suggestions are also made on the improvement of data on companies, on transport and on building and construction.
- (f) The service sector on which the available data is very poor. Besides the use of Revenue Commissioners' data which is explored in Chapter 6, it is suggested that the ESRI/CII business survey might be extended to the retail sector.
- (g) Banking and financial statistics, including greater detail in the Central Bank *Quarterly Bulletin*, improved coverage of building society activities and a feasibility study of a survey of household balance sheets.
- (h) Company statistics, where a number of recommendations are made on making better use of Companies Office data.
- (i) Social statistics to do particularly with improved data on household ideally by development of a general household survey, and in the interim by consideration of how existing surveys might be adapted to provide some of the necessary information.
- (j) Earnings and the distribution of income including in particular a move towards a regular earnings survey.

4.102 Priorities with regard to improvements in timeliness are the national accounts and the Census of Industrial production (building on recent improvements in the latter case).

Finally few estimates of errors are ever provided and quality suffers both from a lack of lengthy consistent time series data and from poor documentation of sources and methods.

CHAPTER 5

COMPILATION OF STATISTICS

Introduction

5.1 This chapter assesses the various methods of data collection with a view to seeing whether more effective methods could be employed, and also explores other dimensions of statistics compilation. At a time when a limited amount of resources is available for the provision of statistics, the quest for better ways of compiling data acquires a degree of urgency.

5.2 The chapter begins by examining the way in which data are collected across the public sector, paying some attention to the growth in data collection outside CSO. The ways of making the best use of this data collection and of avoiding a proliferation of inquiries, are examined. Particular emphasis is put on the need for an efficient co-ordinating capability. There follows an assessment of alternative ways of collecting industrial statistics. A number of issues which concern data collection come up when considering the choice between censuses and surveys. Hence, a section is devoted to considering the respective merits of censuses and surveys and a further section is devoted to a brief consideration of sample inquiries and administrative records.

Overview of Data Collection Outside CSO

5.3 There are a number of ways through which data can be collected: censuses, continuous surveys, *ad hoc* surveys, and administrative records. Outside the CSO, published statistics tend to come both from regular surveys (such as those of the National Board for Science and Technology) and the use of administrative records (such as those of the Department of Social Welfare). *Ad hoc* surveys are more unusual. There are also cases where there is the potential to use samples of administrative records. For example, the only published work on the underlying reasons for earnings differences in Ireland (Walsh and Whelan, 1976) came from a sample of administrative records of the Department of Labour.

5.4 In addition to the above there are unpublished data sources, some of the main instances of which are described in Appendix 4: the IDA employment survey which is based on a census of manufacturing firms,

the EEC consumer survey and the Department of the Public Service (DPS) partial information system on public sector employment. The latter is based on a census of public sector employment which suffers from incomplete coverage, as mentioned in Chapter 4.

5.5 Only part of what is potentially available from unpublished material is covered in Appendix 4. In addition, there are *ad hoc* surveys which are done by Departments and by public bodies, surveys such as those done by the ESRI survey unit for the purposes of ESRI work, and surveys done by other research agencies and by individual researchers. In the case of the annual survey of school-leavers, which has been done since 1980 by The Economic and Social Research Institute for the Department of Labour, there is a published outlet. This is through an annual report of the survey, available from the Department of Labour. However, that report embodies only part of what could be made available through fully analysing the survey results. In addition, with some additional work, this survey could yield valuable data on work history (thus going beyond the one year compass of the survey).

Making the Best Use of Non CSO Data Collection

5.6 Three main issues can be isolated with regard to making the best use of data collection outside the CSO. First, while there are many *ad hoc* surveys done by Departments and other bodies, surveys done by the Economic and Social Research Institute in the context of its own programme of research and surveys done by other research institutes and by individual researchers, none of this body of material is available in one place. Nor is it even catalogued. There is no centralised users' guide to the body of data. Hence, the data which are collected are under-utilised. This is the case, for instance, with regard to the survey data on the labour force and school-leavers which the ESRI collect. It is also evident from the discussion of the DPS employment data in the last chapter: cross-tabulations of employment by age, grade, length of service and sex would for instance be of much interest.

5.7 Second, there is a danger that the current round of computerisation which is occurring among public sector bodies will result in further fragmentation. There is, for example, a danger that computerisation among local authorities will proceed in a way which obviates the possibility of developing an adequate data bank. To take another example: the Department of the Public Service is to expand its personnel information system. Ideally, in this process, the CSO should be consulted and compatible codes for occupations and other entities used.

5.8 Third, there are other weaknesses in the collection of statistics

outside the CSO:

- the degree of overlap in the various inquiries, which may give rise to resistance on the part of the suppliers of the raw data;
- a lack of concordance with CSO categories which has already been pointed out with regard to AnCO manpower data and which also holds with regard to the DPS data on employment in the public service;
- a limitation on realising the full potential of cross-tabulations, which are possible only *within* each inquiry.

5.9 The question arises whether there is some potential for rationalising the data-gathering which is undertaken by State-sponsored Bodies from Irish firms. A number of these bodies – AnCO, The Institute for Industrial Research and Standards, and the National Board for Science and Technology – collect data from Irish firms, as does the CSO itself. On the surface, this could contribute to the problems of non-response and of slowness in response which are mentioned in Chapter 4. This may be the case up to a point, but it has to be qualified in view of the client relationship which exists between many of these firms and the State-sponsored body in question, a relationship which is likely to be conducive to high response rates.

5.10 A more compelling reason for seeking some rationalisation is the richer potential for cross-tabulation (e.g., exports by research and development activity or by type of grant received) which would ensue. At the moment this is limited to the headings used in each individual inquiry. Moreover, on foot of rationalisation, there would arise a common set of standards in respect of methods of compilation and of analysis, which should be in accord with CSO categories as regards coding. Work would have to go into checking and to ensuring consistency in the data. There would, of course, remain a sub-set of data which would be confidential to individual agencies.

Industrial Statistics

5.11 One of the reasons why firms can be slow or negligent in the response to industrial inquiries of CSO is the fact that the necessary statistics are not the outcome of company record-keeping. The latter is done for purposes of accounting and of financial and management information. The questions which are asked in the Census of Industrial Production do not match the data which are in the published financial accounts, although some of the data may be in management information accounts.

5.12 It is recommended that, in consultation with the Confederation of Irish Industry, the CSO engage in a pilot experiment to encourage and influence the development of a software package of modest dimensions for Irish firms. This would combine the virtues of providing financial accounting information and meeting the requirements of the CSO for data from firms. This could help to get over the problems caused by the lack of concordance between CSO requirements and company accounts requirements.

5.13 Computers could, in principle, be used for the collection of industrial statistics. There could be direct input of data by firms to CSO by computer, either by tape or over the telephone. This could also facilitate the provision of data in the opposite direction from CSO to the firms. Whatever about the use of computers for the dissemination of information, the above picture of data *collection* by computer is currently well ahead of what is likely. This is partly due to the structure of Irish industry, with a relatively large number of small firms. It is also due to the type of response problems being met by the CSO from industry where the barriers to speedy or to any response lie in the lack of up-to-date raw data together with little motivation to supply the data.

Other Aspects of CSO Compilation

5.14 There is need for CSO to complete its current round of computerisations. This means computerisation of agricultural statistics, earnings statistics and (to some extent) the national accounts. There is also need for more "on-line" facilities including better on-line access to registers.

Censuses Compared with Surveys

5.15 One question which has become prominent in a number of countries is the extent to which data collection by census should be replaced by surveys. The main issues here can be outlined as follows, by taking the Census of Population.

5.16 Across a number of European countries there has been a reduction in the frequency of census-taking. This reduced frequency in census-taking reflects a number of elements, including:

- the labour-intensity of census collection, with a resulting increase in costs of collection;
- the potential to replace the census with either population registers or surveys;
- the increasing sensitivity to possible invasion of privacy by computer analysis of census data.

5.17 It may be noted that one of the options which has been employed in Germany and in Denmark – a population register – is not available in Ireland. At the same time, there have been a number of problems which have surrounded the census in many countries, i.e.:

- a likely under-enumeration in urban areas,
- delays in producing publications in traditional “hard copy” form;
- difficulties in ensuring a sufficiently high calibre of enumeration staff;
- demands by many users for “micro-data” (giving particulars on individuals) to be available in anonymised form and the lack of such data outside a select number of countries;
- refusals to answer due to perceptions that privacy was being invaded.

It should be added that many of these problems, i.e., under-enumeration, delays and demands for micro-data also arise in the case of surveys.

5.18 The key questions which arise are as follows:

- should the census continue?
- if so, should it be taken at the same frequency?
- and could costs of collection and time-lags in dissemination of results be reduced?

5.19 These questions need to be resolved, bearing in mind the relative advantages of census and surveys. The main advantages of censuses are as follows.

- (i) They provide a relatively full coverage by topic and by area. The latter is especially important as there is a continuing demand for data at the level of the county and at small area level (that is, down to District Electoral Division). The Labour Force Survey has shown the limited extent to which sub-national data can be provided from surveys.
- (ii) They can serve as a sampling frame (i.e., a list of all members of the population to be sampled) for sample surveys or for micro-censuses (which are large-scale sample surveys, carried out as a substitute for full population censuses).

5.20 The main advantages of sample surveys by comparison with a census are as follows:

- (a) there is a greater speed in the dissemination of results;
- (b) there are low costs of collection, partly due to the savings of clerical staff;
- (c) in the case of certain questions such as double-jobbing or whether a person is retired, a survey together with an interviewer may yield more satisfactory answers than self-description under a census; in general there can be greater reliability due to fuller and more accurate response to a personal interview rather than to a self-administered questionnaire;
- (d) there is a greater ability to respond to topical policy issues.

5.21 One of these advantages of surveys must be qualified in the case of a relatively small country such as Ireland. A small country requires a sample size which is not far short of that required in much larger countries, in order to achieve a given level of precision. This means that the cost savings which would arise from a move to surveys in Ireland would be limited. There are other reasons why there could be only limited cost savings. One implication of a move to surveys would be the need to use more staff at statistician level. And there is considerable expense involved in collecting data by personal interview from households.

5.22 On balance, the Census of Population has a number of key advantages which argue in favour of its retention and argue against its replacement by a survey. These key advantages are as follows:

- the provision of data at county and small area level;
- the relative cost-effectiveness of the data collection by comparison with surveys;
- and the lack of a satisfactory sampling frame for a survey other than the Census itself.

5.23 At the same time, it could be worth while to consider using the Census for asking a relatively small number of key questions such as population by age and sex and labour force status. Surveys could be employed for asking more detailed questions on, say, housing and travel-to-work patterns than is possible in the current census. There is a trade-off here: the census cannot be overloaded, yet a survey will be limited in the extent to which it can give statistics by area – it would not be able to give much below the level of planning region.

5.24 In view of the marked changes in population and in migration in recent years, there are compelling arguments for retaining a five year frequency for the Census. On the question of cost, there is a large “overhead” cost element in the census, which limits the extent

to which there could be any reductions in costs through reducing the number of questions asked.

5.25 The question of timeliness in issuing results is taken up in Chapter 7, under data dissemination. One final problem is that of resistance on the part of households to answering census questions, which have been observed in a number of countries. It may be noted that this resistance can arise in relation to all types of data gathering whether census, survey or through administrative records. There is need for a constant effort on the part of the census office to inform the public about the nature of the census. These relations with the public can both inform people about the usefulness of the census and also allay any untoward fears about invasion of privacy. This could be done in part through the schools and by informing teachers about the census.

Sample Inquiries and Administrative Records

5.26 At first sight, there would be potential for the use of samples derived from administrative records – on grounds of cost-effectiveness, as interviews would be avoided. However, as manual records are replaced by computerised records (with Social Welfare data being a case in point) this argument loses validity. It is as easy to produce data from the full set of data in the case of computerised records.

5.27 A sample approach to production inquiries, using either existing procedures or interviews, would not be feasible because industrial detail is required at individual industry level.

5.28 The next chapter takes up the potential which the use of administrative records offers. Despite the potential for using administrative records, there are many issues of economic and social policy where there is no substitute for census or survey statistics at the level of the individual or of the household – especially when it comes to establishing relationships between various entities. This is particularly the case in view of the increasing incidence of “non-standard” households such as lone-parent families and the proliferation of issues on family policy. Hence, the points made in Chapter 4 about the need for a general household survey and about the possibilities, in the interim, of employing the resources of certain existing surveys.

Concluding Remarks

5.29 This chapter has shown that there are a number of ways by which a more efficient system of collecting statistics could be achieved. In part this would be through achieving an effective degree of co-ordination in statistics collection outside the CSO and through avoiding unneces-

sary overlap in these inquiries. With regard to the choice between censuses and surveys, in the case of the Census of Population there are compelling reasons for retaining the Census at a five year frequency. But one possibility would be to ask a smaller number of questions than is currently the case, and to use surveys for additional topics. The other key issue on compilation is the potential for using administrative records. This leads directly to the next chapter.

CHAPTER 6

THE USE OF ADMINISTRATIVE RECORDS

Introduction

6.1 In this chapter we consider the potential of using administrative records as a source of information for policy appraisal and design. We start by explaining what administrative records are and how they differ from other forms of data. We then go on to outline the advantages and limitations which govern their use and describe some features which administrative records should have if they are to be used to best advantage. We then consider how the potential for exploiting administrative records is affected by the spread of computerisation.

6.2 As examples of the potential which is inherent in administrative records we look at two such sets of records: Revenue Commissioners data and Social Welfare statistics. Of course, the interest here lies in aggregate data, not in data on particular individuals. The wealth of information which could be collated and analysed if these data were used to full effect is indicated. In particular, the improved knowledge of such topics as earnings, income distribution, and socio-economic characteristics of Social Welfare recipients which could be gleaned is pointed out. In doing so, some of the principles which are discussed earlier in the report are exemplified, and the barriers and constraints which lie in the way of a successful application of principles are illustrated.

6.3 The chapter also considers the question of integrating social welfare and Revenue Commissioners data and looks at the extent of computerisation throughout other Government Departments and agencies. The chapter concludes by drawing together recommendations with regard to the use of administrative records.

The Nature of Administrative Records

6.4 Administrative records comprise information which is collected as a matter of routine in the day-to-day management or supervision of a scheme or service or revenue-collecting system. In the public service, administrative records are kept over a wide range of agencies and departments and pertain to a wide range of administrative functions. The most important of these would include the processing of tax and social welfare payments, processing of claims for social welfare payments

and of applications for a variety of grants, as well as administrative data on the participants in education and training programmes and on the occupants of local authority housing.

6.5 Administrative records are collected at the lowest possible level of aggregation – the individual taxpayer/applicant/recipient/participant. The individual data kept in administrative records will depend upon the scheme or service in connection with which it is collected in the first place. They will typically include age, sex, marital status and other information relevant to the criteria of eligibility or liability for the service/charge in question and will often include data on income, number of dependents, occupation, employment record, etc. The usefulness of such data when aggregated or cross-tabulated can be very great.

Using Administrative Records

6.6 Before considering the advantages and disadvantages of using administrative records as a source of aggregated or tabulated data, it is worth bearing in mind a number of general points which indicate the circumstances in which the best use of such records is likely to be made. These points have to do, in the main, with the questions of resource use and co-ordination.

6.7 First, the only aspects of administrative records which are reliable are those which are regularly used by the authority in question and are, therefore, kept accurate and up to date.

6.8 Second, considerable clerical resources may be required to maintain administrative records for statistical analysis purposes (i.e., keeping designatory details up to date, elimination of duplication, etc). If administrative records are to be fruitful for policy purposes, they need constant attention. Important administrative details required for analysis purposes (e.g., designatory details such as business description, occupation, age) are not usually complete or up to date because they are not frequently used by the authority. Authorities may not be keen on using people to maintain the records for statistical analysis, as they may have other priorities in mind. This is the biggest handicap to the use of these records. However, it should be noted that statistics based on administrative records can be collected at relatively low cost, by contrast with surveys, for example.

6.9 Third, there would also be need for close co-ordination between statisticians and administrators, in order that the needs of both administration and statistics provision are met. Decisions have to be made

about classifying data in cases where there may well be conflicts between the desires of different users. The definitions and categories thrown up by administrative records will reflect the administrative process (e.g., entitlement to benefits, tax regulations) and may not be altogether suitable for statistical usage. Ideally, statisticians should be involved at an early stage, either when regulations are being formed, new systems are being put in place or manual records are being computerised. Ideally, entities (such as definition of income) and codes (e.g., for occupations) should be compatible with those being used by CSO.

6.10 Fourth, there is some danger that recourse to administrative records would damage the well-established reputation among the public which the CSO has for confidentiality. This need not occur – especially when, as would typically be the case, the records would not be housed in the Central Statistics Office – but it would have to be guarded against.

6.11 Fifth, the increasing use of computers in public administration means that the potential uses of administrative records are enhanced. For statistical purposes there is need to aggregate data and to cross-tabulate data (e.g., number of beneficiaries classified by age and sex). At the same time there is a danger in this increased use of computers: there could be an increased number of mutually incompatible definitions of entities and codes. Especially at the time when schemes are designed, changed, or computerised, there is need to be sensitive to the possibilities of using these records to provide statistical tabulations. This would mean consulting with statisticians at the design stage. If consultation were to occur too late, a costly redesign of systems could be required. Experience to date with some of the sources given in the appendices – with their examples of lack of compatibility with CSO data and changes over time in categories which impede time series analysis – does not inspire confidence that this can be avoided without policy initiatives.

6.12 Related to this, there is a potential advantage, which at the same time throws up a potential problem. Much of policy analysis requires linkages – either to CSO data or to other Departmental data. An example would be the relationship between social welfare payments and patterns of work. Such linkages are either quite difficult to effect or can raise problems of confidentiality. There may not in fact be any breaches of confidentiality, but if people felt that there were, the degree of public consent which is required would be shaken.

6.13 Administrative records have uses other than as a statistical by-product. They can provide sampling frames for surveys, and can help

in the evaluation of the reliability of data which come from censuses and surveys.

6.14 As regards the statistical properties of data collected from administrative records the following advantages may be noted:

- they avoid problems of response which occur when there is resistance on the part of suppliers;
- they can at times be more definitive than survey data insofar as they are based on “objective” criteria rather than on what a respondent says, and are not subject to sampling error.

6.15 However, they have the following limitations.

- (i) The data often thwart any possibility of testing explanatory hypotheses. Thus, for example, car registration data do not enable the relationship between car ownership and income to be tested.
- (ii) There can be biases in the derived statistics. For example, the regular count of the unemployed come from Live Register data, yet the Labour Force survey shows that a substantial minority of persons who were unemployed were in receipt of neither benefit nor assistance. The lack of fit between Live Register and Labour Force Survey data is evident. Another example comes from tax statistics: tax evasion and tax avoidance can lead to distortions in the derived income data.

6.16 There are a number of reasons why greater effort should be made to use administrative records as sources of statistics. Limited resources are available for gathering statistics by surveys. Based on administrative records, it may be possible to produce statistics at lower cost than by means of surveys. There has been increasing resistance on the part of respondents to providing information to statistical offices (indeed, this was the main reason why the pre-1968 survey on the distribution of industrial earnings by the CSO was dropped). In addition, income data derived from administrative records have the potential for being more accurate than income data derived from surveys which are subject both to sampling error and to understatement of income. In a number of cases, there are no survey data at all on incomes. In the case of the service sector, relatively little data are available on earnings and employment. This is true even for the public sector, where the only readily available information is on civil service employment. There is simply no possibility with existing resources that the CSO could mount an earnings survey, for example, in order to cover the service sector adequately.

Administrative Records and Computerisation

6.17 The preceding section contains references to the links between computerisation and the potential for using administrative records. The spread of computerisation will have both positive and negative effects on the use of administrative records. Some of the dangers have already been alluded to.

6.18 In general, however, the potential for making greater use of administrative records as a data source, or as a basis for sampling, will increase as existing records become more computerised. This will also enhance the potential for cross-tabulations. A number of Departments and agencies are now apprised of the potential for decentralised collection and dissemination of data via micro-computers. The idealised picture, thus, is one where the current constraints on resources are loosened through a combination of the use of administrative records allied to computer collection and analysis.

Revenue Commissioners Data

The Data

6.19 Appendix 9 describes the published and unpublished data which the Revenue Commissioners provide as a by-product of their activities. There are a number of purposes for which these data could be used:

- earnings;
- employment;
- income distribution;
- business activity;
- profits;
- taxation;
- coding of firms.

6.20 The motivation for using such data is manifold. Earnings data are of use, indirectly, for assessing trends in general economic activity, since personal consumption is related to personal incomes. Another motivation for the use of earnings data is because of the interest in incomes policy. Data on the distribution of income and taxation are of use in forecasting tax revenue, for testing the tax revenue yielded under a range of alternative assumptions, for assessing the redistributive effects of possible changes in the tax structure, for assessing the relationship between tax policy and social welfare policy, and for assessing the effects of policy changes on the distribution of income before and after income taxes. Data on business activity are useful for analysing current economic trends.

Earnings

6.21 With regard to earnings, the Revenue Commissioners data have the potential for providing indicators of earnings and of employment classified by industry which would enable manufacturing industry, services and public administration to be identified separately. Earnings of employees by sex are already produced, from which the average earnings per employee can be derived. These could be extended to give a breakdown by NACE industrial classification. The minimum time lag which would be involved would be about 15 months from the end of the year to which the data refer. There would also be the need to revise data over time as more accurate assessments for tax were made – which would arise especially in the case of the self-employed, but would also arise due to the delays by firms in returning data on employees taxed under PAYE. However, this type of revision already occurs with the published CSO data on earnings. It is also worth noting that the coverage of these earnings data would be far wider than the existing data on industrial earnings which are widely used and which cover only about 20 per cent of those who are at work.

6.22 Appendix 9 describes the characteristics of the basic income data and the possible new data which could be produced with a greater commitment of resources: average income by industry and occupation and by sex, across all sectors.

6.23 The employers' monthly PAYE and PRSI returns could give indications of movements in earnings and employment within the year. These returns do not provide information at employee level but show:

- an aggregate figure of income tax deducted from all employees;
- the aggregate amount of employee and employer PRSI deductions for the month.

Any use of these data for analysis of trends would have to take account of the following.

- (a) All employers or even the same group of employers may not return their data every month.
- (b) Fluctuations in tax could be due to changes in bands or allowances rather than to earnings trends.
- (c) Changes in PRSI contributions could relate to people reaching ceilings or to classification of employees.
- (d) Employers could vary their returns each month to suit their cash flow rather than to reflect their employee deductions.

6.24 The provision of such information would be a significant addition to the existing range of statistics. Inevitably, limitations would remain. First, given the time lags involved, reasonably up-to-date information would only be available on employees outside agriculture and would exclude data on the self-employed. In this regard, there has been an increase over time in the proportion of people at work who are self-employed outside agriculture.

6.25 Second, as with all data based on administrative records, the categorisation would be based on administrative regulations. As a result, the employment data would not necessarily be consistent with those collected in the Census of Population or in the Labour Force Survey. Changes in regulations can adversely affect coverage and continuity for any derived data series.

6.26 Third, the data could not be grossed up to reflect the population as a whole, given the way in which the structure of output and employment is changing. However, this limitation also applies to the current CSO data on earnings in industry.

Employment

6.27 The data which are collected for the purpose of PRSI contributions include the number of insurable weeks which could be equated with number of weeks worked and hence could provide data on the number of person-weeks which are worked.

Income Distribution

6.28 Appendix 2 describes the existing income distribution data which are published by the Revenue Commissioners and Appendix 9 outlines the unpublished income distribution data of Revenue. Further analysis of the existing data would provide tabulations which would be of interest. The distribution of income after tax by range of income after tax is already produced for the combined PAYE and Schedule D taxpayers as part of the unpublished tables on income distribution. Also of interest would be the distribution of income with more details on family status, such as a breakdown by number of children (subject to the limitations mentioned in Appendix 9 about definitions of child dependants), data by age group for those aged 65 and over and those aged 75 and over, and data by employment status (where Appendix 9 qualifies the latter).

6.29 Other possibilities with regard to income distribution would be possible only with a significant commitment of resources. These would include the following:

- (a) the linking of income tax and social welfare computer files in order to examine the cases of low incomes; in this regard there is a common Revenue and Social Welfare insurance number for PAYE cases but this is not so in the case of Schedule D taxpayers;
- (b) the possibility of random samples of tax records (stratified to ensure adequate coverage of all types of income) with the aggregate results controlled against total income and total tax payments as a check on accuracy.

Business Activity

6.30 The VAT data provide a possible basis for estimating purchases, sales and turnover, which would indicate business activity. Ideally, the earnings and the employment would be matched with turnover. This could be done by Revenue adding to the P35 form, which employers return to Revenue, a business description with name and address. This could enable each new "birth" of a firm to be added. Thus, the VAT data could be used to indicate the trends in new firm formation and in firms which cease to trade. The VAT information could also provide an indication of trends in economic activity within the year which would be up-to-date and frequent, as it would appear at intervals of two months. However VAT data are currently unreliable as an indication of purchases and sales. Currently, 26 per cent of the VAT base is zero-rated, there is a range of exempt activities and not all traders are obliged to register. In practice, many traders confine themselves to returning their taxable sales and purchases only. Moreover, VAT trading details supplied in returns may not be correct and several months may elapse before these are put right. And VAT records are not coded according to the NACE classification (used by CSO for industrial statistics).

Profits

6.31 Data on profits are among the least satisfactory in terms of coverage, and it should be possible to provide some information in this area. Data on profits assessed to tax are already available by NACE industrial classification; these statistics will be extended to Corporation Tax when the assessment of Corporation Tax is computerised.

Taxation

6.32 With the increasing interest in the tax system there is need to consider the provision of a greater quantity of more regular and timely data on tax receipts and associated matters. It would be desirable if the following tabulations were produced regularly:

- the distribution of taxpayers by marginal rate band, and the

- proportion of total income tax which is charged to each group;
- a breakdown of income tax receipts by PAYE, farmers, other Schedule D and other;
- data on tax owed and backlogs in tax receipts;
- the proportion of PAYE tax receipts which come from income tax on wages and salaries of employees as conventionally defined;
- the proportion of corporation tax receipts which should be assigned to Schedule D receipts, in order to help towards an estimate of tax paid by the self-employed.

As all of these data tabulations are already possible, they should not involve any significant additional commitment of resources.

Coding of Firms

6.33 The Revenue Commissioners' data could help the coding of firms. While the CSO uses a variety of sources for coding firms in the industrial statistics, there are often difficulties in picking up the formation of new firms. At best, there can be time-lags before the CSO is aware of new firms.

Constraints

6.34 There are two main constraints which lie in the way of moving towards the provision of the above data. One has to do with objectives. Understandably, the Revenue Commissioners regard their main purpose as collecting money from the tax system and would regard information provision as, at best, a subsidiary objective, or at worst having no justification at all. But there is no incentive for the Revenue Commissioners themselves to take account of the information provision objective. Rather the opposite. If Revenue staff are switched from revenue-raising in order to provide more information, the Revenue Commissioners will be in danger of drawing criticism for failure to maximise tax revenue.

6.35 The second constraint concerns the matter of resources. Currently, in the Statistics Branch of the Revenue Commissioners, there is a small staff which is engaged in various statistical work. There is a separate Data Processing Division which serves Customs and Excise and Inland Revenue. Much of the work of this Division is concerned with budgetary and legislative changes and managerial tasks such as the replacement of computer systems. Currently, that Division estimates that there is a two year backlog of work. This backlog comprises major projects which range over the whole tax area. The growth in the complexity of the tax systems coupled with restrictions on staff replacement in recent years

have meant that there is no slack in the Revenue's resources to enable work which it would regard as inessential to the primary task of collecting revenue to be undertaken.

6.36 One other barrier to the use of the data is that there might be need to get information from taxpayers which they would see as irrelevant to the calculation of their tax liabilities.

6.37 If the basic data were "clean", using the automatic data processing facilities which Revenue has would require little use of resources to produce the desired data. The biggest obstacle in the way of producing tables which would help policy-making outside the specific remit of Revenue is the need to deploy clerical workers to "clean" the data with regard to designatory codes. This is especially the case as Revenue is prepared to consider the provision of a subset of the basic data on magnetic tape to outside agencies – with the individual identifying characteristics removed. Users could then analyse these data using either a software package or a custom-built program. This would be a particularly valuable facility.

6.38 The checking and updating of the existing business information on the Revenue computer files (NACE classification and business activity information) would require quite a lot of work. Older cases may have only vague business descriptions or none at all on file. In some cases it might be necessary to contact the employer for the information. The greatest amount of work would be of a "one-off" nature but there would also be continuing work.

Department of Social Welfare Statistics

6.39 Appendix 2 outlines the scope of the statistics which are published in the annual statistical report of the Department of Social Welfare, the first of which was published in 1985.

6.40 The Department has been gradually computerising its records. This computerisation involves both putting on computer the large stock of manual files (covering existing beneficiaries) and putting new beneficiaries on computer. Because of the magnitude of this task, the Department has had to limit the number of pieces of information which are put on computer for each beneficiary.

6.41 Certain benefits are wholly or partially computerised. Disability benefit is fully computerised and the computerisation of children's allowance is essentially completed. In the case of pensions, the computerisation of contributory and retirement pensions is effectively

completed. Various supplemental schemes (Family Income Supplement, rents subsidy) have been computerised and there are plans to deal with the free schemes which give non-cash benefits, as resources permit (probably in 1986). Details of age, sex, marital status and occupational and regional entities have, as far as possible, been built into recent schemes (pension, Family Income Supplement, rent allowance, children's allowance) in order to provide better profiles of beneficiaries. In addition, the computer software on existing systems has been altered to provide more statistics. For example, since 1982 the nature of the incapacity has been identified in respect of disability benefit.

6.42 In its central records section, the Department maintains records of pay-related contributions for about 1.1 million insured persons collected by the Revenue Commissioners through PAYE since April 1979. This system is more than a record of contributions paid. It has the potential to supply a profile of the insured population covering elements such as age, sex, marital status and claim frequency. The information on the system is not complete, although work is currently under way in the Department to supplement the data with data previously held on the registers of the old manual system.

6.43 There are a number of unused statistical features in these central records, notably one designed to incorporate occupation. An occupational classification of the insured population would be most useful. However, its establishment would depend on both employers and Revenue recording that information for every individual and sending it on to the Department. This would create extra work for employers and for Revenue neither of whom would, apparently, stand to gain much. This is an example of where the links between Revenue and Social Welfare are weak. This central records system has enormous potential to link records and even (with some extra work) to provide some data on benefits over people's working lives.

6.44 The statistics collected by the Department of Social Welfare were formerly used to estimate unemployment as a proportion of the insured labour force. Since 1979 these estimates have not been available and the recently published data on insured employment in the annual report of the Department are markedly higher than employment as given in the Labour Force Survey. The problems which are currently encountered in the Department's annual estimates of the insured labour force reflect the fact that the Revenue Commissioners act as agents for the Department and provide edited data for the Department, among which there seems to be a deal of double-counting. Nevertheless the Department maintains that it has done all it can to clean up cases of

double-counting. At the same time these estimates have become less critical due to the advent of an annual Labour Force Survey.

6.45 A good deal of important information for the formation of social policy is potentially available but not made available. For example, no data on recipients of social welfare benefits by sex and marital status are given in most cases. No data by age or other characteristics are given. Taking a rudimentary but important example, it is not known what proportion of recipients of Supplementary Welfare Allowance are also receiving a non-contributory old age pension. Yet this would shed light on the income adequacy of the pension. Two other examples can be given. No data on actual replacement rates (proportion of pre-benefit income which is maintained by social welfare payments) are available. Such replacement rate data would be central to any study of the relation between social security payments and work incentives. Nor are there data on take-up of benefits, i.e., the extent to which those who are eligible claim benefits. This has a bearing on the question of whether means-tested benefits lead to a noticeably lower than average rate of take-up.

6.46 There is now a greater potential for the provision of information which would be relevant to policy, due to the computerisation. There are still limitations, which can be illustrated by taking the cases of disability benefit and children's allowance as examples. Only information which is relevant to the respective payment process is keyed in to the computer. This is deliberate policy in order to minimise processing delays and to make the greatest number of payments as quickly as possible. Any additional information provided in the forms returned by applicants for these benefits is available for manual inspection. There could, of course, be a sample survey of those forms, but that would take a lot of resources.

6.47 A number of cross-tabulations would be helpful to policy analysis and would give valuable information on the positions of the recipients of benefit, whereas the data at the moment are classified in the main by administrative category, typically the type of benefit. Some examples are given in Appendix 10 where they are accompanied by a comment on the current position.

6.48 Cross-classifications other than those listed in Appendix 10 which would be of interest include classifications by industry, occupation and work record. Similarly, one would like to know the extent to which, say, contributory and non-contributory pensioners, respectively, receive non-cash benefits. This is also impossible with the existing raw

data, although an estimate (based on a survey done some years ago) is available.

6.49 Apart from the above-mentioned data on replacement rates and on take-up of benefit, there is other information which, if regularly disseminated, would be useful for policy, but which would not be possible via the computerised system. This would include:

- the number of beneficiaries of non-cash benefits such as free travel and free TV licences, together with the cost of these benefits;
- claims for benefit classified by reason for rejection in cases where rejection occurs;
- with regard to the social welfare appeals system, the reasons for decisions, and the number of appeals which are challenged;
- the number of registered employers who are responsible for very small numbers of employees; in view of the time and other costs which are involved for very small employers, this might have implications for the way in which such employers are catered for by the Revenue Commissioners and by the Department of Social Welfare.

6.50 In relation to appeals, only the number of appeals is available. It is evident from the above that a priority should be the provision of further data on the Supplementary Welfare Allowance system (not just on payments but on claims for payment). This would provide an implicit indication of the adequacy of benefits.

6.51 In general, the social welfare data are compiled by administrative programme rather than by individual recipient of benefit. Hence, in many cases (except in the case of assistance payments), it is not possible to know the number of people who are participants in more than one programme, something which would be of considerable interest. In fact, items of personal data are held a number of times, due to the existence of independent benefit files. There is need to develop a computer data base with a single record for each client. This would enable the Department to read off an individual's entitlements. In such a system there would be a common set of identifying data such as income and number of dependants. The Department would have reservations about such a data system for four reasons: the additional resources which would be required to produce and maintain it, the possible invasion of privacy (or perceptions of this), a perceived lack of need for policy analysis using such data, and the conscious adoption of operational independence between functional areas. On the latter the Department feels that a

highly integrated approach could mean that all projects would move at the same pace, that of the slowest moving project. Despite these reservations, an aim should be to develop a data base with a record per client. Fears about invasion of privacy are taken up below.

6.52 Under existing conditions, an integrated system containing *both* tax data and social welfare benefit data, or even the capacity to link tax data with social welfare benefit data, would be even more difficult to achieve. This is for the following reasons:

- the existence of legal barriers;
- the strict interpretation on the part of Social Welfare of regulations concerning the release of data and even stricter interpretation of such regulations by Revenue;
- the likely judgement that public opinion could well be hostile to the idea.

6.53 With regard to the second impediment listed above, there is room for some relaxation of these attitudes towards release of information. The best way in which this could happen would be in the context of the recommendations made in this report (Chapter 8) on data protection including the ensuring of anonymity and safeguarding of privacy. The putting in place of a strict protocol on data protection would help to mitigate the third impediment referred to in the last paragraph.

6.54 There are no insurmountable problems of physical incompatibility between the two computer systems. Computer hardware would be a constraint only if Social Welfare were aiming for on-line (VDU) access to Revenue or vice versa.

Other Public Administration

6.55 Among Government agencies generally, there has been a considerable penetration of computerisation. About 50 departments, offices, and public service agencies now use the facilities of the Central Data Processing Service, with the Department of Social Welfare and Health Service agencies being the biggest users. However, the bulk of Social Welfare computing is carried out on its own machines. Under the recommendations of the Review Body on Computerisation in the Government Services (June 1982), every department and office would be assigned primary responsibility for managing its computer-based information services, and ten departments and offices would be equipped with a full internal computer system (Public Service Advisory Council, 1983). However, the development of these capabilities would not

guarantee the best use of resources, without a close link to the planning functions within and across departments, relationships with outside information outlets to ensure compatibility and a firm policy on dissemination. The case of health statistics is a clear example here (para 4.74). In cases where Government Departments have a computerised set of information, there is need for this to be linked to planning and policy functions instead of being separate, as now tends to be the case.

Recommendations

6.56 The potential uses of Revenue statistics – both to fill gaps in series and to augment other sources – have been outlined above. While there would be need for the deployment of additional resources to achieve this potential, the data should be capable of production at far less cost than through purpose-built surveys. Among the gaps which would be filled would be the large one on the service sector. Revenue records could be developed to provide data on the structure, employment, earnings and turnover of the service sector. While there are some incomplete aspects to the data, this is not an insurmountable problem. In any event, over time the coverage should improve. The main constraints which lie in the way of the realisation of this potential are as follows:

- the fact that there is no particular incentive on the part of Revenue to produce the desired statistics, rather the opposite;
- the need which would occur to deploy persons, in part to maintain the files in good order and to provide adequate up-to-date registers.

6.57 It is recommended that the Government should require the Revenue Commissioners and the CSO to develop an action plan, with the object of employing Revenue statistics to provide regular data on earnings, employment and turnover by sector in the first instance. This would involve, in part, the deployment of some personnel. However, the personnel needs here would not all be continuous as some people would be needed for a limited period at the outset in order to get the data into a suitable state and up to date. As a part of this plan, there would be need to establish:

- (a) the amount of additional work involved, which will depend on the extent to which existing procedures are deficient in providing the required information and the extent to which they would have to be changed;
- (b) the extent to which forms would require amendment;
- (c) the extent to which new computer programs and procedures

- would be required;
- (d) how any taxpayer resistance to providing further information, which is not necessary for the quantification of tax liability, could be minimised.

6.58 This should be followed up by a second phase programme of uses of Revenue statistics, as outlined above in the section on Revenue Commissioners' data. The ideal, which is attainable, would be to arrive at a position where a set of data was available to the user to manipulate further, thereby freeing the Revenue staff from further work. It is also recommended that the Revenue Commissioners publish regularly the data on income distribution and on taxation which were outlined earlier in this chapter. This would involve no material commitment of extra resources.

6.59 The translation of potential uses into actuality is nearer in the case of the Social Welfare data. Suggestions are made in Appendix 10 about the types of tabulation which should be considered by that Department for its statistical bulletin. Nevertheless, the potential of these records is as yet unfulfilled. The main reasons for this are the following:

- the lack of full computerisation of the data;
- the fact that where data are computerised, not all the information on the relevant forms is put on computer, for administrative ease.

6.60 Despite the likely improvement in social welfare data from administrative sources, such records will not answer certain questions such as the way in which people move in and out of poverty. For this, survey data on individuals or on households are required (paras 4.68-4.72).

6.61 As far as other Government agencies are concerned, it is recommended that a pilot study involving the linking of computerised data to planning and policy functions be attempted. This would involve taking a policy area (such as industrial policy, energy, education, health) and preparing a data plan, having considered all producers of information and the users, with a policy mapped out together with a timetable for action.

CHAPTER 7

METHODS OF DISSEMINATION

Introduction

7.1 This chapter takes up the issues which arise in relation to data dissemination. In the first place, the importance of knowledge of the market for statistics is stressed. The existing methods of dissemination are appraised. There follows a discussion of the potential for improving data dissemination through public use tapes and through data banks, and the potential use of a data archive.

Dissemination of Statistics and Knowledge of Market

7.2 There is a two-fold aspect to dissemination: knowledge of existing and potential uses to which statistics are put, and the tailoring of dissemination to those uses. In the absence of knowledge of the market there will be little guidance available on two crucial decisions:

- what subject areas to concentrate on (or to dispense with), at the margin;
- the nature of the trade-offs between attributes such as timeliness, frequency and accuracy of estimates.

CSO could be more aware of the existing markets (including the types of uses which occur) and of potential markets which are not being catered for (but which could be stimulated by, for instance, better timeliness). This is related to deficiencies in the means by which users' experience is relayed to CSO. Existing channels tend to be dominated by one or two large public sector users such as the Department of Finance. There is need for the CSO to acquire greater knowledge of who is using its statistics and how they are being used — this need not be an elaborate exercise nor need it be carried out continuously.

Methods of Dissemination

7.3 The main means by which data could be disseminated are as follows:

- (i) through printed reports;
- (ii) through microfiche tables;
- (iii) by means of special tables which are geared to the needs of

specific users;

- (iv) by computer tapes containing summary information;
- (v) by public use tapes which contain data on individuals, in anonymised form.

7.4 Currently, CSO statistics are disseminated through (i) and (iii), that is published reports and special tables. We now take up some of the deficiencies in the regular published reports and in special tabulations. Three instances will be taken: the *Irish Statistical Bulletin*, the industrial statistics, and the small area statistics from the Census of Population. The first two are cases of published reports and the latter is a case where special tabulations can be made available. These instances are not the only ones where current dissemination needs to be improved but are chosen for two reasons. They comprise three complementary and important data sources, and the discussion can exemplify both some of the current weaknesses and a number of principles regarding dissemination.

Irish Statistical Bulletin

7.5 The all-purpose nature of the *Irish Statistical Bulletin*, the format of which has remained broadly unchanged for many years, is now out-moded. It appears after a significant time-lag from the cover date. A wide variety of subjects is covered. Particular subjects (such as balance of payments or the census of industrial production) do not appear in a set quarter each year. In order to assemble a time series on, say, industrial earnings and hours of work one has to comb through years of quarterly issues, watching for the revisions to data which occur. For other than specialist users, the effort required to locate and put together a relevant set of data is likely to dissuade most people. Stereotyped commentaries tend to accompany the statistics. No attempt has been made to revamp the design to make the publication attractive to non-specialist users, such as by the use of simple graphs.

7.6 There are two potential candidates which would substitute for the existing *Irish Statistical Bulletin*. One would be a more frequent all-purpose bulletin. The other would be a publication series organised by subject matter, at about quarterly frequencies. The current range of statistics would hardly justify a monthly series, and in any event the need for timely statistics can be catered for by the regular mimeographed releases.

7.7 It is recommended that there be a publication series organised by subject matter, which contained some elementary charts. The subject areas could be ones such as: agriculture; industry; trade and balance of payments; labour force. employment, unemployment and hours of

work; vital statistics; prices and earnings. Two or three separate publications could be envisaged with, for instance, labour force, employment, unemployment and hours of work being grouped in one publication. These publications should include much longer time series than the current *Bulletin*. The publications could be linked to the data bank. Ideally, these data should be published with a much shorter time lag than the current one of some 7 months for the *Bulletin*. Towards this end, camera-ready copy could be used for many of the tables in conjunction with tables produced by computer output. And some of the existing commentary, where it adds little to the numbers in the tables, could be compressed. Graphs could be produced by computer.

7.8 If it is felt that a commentary is imperative, this could be done at less frequent intervals – say once every year or so. The intent would be not to hold up the dissemination for the sake of standard commentaries.

7.9 CSO holds that it is difficult to hold to a fixed schedule for publication, as they are dependent on data from firms. A way to overcome this would be to use preliminary estimates which can subsequently be revised. CSO could still go ahead with the mimeographed releases as otherwise there would be a worsening in timeliness. The use of preliminary estimates, based on partial data, is one way of improving timeliness.

Industrial Statistics

7.10 Some of the current weaknesses in dissemination can be highlighted by the example of industrial statistics. It seems as if there is very little use of such statistics by industry whether for general background information on the economy, or for more particular uses such as productivity comparisons. One indication of this comes from the work of the Irish Productivity Centre on inter-firm comparisons (Boucher, 1980) where the official statistics which related to turnover were seen by industry as being too out-of-date and too aggregative for their requirements.

7.11 Chapter 2 pointed out that industrial firms will tend to put a good deal of emphasis on timeliness of statistics, and on their need for disaggregated data (say, to compile market shares). Beyond a certain level of disaggregation it would not be possible under the *Statistical Act, 1926* for CSO to supply data on output, as information on individual firms could be discernible.

7.12 The lack of use of the industrial statistics is surely one of the reasons for the problems on non-response and a general grudging

attitude on the part of industrial providers of the basic raw materials of industrial statistics. If firms feel that nothing worthwhile for them is likely to come out of form-filling, there may be little incentive for them to comply, other than from a spirit of altruism. Admittedly, this is not the only reason for non-response. Even where a firm recognises the potential benefit of the statistical output, if the firm contributes a relatively small part of the total output, it may decide that non-compliance will not materially affect the outcome.

7.13 The CSO industrial statistics should be made more attractive to industrial users. As well as the production of an attractive guide to sources (discussed below), design could be more attractive, some uniformity in design and format (e.g., size, colour) could be used within particular series and elementary graphs used. A pilot effort could also be mounted to make the services of CSO more widely known to industry, say, in collaboration with the Confederation of Irish Industry. This is appropriate at a time like the present when the time-lags in the production of Census of Industrial Production statistics are declining, thereby increasing the chances of meeting industry requirements. This concerted effort to improve the marketing of industrial statistics could be on a pilot basis at first, taking a particular sector or sub-sector of industry.

Small Area Statistics

7.14 There is a considerable potential for CSO to market, on a commercial basis, small area statistics from the Census of Population and the Census of Agriculture, for private business. For example, retail firms contemplating a possible location, supermarkets, direct mail firms, those who distribute newspapers, all would find these statistics to be of use. In order for the potential to be achieved there would be need for CSO to put more resources into marketing than the negligible amount which is currently put into that function. There are two options. One would be the development of specific customer services functions within CSO. The other would be the use of an outside body as a marketing arm. The option of developing a customer services function within CSO is recommended, as there would be spin-off benefits for other parts of the Office. There should be a good element of cost recovery in this work.

General Points on Dissemination of CSO Statistics

7.15 Currently, the only guide to sources of statistics which is produced by the CSO, *Publications Compiled by the Central Statistics Office*, is essentially out of date and is not a compelling publication. An attractive source guide to CSO output should be produced. This would alert potential users to the existence of statistical series. In

addition, a booklet should be produced, aimed at industry on the potential uses of industrial and trade statistics. This could be disseminated in co-operation with the Confederation of Irish Industry, and could include examples on the use of statistics at the level of the firm such as the use of trade statistics, Household Budget Survey data, data on wholesale and retail distribution, on inputs and their costs, on earnings, productivity comparisons, data suitable for a firm which is introducing a product, together with background information to enhance an understanding of the economy and a section which explains terms.

7.16 To this end, an editor of publications should be established within the Office, with a set of functions which relate to presentation of content and attractiveness to users.

7.17 It is quite likely that the desirable qualities for a statistician do not sit easily with "emphasising broad sweeps of arguments and being unreflectively extroverted" (Boreham, 1984, p. 64.2) which are desirable for marketing. It may be necessary to reserve marketing for different people, or to seek occasional consultancy advice.

7.18 In the area of trade statistics, there is potential for better availability of unpublished data, e.g., through microfiche: it is understood that CSO is proceeding on this. There should be some opportunity for selling foreign trade data to companies, including through special tabulations. The provision of trade data on an on-line computer service is not feasible at the moment because of the amount of storage space required.

7.19 In general, in cases where special tabulations such as those from the Census of Population and the Labour Force Survey are available on request, this facility should be publicised by CSO.

7.20 Finally, those statistics which are given to international organisations for publication (Appendix 2) should be published domestically by the CSO.

Public Use Tapes

7.21 *Microdata* are data for individual respondents, by contrast with the standard tables which are aggregated over all respondents to a survey or census. They should be distinguished from small area statistics which are the standard tables at a fine level of disaggregation by *area*. Microdata are usually thought of in terms of data for the country as a whole. CSO does not issue microdata tapes from the Census of Population. These would be tapes for public use (often called "public use

tapes") with detailed census data for anonymous samples of persons or of households. Such tapes could be based on a sample of persons (or of households) containing personal information about individuals but anonymised in the sense that identifiers would be removed.

7.22 In the United States and in Canada, such data are made available. For example, the public use samples from the 1976 Census of Population in Canada comprise 1 in 100 of those who completed the long-form questionnaire for the 1976 Census. Data are organised in three separate files: respectively, for individuals, households and families. Each of the files is based on an independent sample to prevent the linkage of data from one file to another, which might make possible the identification of an individual. In order to protect confidentiality, the names, addresses and geographical identification are removed. Some characteristics (especially details on industry of employment and occupation) are re-grouped in order to prevent the disclosure of information for any individual. Thus, only thirteen industries of employment are given in the 1971 public use samples, where the Census has 999 possible codes. Other public use samples are released by the Canadian Statistical Office: microdata from the Labour Force Survey and the Survey of Consumer Finances. From the US Census of Population and Housing of 1980, samples are of 1 in 1000, 1 in 100 and 1 in 20 of the population and housing of the United States. The data in the 1980 US public use sample files include, in the case of persons, the following: age, education, place of work, transport to work, marital status, occupation, industry, hours worked, work history and disability status.

7.23 Two types of microdata are practical possibilities.

- data on the characteristics of every household or individual in a particular area such as a county, without any identifiers which would enable people to be identified;
- data on a sample of individuals in the country as a whole, again without any identification of the people.

In order to protect the confidentiality of the respondents, the information which would identify people is excluded from the records. Public use samples are extracts (derived by random sampling) from the full records of the Census questionnaires.

7.24 It is difficult to gauge the potential demand for such data by users. Users would need to have the appropriate computer facilities for analysis and this requirement would tend to limit the numbers. It is particularly hard to estimate the ultimate demand in advance of the facility being available. In Canada, purchasers of public use sample tapes have included

universities, Governments, academic users, and data archives or computing facilities at universities where the tapes are made available, in turn, to users under controlled conditions.

7.25 The *advantages* of microdata to the user, by comparison with the standard tabulations, lie in the flexibility which the user has in compiling tabulations. In the latter the basic unit is the geographical area and counts of persons or of households in that area are given. These counts consist of averages (e.g., average household size) or of frequency distributions (e.g., number of persons aged less than a certain age). However, users may wish to take the individual data and use their own classifications and methods of summary. Virtually any type of table can be produced. The data at individual level can also be used for statistical testing and for policy simulation. Some statistical testing would be facilitated by the availability of microdata — for example, the relationships between income and educational attainment of husband on the one hand and of wives on the other. It would be possible to examine the relationship between entities which are not shown in the normal Census tabulations. Moreover, microdata would make it easier to study sub-groups in the population such as the elderly or lone-parent families.

7.26 The main argument *against* the release of microdata is the perception which might occur that Census confidentiality would be breached. Individuals' compliance with the Census might suffer if (however unjustified the thought) people felt that data on identified individuals were being, or could be, disclosed. The degree of compliance with the Census is relatively high (far higher than in the case of the Household Budget Survey) and, once it suffered, it would be difficult to recapture. This is even though the potential to use techniques for suppressing information (of which examples are in Norris, 1984) could effectively eliminate the danger of breaching confidentiality. For example, data from sensitive questions could be eliminated, or replies could be coded into broad categories.

7.27 Even if the above fears could be overcome it is quite possible that the release of microdata could be judged to be in breach of the *Statistics Act, 1926*, although no test case has been taken in this regard.

7.28 What about the costs of release? This is unlikely to be any greater than the existing costs of releasing complete cross-tabulations, though if techniques of maintaining confidentiality were used, the costs would be increased.

7.29 One option, which the CSO is prepared to consider is a parallel arrangement to that which has been used for the Household Budget Survey, whereby a sample of Census returns is used — a suitably structured random sample of, say, 5 per cent of the Census returns (Embleton, 1984). This sample would be held on magnetic tape within the CSO. Users would either write their own programmes using a conventional programming language or else using a computer package. CSO would run and vet the output to ensure confidentiality. While this analysis of sample microdata by CSO itself would go part of the way towards a public use tape facility, it would lack the flexibility and speed of access of the facility as understood in other countries. Nevertheless, it is desirable that CSO go ahead with this proposal to compile a random sample to be run on the basis of users' requirements, and that the following features should accompany the facility:

- a readily understood set of documentation on the data files, including a description of the entities,
- a fast turn around between submitting a request for analysis and the provision of results.

7.30 It is recommended that legislation should remove any doubts on whether the release of microdata by CSO would be in breach of the *Statistics Act, 1926*.

Data Banks

Nature of Data Bank

7.31 A data bank is a set of data available and disseminated in machine-readable form. Data are held on computer and access to the data is, in principle, available to anyone with computer facilities. A typical data bank would be updated regularly and sold on magnetic tape.

7.32 Appendix 5 outlines the scope of some of the existing data banks in Ireland. In the case of the IIRS data bank, the emphasis is on information at the level of the firm, which for obvious reasons of disclosure could never be obtained from CSO data.

7.33 The CSO is developing a computerised data bank of non-confidential data which will be accessible to users who possess the computer hardware linked to the computer on which the data bank will be stored (Embleton, 1984). This data bank will comprise both time series (initially the data in the 75-item economic series) and cross-sectional data (e.g., the Census of Population small area statistics, tabulations and other cross-classifications from CSO surveys). The CSO intends that a data bank will be accessible in 1985. Initially, access will be restricted to

Government Departments, with other users getting access at a later date.

Advantages

7.34 Data banks have a number of potential advantages for data dissemination and data analysis. More use is being made of computers in data analysis and this gives rise to a demand on the part of users for series to be available in machine-readable form. Such a form would have the following advantages for users:

- the avoidance of their having to transfer published series to tapes or other media;
- the avoidance of errors in transcription;
- enabling data to become available more quickly, as the time which would otherwise be spent preparing and distributing a publication is eliminated;
- enabling a greater volume of data to be provided than in printed form;
- a reduction in the time spent searching when there is need to retrieve information from the "store";
- allowing camera-ready copy for publication.

7.35 A data bank would have flexibility insofar as there are a number of different ways in which access could occur. Producers could market data in various media such as magnetic tapes or disks. Users could use micro-computers to interrogate data, giving them control over analysis.

Method

7.36 Series can be grouped into several data sets, each available individually and sold like that. Some purchasers could be information providers who themselves gave users access to the data. Others could buy directly from the CSO and mount data on their own computers.

Content

7.37 The CSO data bank would eventually consist of national accounts data, Balance of Payments, industrial production, prices, earnings, population and labour force. It could then be linked to the financial statistics of the Central Bank and Exchequer statistics of the Department of Finance. A linked data bank between the CSO and the Department of Finance would have the potential of containing inter-Departmental information.

Requirements

7.38 The evidence from other countries is that there are two potential

weaknesses of data banks, which can be overcome with due preparation. First, some individual series may not be fully up-to-date. This can be overcome by building in an appropriate incentive. For example, the data bank could be linked to the regular release of updated series (such as the CSO mimeographed releases).

7.39 Second, there can be inadequacies in the supporting documentation. This can occur when those who wish to familiarise themselves with the contents of a data bank must first consult a printed catalogue which tends to be out of date, and even if it is up-to-date and accessible through computer access, is of limited use in its detail (Divoy, 1982). A solution would be to have adequate documentation accessible by computer at the same time as access is being had to the data.

Demand

7.40 Evidence from other countries suggests that much of the demand comes from within the Government service and from organisations such as research institutes, financial institutions and market research firms. That is, the demand would come from relatively large-scale and experienced users.

7.41 However there are some specialist uses, especially those of small and medium-sized firms, which are unlikely to be met by the large-scale data banks of the main statistical offices. Their requirements are likely to be met by a type of intermediary in information which has already begun to develop in Ireland. These intermediaries provide a package which includes some economic data but also other information such as company profiles and summaries of current topics – on legislation or export aids, for example. These systems tend to emphasise ease in their use and are not designed for information specialists. While the CSO would have a key role in collecting and disseminating its central data bank, it would hardly have the role being performed by such intermediaries who would remain in close contact with final users.

7.42 How best could the centralised bank supply these intermediaries? One way would be through a centralised data bank from which specialised banks would get material. This would have disadvantages due to technical difficulties and the constraints which it would put on production of statistics (Divoy, 1982). A better solution would be for the central office to produce a good directory on the information which was available – which could be in the form of a documentary data bank – together with the sale of information on magnetic tape.

Summary of Key Issues

7.43 In summary, the key issues which need to be settled about data banks are the following. Where possible, firm recommendations are also made.

- (i) Should there be a move to an all-purpose data bank with a wide variety of subject matter? This could consist of CSO and Central Bank data, data which are being maintained by individual Departments and agencies including data on public expenditure and on local authorities' expenditure and revenue, and taxation data, together with international macroeconomic data from OECD and EEC. If this is chosen, how fast should the data bank be developed?
- (ii) An *alternative* course would be a set of individual data banks on subject areas, with some form of linkage between them. If this means were adopted, there would be need for avoidance of duplication, compatibility between data banks and adequate access for users. Good documentation (including description of contents and on methods of access) would be required. So also would constant updating and "cleaning", through, for example, the elimination of redundant data, and standard codings.
- (iii) There is a danger of a proliferation of small independent data banks, which would involve both duplication and a lack of compatibility with one another. In particular, there is a danger that the increasing diffusion of computers among public bodies, including not just Government Departments, but the local authorities, State-sponsored Bodies and Government agencies, will lead to the onset of incompatible data sets, for example with regard to coding and the classification of variables, which in turn are incompatible with CSO data. This should be avoided. Unless some action is taken within the next year or two, it will probably be too late to remedy the position.
- (iv) What is the likely level of future demand by firms, bearing in mind that firms tend to require very specific data such as sub-sectoral data which CSO may not be able to provide?
- (v) What structure of dissemination should be used? One possibility would be the CSO dealing with an agent which would market the data bank and which could licence hosts; other organisations could hold data on a royalty basis. The agent would provide a magnetic tape or other service, answer queries, collect fees and monitor users' requirements.
- (vi) Just as in the case of the traditional modes of dissemination,

difficulties of access can occur. This could be due to ignorance of what exists, or problems about protecting the identity of individuals.

- (vii) If the best use of the data bank is to occur, there is likely to be need for an "after-sales" service.
- (viii) One policy issue which may arise in the future concerns possible conflicts of interest between official dissemination and private dissemination of machine-readable data. Private companies are likely to enter increasingly into the area of "packaging" data and disseminating the data in machine-readable form. They may be undercut by provision of such data at below cost by official agencies. The question likely to arise is whether the official producers should support, or compete with, intermediaries; and if the latter, on what terms?
- (ix) In the case of business statistics, currently there is an interest among certain users in the possibility of tapping into CSO data by the use of computers. The CSO is in the position of being a monopoly provider of certain data which is of interest to these users. There is need for a set of ground rules about access to these data which, while guaranteeing the necessary confidentiality about individual firms, provide timely access to the data for those who wish to engage in further analysis of the data for direct marketing to customers.

7.44 To conclude on data banks, there is considerable potential in the use of machine-readable data banks, not least because of the marked fall in cost relative to printed outlets, and the increased facility for data analysis which users have through micro-computers. It is desirable that CSO bring its data bank to fruition, with means of access to non-Government users. A vital component of this would be a good index to CSO data, with information on contents and on how to utilise the contents.

Data Archive

7.45 Given the constraints on resources, there is likely to be need for more secondary analysis. Secondary analysis has been defined as "any further analysis of an existing dataset which present interpretations, conclusions, or knowledge additional to, or different from, those presented in the first report on the inquiry as a whole and its main results" (Hakim, 1982). Such analysis can take the form of more detailed work or analysis of particular sub-groups, for example. It has the added advantage of limiting the reporting burden on the public which is caused by repeated surveys. Moreover, there will tend to be a demand on the part of users for ways of facilitating the analysis and re-analysis of sur-

vey and other large data sets. This is for two reasons: the increase in computing facilities which is occurring, and the development of methods of data analysis. This all raises the issue of whether a national data archive should be fostered.

7.46 A data archive would have the following functions:

- to serve as a repository of machine-readable social science data from academic, commercial and Government sources and to make them available for secondary analysis in general this involves the acquisition, "cleaning" and cataloguing of these data;
- to serve as a broker between producers and users of such data, to engage with data users in handling their queries and problems;
- to disseminate information about computer-processed data and to market these data;
- to make recommendations on documentation and storage of data files;
- to ease the path to users' analysis of large data sets by, for example, developing software packages;
- to resurrect old data files so that they can be used for secondary analysis.

7.47 A number of advantages would accrue from a data archive, as follows.

- (a) Secondary analysis would be facilitated in a cost effective fashion, bearing in mind that the data which the archive would collect are especially costly to collect.
- (b) There would be a greater knowledge among potential users about the availability and attributes of data sets.
- (c) Some data sets which might otherwise be lost would be conserved, all the more valuable a function in view of costs of collection of the data.
- (d) The archive could serve as a link between producers of data and the users.

7.48 Some of the roles of the archive, including that of a broker between producers and users of data, could be expected to evolve organically from modest beginnings. It is possible that an archive could end up having a role in the dissemination of large Government generated data sets such as the Labour Force Survey and the Household Budget Survey. Evidence from other countries is that the various aspects of an archive activities — including data acquisition, data processing, handling en-

quiries, usage — are likely to expand gradually over time. Users would include research institutes, researchers at universities, Government and private industry.

7.49 It is recommended that a feasibility study be mounted for an archive facility. This would be essentially for a computerised information retrieval system. A feasibility study could allow the funding of the hiring of a person and of computer facilities. Given that archival facilities exist in most other EEC countries, there are possibilities of external funding for a feasibility study. In other countries, data archives have tended to be funded by one or other, or a mixture, of the following: Governments, social science research councils, universities.

7.50 The basis for an archive could be said to exist in the records of the ESRI Survey Unit. The research role of the ESRI would also justify the development of an archive as an outgrowth of its activities. For an archive to function, there would need to be automatic data processing facilities such as would be provided by a university computer centre. Hence, a joint approach by the ESRI and a university computer centre, seeking outside funding at least as "seed money" would be the most promising avenue.

Other Aspects of Dissemination

Dissemination other than in "Hard-copy" Form

7.51 Much of the above discussion has been concerned with the possibilities of disseminating data in ways other than the standard "hard-copy" form. This is exemplified in the sections on public use tapes and data banks. Over the coming years there is likely to be increasing potential for dissemination of data by microfiche and via computer. There would be a number of advantages with microfiche: production can be less expensive than for printed products, larger quantities of statistics can be displayed in a given amount of storage space than can a printed report, and retrieval of selected statistics does not require the technical competence which is required of a computer tape user (Wetzel, 1982).

7.52 Dissemination via computer could be done through decentralised computer terminals, prior to formal publication of a volume of data. The data could also be put on tape and made available to users in that form.

7.53 In view of the high fixed costs in large scale surveys and censuses, every effort should be made to "work the data" very hard by providing cross-tabulations which are responsive to user demands. At some time

in the future, users may be able to influence the design of tabulations, for example through getting at results in an interactive way via computer terminals.

Use of Sub-samples

7.54 One way to speed up dissemination was used in the case of the 1981 Census of Population. This is the preparation of results, earlier than would usually be the case, based on a sub-sample of a certain percentage of the records. The sample would be picked before the analysis of the full data file.

Guide to Sources

7.55 There is need for a central index to the range of statistics which are provided through public sector bodies. This would help to avoid duplication, would contribute towards the best use of statistical resources, and be of benefit to users. The index could include: subject, data collected, some attributes of the data, date of publication, organisation which produces the data, and contact person.

Concluding Remarks

7.56 This chapter has shown the extent to which existing methods of dissemination are based on traditional "hard-copy" form and — partly for this reason — have timeliness problems. There is potential to use alternative methods of disseminations. These would help to overcome some of the timeliness problems. Emphasis has been put on the potential which is held out by a data bank, a type of public use tape facility, and a data archive.

CHAPTER 8

PLANNING FOR PUBLIC STATISTICS

Introduction

8.1 This chapter is linked to the themes of Chapter 3. That chapter asked the question, at the level of principle only, whether it would be possible to establish a formal system of planning the provision of statistics which would be sensitive to the different types of user demand. And it asked how priorities might be set in producing statistics, again at the level of principle. This chapter looks at the way in which decisions are actually taken about allocating resources to public statistics. To what extent does this take account of the principles outlined in Chapter 3?

8.2 First, the appraisal and planning system for public statistics is evaluated. These follow an outline of future demands. Then we outline some principles which are designed to lead to the most efficient use of resources within the CSO. Related to this is the role which the Statistical Council might play, a question which is taken up next. A key issue which remains is how best to co-ordinate the provision of statistics outside the CSO, which is considered in the following section. We then examine the relative advantages of centralised and decentralised systems of statistics collection. There follows a discussion of the ways in which there could be more effective contacts between producers and users of statistics. A further issue which needs to be resolved is the set of terms under which people have access to Government data. Recommendations are made to overcome problems of access to these data. Finally, the implications of the various recommendations for resources and for costs are taken up.

Appraisal and Planning

8.3 An effective system for setting priorities for statistics is imperative in view of the many demands pressing on constrained resources. By the standards outlined in Chapter 3, currently there are few indications that an adequate system of appraisal and planning exists. In summary, current deficiencies are related to the following:

- the increasing proliferation of producers of statistics;
- the lack of a central focus for decision-making which would set standards, monitor performance, play a key role in allocat-

ing resources and give policy advice across the range of statistical output;

- the failure on the part of users to articulate effectively their requirements over a reasonable planning horizon;
- in particular on the latter point, the divisions of interests within public sector users (e.g., those pursuing policy analysis and others) which means that these users do not always have an unequivocal policy on the allocation of resources to statistics.

The recommendations in the remainder of this chapter are aimed at remedying these deficiencies.

8.4 The weakness of the present system from the point of view of appraisal and planning can be illustrated by two particular examples. The first concerns the cancellation of the 1976 Census of Population, which happened to follow on the cancellation of the UK Census for 1976. The decision to cancel was taken very late in the planning period, after a lot of preparatory work by CSO. There is no evidence that the decision was informed by a comparison of resource savings with the likely economic costs of abandoning the Census. In this regard mention has already been made above of the increasingly inaccurate population, labour force and other estimates which characterised the years subsequent to the cancellation of the Census. Moreover, there does not seem to have been any exploration of what Departments and local authorities might have instituted in the form of proxy inquiries (with again, an account of the resource costs of *those* inquiries).

8.5 The second example concerns the cancellation of the annual Household Budget Survey with effect from 1982. This was one of the steps found necessary by CSO at short notice to ensure compliance with general Government controls imposed on staffing and expenditure levels. Here, there is no evidence that any alternatives to the survey were considered by Government, or that other means of living within the target budget for CSO (even at the cost of lowering the quality of some statistical series) were considered. Nor is there evidence of a thorough-going comparison of resource cost savings arising from the cessation of the Survey with the costs incurred due to the consequent non-availability of data. The longer-run implications such as the use of the Survey in deriving expenditure estimates for the national accounts, or its role as the sole source of data for redistribution analyses, do not appear to have been thought through by Government.

Future Demands

8.6 Chapter 4 outlined the weaknesses in the range of published statis-

tics. However, there is need to go beyond this: one must take account of future demand as much as current demand. What follows is an attempt to sketch out briefly some of the main demands which are likely to arise over the coming decade.

8.7 There is likely to be an increasing amount of policy-orientated work on particular sectors which will generate a demand for statistics on output and employment by sector. Policy-orientated sectoral analysis is already taking place under the aegis of the Sectoral Development Committee. The demand for increasingly disaggregated and accurate sector-by-sector data is likely to be a feature of the triennial reviews of industrial policy being instituted by the Department of Industry, Trade, Commerce and Tourism. Moreover, the serious and apparently chronic nature of the unemployment problem will generate increasing interest in the service sector as a source of jobs with concomitant demands for detailed data.

8.8 The increasing complexity of government, budgetary problems and resource constraints, will mean that greater emphasis will be put on careful appraisal of projects. This is already evident from the section on "Better Project Appraisal and Project Management" in *Public Capital Programme 1984*. Related to the themes of Chapter 2, there are informational requirements for such work.

8.9 Both on the part of users in Government and users outside Government (e.g., of business statistics) there is likely to be a demand for greater timeliness in statistics – even if this means that simple summaries of key entities be presented without a detailed sectoral breakdown. The increased emphasis on timeliness is likely to emerge as a consequence of improvements and innovations in information technology which will facilitate the more rapid transmission of data and generate the expectation amongst sellers, purchasers and processors of information that the raw data should be correspondingly more quickly available.

8.10 An increasing level of social awareness is likely to mean a greater usage of household statistics such as those in Vol. 3 of the 1981 Census of Population. The welfare of those such as children, the long-term unemployed and lone-parent families is likely to lead to demands for related statistics. An increased interest in family policy will bring related demands.

8.11 An increasing interest in the impact of social welfare schemes and the interaction of taxation and income support systems – already in evidence through the setting up of the Commission on Social Welfare –

should lead to increased demand for statistics on income distribution. What is the net impact of taxes and transfer payments on different types of household, and how do various Government policies affect the distribution of income? Arising from public expenditure constraints, the allocation of expenditure to education, health and housing will need a basis in information on outcomes.

8.12 In the case of labour force, manpower and education statistics, there is likely to be more emphasis on flow statistics (e.g., the numbers moving from education to employment in a particular period) rather than on stocks (e.g., the number in the labour force at a particular date). These flow statistics show the change in stocks. For many persons, their moves over the life cycle are not a simple progression from schooling to employment to retirement. Instead, there may be a more complex series of moves backwards and forwards between education, training, full-time employment, part-time employment, and home duties. For forecasting and for policy analysis (including a study of labour turnover and social mobility), the flow data can be more useful than stock data.

8.13 Since 1979 the exchange rate of the Irish pound has become more exposed to market influences. The current balance of payments deficit has, in turn, become more important as an economic indicator. From the point of view of the Central Bank and its responsibilities, that deficit, and forecasts of its future magnitude, have been used in setting monetary policy. This has put a greater focus on the need for accurate and timely balance of payments statistics. Already the Central Bank's own banking return has been revamped. This tendency for greater weight to be put on financial statistics will continue and there is likely to be increasing need for good quarterly balance of payments statistics and for improving the balance of payments statistics, notwithstanding the improvement which occurred with the May 1984 revisions.

8.14 Among commercial and financial users the increasing numbers of computer terminals will mean that there will be demands for links to data banks which hold aggregate data. The interest which has been evident in recent years in small area statistics is likely to continue, and to increase if anything, for the following reasons:

- the continual debate on the proper allocation of functions to local government;
- the persistence of local planning issues;
- the regular formulation of development plans by local authorities;
- to enable local communities to observe the impact on their local areas of decisions made elsewhere.

Resource Use in the Central Statistics Office

Principles

8.15 The successful resolution of the problems identified in this chapter will depend at least in part on the flexibility afforded to the CSO in relation to the acquisition of equipment and the deployment of personnel as well as on the quality of staff training and the existence of satisfactory career structures. This section outlines a number of principles which would ensure that the best use is made of the personnel and other resources which are available. It has already been seen that, as the CSO is part of the Civil Service, it is constrained in its acquisition of resources and in the flexibility with which it uses them.

Flexibility Within Budget

8.16 CSO decisions on expenditure of any magnitude such as on equipment and on the acquiring of staff are subject to sanctions from the Department of Finance. It would be desirable and would lead to increased efficiency if a greater degree of flexibility were afforded to CSO within a fixed budget, at least up to a certain amount of expenditure. This recommendation is designed to increase efficiency. It need not lead to a loss of budgetary control, as the CSO can still be constrained by an overall budget. Indeed, the recommendations made below would be likely to lead to more cost-effective financial controls.

Use of Labour

8.17 CSO is also constrained by the way in which data processing is organised in the Civil Service. In particular, the systems staff for the CSO are recruited at a point where in general they may have had no training in the use of computers. This is patently unsatisfactory and needs to be replaced by a method which allows recruitment of trained people.

8.18 Other issues relate to the flexibility with which CSO can use its personnel. Again reflecting its place in the Civil Service, there are limits to the extent to which staff in the CSO can be redeployed in response to fluctuations in demand. This is manifestly inefficient and there is need for more flexibility to be given to CSO in its ability to redeploy staff.

8.19 With regard to the effective use of personnel, there is also need to ensure a satisfactory career structure. The problems here are likely to arise in relation to systems staff and general service (non-statistical) staff. At the moment there are few promotional outlets for these staff. There are two contrasting ways by which the lack of promotional ladders for computer systems staff and general service staff,

with their consequent adverse effects on morale, could be attacked. One way would be through a continual recycling of staff between CSO and other parts of the Civil Service after spells in CSO. However, that would be inherently wasteful. Another way would be the provision of sufficient opportunities for retraining and for change of role within the Office, such that a better career structure would be held out for these staff. This method would be preferable. In the absence of this, systems staff could be lost to CSO after an investment in their training.

8.20 There is need to give effective training to statisticians – both in management skills and in economic and social disciplines for those with a pure mathematics background. The ideal is a flexible group of statisticians with capability in the use of computers and awareness of economic and social issues. This can be achieved through a combination of recruitment, staff development paths and on-the-job training. In recent years there has been a greater amount of training done within CSO, and these initiatives should be built on. The training programme should emphasise the continuous updating of skills and a sensitivity to economic and social policy.

8.21 In a number of places in this report, the need for effective use of computers has been stressed. Related to this, resources within CSO should be devoted to developing and modifying software packages which emanate elsewhere to the needs of the CSO.

8.22 While it can be difficult to give reward for merit within the constraints of the Civil Service, there is need to give some positive recognition for the achievement of excellence throughout the Office.

8.23 While it is not recommended that CSO statisticians go out to work permanently in other Departments, closer links between the statisticians' work and policy issues would be desirable. If one were to design a system *de novo*, with statistics to play a useful role in policy, it would not be one where statisticians are as removed from the policy-making process as they are at the moment. The following recommendations are made in this regard.

8.24 First, consideration should be given to providing a regular outlet for signed articles by CSO statisticians, as long as this did not impede the regular work of the Office. This would be a means of relating statistical analyses to subject matter areas and policy concerns. Furthermore, it would have the added benefit of helping to avoid a "deskilling" of the work of statisticians.

8.25 Second, it is recommended that exchanges should occur for periods of, say, 1-2 years between statisticians in CSO and social scientists in other parts of the Government service or in the private sector. This would have a number of benefits:

- it would help towards forging a closer link between the work of the CSO and the policy process;
- it would help towards achieving a greater degree of mutual understanding about the problems which producers and users of statistics face;
- it should augment the on-the-job skills of both statisticians in CSO and social scientists outside the CSO.

8.26 If an exchange scheme of this nature is to work effectively, both parties must gain from the exchange. The work of statisticians in the CSO involves a combination of statistical ability and management expertise. Those who came into the Office in a statistical role under an exchange system would need to bring this combination of qualities. This should be possible, for a number of reasons. There are numerous social scientists within and outside the public service. These could be of particular value in work on the national accounts and the balance of payments, in redistribution analysis from the Household Budget Survey, and in work on population and labour force projections. There are others, such as accountants in the private sector, who would bring a valuable set of qualities to bear on work in, for instance, industrial statistics, the national accounts and the balance of payments.

8.27 The other type of exchange would involve "managers" who are at Assistant Principal level and are not statisticians. Here again, there can be mutual benefits, in terms of a broadening of on-the-job learning and of experience. Admittedly, the exchange of either statisticians or administrators would be most fruitful if the current schemes of lateral mobility within the public service and between the public service and the private sector, were far more widespread.

Statistical Council

8.28 Under the *Statistics Act, 1926* there is provision for a Statistical Council, numbering from four to nine members, "to give advice and assistance in regard to the execution of this Act and any other matter relating to statistics . . .". In May 1984 a seven-person Statistical Council was set up to advise and assist the Taoiseach as provided for in the Act. It was stated on its formation that the Council would "assist in securing the reliability, timeliness and accessibility of statistical information concerning the economy and society." It is unclear what mixture of

advisory and executive (if any) functions the Council is expected to carry out.

8.29 One of the weaknesses in the current provision of statistics is that it is not sufficiently performance-related. That is, standards of attainment are not set explicitly, to be followed up by monitoring of achievements towards these ends. The following guidelines for the work of the Statistical Council, and its links with decision-making in the CSO, are recommended as means of addressing these deficiencies. The general aims of these recommendations are to achieve as much efficiency as possible in the provision of statistics, to move towards a performance-related system to push responsibility for decisions down the hierarchy, and to fix a clear set of responsibilities for achieving goals.

8.30 The recommendations are as follows:

- (i) The Statistical Council should have more specific terms of reference.
- (ii) The Council should act in a purely advisory role to Government. In doing this it should be free to use consultancy advice on specific issues.
- (iii) There is need to broaden the membership of the Council beyond its current academic weighting, through bringing users either on to the Council itself or on to sub-committees of the Council. These should include people other than the immediate group of official users. This recommendation reflects the discussion in Chapter 2 of the power which the provision of information can give and its potential to affect decision-making.
- (v) The CSO should prepare a short-term programme of its activities and a longer-term rolling programme. These programmes would be produced regularly. They would set out standards to be achieved and requirements needed to achieve the standards. The programmes would outline a ranking of the main priorities with regard to the output of statistics, and would cover computerisation and staff development plans. The programmes would also include summary budgetary data.
- (v) The Statistical Council would comment on these programmes. Following receipt of the Council's comments, the revised programme and the original Council comments would be submitted to the Government, through the Department of the Taoiseach, for approval.
- (vi) The CSO would prepare an annual report to Government

on developments, and the Statistical Council would comment: both of these documents to be published. CSO already produces a short annual report in the form of a detailed Ministerial brief on the Office's activities which is prepared in conjunction with the presentation of the CSO annual vote in the Dáil.

- (vii) The CSO would prepare detailed cost-output budgets once a year which would be sent to the Statistical Council for comment. In these budgets, all costs would be allocated to each of the main statistical series. (There is a limit to the extent to which disaggregation is possible due to costs being shared between certain series.) The budget would not be published but in summarised form would be used as in (vi) above.
- (viii) In the case of important initiatives such as the recommendations made in this report on Revenue Commissioners data, the Statistical Council would comment on these and there would be an opportunity to revise the proposals in the light of the comments.

Co-ordination of Statistics Outside the Central Statistics Office

8.31 Although Ireland has a centralised statistics office, statistics are now being collected and distributed by a wide variety of public bodies. No explicit co-ordination of this output of statistics occurs. Nor is there any indication of the amount of resources which go into this activity. To some extent, the growth in non-CSO sources has been in response to perceived deficiencies in the existing body of information. In part, it has occurred as a by-product of filling internal planning needs and the need for co-ordination. In part also, it has occurred as a by-product of implementing administrative schemes: the building cost index would be an example here.

8.32 The need for co-ordination of the collection of statistics outside CSO has already been pointed out in Chapter 5. A co-ordinating role is needed in relation to all aspects of these statistics. The main functions of the co-ordinating role would embrace a number of objectives.

8.33 First, there is the need to ensure quality control, that is some minimum set of standards which would be universally applicable and to guarantee compatibility between individual data sets (for example, on codes). The greater the degree of standardisation used for classifications and definitions, the less would be the likely burden on respondents as they found that their records were in conformity with all requirements.

8.34 Second, there is need to avoid unnecessary duplication. In par-

ticular, the potential for rationalisation of the data-gathering activities of State agencies should be examined. This would lead to enhanced possibilities for data analysis, as it might be possible to cross-tabulate data across the headings contained in individual surveys. There are two ways in which this might occur: through the institution of an "umbrella" or omnibus survey, or through the linking of records. The latter would be much more difficult to achieve. To move towards an "umbrella" survey would be the most fruitful route. This would occur in relation to household data, and here is linked to the need for a general household survey (Chapter 4). An "umbrella" survey could also occur in relation to industrial data from firms. Here, there would be the need to overcome a resistance on the part of firms reluctant to deal with any central data-gatherer or unwilling to permit sharing of data.

8.35 Third, it is important to ensure that statistics which are of importance to policy-makers but which are of little or no importance to the collecting agency are produced. This may at times require that such a subordinate objective be given explicitly to the agency concerned.

8.36 Fourth, to consider the use of statistics collected by State agencies, other than the CSO, as means of verification, as sampling frames or as registers for the purposes of coding.

8.37 Fifth, to fulfil some "gatekeeping" functions in respect of the increasing volume of surveys of Irish firms being carried out by agencies in the public sector.

8.38 Sixth, to use the enhanced capability for data transmission via computers within the public sector. This reflects the increasing computerisation of public sector records. There is need to ensure mutual compatibility in such matters as the use of codes. Also in computer-to-computer operations, certain standards would have to be set and maintained.

8.39 Seventh, to encourage public sector bodies to consider the statistical possibilities of administrative records and to consult on this with bodies such as the CSO. This would be especially important at a time when new computer facilities were being installed.

8.40 There are many examples of the valuable work which could be done through the co-ordinator. There is the achievement of standardisation of information in reports and accounts of State-sponsored bodies and of a common reporting standard for certain public bodies (Chapter 4).

8.41 Another example is in the area of balance of payments and the activities of transnational companies. Currently, four bodies collect information which would be of interest from the viewpoint of a policy analyst: the IDA on the disbursement of industrial grants, the CSO on industrial production, the Revenue Commissioners on the taxation of corporate income and the Central Bank through exchange control regulations (O'Leary, 1984). There is a *prima facie* case for some co-ordination of this information collection. The co-ordinator could seek rationalisation and the greatest efficiency in the evolution of data banks – which is needed as can be seen from Chapter 7. The co-ordinator should encourage the most effective use of administrative records. The potential for this is evident from Chapter 6.

8.42 Minimum standards should be set in relation to data which are collected as a by-product of Government contracts, including their deposit at a central location.

8.43 In summary, as far as the relations between CSO and other bodies are concerned, the key organisational issues relate to co-ordination of activities and compatibility of data sets. This is in the light of the increasing fragmentation of outlets which has been occurring. The principal bodies which are involved, outside the CSO, are:

- AnCO;
- Central Bank of Ireland;
- Departments of Education, Energy, the Environment, Finance, Health, Industry, Trade, Commerce and Tourism, Labour, the Public Service and Social Welfare;
- Higher Education Authority;
- Industrial Development Authority;
- Institute for Industrial Research and Standards;
- National Board for Science and Technology;
- National Manpower Service;
- Revenue Commissioners.

8.44 It is recommended that in order to achieve some degree of coherence, responsibility for encouraging co-ordination among non-CSO producers within the public sector should be assigned. There are a number of ways in which this desired co-ordination could occur. One would be a central office with responsibility for all public statistics. Another would be a co-ordinator of non-CSO statistics, together with effective liaison between that co-ordinator and CSO. The co-ordinator could be in a Government department, outside the departmental system, or could work through an inter-departmental committee.

8.45 In order to avoid a proliferation of both bodies, of controls and to achieve cost-effectiveness, it is recommended that the functions of the CSO should be widened to include the co-ordination of all public statistics which are gathered outside CSO. This should be written into the functions of CSO, in order to give the Office the desired degree of leverage in its dealings with Departments and agencies.

8.46 Ideally, the co-operation required to secure co-ordination would be forthcoming voluntarily. If after a short period of time it became evident that such was not the case, there would be need to use some coercive power or financial leverage in order to achieve the desired level of coherence.

A Decentralised System?

8.47 The organisation of official statistics in Ireland is nominally a centralised one. In fact, there are statistician posts in the Departments of the Environment, Health and Labour which have not been filled. Beyond this, a creeping decentralisation has occurred through the entry into data production of Government Departments and various other public sector bodies. Unfortunately, this has been unplanned and unco-ordinated, with no assurance of minimum standards with respect to quality control.

8.48 The advantages of centralisation are supposed to reside in the following:

- economies of scale in data collection and dissemination;
- the central agency is seen to be free of Departmental influences and hence is regarded as dispassionate in its approach to potentially contentious issues;
- the sustaining of a balance between the different outputs and co-ordination is easier and obtained in a more cost-effective way.

8.49 The strongest argument in favour of retaining a centralised system for Ireland is the need to keep the CSO free from any hint of outside influence. The reputation which the Office has for being utterly free of such influence is something which has to be preserved.

8.50 Under a decentralised system, one agency usually has the job of co-ordinating the activities with regard to statistics of different Departments, for seeing that standards are met, etc. It may keep within it certain important functions such as the national accounts and certain survey functions: in these cases it is probably easier for the central

agency to perform the task of "horizontal" co-ordination. It may have a say in the allocation of resources with regard to statistics between Government Departments and also in determining recruitment and training standards for professional statisticians.

8.51 Among the main advantages which are cited in favour of a decentralised system are the following:

- the statistician is more than a "mere" statistician but someone who has knowledge of the subject, e.g., education, transport, employment, which the statistician function is serving;
- the statistician is more sensitive to the changing nature of user needs.

8.52 Under a decentralised system, the statistician is supposed to maintain a loyalty to the central office. However, the evidence from other countries is that the statistician in the department feels most loyalty to the department rather than to the central office.

8.53 The issues are ones of degree. There are evidently limits to the degree of centralisation which is possible or which is appropriate, but it is difficult to set these limits.

8.54 Given the relative size of the country and the constraints on resources, on balance there are compelling reasons for retaining the centralised system with regard to the CSO. There would be merit in a few pilot projects linked, say, to the production of statistical bulletins which are more frequent and more up-to-date whereby statisticians from the central office spent some time in outlying departments. In order to benefit from such experiments, they would have to be monitored and written up. The statistical output of such experiments need not be glossy productions in order to be effective, as the experience of the *Quarterly Bulletin of Housing Statistics* shows.

8.55 There are two possible approaches to the filling of statistician posts in outlying departments. The CSO could agree to nominate a person from the appointments panel of would-be statisticians, rather than retaining that person for CSO. Alternatively, the departments themselves could recruit people with experience. The former course is recommended.

User Requirements

8.56 In a number of instances throughout this report it is pointed out that there is insufficient contact between the producers and the users of statistics. There are some bilateral contacts between producers of statistics and both public sector agencies and representative bodies from the private sector. But there is no regular forum for a general exchange of

views on the main issues. In cases where the CSO has tried to canvass reactions from users, as in the case of the Consumer Price Index, it has been difficult to get more than a limited response.

8.57 One possible move would be to set up a standing committee of statistics users. Given the existence of the Statistical Council, and the need to avoid a profusion of advisory bodies, this is not proposed. Rather, the following steps are recommended.

8.58 There should be a series of Statistical Users Seminars. The first such Seminar has already been held, under the aegis of the CSO and the Department of the Taoiseach, in June 1984. These should be continued on a regular basis. Indeed, as new developments took place, such as the setting up of a CSO data bank, there would be new opportunities for users seminars and for statisticians to explain the potential uses of new facilities or series. There would also be the opportunities for exchanges of views on topics such as the analysis of data from large data sets, for example, the Census of Population and the Labour Force Survey. The seminars should provide feedback to producers of statistics from users such as public sector bodies, industrial, financial, academic and other users. Specific topics such as the national accounts and the agricultural statistics should form the basis for individual seminars.

8.59 The scope of these seminars should not be limited to CSO statistics. An obvious candidate would be financial statistics, for example. In order to ensure the widest possible scope for the seminars, and because it would fall within the remit of the Council, the Statistical Council would be a useful umbrella body for hosting the seminars.

8.60 There may be more scope for the CSO to levy user charges in order to get an indication of the implicit value which different users put on different types of statistics. The scope is limited, though. In addition, the danger to be avoided is that this could be seen as a useful means of "milking" revenue for the Exchequer at the risk of lowering the benefits received from statistics.

8.61 Other means of obtaining an indication of the value put on series would be a more refined method of obtaining comments from users, both at the design stage of the main periodic surveys and censuses, and through a vehicle to obtain regular complaints. These would typify the "market research" which is needed to a greater degree than exists at the moment. There are other ways of helping the resource allocation process which should be used, such as monitoring the requests for special tabulations from censuses and surveys.

8.62 As indicated above, formal cost-benefit analysis would be extremely difficult to attempt, largely because of difficulty in capturing outputs. The more formalised cost-output budgets for the main statistical series should be a help in decision-making about particular series. Moreover, the questions of who is using what set of statistics, and for what purpose, should continually be raised.

8.63 The more formalised method of setting priorities, outlined above, would also have the advantage that it would put more onus on the users to articulate their needs more precisely and over a slightly longer time horizon than is usual for them. It would also have the advantage that it would focus attention on alternative and better ways of producing a given set of statistical output other than by simply putting more resources into the area. This should be a perennial focus of attention.

Access to Government Data

8.64 One issue which needs to be resolved is the setting out of principles of access to Government data. Government Departments contain much information which is of interest to policy analysts, some of it in the form of raw data. A certain amount of furtiveness in even disclosing the presence of data seems to be common.

8.65 Two barriers arise which impede a more effective use of these data. First, there is no centralised users guide to the body of data. In the cases of occasional survey work which Departments and agencies have done there is an even greater chance of a lack of awareness among potential users about the availability of data. Second, there is the lack of ground rules on access by outsiders to these data on a basis which does not leave the user beholden to the suppliers.

8.66 The following measures are recommended to overcome some of these problems.

- (i) Unpublished material which is held by Government Departments should be itemised to be followed by the publication of a brief guide to official sources.
- (ii) Each of the main Departments should have a liaison officer, chosen from among existing staff who would be familiar with the data being collected internally and who would be the link person in dealing with outside queries about access to these data. This person would have a two-way function as he/she would help departments to keep in touch with research and uses of data which occur outside the Department, would help to assess the research needs of the Department and would

help researchers and users to obtain the information which they needed. The functions would not simply be to facilitate access to data but to provide guidance on the data which were available for use. One of the benefits of this should be the creation of a greater degree of awareness of user requirements.

- (iii) In cases such as the housing conditions survey, the results should be disseminated as quickly as possible in published form – as in the case of the *Quarterly Bulletin of Housing Statistics*, this could be in a modest format.
- (iv) Departmental bulletins should stick to a pre-announced schedule for publication.

8.67 If a more open approach to the dissemination of information were adopted by Government Departments, this would be of value in itself in making dissemination a more routine affair than it is at the moment. With a more open approach as the norm, a particular Department or agency would not feel that its activities were being singled out for appraisal – as tends to be the perception at the moment.

8.68 Two related issues are likely to be a source of increasing attention. First, there is the case for more open government with a freedom of information act which would give members of the public the right to see official files, public information and one's own personal files. This would require legislative action. Second, there is the case for data protection in a world of increasing computerisation, and the laying down of standards regarding the safeguarding of privacy. In Ireland there are currently no standards on data protection. There are EEC standards, to which Ireland is not a party. The issues which are likely to arise under this heading would include:

- the ensuring of anonymity if individual records are released;
- the transfer of identifiable data to third parties;
- in compiling sampling frames, the use of data as registers for further inquiries;
- linkages of data on separate files;
- time limits for retention of data.

8.69 There should be a set of guidelines, or legislation, on data protection, with access for the individual to files being maintained on him/her. In this way, any forebodings which people might have about release of information which transgressed privacy would be minimised. There is likely to be increasing pressure for a formalised set of rules on data protection, given the increasing incidence of such measures in

other European countries. It is unlikely that Ireland could get away with being a "data haven" without any protocol or legislation.

Resources and Costs

General Points

8.70 It is considered that in the case of all recommendations except where specific comment is made below, one or other of the following holds:

- *either* the recommendations could be effected without any significant increase in the commitment of resources to statistics,
or
- where there would be need for some additional resources within a particular segment, this would be cost-effective from the point of view of the statistical system as a whole.

8.71 With regard to those recommendations which would involve an increase in resources, it should be borne in mind that there should be resource savings in the form of greater efficiency from the package of recommendations as a whole. There should be some resource savings through, for instance, the avoidance of duplication, the merging or linkage of records, and the avoidance of the need for surveys through the effective use of administrative records. However, such savings would occur across the public sector as a whole, and would not necessarily be observed within the CSO itself.

8.72 Costs would be sensitive to the time period over which any action would be taken. Other things equal, the faster the pace of implementation, the greater the likely costs.

8.73 We now take up the details of the resources issue under two headings – human resources and capital resources. No estimate of costs is made for the Revenue Commissioners: Revenue did not feel it appropriate to cost the recommendations.

Human Resources

8.74 Taken individually, a number of the recommendations would not involve any significant increase in staff resources. But taken together they would have a cumulative effect and would require some additional resources. Furthermore, in some cases (such as labour force and household information, Chapter 4), there would be a good deal of work required initially, which would then tail off.

8.75 By contrast, in other cases (such as cross-tabulations from the

Labour Force Survey, Chapter 4) there would need to be an infusion of staff time at regular intervals. In the case of moving the Census of Population to a *de jure* basis, there would need to be an initial commitment of staff time, associated with extra questions on the schedule.

8.76 As is evident from Chapter 6, the effective use of administrative records would require the deployment of staff in establishing files and in on-going maintenance of those files. This would apply, for example, to Revenue Commissioners and Social Welfare data. The additional automatic data processing (ADP) resources would depend on whether the user was to be given a capability for analysis, which would mean that computer packages would be made available to the user. There is need to make clear the distinction between the "one-off" requirements for the use of Revenue records and the continuing requirements. The *former* would be:

- matching the VAT and BNA (Basic Name Address on PAYE side) files: costing, say £20,000;
- coding of registrations based on current business descriptions, costing, say £23,000.

The *latter* would be:

- systematic updating of say one third of the current business registrations each year, costing, say £6,000 per annum.

Here and elsewhere, cost figures are at 1984 prices.

8.77 This report has put a good deal of emphasis on the need for improved co-ordination in the compilation and dissemination of statistics. To be effective, the co-ordination functions could require the full-time attention of a senior staff person with possibly an additional person, especially at the outset when the volume of work could be greatest. The cost would be about £25,000 per annum initially but there should be some offset for the public services as a whole, through more effective deployment of staff. Recommendations are made that the CSO produce cost-output reports and use a more formalised planning method (above). In order to achieve an initial impetus in this work, it would require about half a unit of staff for at least a period of time. CSO already produces an annual report to Government, so there would be no additional resources associated with that.

8.78 A number of recommendations are concerned with user charges for, and more vigorous marketing of, CSO statistics (Chapters 7 and 8).

If this work were to be properly organised and supported there would need to be, say about one extra person in the CSO information section – but there would be offsetting revenue to be counted.

8.79 In order to achieve better documentation of sources and methods of CSO statistics (Chapter 4), there would not be a need for a permanent increase in staff, but there would be some deployment of person-hours at the initial stages.

8.80 The above deals with the development and modification of software packages which emanate elsewhere. The resource implications differ quite a bit between:

- capitalising on existing packages, for which negligible extra resources would be required;
- CSO doing its own modifications for which there would be the need to deploy a statistician and a HEO/systems analyst.

In relation to the national accounts and balance of payments (Chapter 4), there is need to distinguish between what could be done over a time horizon of 2-3 years with existing resources and what would require additional resources. The *former* would cover mainly three items, *viz.*:

- the identification of the group of commercial State-sponsored Bodies in the accounts;
- a reduction in time lags for the dissemination of national accounts data;
- the production of quarterly balance of payments statistics.

Additional resources would be required for the following:

- the building up of an independent set of expenditure estimates which would have two main prerequisites:
 - (i) an annual stocks inquiry (£40,000 a year leaving aside some set-up costs);
 - (ii) an annual small-scale Household Budget Inquiry (£200,000 a year);
- a greater disaggregation on the output side by sub-sector, which would involve coding and manipulating register data.

8.81 Currently there is a lopsided staff structure in the national accounts section of CSO with only one HEO. This means that improvements such as in the accompanying notes to the national accounts, which would require work at statistician level, could not be achieved without

extra staff at HEO/EO level in the section.

8.82 It is recommended that there be a reduction in the time lag for dissemination of Census of Industrial Production data (Chapter 4). This is possible, according to CSO, only if any vacancies which arise are filled. It was acknowledged in Chapter 4 that increased resource would be required for linkage of data on production with data on trade (at the category level). This would be a major project involving matching of data and discussion with firms. The cost would be, say, £80,000 in total over a 2-3 year period.

8.83 The recommendation which is made on household balance sheets (Chapter 4) is of a feasibility study, thus no estimate of resource costs is given.

8.84 It is accepted above that a regular earnings survey (Chapter 4) would require more resources and hence the qualified recommendation. This would be a major project with costs which would depend on how the sample was drawn. It is estimated that a survey on the lines of the 1979 structure of earnings survey, without any EEC support, would cost £120,000. While this would not be ideal, as it would lack questions on education and previous training of employees, it is likely that such questions would give to response problems and an increase in costs.

Capital Resources

8.85 There has been some degree of computerisation within the CSO and currently micro-computers are being installed there. Over the long term, there is need for improved computer hardware and desk-top terminals for CSO.

8.86 The increased penetration of computers gives more flexibility in handling data. Such equipment does not necessarily lead to a direct saving in staff numbers but does bring increased speed in handling data and hence an increase in statistical "output" per unit of input.

8.87 However, with regard to computerisation, it is not simply a question of acquiring machinery. There can be implications for the collection system and for increased use of ADP manpower resources – this would be the case, for example, in agricultural statistics.

8.88 Chapter 5 mentions the need for greater "on-line" facilities at CSO. This would require more equipment. However, some of this is happening currently, as CSO is upgrading its computer hardware.

Social Welfare Data

8.89 In Chapter 6, we explored the extent to which the on-going computerisation of social welfare data could yield useful data for policy analysis. However, it is difficult to separate out the costs of the three functions of statistics provision: ability to pay benefits and to administer the system on a day-to-day basis (e.g., facility to control claims); management information; information for policy analysis. For these reasons, no cost estimates are given.

CHAPTER 9

SUMMARY

Information and Policy-making

9.1 There is a disparate group of users of statistical information, ranging from Government to private sector firms and interest groups. Different users will put premia on different attributes of data. For instance, timeliness will be a crucial aspect for many private sector users, as will the provision of industrial data at a fine level of detail.

9.2 Among public sector users, the policy issues of the day will generate a demand for relevant data. Given the time-lags that are involved before data can be provided, the provision of data may constantly lag behind what is needed to answer current policy questions. That is unless it is possible to anticipate the policy concerns and provide the related data.

9.3 Information which is provided by Government can be of considerable help to private decisions. Thus, the benefits which are obtained from information are not limited to Government users. This raises the issue of dissemination. Much of the information which is collected by public sector agencies is not disseminated. Indeed, there is a general lack of openness in public administration in Ireland which puts a barrier in the way of access to information which is held in the public sector.

Resource Allocation

9.4 There are a number of reasons why it is difficult to use formal criteria in deciding how much public resources to put into the provision of statistics. This is partly because of the "public good" aspects of statistics; once information is provided at all, many people can benefit at little or no extra cost. And it is partly because of difficulties in discerning the preferences of the various users for the different statistics. Because of the diffuse benefits which arise from statistics, formal cost-benefit analysis will not provide a method of deciding how much resources to put to statistics. However, it is possible to get a feel for the value of statistics by asking in any particular case: what are these statistics for, and who is using them? In answering these questions, due account should be taken of the fact that many of the benefits arise outside Government.

Coverage and Assessment of Public Statistics

9.5 One of the crucial attributes of statistical series is the broad coverage – to what extent are sectors or entities covered? Based on an examination of coverage, a number of recommendations are made for improvement; the main ones are as follows:

- on the national accounts, more detailed disaggregation on output and expenditure;
- in the case of population and the labour force, the provision of data on movement between states such as employment, unemployment, disability, retirement; the adoption of a *de jure* basis for the Census of Population; and more detail on links between labour force participation and family composition;
- on employment, more detailed classifications and the provision of a regular bulletin on public sector employment through the Department of the Public Service, with improved coverage by comparison with the current system;
- in the case of public expenditure, a coherent system which would enable the volume and price of public services, by programme, to be assessed over time; this would mainly involve the provision of consistent data on a programme basis along with expenditure series in both money and volume terms and data on tax expenditures, and a common reporting standard on expenditure and revenue for most public bodies;
- greater disaggregation of the international trade data and a linking of the trade with the industrial data;
- in order to improve the poor data on services, the use of Revenue Commissioners data, and the possible extension of the ESRI/CII business survey to the retail sector;
- in the case of banking and financial statistics, greater detail in the Central Bank *Quarterly Bulletin* and improved coverage of building society activities together with a feasibility study of a survey of household balance sheets;
- improvements in the data which are filed at the Companies Office and more utilisation of these data;
- a mandatory standard for the annual reports of State-sponsored Bodies;
- a general household survey which would be of great benefit for social policy issues; in the interim, the EEC consumer survey could be built upon;
- a move towards a regular earnings survey.

9.6 There is need for adequate "sources and methods" documentation to be provided with the CSO series. Similarly, an adequate set of notes should accompany the *Budget* booklet and the public expenditure

tables, describing the main statistical series and their characteristics.

Compilation of Statistics

9.7 An increasing proliferation of data producers outside the CSO is evident. There is potential to rationalise the data-gathering which is undertaken by public bodies from Irish firms.

9.8 One of the reasons for the poor response on the part of industrial firms to CSO requests for data is that the statistics are not easily abstracted from company records. In order to arrive at a better fit between CSO requirements and the financial accounting practices of firms, the CSO should engage in a pilot experiment to encourage the development of a software package for firms to bridge their accounts and CSO requirements.

9.9 There is need for CSO to complete its current round of computerisation. This means computerisation of agricultural statistics, earnings statistics and (to some extent) the national accounts.

9.10 The issues which arise in deciding between censuses and surveys can be pointed up by considering the Census of Population. The Census has a number of strengths which argue in favour of its retention at a five year frequency. At the same time, it could be worthwhile to consider using the Census for asking a relatively small number of key questions, and employing surveys for asking more detailed questions, on housing and travel-to-work patterns, for example.

The Use of Administrative Records

9.11 There are many ways in which Revenue Commissioners data would fill gaps in data series and augment other sources. Among the gaps which could be filled would be the large one on activity and earnings in services. The use of this source should be cost-effective, as otherwise there would have to be recourse to special surveys. The main constraints which lie in the way of the realisation of this potential are as follows:

- the fact that there is no particular incentive on the part of Revenue to produce the desired statistics;
- the need which would occur to deploy persons, in part to maintain the files in good order and to provide adequate up-to-date registers.

9.12 It is recommended that the Government should require the Revenue Commissioners and the CSO to develop an action plan, with the object

of employing Revenue statistics to provide regular data on earnings, employment and turnover by sector in the first instance. This should be followed up by a second phase programme of uses of Revenue statistics, as outlined above in Chapter 6. The ideal, which is attainable, would be to arrive at a position where a set of data was available to the user to manipulate further.

9.13 It is also recommended that the Revenue Commissioners regularly publish further data on income distribution and on taxation.

9.14 It is recommended that, in a particular policy area, a pilot study be attempted, drawing up a computerised data plan linked to the planning and policy functions.

Methods of Dissemination

9.15 One of the main vehicles for dissemination of CSO data is the *Irish Statistical Bulletin*. This is outmoded, partly due to its miscellaneous character and lack of timeliness. It is recommended that there be a publication series organised by subject matter, containing much longer time series than at present and also elementary charts. There are also a number of ways by which timeliness could be improved – by rationalising the commentary and using preliminary estimates.

9.16 The CSO industrial statistics should be made more attractive to industrial users, partly through making design more attractive with some uniformity in design and format (e.g., size, colour) and graphs. In conjunction with this, a pilot effort could also be mounted to make the services of CSO more widely known to industry, say, in collaboration with the Confederation of Irish Industry.

9.17 There is a considerable potential for CSO to market small area statistics from the Census of Population and the Census of Agriculture, to private business on a commercial basis. It is recommended, to this end, that a customer services function be developed in CSO to improve marketing.

9.18 An attractive source guide to CSO statistics should be produced, together with a booklet aimed at industry on uses of industrial and trade statistics. This could be disseminated in co-operation with the Confederation of Irish Industry. Related to this, an editor of publications should be established within CSO.

9.19 Existing methods of data dissemination are based largely on traditional "hard-copy" form. There is potential to use alternative methods of dissemination which could both cut costs and help to over-

come some of the timeliness problems. There is considerable potential for developing the following:

- dissemination via microfiche;
- a type of "public use tape" facility, whereby data at individual or household level were disseminated in anonymised form;
- data banks, whereby data are available and disseminated in machine-readable form;
- a data archive which would be a repository of machine-readable data on the economy and society and which would make them available for analysis.

9.20 On the latter it is recommended that a feasibility study be mounted for an archive facility. Finally, there is need for a central index to the range of statistics which are provided through public sector bodies.

Planning for Public Statistics

9.21 There are a number of ways by which planning and resource allocation for public statistics could be improved. Within the CSO, a greater degree of flexibility than currently holds should be afforded to CSO within a fixed budget. Similarly, there is need for flexibility in the use of staff within CSO. Related to this is the desirability of recruitment of trained people for computer systems work, and of having promotional outlets for computer systems staff and general service staff. Some resources should be devoted within CSO to developing and modifying software packages which come from elsewhere.

9.22 There are a number of ways in which closer links between the work of statisticians and policy concerns could be forged. Related to this is the recommendation that exchanges should occur for periods of, say, 1-2 years between statisticians in CSO and social scientists in other parts of the Government service or in the private sector.

9.23 The other two main areas which are germane to efficiency across public statistics are as follows: the role of the Statistical Council, and the co-ordination of statistics outside CSO. With regard to the Statistical Council, a number of recommendations are made. These would give it a role, in conjunction with the CSO, in a revised system which would be more formalised. The revised system would provide a central focus of decision-making across all public statistics, including the setting of standards and the monitoring of performance.

9.24 With regard to the co-ordinating role, this would have a number of objectives designed to maximise output from public resources,

achieve quality control and compatibility between data sets, avoid unnecessary duplication, use the capability for data transmission via computers, and encourage public sector bodies to consider the statistical possibilities of administrative records and to consult on this with the CSO. The functions of the CSO should be widened to include this co-ordination.

9.25 Minimum standards should be set in relation to data which are collected as a by-product of Government contracts, including their deposit at a central location.

9.26 There would be merit in a few pilot projects – linked, say, to the production of statistical bulletins more frequently and more up to date on a subject matter basis – whereby statisticians from the central office spent some time in outlying departments.

9.27 Other points are designed to make statistics provision more responsive to the requirements of users. Among them is a recommendation for a series of Statistical Users Seminars.

9.28 Finally, a number of specific measures are designed to overcome the barriers which currently impede the most effective use of Government data. Recommendations are made for:

- the provision of a centralised users guide and
- the laying down of ground rules on access by outsiders.

Together with this, there should be a set of guidelines, or legislation, on data protection, with access for the individual to files being maintained on him/her.

APPENDIX 1

BRIEF DESCRIPTION OF THE MAIN CSO STATISTICAL PUBLICATIONS

Frequency and latest date at April 1985 is given after title.

General Digests

Irish Statistical Bulletin (ISB): quarterly, June 1984 (published February 1985). Contains mainly data on prices; industrial production; industrial employment; earnings and hours worked; earnings and hours worked in building and construction; output in industry; transport; unemployment.

Statistical Abstract of Ireland: annual, 1981 issue published May 1985. Abstracts not only data of CSO publications but also data issued by several Departments by State. Includes data on population, agriculture, industry, trade, retail and wholesale distribution, social statistics, education, national accounts, public finance, banking, transport, prices.

Economic Series (mimeo): monthly, 31 March 1985. Continues the series published in ISB, and covers 75 individual monthly or quarterly series. The main items are: imports and exports (value, volume), industrial production, electricity output, retail sales (value, volume), wholesale and retail prices, agricultural output, agricultural prices, cement sales, employment in building and construction, unemployment, births, marriages, deaths.

General Economic

National Income and Expenditure (NIE): annual, 1982 issue published August 1984. Contains 1982 data on national income, national output by sector, personal income and expenditure, receipts and expenditure of public authorities, balance of payments, together with preliminary data for 1983 on income and balance of payments.

Balance of international payments details are given in an issue of ISB.

Input-Output Tables: irregular, 1975 tables published 1983. Describes the inputs and outputs of different branches of the economy and their interrelationships.

Mimeographed Series. CSO issues mimeographed series at monthly intervals: including on external trade, industrial production index, retail sales index, motor registrations, wholesale price index, Live Register and flows on and off the Register, numbers on Register by region. Quarterly data cover the consumer price index; age analysis of Live Register, age by duration analysis of Register; strikes or lock-outs reported. Further details are in Appendix 3.

Industrial Production

Census of Industrial Production 1979 (published April 1984) was the first of a new series of annual reports with the full results of the annual census of industrial establishments and enterprises. Data are on output and employment by sector and by county, on costs, turnover, stocks, indirect taxes, acquisition of assets.

Census of Industrial Production 1980 (published February 1985).

1981 Census of Production: initial overall results issued April 1985.

Industrial Turnover Index: was introduced in October 1984. Index for December 1984 issued in April 1985.

Agricultural statistics: preliminary estimates of agricultural output are in Department of Finance, *Economic Review and Outlook* (annual); principal results for 1983 are in ISB June 1984. Agricultural statistics for June 1983 are in ISB September 1983.

External Trade

Trade Statistics of Ireland: monthly, December 1984 issue published April 1985. Containing particulars of imports and exports by commodity and country.

Manpower, Earnings

Census of Population: described below.

Labour Force Survey: described below.

Labour Costs Survey 1981 in Industry, Distribution, Credit and Insurance (published May 1984). Contains results of a survey of labour costs in industry and certain services. Covers labour costs in the widest sense and also includes number of employees by size of firm and by sex.

Survey of the Structure and Distribution of Earnings in Industry, Distribution, Credit and Insurance October 1979 (published May 1984). Contains data on average earnings by sex and occupational status, by age and sex and by other characteristics; data on numbers of employees by these characteristics. Earlier survey for 1974 covered distribution, credit and insurance.

The Trend of Employment and Unemployment: annual, 1978 issue published November 1979. Contains data on employment by sector, unemployment (with an industrial and an occupational analysis), vacancies, industrial disputes. The publication has been temporarily suspended pending the completion of a review of contents.

Redistribution of Income

Redistributive Effects of State Taxes and Benefits on Household Incomes in . . . occasional, 1980 data published in 1982. Data are estimated from 1980 Household Budget Survey. The report estimates the degree to which income is redistributed for different types of households by tax payments and State benefits. The calculations move from direct income (such as wages and salaries) to final income by allowing for cash benefits, direct taxes (income taxes and employees' social insurance contributions), non-cash benefits and indirect taxes (such as VAT).

Building and Construction

"Planning Permissions Granted during the . . . quarter of 19. ." (mimeo); quarterly. Granted during the third quarter of 1984 (published January 1985). Gives the number and floor area of planning permissions granted.

Transport

Road Freight Transport Sample Survey: annual, 1982: *Road Freight Transport 1982* (published November 1984).

Distributive and Other Services

Census of Distribution, 1977: Vol. III: *Wholesale Trade and Services* (published August 1983).

Population and Households

Census of Population usually every 5 years. It is intended that the reports of the 1981 Census will extend to 13 volumes, including population by area, ages and marital status, industries and occupations,

housing and households, fertility of marriage, usual residence and birth-place, education.

Census of Population of Ireland 1981: Five per Cent Sample Estimates: Age, Marital Status and Labour Force (published March 1983). Has data on age group, marital status, principal economic status, industry group, occupational group.

Census of Population of Ireland 1981: Five per Cent Sample Estimates: Housing and Households (published December 1983). Contains estimates based on sample about 1 in 20 households, giving characteristics of private households in permanent housing units.

Census of Population of Ireland 1981 Vol. 2 Age and Marital Status Classified by Areas (published September 1984); *Vol. 3 Household Composition and Family Units* (published April 1985).

Labour Force Survey:

Every 2 years since 1975 (though not held 1981): *1983 Labour Force Survey First Results* (published October 1984). Includes data on population by economic status (at work, unemployed, etc.) and age, labour force, employment by industry, by region, by sex, employment by industry by sex and age, employment by occupation.

Quarterly Report on Births, Deaths and Marriages . . .: quarterly, September 1984 (published March 1985). Includes data on marriages, births, deaths and infant mortality. December issue contains extended data for calendar year such as births by age of mother.

Report on Vital Statistics: annual, 1981 issue published November 1984. Includes data on population by age, marriages (including number, rate, age at marriage), births, deaths.

Household Budget Survey: annual for urban areas up to 1979 with all State in 1980 and smaller scale for all State in 1981; now irregular, 1980 issue: Vol. 4 *Detailed Results for Rural Houeholds* (published October 1984). Contains data on average size, housing tenure, household facilities and weekly expenditure of households classified by gross household income and by other entities such as household tenure and household size.

APPENDIX 2

BRIEF DESCRIPTION OF PRINCIPAL DATA SOURCES OUTSIDE CSO PUBLICATIONS

Irish Sources

This frequency and the latest date to which data refer at April 1985 and date publication are given after publication title. Only cases where there are regular publications are included.

Financial Sector

Central Bank of Ireland, *Quarterly Bulletin*: quarterly, No. 3 of 1984. Contains monetary indicators, external reserves, domestic credit, money supply, interest rates, exchange rates, balance sheet and other data on banking and financial institutions.

Central Bank of Ireland, *Statistical Supplement*: monthly, April 1985. Comprises updated information on some of series in *Quarterly Bulletin* such as domestic credit, interest rates.

Public Finances

Department of Finance, *Budget* booklet, incorporating *Public Capital Programme*: annual, *Budget 1985*, 1985. Contains data on current and capital budgets, main heads of current Government expenditure, estimates of Exchequer receipts and expenditure, national accounts classification of budget.

Department of Finance, *Estimates for Public Services*: annual. *Revised Estimates for Public Services 1985*, 1985. Gives estimates of the costs of Departmental functions which must be voted.

Appropriation Accounts: annual Accounts 1983, 1984. Gives a comparison of actual expenditure with planned expenditure.

Finance Accounts: annual, *Finance Accounts 1983*, 1984. Includes data on national debt and its composition.

Iris Oifigiúil: weekly (Tuesday issue): receipts and issues into and out of the Exchequer.

Department of the Environment, *Local Authority Estimates 19... with Provisional Outturn Figures for*: *Local Authority Estimates 1984 with Provisional Outturn Figures for 1983, 1984*. Contains estimates of receipts and expenditure on current account adopted by local authorities and estimated outturn numbers for preceding year. Receipts and expenditure are classified by programme.

Department of the Environment, *Returns of Local Taxation: annual, 1980 with Summary Figures for the Following Years*, 1985. Has details of the receipts, expenditure and indebtedness of local authorities, revenue account receipts and capital account receipts.

Revenue Commissioners, *Annual Report: Annual Report of the Revenue Commissioners Year ended 31st December 1982*, 1985. Includes data on tax receipts by type of tax. For the first time for 1980-81, data were published on the aggregate cost of allowances and reliefs under income tax and corporation tax, classified by type of allowance (e.g., child allowance, PAYE allowance, interest paid).

Industrial Production

CII/ESRI, *Monthly Industrial Survey*: monthly, February, 1985. Contains trend information on production, sales, exports, stocks; data on capacity utilisation.

Agriculture, Forestry and Fishing

An Foras Taluntais, *Farm Management Survey*: annual, *Farm Management Survey 1983*, 1984. Has data on distribution of farms by size and labour income, on gross output, expenses, income and resources.

Report of the Minister for Fisheries and Forestry on the Forest and Wildlife Service 1983 (published 1984). Includes data on acquisition of land for State forest development, provision of planting stock, area and classification of State forest lands held.

An Bord Iascaigh Mhara, *Quantity and Value of Sea Fish (Excluding Salmon) Returned as Landed . . .*: annual, data up to 1983 published in 1984.

Labour

AnCO, *Manpower Survey*: irregular, *Manpower Survey 1981*, 1982. Contains data on employment by occupation in manufacturing industry, with some regional data.

Department of Labour, *Manpower Information Quarterly*: quarterly: January 1984 (issued March 1984). Data include on NMS vacancies, job seekers, trainees on AnCO courses, leavers from second level schools, redundancies notified by employers.

Department of Labour, Report on School-leavers survey: annual, *Economic Status of School-leavers 1983: Results of a Survey carried out in May/June, 1984* (published November 1984). Contains data on employment pattern of school-leavers, classified by the level at which they left school, together with participation in work experience and AnCO training schemes.

The Higher Education Authority, *First Destination of Award Recipients in Higher Education*: annual, *First Destination of Award Recipients in Higher Education 1982*, June 1983. Gives results of survey on the pattern of first destination for students who received primary or higher degrees, employment status, salary.

AnCO, *Apprenticeship Statistics 1966-1983* annual, 1984. This includes data on registered apprenticeship population, day and block release attendances.

Local Appointments Commission, Civil Service Commission, *Report*: annual, *Report 1983* (published 1984). Contains competition statistics for competitions held in year.

The Labour Court, *Annual Report*: annual, *Annual Report 1983, 1984*. Contains data on minimum wage rates.

Department of Labour, *Labour Inspection Report for 19...: annual, Report for 1982, 1984*. Contains data on accidents in industry and on inspection under Employment Regulation Orders.

Education; Science and Technology

Department of Education, *Statistical Report*: annual, *Statistical Report 1981-82*, July 1984. Includes data on numbers receiving full-time educations and on new entrants by level of education.

The Higher Education Authority, *Accounts and Student Statistics*: annual, *Accounts 1982 and Student Statistics 1982/83*, 1984. Includes data on student numbers, degrees awarded, those entering higher education for the first time.

The Higher Education Authority, *First Destination of Award Recipients in Higher Education*, annual: 1983 report published in 1984. Contains data on first destination of degree and sub-degree recipients.

National Board for Science and Technology (NBST), *Irish Science and Technology Statistics*: biennial, December 1983. Data include: science and technology expenditure, manpower in Research and Development by qualification, R and D expenditure including by sector.

NBST, *Science Budget*: annual, *Science Budget 1983, 1983*. Includes data on science and technology manpower outturns and science and technology expenditure outturns.

Energy, Transport

Department of Energy, *Energy in Ireland*: quarterly, July-September 1984 (issued March 1985).

Department of Energy, *Energy in Ireland*: annual, 1983.

These two publications include data on consumption by type and on sales by type.

Institute for Industrial Research and Standards, *Comparison of Energy Costs* (separate issues for domestic fuels, domestic heating; commercial/industrial fuels): quarterly, April 1985.

Department of the Environment, *Census 19...: annual, September 1984*. Shows the number of vehicles by type by county.

An Foras Forbartha, *Vehicle Kilometers of Travel 19...: annual, 1980*.

An Foras Forbartha, *National Roads and Traffic Flows 19...: annual, 1980*.

An Foras Forbartha, *Road Accident Facts 19...: annual, 1983*.

CIE, *Annual Report*: annual, 1983: rail and road traffic and average receipts.

Companies

Department of Industry, Trade, Commerce and Tourism, *Companies General Annual Report*: annual, *Companies General Annual Report 1983, 1985*.

Tourism

Board Fáilte Éireann (BFE), *Survey of International Travellers*: annual (since 1972), 1983. Gives data on holidays, and on location of holiday by tourist region.

BFE, *Home Holidays Survey*: annual, 1984. Based on about 1,600 interviews, gives data on type of home holiday-taking.

BFE, *Hotel Survey*: annual, 1983. Contains data on bednights and on hotel occupancy rates.

Health, Housing, Social Welfare

Department of Health, *Statistical Information Relevant to the Health Services*: annual, 1984. Includes numbers receiving health services, admission to hospitals, manpower statistics, expenditure statistics.

Report of the General Medical Services (Payments) Board, annual, for the year ended 31 December, 1983. Data on use of services of general practitioners and of pharmacies.

Department of the Environment, *Quarterly Bulletin of Housing Statistics*: December 1984. Contains data on housing activity; financial flows to housing; prices, capital formation in housing. The December issue contains additional data on incomes of loan applicants.

Department of the Environment, "Local authority housing monthly progress report", Position at 31 January 1985. Gives data on completions, houses under construction, employment.

Annual Report of the Registrar of Building Societies: annual, *Annual Report of the Registrar of Building Societies, 1982*, 1984. Contains data on building society finances.

An Foras Forbartha, "National Building Price Indices": quarterly (mimeo), September 1984 (published January 1985).

UN (Economic Commission for Europe), *Annual Bulletin of Housing and Building Statistics for Europe*: annual, *Annual Bulletin of Housing and Building Statistics for Europe, 1983*, 1984. Includes data for Ireland on dwelling stock and on structure of dwelling construction.

Construction Industry Federation/EEC, *Survey of the Irish Construc-*

tion Industry: quarterly, December 1984. Gives trends on activity, prices, work in progress.

Construction Industry Federation Survey of Construction Starts: for 4th Quarter 1984 (published April 1985).

Department of Social Welfare, *Statistical Information on Social Welfare Services 19 . . .*: 1983 issue published 1985. Gives data on number of beneficiaries for each of the benefits and average weekly payments on those benefits, the number of adult and of child dependants under certain schemes, the number of claims received and the decisions on those claims, the rates of contribution and of benefit under the different benefits, and total income and expenditure under social welfare schemes.

Income Distribution

Revenue Commissioners, *Annual Report* (see above). Since the 1977 report, data are given on the distribution of incomes, classified in some cases by dependency, and in other cases by type of taxpaying unit. The distribution of income data in the 1982 Report relate to income assessed in the tax year 1981-1982 (which means income received in 1981-82 for PAYE earners and 1980-81 income for Schedule D assessments). For the first time for 1979-80, income distribution data were published for trades and professions, by type of trade/profession.

External Sources

In addition there are the following publications of international organisations which contain Irish data which are not published elsewhere.

Eurostat, *Labour Force Sample Survey*: every two years, 1981 issue published 1983. Includes Irish data on unemployment which are not published elsewhere.

Eurostat, *Demographic Statistics*, latest issue published 1984. Includes Irish data on total fertility rate in each year.

Eurostat, *Structure of Earnings in Wholesale and Retail Distribution, Banking and Insurance in 1974: 5 - Ireland*. Contains results for Ireland of the first survey on the structure of earnings in these sub-sectors.

Eurostat has issued a six volume report on the results of the 1975 EEC Farm Structure Survey (published 1978) and key results of the 1977 survey have been published in a one volume mimeographed report of

December 1981 (by Agricultural Statistics Committee of Statistical Office of the European Communities). The most recent survey results are in: Eurostat, *Community Survey on the Structure of Agricultural Holdings 1979/1980, Vol. II, Vol. III Main Results*, 1985.

Commission of the European Communities, *Results of an Economic Survey of Investment in the Community*, quarterly. Trend in industrial investment by broad category, excluding investment of public undertakings.

Eurostat, *National Accounts ESA: Detailed Tables by Branch 19* : annual, 1984 issue published 1985: more details on output by industry, consumption of households and gross fixed investment than is in NIE.

OECD, *National Accounts 1970-1982: Volume II: Detailed Tables*, Paris 1984, annual contains data on capital transactions not in NIE, and data on GDP by activity, income, consumption and capital formation which are more detailed than in NIE.

United Nations, *National Accounts Statistics: Main Aggregates: Detailed Tables 1982*: 1985, annual. Contains greater detail on output by activity, on income, consumption and capital investment than is in NIE.

OECD, *Revenue Statistics of OECD Member Countries 19 . . .*: annual, *Revenue Statistics of OECD Member Countries 1965-1983*, July 1984. Has internationally comparable data on tax revenues, trends over time in tax levels, tax structures, taxes relative to Gross Domestic Product, taxes by type.

OECD, *The Tax/Benefit Position of Production Workers*: annual, *The 1982 Tax/Benefit Position of Production Workers*.

OECD, *The Tax/Benefit Position of Selected Income Groups in OECD Member Countries, 19 . . .*: at intervals of a number of years, *The Tax/Benefit Position of Selected Income Groups in OECD Member Countries, 1974-1978*, October 1980.

In these two publications, the results are in effect not based on the collection of data as normally understood in the content of this exercise, but on the application of the tax rules and rates to different "prototype" workers on average earnings.

Two occasional publications are the following:

Eurostat, *Pensioners in the Community 1977, 1981*. Contains Irish data which come from the inclusion with the questionnaire of the labour force survey of a series of questions on pensioners and retirement conditions.

Eurostat, *Economic and Social Features of Households in the Member States of the European Community*, 1982. Gives Irish data on number, size and structure of households in 1971; has details on single-member households (e.g., sex x category of activity x age) not published elsewhere.

APPENDIX 3

CENTRAL STATISTICS OFFICE PUBLICATIONS AND MIMEOGRAPHED RELEASES: FREQUENCY AND NUMBERS ISSUED

Central Statistics Office Publications: Frequency and Number Printed

Publication	Frequency	Number printed
Irish Statistical Bulletin	Quarterly	1,500
Statistical Abstract	Annual	1,200
Vital Statistics	Quarterly	450-500
	Annual	800
Census of Population	Quinquennial (normally)	
Volume 1		5,000
Volume 2 et seq.		1,500-2,500 depending on volume
Labour Force Survey	Biennial	2,000
Trade Statistics	Monthly	1,200-1,700
Census of Distribution (4 volumes)	Ad hoc	600-1,000 per volume
National Income and Expenditure	Annual	2,050
Input-Output Tables	Ad hoc	450
Household Budget Survey (large-scale inquiry)	Ad hoc	750-1,000
Income Redistribution Analysis	Ad hoc	1,000
Report on Census of Industrial Production	Annual	1,000

Source: CSO.

Subject	Frequency	Number of issues	Number issued per issue
Agricultural Enumerations	Annual	5	1,400
Agricultural Output	Annual	1	1,300
Size of Herd Analysis	Biennial	1	1,300
Pigs Slaughtered at Bacon Factories	Weekly	1	150
	Monthly	1	190
Production of Butter etc.	Weekly	1	180
Balance of Payments	Annual	1	500
Building and Construction			
- Employment	Monthly	1	550
- Earnings	Quarterly	1	600
- Planning Permissions	Quarterly	1	620
Distribution			
- Retail Sales Index	Monthly	1	3,900
- Hotels and Guest Houses	Quarterly	1	1,100
- Hire Purchase and Credit Sales	Annual	1	300
- Advertising Agencies	Annual	1	300
Economic Series	Monthly	1	1,260
Industry			
- Index of Production	Monthly	1	400
- Employment, Earnings and Hours Worked	Quarterly	2	1,500
- Census of Industrial Production	Annual	1	1,200
Labour/Live Register			
- Basic Statement	Monthly	1	900
- Industrial Analysis	Monthly	1	700
- Area of Residence	Quarterly	1	300
- Age Analysis (incorporating half-yearly duration analysis)	Quarterly	1	650
- Occupational analysis	Quarterly	1	200
- Industrial disputes	Quarterly	1	300
Prices			
- Agricultural Input Price Index	Monthly	1	460
- Agricultural Output Price Index	Monthly	1	325
- Consumer Price Index	Quarterly	1	2,100
- Wholesale Price Index	Monthly	1	1,100
Tourism			
- Visitors home and abroad -- summary results	Annual	1	70
Trade (External)			
- Provisional Trade	Monthly	2	1,000
- Animals exported by sea and air	Monthly	1	75
	Annual	1	75
Transport			
- Motor Registrations	Monthly	2	1,100
- Motor Registrations	Annual	1	1,100
- Omnibus Services	Monthly	1	1,100

Note: The numbers include those which go to the Government Information Service for distribution to newspapers and those which go to the members of the Houses of the Oireachtas.

Source: CSO.

APPENDIX 4

OUTLINE OF UNPUBLISHED DATA SOURCES IN IRELAND

In a number of cases, data are collected on a regular basis by official bodies, and are either published or are sent on to organisations such as the EEC for publication, together with data for other countries. This Appendix indicates the main sources of such information, excluding those cases where information is collected purely for internal purposes as in the case of a corporate plan.

Industrial Development Authority Employment Survey

This is an annual survey, now conducted on 1 November each year, from the IDA. It is collected for the internal planning needs of the IDA, but some summary information from the survey appears in the IDA *Annual Report* (and formerly appeared in *IDA News*) on employment in indigenous industry and in overseas sponsored industry (by employment range) and on employment change by sector.

An Foras Talúntais, EEC Consumer Survey

This is undertaken quarterly for the EEC, with four quarterly samples of 2,000 households each. Within four weeks from completion of survey, data are sent to EEC. Within two months of the survey summary data for Ireland, compared with those of other EEC countries, are issued by the EEC — recently in *Series C of European Economy*. For the first time these data appeared in *Supplement C — No. 1 — March 1974: Consumer Survey Results*.

Apart from questions on consumer confidence and attitudes and on intention about expenditure over the next twelve months, questions are asked on structure of household, level of education and net (i.e., after direct taxes) household income. From time to time, additional questions for clients (usually in the public sector) have been added. Data are available on tapes. In principle, anyone with a compatible machine should be able to have access to the data, but this has not been tested.

Department of the Public Service (DPS), Information on Public Sector Employment

An information system is operated by the DPS, using manual returns

sent in by branches of the public service. This system is designed for internal purposes of organisation, personnel and remuneration, and is drawn on for answering Parliamentary Questions. Some articles in *Seirbhís Phoiblí* (e.g., Glavey, 1981 and Meehan, 1983) have drawn on this data base. In particular, in the absence of more adequate alternative sources, DPS data provided most of the data used in Humphreys (1983) in order to examine the changing patterns of public sector employment.

The Staff Information System was compiled manually up to 1975. From 1976 on, the system has been computerised by Central Data Processing Services (CDPS) on behalf of the DPS. For most of the non-industrial Civil Service, data are collected on numbers of staff, details of remuneration, whether working part-time or full-time, age, sex, movement in and out of the Service, promotion. Following the computerisation, data on, for example, length of service can be provided. These data are updated continually so that at any time (say, within the year) a snapshot picture of the non-industrial civil service can be obtained. For 1st January each year a printout of the records is retained.

More limited information which is not computerised is available both on certain non-industrial staff (such as numbers of staff) and on industrial civil servants, completed annually at the beginning of the year.

For the rest of the public service, much more limited data are available, in the sense that the data

- are compiled manually;
- are available with longer time lags;
- consist of more limited information.

For example, in the case of the Garda Síochána, monthly returns are made to the DPS (a series going back to 1976) on numbers by rank and sex, vacancies; monthly returns are made by the Defence Forces; annual returns are made on local authority employment (on numbers, location, remuneration, annual returns are sent by the Department of Health (obtained from the annual Health Personnel Census: on numbers by grade and location).

The DPS sends questionnaires at the beginning of each year to all State-sponsored Bodies on numbers of staff with details of full-time/part-time work, grade, remuneration, overtime; from 1982, additional details on age, sex and location were requested. In 1984, data on staff numbers in each of a number of pay-bands were requested.

APPENDIX 5

DATA BANKS

Introduction

This Appendix describes in summary form the main data banks which have been developed in recent years.

Department of Finance

The most recent version is described in FitzGerald *et al* (1983). This is a data bank of annual economic series, much of it coming from *National Income and Expenditure*, with additional material on investment and consumption taken from the OECD, EEC and UN national accounts tables for Ireland. Section 1 contains the national accounts data including transformations of the basic data from 1958 to constant prices and transformation of Government data to a calendar year basis. Section 2 contains annual data including on trade, monetary statistics, employment series, and Government sector data drawing on a variety of sources. Section 3 contains miscellaneous data such as some social welfare data. All of the data are on direct access to users of the CDPS computer.

Central Bank of Ireland

The Central Bank maintains a data bank of economic time series, described in Central Bank of Ireland (1984). The series are based mainly on CSO or on Central Bank data. The most important series are put in a folder which is available in limited distribution. All series are tested for seasonality, and are presented in seasonally adjusted form.

Institute for Industrial Research and Standards (IIRS)

The IIRS maintains an Industrial Information System, which is available for access by external users on a dial-in basis, or on a client's behalf by Institute staff. It was established in March 1982. The emphasis is on manufacturing industry and data are constantly updated in that sector. Major construction and service companies are included, as are many wholesalers and retailers. For the manufacturing sector, data on 6,600 companies are currently stored, according to the NACE system of EEC. The data which are stored include classification of the company's activities, number of employees, nationality of controlling interest.

An Foras Forbartha

In the late 1970s An Foras Forbartha developed a data base for urban and regional planning (described in Walker and Blackwell, 1980). This was designed to meet the needs of Irish local authority planners in the 1980s, with particular reference to their two main areas of work:

- development planning;
- development control.

The data stored related to population, employment, housing and planning applications, among other things. Data were stored at a high level of disaggregation, such as townland or street (in the case of planning applications) and urban and rural district. Most of the data collected related to the period since 1961, drawing on primary data from sources including CSO, State-sponsored Bodies and local authorities, with adjustments to ensure compatibility between data sets in many cases.

The system was designed to achieve a direct link between the user (typically a local authority planner) and the system, using the local authorities' hardware. The system was implemented on a pilot basis for the North East Region. It was designed to suit the particular main-frame computer which was used by most County Councils. This aspect has now been overtaken by events. Local authorities either have micro-computers or are likely to obtain them. The system of An Foras Forbartha cannot be adapted to run on a micro-computer. Reflecting these changes in technology, no further work has been done to update or expand the data base beyond the pilot project mentioned above.

An Foras Talúntais (AFT)

AFT is developing a data base and a data bank which will cover different facets of agriculture: from the administration of research projects to instructional material.

APPENDIX 6

THE REPORT OF THE COMMITTEE ON STATISTICAL REQUIREMENTS AND PRIORITIES, AND SUBSEQUENT ACTION

Introduction

This Appendix summarises the November 1974 report of the Committee on Statistical Requirements and Priorities (Central Statistics Office, 1974) and the subsequent action which was taken.

The Report

The Committee essentially dealt with CSO statistics. Leaving aside regional statistics, the following were the main priorities of the Committee.

The *highest priority* was given to improvement of the short-term statistical information in the industrial sector, specifically:

- provision of monthly indicators of output;
- reduction in the time-lag in the availability of results, for which establishment of a field force, adequate in numbers and quality, would be essential.

The *second highest priority* was the setting up of a study group to examine problems of unemployment statistics, and related to this a short-term series on employment covering all sectors should be considered.

The *other priorities* were as follows, in summary form and not in any order of priority:

- (i) Measures of output (annual and quarterly) for building and construction.
- (ii) More frequent structural statistics for agriculture, and comprehensive price statistics.
- (iii) On incomes, more detailed information on profits by sector, and annual estimates of individual incomes by income ranges.
- (iv) A new series on quarterly stock changes in industry and in distribution.
- (v) The initiation of a quarterly Balance of Payments Statement on current account.

- (vi) A quarterly index of the volume of fixed capital formation.
- (vii) The initiation of a continuing small-scale Household Budget Survey for urban areas.
- (viii) A monthly consumer price index to replace the quarterly index.
- (ix) A capital intentions inquiry.
- (x) Seasonally adjusted series for monthly and quarterly indicators, to be published regularly.
- (xi) Census of Population, Census of Agriculture, Census of Distribution and a full Household Budget Survey, to be held every five years.

Subsequent Action

Taking the recommendations in the above order, the subsequent action has been as follows,

With regard to the highest priority, monthly index numbers of industrial production were introduced in February 1977. A small field force was created in 1979.

Related to the second highest priority, an Inter-Departmental Study Group on Unemployment Statistics was set up and issued a report in April 1979 (Central Statistics Office, 1979). Most of the recommendations concerning the improvement of the Live Register statistics have been implemented, i.e., changes in the coverage of Live Register statistics, a change in the frequency of the basic information from weekly to monthly, a new distinction made for persons under 25 years of age in the monthly Register, a seasonally adjusted series, the introduction of a quarterly age classification of the Register with data twice yearly on age group by duration of continuous registration (with all of the above dating from January 1980), and the introduction in January 1983 of a series on flows on to and off the Register in conjunction with the monthly industrial analysis. Labour Force Surveys were taken in 1975, 1979 and 1983, and it has been decided to have an annual Labour Force Survey from 1984 on.

With regard to building and construction, improvement has been made in the timing and quality of annual data covering the larger firms only.

Some structural surveys have been undertaken for agriculture on the basis of sample holdings in 1975, 1977, 1980 and 1983 as part of an EEC-wide series of Farm Structure Surveys. The Farm Management Survey is another source of data for such analysis. A new input series and a revamped output price series have been introduced.

While better data on profits have not become available, reflecting in part a lack of full computerisation of the data, a series of income distribution tables are published by the Revenue Commissioners in their *Annual Reports*.

Work is in progress by CSO on developing quarterly balance of payments statistics.

Quarterly data on industrial capital formation have not been introduced; in part, this reflects the inherent difficulties of covering building and construction.

Seasonally adjusted series have been introduced for the volume of industrial production, retail sales, merchandise exports and imports, industrial employment and the Live Register.

There have been Censuses of Population in 1979 and 1981, Censuses of Agriculture in 1975, 1977 and 1980, a Census of Distribution in 1977. There are no plans for a further Census of Distribution. Smaller-scale Household Budget Surveys covering urban areas occurred annually in 1974-1979. A full Survey was taken in 1980 and a smaller-scale survey covering urban and rural areas was taken in 1981; this smaller survey was then discontinued.

Action Not Taken

The following action which was recommended has not been taken:

- quarterly output for building and construction;
- information on profits by sector;
- annual estimates of individual incomes by income ranges;
- quarterly stock changes in industry and in distribution;
- a quarterly index of the volume of fixed investment;
- a monthly consumer price index;
- a capital intentions inquiry.

The Central Statistics Office sought sanction for expenditure required for a monthly consumer price index but was refused the sanction.

It should also be noted from the above that where action has been taken it has not always been maintained, as in the case of the Household Budget Survey and the Census of Distribution.

APPENDIX 7

TIMELINESS OF CSO DATA SERIES

The following tabulation outlines the time-lags which occur in relation to the main economic time series.

Series	Time-lag
National Accounts	
– estimates for main aggregates	7 months
– full accounts	1 year 7 months
Production	
– industrial	2½ months
– Census of Industrial Production: full results	4 years 2 months
– initial summary results	3 years 5 months
– agricultural	8 months
Consumption	
– retail sales	3 months
– motor registration (private cars)	1 month
External trade, merchandise	
– provisional figures	2 months
– full data	4 months
Prices	
– consumer	1 month
– wholesale	3 months
– import and export	2 months
– agricultural output	2 months
– agricultural input	2½ months
Investment	
– cement sales	1 month
Stocks	
– agricultural	2 months

Balance of Payments	
– preliminary	5 months
– final	1 year 5 months
Labour Force	
– employment in transportable goods industries	5 months
– unemployment	7 days
Incomes	
– industrial earnings and hours worked	
– provisional	5 months
– final	8 months
Employment in building and construction	
– preliminary	1 month
– final	2 months
Earnings and hours worked in building and construction	
– provisional	3 months
– final	6 months
Planning Permissions	4 months

APPENDIX 8

MAIN EEC REQUIREMENTS IN THE AREA OF STATISTICS

Agriculture

Directives 73/280, 73/258 and 78/320 on production of milk and milk products.
 Directives 73/132, 73/53 and 81/488 on cattle counts, slaughtering.
 Directives 76/630, 79/920 and 82/177 – similar data on pigs and sheep.
 Directive on 1975 survey of the structure of agricultural holdings (followed by Regulations such as 3228/76 on organisation of a survey for 1977 and Regulations on surveys for 1980, 1983, 1984 and 1987).
 Directives 74/677 *et seq* on an annual (now biennial) survey of earnings of agricultural employees.

Industry

Directive 64/175 on annual surveys of investment in industry.
 Directive 72/211 on co-ordinated monthly statistics for industry.
 Directive 72/221 on co-ordinated annual surveys of industrial and building activity.
 Directive 78/166 on short-term indicators for building sector.

External Trade

Regulations 1736/75 and 1445/72 on the external trade statistics of the Community and Statistics of trade between member states, and relation to NIMEXE classification.

Prices

Annual EEC Survey of Retail Prices.

Population and Labour

Regulations (from 2640/74 to 276/84) on the biennial (now annual) Labour Force Survey.
 Regulation 73/3192 on a survey of labour costs in distribution, banking and insurance.
 Regulation 1596/81 on the organisation of a survey of labour costs in industry, wholesale and retail distribution, banking and insurance, to be undertaken in 1982 on the basis of accounting data for 1981; similarly, Regulation 3149/83 on 1984 data.

Transport

Directive 69/467 on international road freight movements.

Directive 546/78 on annual national road freight surveys.

Concluding Remarks

In cases where the Council of Ministers issue regulations, they are binding in every respect. Directives are binding in the Member States to which they are addressed with regard to the results to be achieved, but the means are largely left up to the national authorities. Decisions are binding in every respect on those named. Part of the demands of the EEC has meant attendance by senior staff at the Committees and Working Groups of the EEC Statistical Secretariat; this has been particularly onerous in connection with the development of harmonised classification for external trade. The main effects of EEC demands have been felt in agricultural statistics (greater detail and frequency) and industrial statistics (reclassification to NACE basis, collection of data on turnover and orders, initiation of a separate enterprise inquiry in the case of enterprises with 20 or more persons), in the initiation of EEC surveys on labour costs (initially every three years) and structure of earnings (initially every six years), and in Labour Force Surveys every two years between 1975 and 1983, with the exception of 1981.

APPENDIX 9

REVENUE COMMISSIONERS DATA

Introduction

This Appendix describes the unpublished data of the Revenue Commissioners and outlines the requirements in terms of basic data preparation if the maximum use were to be made of the data for policy purposes.

Published Data

Appendix 2 has indicated the range of published data in Revenue Commissioners reports.

Another source of information on tax receipts and tax forgone due to tax reliefs which is necessarily sporadic is in the form of answers to Parliamentary Questions and in the results of occasional exercises such as the report of the Government-ICTU Working Party on Taxation.

Unpublished Data

Unpublished tables on income distribution statistics are produced by the Revenue Data Processing Division. These tables give the distribution of income by range of income (salaries and profits) by NACE Division, by NACE Class and by marital status. Allowances, deductions, reliefs and credits are also shown. The tables are broken down into groups, giving the source of income by schedule, all persons, and cases where the main source of income is from farming. For all persons, data are given on number of cases, amounts of total income, income tax and income after tax by range of total income (defined below), by range of taxable income, and by range of income after tax.

In cases where the main source of income is Schedule D, data are given on number of cases, amount of allowances, deductions, reliefs, income tax by range of gross income. These data on income are given for each marital status group. For all persons, data are given on number of cases and amounts of life assurance by range of total income, and number of cases and amounts of interest paid by range of total income. For farmers, data are given on number of cases by range of total income for part-time farmers, full-time farmers and all farmers.

The income distribution statistics come from data held on two computer-based tax files:

- the Schedule D income tax file;
- the PAYE employee file.

These files comprise taxpayers whose main source of income falls into each of these respective categories. The file record for each taxpayer includes address, reported income, deductions and reliefs, marital status, number of dependants, spouse's earnings, life assurance held and tax assessed, economic activity code of the employer, PRSI tax deducted, PRSI contributions.

The taxpayer is the tax unit. In cases of separate assessment, data for husband and for wife are given separately. In cases of joint assessment, the income of husband and wife is combined. The main income concept is called total income, which is gross income *less* statutory deductions such as depreciation, expenses and superannuation contributions. All income tax and deductions are assessed amounts and hence may differ from actual payments.

A few details on the tables are as follows.

Marital status groups:

Single male; single female; married couple, wife earning; married couple, wife not earning; widower; widow.

Format of tables:

- (a) Where main source of income is Schedule D
 - earned
 - unearned
 - case 1 or 2 or both
 - (b) Where main source of income is Schedule E, PAYE
 - (c) Where main source of income is Schedule E, direct assessment
- All persons: cumulation of (a) and (b)
Where main source of income is from farming.

Inherent Limitations of the Data on Incomes

The main inherent limitations of the basic data on incomes are as follows.

- (i) The basic data on file cover only persons who are either issued with tax free allowance certificates (PAYE) or are subject to the direct assessment process (self-employed mainly). Hence, there is no information on many of those with low incomes or those whose incomes consist solely of social welfare payments.

Where full details are not on file (for example, under PAYE if the employer has not returned the incomes for all his employees), the taxpayer's record is not included in the resulting statistics.

- (ii) There is a difficulty of distinguishing between low earners and school-leavers who are in employment for part of the year; similarly, those who may work for half of the year on "full" pay are not identified and will appear as if they are low earners over the "whole" year.
- (iii) Tax evasion affects both the distribution of income and the distribution of taxable income, and also affects the number of cases covered.
- (iv) Data are processed according to assessed income rather than accrued income.
- (v) The tax exempt element of bank deposit interest which is not subject to tax is not included in income, neither is building society interest in cases other than the higher rate taxpayers. Capital gains are not included in income.
- (vi) For different income recipients, the income assessed refers to different tax years. For those assessed on Schedule D – obtaining income in the form of profits of trades or professions, rents, interest on loans, income from abroad – the income relates to a year earlier than in the case of those on PAYE. This can make a difference when making comparisons between different groups of people, especially at a time of relatively high inflation.
- (vii) In cases where tax is paid in instalments, the tax charged may not be the same as the tax which is accepted in the year of assessment. This does not apply to PAYE and other income which is taxed at source.
- (viii) With regard to the possibility of obtaining data classified by employment status, the basic data give information on whether the person is an employee or is self-employed, but not on whether the person is an employer.
- (ix) In general, the data are processed on a "need to know" basis, in order to provide sufficient information to enable the Revenue to limit the person's income. Thus, for example, in the case of life assurance premia, the date on premia are after four limitations have been applied, such as on the proportion of the premium allowed, the proportion of income allowed, and the proportion of capital allowed. Similarly, from 1985-1986 onwards, the only interest data which will be available will relate to that on borrowings for the purchase, repair or improvement of the sole or main residence and that itself will be subject to a limitation which applies to the amount of interest relief which can be claimed.
- (x) While in theory there should be a wide coverage of income-

earning units, even the cases of people whose income fall below the respective allowance levels which apply to them, in practice there are people who are not covered. Apart from a small number of persons such as outworkers and weavers, etc., the main category which is not covered is the group of self-employed workers whose incomes are relatively low, and in these cases the Revenue would regard it as too expensive to include them in the records. The largest sub-group within the group of self-employed persons is farmers on low incomes, about 50,000 in number who will remain outside of the records.

Other Features of the Data on Incomes

Some other features of the data, which are germane to the possibilities of policy analysis, are as follows. First, while there is currently a relative lack of coverage of farmers, this would be remedied by the bringing of all farmers into the tax system, though the proposals in the national plan of October 1984 would mean that full-time farmers with holdings below eighty adjusted acres will be exempted from income tax.

Second, it is only possible to engage in analysis by tax unit rather than by household. A married couple is treated as one unit except where separate assessment occurs in which case the couple is treated as two separate persons. Hence, data on earnings of a spouse are available in all cases where these are so identified and are on record. If a person has more than one job, the various employments are aggregated together.

Third, the adult and child dependency data are as recorded for tax purposes. Hence, the definition of child dependant is a Revenue definition, not a Social Welfare definition.

Fourth, data processing on a sub-national basis would be unlikely to be possible due to the centralised tax return system. A further problem in the case of concerns which operate nationally is the assignment of taxpayers to the tax district of their employer's head office. Also, the boundaries of tax districts do not coincide with county boundaries.

Fifth, some income is used to reduce the value of income tax allowance, for example, investment income. This would be displayed as income but would not be known as investment income.

Some Features of the VAT Data

The data on turnover have a limitation. In a large number of cases, firms pay VAT at the zero rate, or in some cases they may have a range of turnover, some at zero rate, some at positive rate. In these

cases the firms may enter nothing on turnover in the data which go to the Revenue Commissioners. Hence, firm turnover data relate essentially to cases where VAT is on a positive rate.

Requirements for Maximum Use of Data

If the basic income data were to be used to the full, there would be need for more resources to be devoted to the compilation and processing of statistics, for the following reasons.

First, in order to utilise the income data to the full, there would need to be an up-to-date classification of the activities of the employee's firm. When the data were coded originally, the classification used for business activity was not very detailed, and has not been kept up to date, hence there is a dated business description. Over time, individual units may change their business activity and this will not always be picked up in the data. The data for new entrants are likely to be coded more satisfactorily.

Second, the number of insured persons by occupation is not known currently, as much of the data field for occupation is not filled and much is not updated. In addition, the occupational codes which are used do not correspond with the occupational codes which are used by the Central Statistics Office.

Third, it would not be possible to cross-classify *aggregate* results on incomes with those of the previous year in order to get an indication of trends in income over time, without a major recasting of the system. This could be done internally by Revenue. The difficulties lie not only in the manual work which would be needed to set up and to correct the data but also in the area of systems development and the automatic manipulation of the data.

Fourth, in general there would need to be more validation-checking. This would consist of checking against aggregate data on population by size and by structure (sex, age, marital status), on the labour force by size and by structure, on employment by sector and by occupation, and on aggregate income from sources such as those of the Census of Population, the Labour Force Survey and the national accounts. This would be needed in order to estimate the statistical validity of the data.

Fifth, with regard to the VAT data, the VAT registration numbers and the PRSI numbers are not integrated by the use of a unique reference number. As a result of this, the turnover data cannot currently be combined with data on earnings and on number of persons.

APPENDIX 10

DESIRABLE DATA FROM DEPARTMENT OF SOCIAL WELFARE RECORDS

This Appendix outlines some data which are relevant to policy analysis on social welfare, and comments on the current availability of the data. This is not an exhaustive list but is illustrative of the type of information which is germane.

1. The number of pensioners cross-classified by sex, marital status, age, dependency class and by rate of pension. *Comment:* fully available only for invalidity pension and retirement pension; dependency class and rate only are available for other pensions.
2. The number of pensioners by type of pension who receive (a) age supplement payments, (b) living alone allowance. *Comment:* fully available.
3. The number of persons of pension age (65 and over, 66 and over) who are in receipt of: widows' pensions, invalidity pensions, deserted wife's allowance, deserted wife's benefit. *Comment:* available for invalidity pension and deserted wife's payments, while estimates are available for widows' pensions.
4. The number of beneficiaries, by type of benefit, classed by the length of time that they have been beneficiaries. *Comment:* duration analysis is available for unemployment payments and for disability benefit.
5. The number of cases where the wives of social welfare beneficiaries are obtaining benefits, which would indicate the number of households where there were no significant sources of income other than social welfare pensions. *Comment:* not available.
6. The number of cases where women are covered for benefit on their husbands' insurance, together with the number of cases where they obtain such benefits. *Comment:* not available.
7. The numbers receiving the Supplementary Welfare Allowance in

addition to other social welfare payments, classified by age, sex, marital status and by the other payments received, which would indicate the adequacy of these payments. *Comment:* not available.

8. The number who receive exceptional payments under the Supplementary Welfare Allowance Scheme, classified by age, sex and marital status. *Comment:* not available.
9. The numbers in receipt of the Unmarried Mothers Allowance, classified by age of mother, age and number of children. *Comment:* while not available, the raw data are on file and the information is potentially available.
10. The numbers of recipients of short-term unemployment benefit and of other benefits, classified by age, sex, marital status of recipients (and by number and ages of children in the case of deserted wives' benefit). *Comment:* data on dependants are available but data on age are not available; marital status is available for Disability Benefit but not for Unemployment Benefit; in the case of deserted Wives' Benefit there are no data by age of children but there is a breakdown by number of children in the family.
11. The number of people who are paying social insurance contributions classified by occupation and age of entry to the scheme. *Comment:* not available. There is, in any event, a problem with regard to these Social Welfare data on occupation: the data relate to the occupation of an insured person at his or her point of entry into insurability only. In many cases this may bear little or no relation to the current occupation of the insured person.

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