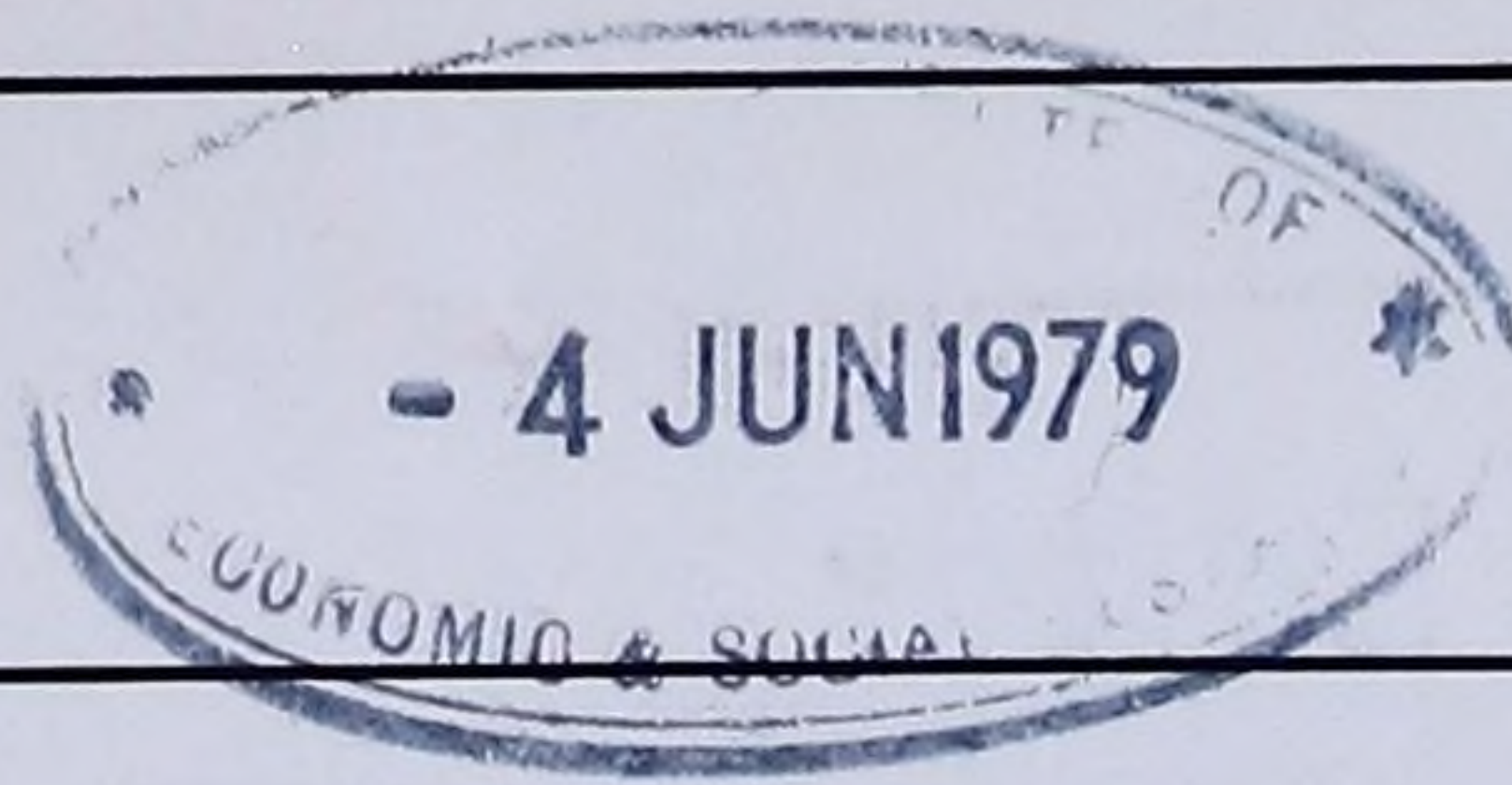


45



CSO

MAY 1979

HMSO 85p net

STATISTICAL NEWS

**Developments
in British Official
Statistics**



A publication of the Government Statistical Service

Note by the Editor

The aim of *Statistical News* is to provide a comprehensive account of current developments in British official statistics and to help all those who use or would like to use official statistics.

It appears quarterly and every issue contains two or more articles each dealing with a subject in depth. Shorter notes give news of the latest developments in many fields, including international statistics. Some reference is made to other work which, though not carried on by government organisations, is closely related to official statistics. Appointments and other changes in the Government Statistical Service are also given.

A cumulative index provides a permanent and comprehensive guide to developments in all areas of official statistics.

It is hoped that *Statistical News* will be of service and interest not only to professional statisticians but to everybody who uses statistics. The Editor would therefore be very glad to receive comments from readers on the adequacy of its scope, coverage or treatment of topics and their suggestions for improvement.

Enquiries about individual items in this issue should be made to the appropriate sources where indicated; otherwise they should be addressed to the Editor of *Statistical News* at:

Central Statistical Office,
Great George Street,
London, SW1P 3AQ.

Subscriptions and sales enquiries should be addressed to Her Majesty's Stationery Office at PO Box 569, London SE1 9NH Telephone: 01-928 1321 or at any of the addresses listed on back page of cover.

Articles in recent issues

**CENTRAL
STATISTICAL
OFFICE**

MAY 1979

No. 44 May 1977

Statistics on industrial and commercial companies
The development of automation - looking for the next
generation of population
Publications of the Central Statistical Office
The national and world average (Gross Britain)
Coffee consumption: planning in the long run
Food and feeding 'go outside' - progress report

Richard Eason
Barry Warner
A. A. Scott
J. M. Martin
M. W. Ireland

Statistical News

No. 45

No. 45 August 1977

The environment in which statistical data is produced
The survey of short-term interest rates
The Statistical Information Service of the Central
of Public Administration
Secondary school expenditure: progress and prospects
Survey into the environment
Census in the South East

John Clark
John Clark and Roger Sedall

**Developments
in
British
Official
Statistics**

No. 39 December 1977

Occupational Mortality 1970-72: a preview
Housing statistics: some recent developments
Differential response in the Family Expenditure Survey -
the effect on estimates of the redistribution of income
A classification of Scottish local government districts

A. J. Fox
Roger Sedall
R. P. Harris
W. R. N. Sainsbury

No. 40 February 1978

Statistics users' conference 1977: Financial statistics
Designing a database for use in compiling the
national accounts
Introducing personalised forms for the quarterly
survey of new manufacturers' sales
The use of postcodes in statistical work by central
government departments
The survey of small goods vehicles 1976
A study of school improvement policy and the role
of a survey of school buildings
Road traffic and the environment

Wim Daly
Anne Harrison
G. S. Hall and C. P. Cook
E. J. Kelle
J. M. Nolan
Alan McIntyre
F. D. Scafo

No. 41 May 1978

Report on value added
Measuring value added from the census of production
Social accounting matrices and developing countries
The Department of Industry's investment intentions survey
Factors affecting the output of Crown Court cases

Central Statistical Office
Dr. Bernard Mitchell
C. C. Greenwood
Miss M. O'Connor
H. D. Mitchell, G. Cross and
B. J. Alworth

**LONDON
HER MAJESTY'S STATIONERY OFFICE**

© *Crown copyright 1979*

First published 1979

Brief extracts from this publication may be reproduced provided the source is fully acknowledged. Proposals for reproduction of larger extracts should be addressed to Copyright Section, Her Majesty's Stationery Office, St. Crispins, Duke Street, Norwich NR3 1DN

ISBN 0 11 723299 8

ISSN 0017-3630

Articles in recent issues of *Statistical News*

No. 37 May 1977

Statistics on industrial and commercial companies
The development of automatic editing for the next
Census of Population
Publications of the Central Statistical Office
The national road traffic censuses (Great Britain)
Officer manpower planning in the Royal Air Force
Food and farming 'go metric' – progress report

Nicholas Rudoe
Barry Werner
A. A. Sorrell
J. M. Munden
M. W. Marland
Note by the Ministry of Agriculture,
Fisheries and Food

No. 38 August 1977

The environment in which statistical offices will work in ten
years' time
The survey of short-term export prospects
The Statistical Information Service of the Chartered Institute
of Public Finance and Accountancy
Secondary school teachers – a new survey and mathematical
model for assessing teacher demand
Survey into the use of government statistics
Census in the South Seas

Sir Claus Moser
Stephen Curtis and Roger Beedell

B. Fieldhouse

Brian Longman
Peter Brierley
John Doyle

No. 39 November 1977

Occupational Mortality 1970–72: a preview
Housing statistics: some recent developments
Differential response in the Family Expenditure Survey:
the effect on estimates of the redistribution of income
A classification of Scottish local government districts

A. J. Fox
Roger Sellwood

R. P. Harris
W. R. N. Smith

No. 40 February 1978

Statistics users' conference 1977: Financial statistics
Designing a database for use in compiling the
national accounts
Introducing personalised forms for the quarterly
inquiries into manufacturers' sales
The use of postcodes in statistical work by central
government departments
The survey of small goods vehicles 1976
A study of school improvement policy and the role
of a survey of school buildings
Road traffic and the environment

Brian Baty

Anne Harrison

G. S. Hull and C. R. Cook

E. J. Kafka
J. M. Haslam

Alan McIntyre
F. D. Sando

No. 41 May 1978

Report on seminar on value added
Measuring value added from the census of production
Social accounting matrices and developing countries
The Department of Industry's investment intentions survey
Factors affecting the output of Crown Court centres

Central Statistical Office
Dr. Bernard Mitchell
C. C. Greenfield
Miss M. O'Connor
H. D. Mitchell, G. Croft and
E. J. Ainsworth

Articles in recent issues of *Statistical News*

No. 42 August 1978

Sir Claus Moser: an appreciation
 National Dwelling and Housing Survey: organisation
 and fieldwork
 National Dwelling and Housing Survey: enquiries and
 comments
 The General Household Survey: 1971-78
 Some important classifications of the European Communities

The Rt. Hon. Edmund Dell, M.P.
 Roger Sellwood and Dennis
 Roberts
 Mrs. Margaret Waite
 Mrs. Mary Durant
 Central Statistical Office

No. 43 November 1978

Statistical computing: The COMPSTAT 78 symposium
 NEDO's data bank of OECD trade data and the industrial
 strategy
 Productivity comparisons - Caveat emptor
 The top 1,500 industrial and commercial companies

P. B. Kenny
 D. C. Connell
 Matt Semple
 S. J. Penneck

No. 44 February 1979

Statistics users' conference 1978: Dissemination of statistics
 The use of company reports for national statistics
 Constructing a sampling frame of industrial and
 commercial companies
 Scheduling a dockyard factory
 Projections of the population by marital condition
 Primary education in England
 Scottish secondary school accommodation model

Hamish Lumsden
 M. J. Erritt
 Clive Lewis
 D. W. Wallage and I. F. Body
 C. Daykin and R. Leete
 M. Stock
 F. Thomas

ARTICLES

	<i>Page</i>
Measuring the effectiveness of the Survey Control Unit	45.1
The Conference of European Statisticians' Working Party on Electronic Data Processing	45.6
The SSRC Survey Archive	45.8
Defence Statistics and NATO	45.12
Retailing inquiries: field follow-up surveys	45.15
A successful application of computer output microform (COM)	45.18

REGULAR FEATURES

Recently available statistical series and publications	45.21
New surveys assessed by the Survey Control Unit	45.23

NOTES ON CURRENT DEVELOPMENTS

	<i>Page</i>		<i>Page</i>
Regional statistics		Manpower and earnings	
<i>Welsh Social Trends</i>	45.26	National survey of engagements and vacancies	45.29
<i>Scottish Housing Statistics</i>	45.26	<i>New Earnings Survey</i>	45.30
Population and vital statistics		Manpower planning	45.30
<i>Population Trends</i>	45.26	Equal opportunities commission	45.30
GRO (Scotland) – Population and vital statistics	45.26	Industrial disputes	45.30
World Fertility Survey	45.26	Women and shiftwork	45.30
Population projection seminars	45.27		
Social statistics		Agriculture and food	
<i>Home Office statistical bulletin</i>	45.27	National Food Survey	45.31
Probation and after-care	45.27	Agricultural censuses and surveys	45.31
Housing			
National Dwelling and Housing Survey	45.28	Industrial statistics	
Local Authority survey of housing and population	45.28	Output measures: MLH 104	45.31
Health and social services		Stock of consumer durables	45.31
<i>Health and Safety statistics</i>	45.29	<i>Business Monitors</i>	45.31
Blindness and partial sight	45.29	Index of industrial production for Wales	45.32
Care of the mentally handicapped	45.29	<i>Engineering in Britain, West Germany and France</i>	45.33
		Commercial and industrial property statistics	45.33

	<i>Page</i>
Prices	
Rising prices on different types of household	45.33
<i>Family Expenditure Survey</i>	45.34
Income and wealth	
<i>Inland Revenue Statistics 1978</i>	45.34
Survey of personal incomes	45.34
Distribution of income	45.34
Survey of shareholdings in companies	45.35
Trends in sales of land and buildings	45.35
Postgraduate income and expenditure	45.35
Home finance	
<i>Financial Statistics</i>	45.36
Financing of North Sea oil	45.36
<i>Guide to Public Sector Financial Information</i>	45.36
Overseas finance	
Euro-currency interest rates	45.36
Overseas trade	
Increased detail in the industry analysis of imports and exports	45.36
Export prices of primary products	45.37
Computing	
Conference of European Statisticians Working Party	45.37
Research and development	
R & D Expenditure	45.37
Conferences and meetings	
Compstat 1980	45.38
Government Statistical Service	
Appointments and changes	45.38
Late item	
ITSM 1979, Nottingham University	45.38
ALPHABETICAL INDEX	45.39

Measuring the effectiveness of the Survey Control Unit

Robin Horton, *Statistician, Central Statistical Office*

The Survey Control Unit of the CSO has been assessing surveys conducted by government departments and their agencies since 1972. For some time it has been trying to develop a measure of how successful it is in improving the quality of surveys and minimising the burden placed on industry and the public in responding to them.

To obtain a comprehensive measure of the Unit's efficiency would require information:

- (a) on the quality of recommendations that the Unit has made; and
- (b) on the proportion of its recommendations that have been implemented.

Although the Unit naturally hopes that its recommendations are consistently sound, objective information on (a) is not available. In future, results of the Evaluation of Past Surveys exercise (see *Statistical News* 44.40) may give some guide by enabling the Unit to identify problems it had not previously foreseen and, in cases where the Unit's recommendations had been rejected, to determine whether the changes would in fact have improved the surveys.

The tables accompanying this article give an indication of the effectiveness of the Unit in terms of (b) – that is they show the proportion of the Unit's recommendations that have been implemented before fieldwork began. They also provide some information about the general work of the Unit. The figures in the tables relate to 1978 and show surveys to businesses and local authorities separately from those to individuals and households (other surveys). This separation is made because the assessment the Unit makes of surveys to businesses and local authorities depends on slightly different criteria from those used to assess other surveys. For business surveys, two major concerns are the risk of duplication – i.e. asking firms to provide information that is already available for statistical purposes – and the burden of form-filling, particularly as it affects small firms. On the other hand, unnecessary invasion of privacy in sensitive subject areas may arise with surveys involving individuals and households.

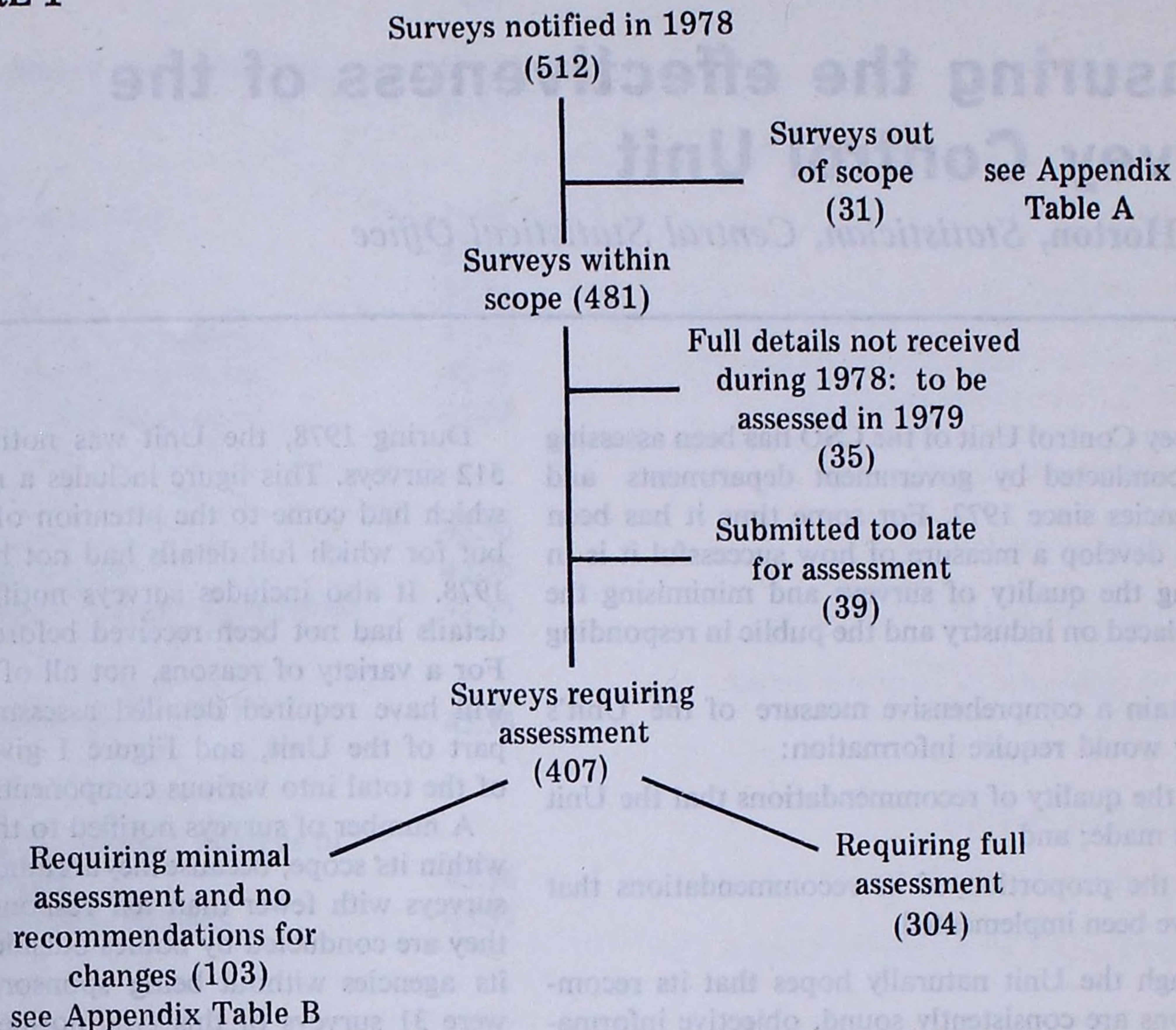
During 1978, the Unit was notified of a total of 512 surveys. This figure includes a number of surveys which had come to the attention of the Unit in 1977 but for which full details had not been received until 1978. It also includes surveys notified for which full details had not been received before the end of 1978. For a variety of reasons, not all of these 512 surveys will have required detailed assessment work on the part of the Unit, and Figure 1 gives the breakdown of the total into various components.

A number of surveys notified to the Unit do not fall within its scope, because they are administrative returns, surveys with fewer than ten respondents, or because they are conducted by bodies outside government and its agencies without being sponsored by them. There were 31 surveys of this type notified in 1978, and a breakdown of them is given in Appendix Table A.

In some instances, insufficient information is received for the Unit to be able to make an assessment, and these surveys are left pending assessment until more information is received. These are normally surveys that are reported at a very early stage, sometimes several months before any fieldwork is scheduled to take place. There were 35 of these in 1978. In addition, 39 surveys were notified either after the start of fieldwork or insufficiently ahead of fieldwork for the Unit to have time to influence the design or conduct of the surveys.

The remaining surveys (407 or 79 per cent of all those notified) were given an assessment to some degree or another. For a variety of reasons, some surveys numbering 103 in 1978) require very little assessment and are fully recognised by the Unit without any recommendations for changes being made. Surveys of five types fall into this category and details are given in Appendix Table B. Firstly, there are the surveys carried out by OPCS and GRO(S) for which survey control aspects have been considered by these bodies in respect of technical matters concerned with survey design. The Unit is at times concerned with these surveys before notification, when decisions are taken as to whether they should go ahead, but once that

FIGURE 1



stage is over, other survey control aspects are left to OPCS or GRO(S).

Secondly, the Unit is notified of a number of surveys which follow the basic design of earlier surveys that have been recognised by the Unit. Examples of such surveys are Origin and Destination surveys, which invariably follow a consistent pattern, and surveys carried out by the Central Office of Information in the field of advertisement testing, where all that changes from survey to survey is the subject matter being tested. Thirdly, the Unit is also notified when changes are being made to regular surveys it has previously recognised. Where these changes are insubstantial, the surveys are recognised again without any comment. Fourthly, a number of surveys are considered by CSO and other official committees on which SCU is represented. When these surveys are finally officially reported to the Unit, any points that the Unit would have raised have already been considered by the committees and there is little need for further assessment. Finally, when the Unit assumed something close to its present role in 1972 it was decided that it should concentrate resources on the assessment of new or revised surveys. The policy was therefore adopted of recognising any regular surveys which have

run unchanged since 1971 or earlier, as and when they came to the Unit's attention. A small number of such surveys are still being reported to the Unit.

After allowing for these surveys, the Unit fully assessed 304 surveys during 1978. When making assessments, the Unit first considers the purpose of the survey. It then considers whether:

- i. alternative sources for all or some of the data exist;
- ii. the content of the questionnaire and notes is comprehensible and unambiguous;
- iii. the information required is readily available to respondents;
- iv. there are any unnecessarily intimate or controversial questions;
- v. all the questions are relevant to the purposes of the survey;
- vi. classifications used conform to standard classifications;
- vii. the questionnaire has been piloted;
- viii. reference is made in covering letters and notes to respondents of the purpose of the survey, the use to be made of the information, government sponsorship, confidentiality safeguards, the statutory or voluntary nature of the survey, its

relationship to other surveys which it apparently duplicates, and whether and where results will be published;

- ix. the sample design is capable of producing useful results, with particular reference to response rates and representativeness;
- x. adequate results could be obtained with fewer respondents;
- xi. the frequency intended for a regular survey is justified;
- xii. the timing of the survey will clash with other government returns; and
- xiii. respondents or their representatives have been consulted about the survey.

Clearly, it is not necessary to consider all these points for every survey, but they provide the framework within which surveys are assessed and against which recommendations are made by the Unit. The Unit sees a substantial number of small scale, basically simple, surveys which satisfy the relevant criteria and require no comment. Table 1 shows that there were 128 surveys of this kind in 1978, representing 42 per cent of all surveys fully assessed.

Since the end of 1977, the Unit has been recording on the computer file it keeps for each survey references to the recommendations it has made and the resultant actions taken by those conducting the surveys. Broadly, the recommendations the Unit makes can be split into two groups. On the one hand, there are recom-

mendations for cancellation or for making major changes to sample designs and questionnaires, and, on the other, there are those making minor comments about question wording, the provision of adequate handouts or covering letters, etc. The number of surveys for which each of these types of recommendations were made in 1978 is also given in Table 1, which shows that the Unit recommended major changes for 28 per cent of the surveys fully assessed, and minor changes for 30 per cent.

For a number of reasons, including criticisms from the Unit, some surveys are cancelled or postponed. There were 10 such surveys during 1978, and Table 2 shows that in six of these ten cases the Unit had recommended cancellation or a major change.

For those surveys that are carried out, the Unit records the action that has been taken on its recommendations. Actions can be grouped into three categories. The first category comprises actions which fully or substantially meet the Unit's recommendations; the second, actions which partially meet the recommendations; and the third, those which only slightly meet or do not meet the recommendations. It takes time for actions to be reported back to the Unit and Table 3 shows the recommendations that the Unit made for the 37 surveys in 1978 for which actions are not yet known. When these actions are known, updated versions of Tables 4 and 5 will be published in *Statistical News*.

Table 1
Surveys fully assessed, by type recommendation made

	<i>Surveys to businesses and local authorities</i>		<i>Other surveys</i>		<i>All surveys</i>	
	Number	Per cent	Number	Per cent	Number	Per cent
Total number of surveys requiring a full assessment	147	100	157	100	304	100
Surveys for which no recommendations for changes were made	67	46	61	38	128	42
Surveys for which recommendations for changes were made	80	54	96	62	176	58
Surveys for which major alterations to sample design, questionnaires, etc. were recommended	38	26	48	31	86	28
Surveys for which minor alterations to questionnaires, etc. were recommended	42	28	48	31	90	30

Table 2
Surveys cancelled or postponed, by type of recommendation made

	<i>Surveys to businesses and local authorities</i>		<i>Other surveys</i>	<i>All surveys</i>
				Number
Total number of surveys cancelled or postponed	5		5	10
Surveys for which cancellation was recommended	0		1	1
Surveys for which major alterations to sample design, questionnaires, etc. were recommended	2		3	5
Surveys for which minor alterations to questionnaires, etc. were recommended	3		1	4

Table 3

Surveys for which resultant actions are not yet known, by type of recommendation made

	Surveys to businesses and local authorities	Other surveys	All surveys
Total number of surveys for which resultant actions are not yet known	17	20	37
Surveys for which cancellation was recommended	0	0	0
Surveys for which major alterations to sample design, questionnaires, etc. were recommended	10	13	23
Surveys for which minor alterations to questionnaires, etc. were recommended	7	7	14

Table 4

Surveys to businesses and local authorities for which results are known, by type of recommendation

	Actions completely or substantially meet recommendations	Actions partially meet recommendations	Actions slightly meet or do not meet recommendations	All surveys
Total number of surveys for which recommendations were made	35	7	16	58
per cent	60	12	28	100
Surveys for which major alterations to sample design, questionnaires, etc. were recommended	17	5	4	26
per cent	65	19	16	100
Surveys for which minor alterations to questionnaires, etc. were recommended	18	2	12	32
per cent	56	6	38	100

Table 5

Surveys at households and individuals for which resultant actions are known, by type of recommendation

	Actions completely or substantially meet recommendations	Actions partially meet recommendations	Actions slightly meet or do not meet recommendations	All surveys
Total number of surveys for which recommendations were made	31	17	23	71
per cent	44	24	32	100
Surveys for which major alteration to sample design, questionnaires, etc. were recommended	11	10	10	31
per cent	36	32	32	100
Surveys for which minor alterations to questionnaires, etc. were recommended	20	7	13	40
per cent	50	18	32	100

It is those cases where the resultant actions are known that enable the Unit to make some assessment of its effectiveness. Table 4 shows for business and local authority surveys the action taken against the recommendations made.

It can be seen that as far as recommendations for major changes were concerned, the Unit was successful in having them substantially or totally implemented in about two-thirds of cases, and partially implemented in a further fifth. The success rate for recommendations for minor changes was not as high, reflecting in part the greater emphasis put by the Unit on more serious problems.

Table 5 gives similar figures for surveys of households and individuals.

Though the proportion of recommendations not being met was much the same overall for these surveys as for surveys to businesses and local authorities, a smaller proportion of recommendations was completely or substantially met, more being partially met. This may be a reflection of the less homogeneous nature of these surveys and the people conducting them. Whereas business and local authority surveys are generally fairly straightforward in content and approach, household and individual surveys can be more complex in both breadth and detail. In these areas policy con-

siderations within departments must sometimes override the purely technical issues affecting survey content and design.

In a number of instances, of course, the Unit's recommendations have simply been rejected, and in such cases the Evaluation of Past Surveys exercise will prove invaluable in showing whether the Unit has been justified in making the recommendations or whether the departments carrying out the surveys were justified in rejecting them. Such an analysis will have to wait until more information becomes available from

the exercise. The results will be reported in a further article.

Overall, the figures given in the tables indicate that the Unit has been successful in influencing the conduct and content of surveys and believes that in this way it has raised the quality of survey work in a substantial number of cases. The continuing work on evaluation of surveys and the Unit's input to them should ensure that this success rate will at least be maintained.

Reference

Statistical News No. 44, February 1979 (HMSO) (Price 85p net)

APPENDIX

Table A

Summary of those surveys notified to the Survey Control Unit during 1978 which were outside the scope of the Unit

	Number		
	<i>Surveys to businesses and local authorities</i>	<i>Other surveys</i>	<i>All surveys</i>
Total number of surveys outside the scope of SCU	24	7	31
Number of statistical surveys conducted by government departments and their agencies addressed to fewer than ten respondents	3	2	5
Number of administrative enquiries conducted by government departments and their agencies	17	4	21
Number of enquiries carried out by bodies other than government departments and their agencies	4	1	5

Table B

Surveys requiring minimal assessment and no recommendations for change

	Number		
	<i>Surveys to businesses and local authorities</i>	<i>Other surveys</i>	<i>All surveys</i>
Total number of surveys requiring minimal assessment and no recommendations for change	28	75	103
Surveys carried out by OPCS and GRO(S) for which survey control aspects had been considered prior to notification	0	29	29
<i>Ad hoc</i> surveys for which methodology and questionnaire design were similar to earlier surveys recognised by SCU	8	46	54
Regular surveys re-submitted to SCU, for which revisions made were insubstantial	11	0	11
Surveys which had been considered by CSO or other committees on which SCU was represented	7	0	7
Regular surveys in existence and unchanged since 1971 or earlier, submitted to SCU for the first time in 1978	2	0	2

The Conference of European Statisticians' Working Party on Electronic Data Processing

T. F. Hughes, *Computer Branch, Central Statistical Office*

In January 1957 the Conference of European Statisticians (CES) convened a meeting to consider and to discuss the use of electronic data processing for statistical purposes and, as a result of recommendations made at this meeting, set up a Working Party on Electronic Data Processing. The objectives of the Working Party were stated as:

- i. To consider the organisational problems connected with electronic data processing.
- ii. To exchange information on the experience and plans of national statistical services in this field.
- iii. To consider the possibility of international co-operation in solving common problems in the use of electronic data processing, for statistical purposes.

Since it was set up in June 1957, the Working Party has met on fifteen occasions, and the number of participants, including both member countries of the Economic Commission for Europe (ECE) and international organisations, have increased from 15 in 1957 and 17 in 1962 to 31 in 1977 and 34 in 1978. The Working Party is nowadays generally considered to be one of the most important subsidiary bodies of the CES and, since 1971, its Chairman has been provided by the Central Statistical Office.

The Working Party has maintained its role in the exchange of information and experience in two ways. The first of these is the regular circulation of questionnaires. One of these seeks information on the use of electronic data processing, i.e. on the type of equipment in use or planned, on the use of computer languages and programming systems, and on changes which have taken place since the previous questionnaire. A second questionnaire aims at forming an inventory of generalised statistical programs available at, or acquired by, national and international statistical services. The replies to the questionnaire are circulated to all statistical services and are amplified and discussed at Working Party meetings. At its twenty-sixth session, the Conference of European Statisticians, after suggestions made by the Working Party, agreed that a directory of generalised statistical programs should be prepared from replies received as a result of the questionnaire. The ECE Secretariat has started collecting the information to be included in the directory.

The second method of exchanging information, experience and ideas, is by means of papers presented at each Working Party meeting by members of national services or by consultants appointed by the Secretariat of the ECE. During the fifteen sessions of the Working Party, over sixty papers have been presented covering the complete range of operations included in statistical data processing. Some of these papers are now regarded as standard works in the field. Indeed, one early paper specified a statistical system very much akin to present data management systems some years before such systems came to be developed.

Shortly after it was set up, the Working Party prepared lists of documents, articles, and other sources of information on the application of electronic data processing to statistics. Interest in such publications has gradually increased, and since 1970, a bibliography on statistical computing and related topics has regularly been published by the Computing Research Centre, Bratislava (CRC).

The Working Party has also, on several occasions, recommended that groups of rapporteurs be set up to study and report on various topics of importance in statistical data processing. One of these groups, concerned with problems of specifying a programming language for statistical purposes, instigated what has now become one of the most fruitful fields for international co-operation. The group recommended that detailed proposals for developing an integrated statistical system be formulated by the CRC and that these be discussed by an enlarged group of representatives from countries in which work was actively proceeding on the subject. The CES accepted this recommendation and agreed that a meeting 'be convened at Bratislava to discuss the detailed proposals, to formulate the precise objectives and field of work, and to advise the CRC on methods of carrying it out'. Thus the Integrated Statistical Information System (ISIS) seminars were born.

The first four ISIS seminars were solely concerned with the software aspects of statistical information systems and, in particular, with reviewing the design and development of the Integrated Statistical Information System software at the CRC. In 1974 the seminars, in addition to reviewing ISIS, discussed several

contributions from statistical services, relating to statistical information systems, and since that date the seminars have become increasingly concerned with such contributions. In 1975 for example, the UN study group report on 'Computing in National Statistical Services beyond 1980' was extensively discussed, and during the 1976 seminar the Working Party's group of rapporteurs on data management in statistical services held its first meeting. Since 1977 the ISIS seminars have become official ECE seminars.

During its 13th Session in 1976, the Working Party recommended that a proposal made by the ECE Secretariat to establish an international co-operative research programme on the design and the development of statistical information systems be considered by the CES. The CES accepted the proposal and agreed that such a co-operative programme would be within the provisions of the Final Act of the Helsinki Conference on Security and Co-operation in Europe, and invited the Secretariat to prepare detailed proposals on the content and organisation of the programme. The programme was initiated at ISIS '76 by arranging for the preparation of studies on statistical data dictionaries and on interactive terminal oriented interfaces between statistical users and the computer, and for the results of these studies, and papers on other optional topics, to be presented at ISIS '77. At its 14th Session, the Working Party discussed these arrangements and recommended that while the two chosen subjects should remain within the programme, statistical services be invited to submit suggestions for further topics to be included in the long-term programme. This recommendation was accepted by the CES and several suggestions were received from member-countries and from the Washington seminar on statistical services in ten years' time. These suggestions were divided into five groups and these were recommended by ISIS '77 to the Working Party:

- i. Gross architecture of statistical information systems.
- ii. Statistical data dictionaries.
- iii. Interactive systems.
- iv. Centralised versus decentralised statistical processing.
- v. Data editing.

Studies of these topics were presented by 13 countries at the 1978 seminar and future seminars will be devoted almost exclusively to consideration of the International Co-operative Research Programme.

Since the ISIS seminar of 1978, the UNDP has agreed to finance a study of methods whereby the international co-operative programme can be made more effective. Discussions on this project between the ECE Secretariat and individual member countries are due to take place in the near future.

In addition to reviewing progress in the international co-operative research programme, the Working Party will, at its next session, consider 'The Inter-dependence of Trends and Requirements in Computing Technology and Statistical Services'. Under this general heading, national and international statistical services will present papers on:

- i. the mutual understanding of statisticians and computer specialists.
- ii. the involvement of statisticians in the development of computer systems.
- iii. training of users, other than computer professionals, in the use of computer facilities.
- iv. the role of the database administrator.
- v. distributive processing.

Reports on the use of advanced techniques for the presentation of computerised output including photo-composition, micro-films and text-processing, will also be included on its agenda, together with a series of technical reports on experiences in creating and developing data bases and data management systems.

At its 15th session in 1978 the Working Party recommended the setting up of a group of rapporteurs to consider the computer aspects of statistical systems. A group from nine countries, including the United Kingdom, met informally in Bratislava during the ISIS '78 seminar. Since then, the group has worked through correspondence and a progress report will be presented to the Working Party at its next session in May 1979.

Future sessions of the Working Party will deal with:

- i. The impact of mass storage devices on statistical data processing.
- ii. The use of APL for statistical work.
- iii. The precision of data in statistical data files.
- iv. Geographic co-ordinates in statistical processing.
- v. Anti-disclosure techniques.

Further information can be obtained from:

Mr. T. F. Hughes,
Central Statistical Office,
Great George Street,
London SW1P 3AQ.
Telephone: 01-233 7799.

The SSRC Survey Archive

Ivor Crewe, *Director, SSRC Survey Archive*

It is now ten years since the SSRC Survey Archive (originally called the Data Bank) was first established at the University of Essex. It owes its existence to a number of inter-connected trends in the early and mid-1960s: the rapid development of computer technology; the growth of statistical monitoring and research by government departments; a new interest in quantification and data collection, especially by means of sample surveys, amongst academic social scientists; and the emergence of market research as a major industry. Accompanying the assumption that these trends would continue was a concern about the efficient use of scarce resources. Surveys are a particularly expensive (and tedious) form of research; they are also notoriously subject to under-analysis and unnecessary duplication. At the same time the legitimate replication of surveys for the purpose of trend and comparative research is often stymied by the inaccessibility of existing surveys. But although the initial setting-up costs of a survey are high, the marginal costs of data reproduction are small: the obvious solution, therefore, was to set up a national store-cum-lending library of social science survey data.

Not surprisingly, some of the assumptions behind the decision failed to materialise. Expectations about the quantity and quality of data that would be lodged by government and by private industry turned out to be over-optimistic, at least in the first few years. Academic fashion, especially in sociology, turned away from quantitative research (indeed from applied research altogether) and has only recently reversed direction. Some early projects – notably the Key Word in Context (KWIC) index of every individual survey question held by the Archive – soon proved impractical as the Archive's collection grew.

But in essence the Archive's purpose has remained the same over the decade: to acquire, process and disseminate social science surveys for the purpose of secondary analysis by the research community. There has inevitably been a diversification of activities over the years, and these will be mentioned towards the end of the article. But the Archive's policies and procedures are most conveniently described under its main lending-library functions of acquisition and distribution.

Acquisitions policy

The Archive actively solicits surveys that are (a) about Britain, or part of Britain, and/or (b) have been conducted by British researchers, and/or (c) are likely to be of interest to British researchers. Acquisition is subject to strict rules about confidentiality. The original survey schedules are not accepted; nor are data files with the names of respondents. Data which could be used to identify, or help identify, unnamed respondents (e.g. age, place of birth, place of residence) are eliminated or 'broad-banded'. Otherwise there are no formal restrictions on the kind of surveys accepted for deposit, so long as the data are computer-readable and the accompanying documentation is accurate and legible. Sample size, date or place of fieldwork, and the survey's substantive content are rarely important considerations. Market research on branded goods, however, is only occasionally accepted (or offered). And in recent years the Archive has had to decline some narrow gauge, highly localised surveys (e.g. trip-rate data for a particular neighbourhood) where the likelihood of secondary analysis other than by the original investigator was extremely small. The Archive will also refuse surveys that are of transparently poor quality. Nonetheless, the general aim is to collect surveys on as wide a front as possible.

Although the Archive has something close to 'British Museum' aspirations, it does not have 'British Museum' powers. Inevitably only a proportion of eligible surveys, albeit a substantial one, eventually find their way to the Archive. The original investigators have natural inhibitions about releasing their material – not only possible anxiety about exposure to critical re-scrutiny or reluctance to end what has become a long-standing love affair with a brainchild, but simply end-of-survey fatigue.

A number of methods, carrots rather than sticks, have been adopted to overcome these inhibitions and maximise acquisitions. The Social Science Research Council – the largest source of funds for academic surveys – makes the deposit of data in the Archive a condition of awarding the grant. Other research foundations collaborate with the Archive to encourage the transfer of surveys they have supported. A number of fieldwork agencies, notably Social and Community

Planning Research, National Opinion Polls Ltd., and Social Surveys (Gallup) Ltd., automatically deposit their social and political surveys. Depositors can protect themselves from poaching or misrepresentation by making release of their data by the Archive conditional on their explicit permission; in addition special conditions, such as prior discussion with the secondary user or pre-checks on secondary publications, can be incorporated in the terms of deposit. Depositors obtain a cleaned copy of their data (which is particularly valuable if the original research is continuing) and may apply for a small amount of financial help preparing the data for transfer. Finally, and, perhaps of most importance, the Archive maintains a register of current surveys on which basis it continuously and actively solicits deposit.

Coverage

The procedures described above have been effective in the sense that the Survey Archive is now the largest social science data archive outside the United States. It holds over 1,400 data files, with about 200 added each year. Data holdings can be conveniently divided into the following categories:

Large-scale continuous surveys

These include:

- 1966 and 1971 Census Small Area Statistics
- General Household Surveys
- Family Expenditure Surveys (from 1968)
- National Child Development Surveys (National Children's Bureau)
- National Readership Surveys
- NFER Streaming Longitudinal Studies (National Foundation for Educational Research)
- European Commission's Eurobarometer Surveys
- Financial Expectations Surveys (British Market Research Bureau)
- British Election Studies
- NORC General Social Surveys (National Opinion Research Center, Chicago)

Academic surveys

These are often small scale, one-off surveys designed with hypothesis testing rather than parameter estimation in mind. But they include a number of major studies which, whilst not continuous in design, are likely to serve as reference data for many years to come, e.g. the SSRC Survey Unit's series of 'Quality of Life' surveys, the Oxford Social Mobility studies, the Images of the World in the Year 2000 project, and the extensive body of socio-medical surveys conducted by the Institute for Social Studies in Medical Care.

Opinion polls

The Archive has gradually accumulated the regular opinion poll data produced by the main fieldwork agencies in Britain, including NOP (from 1964 onwards), Gallup (1970 onwards), Opinion Research Centre (1973 onwards) and Louis Harris (1973 onwards). These data cover not only voting intentions and attitudes to the political parties, but public opinion on a wide range of current affairs and social issues.

Data from foreign archives

The Archive has exchange arrangements with all the major foreign social science data archives, including the Roper Center in the United States, the Zentralarchiv in West Germany, the Steinmetz Archives in the Netherlands, and the Belgian Archives for the Social Sciences. The Survey Archive also has direct access to the unusually rich collection of survey material on the United States, Third World and Eastern Europe, held by the Inter-University Consortium for Political and Social Research at the University of Michigan.

The policy of acquiring data on a broad front is occasionally criticised on the grounds that depth is preferable to width and can only be achieved by the Archive concentrating its fire on selected targets. In fact the Archive is selective in a number of ways. First, special efforts have been made to fill gaps in its coverage: in the last year or two a large number of planning and environmental surveys have been obtained and in the near future it is planned to strengthen holdings in the area of crime and social deviance. Second, extra attention is being paid to enlarging the collection of major reference surveys that are likely to attract heavy demand. Recently the Ministry of Agriculture, Fisheries and Food agreed to deposit the annual National Food Surveys (from 1979 onwards), and negotiations for the Department of Environment's National Dwelling and Housing Survey are currently under way. Finally, it needs to be stressed that the important decisions about priorities take place not at the stage of acquisition (which is relatively cheap) but at that of data-processing (which is expensive). The choice of data sets to clean and check is entirely demand-driven: requests for 'uncleaned' data sets automatically moves them to the head of the processing queue. In this way the Archive can funnel its resources towards current user demands whilst continuing to store material, the true value of which will only be apparent in the future.

Distribution and usage

The Archive's aim is to make dissemination of its holdings as cheap, simple and quick as possible. No charge is levied for the data-sets themselves, although users have to meet the reproduction costs of tapes

(unless they supply their own), documentation, and postage. The average charge per data set is £2.00 – cheaper than a serious paperback (and longer-wearing). Acquisition is simple in the sense that the Archive will write tapes in a format compatible with the users' local computing installation: no tape conversion work is necessary. Moreover, codebooks and data files have been checked to eliminate (or where this is not possible, flag) discrepancies between the documentation and data. And distribution is quick in that most data sets can be despatched within ten days of being ordered.

The Archive does not undertake data analysis on behalf of users. This policy is reviewed from time to time, but on each occasion the same economic and pedagogic objections to a data-analysis service hold sway: lack of resources in the Archive, the spiralling nature of data analysis requests, and the opportunity for most users to do (or learn to do) the analysis themselves. However, the Archive is prepared to commission data analysis for users without direct access to a computer (e.g. for researchers employed by charities or small research units) although it should be stressed that the Archive acts as no more than an introduction agency.

Usage has grown rapidly in the last few years, partly in response to the growth of data holdings, but mainly as a result of the Archive's services becoming better known to the research community. However, 90 per cent of users come from the universities, polytechnics and independent research organisations. The Archive would like to see much more use made of its data by central government and local authorities, especially for the planning of research, and for trend and comparative analysis.

Supplementary activities

The Survey Archive is concerned not simply to acquire, process and distribute existing surveys but to improve the quality of surveys and their secondary analysis. To that end it organises a number of auxiliary activities of which the more regular and important include:

Data-use seminars: the Archive organises a regular series of single-day seminars devoted to the secondary analysis of a major data set, or a coherent body of data, lodged with the Archive. The seminars are designed to bring together the original investigators, past users of the data, potential users of the data, and interested outsiders. Recent seminars have covered the Family Expenditure Surveys, the National Child Development Studies, and the General Household Surveys. Future seminars are planned for socio-medical surveys and the secondary analysis of opinion poll data. Seminars are publicised in the Archive's *Bulletin* well in advance and are open to all.

Summer school in survey design and analysis: the Archive organises a four week residential summer school in survey design and analysis at the University of Essex. The course is held in conjunction with the larger Essex Summer School in Social Science Data Analysis which concentrates on advanced techniques of analysis and modelling. The emphasis of the course is on the practical rather than theoretical aspects of survey design, and is especially concerned with the constraints under which non-academic researchers work. *Visiting fellowships:* provision is made for visiting fellowships, lasting from a year to one month, for researchers (including those not affiliated to academic institutions) who wish to devote an uninterrupted period of time to the re-analysis of data held by the Archive. Fellows are provided with an office, the technical services of the Archive, and the computing facilities of Essex University.

The Archive is very conscious of the importance of maintaining close contacts with the survey research community. But the very factors that make this particularly necessary also make it peculiarly difficult. Survey users and practitioners do not form a natural community. They are widely dispersed across disciplines and institutions, and often intellectually isolated within their department or organisation. Nor do they form a profession: there are no journals, conferences or associations for survey researchers.

The Archive has therefore set up a network of voluntary 'representatives' in the universities, research organisations and public sector, whose job is to act as a two-way messenger between the Archive and the user community. The Archive is kept informed of the needs of their colleagues, and their colleagues are kept abreast of the Archive's data holdings and services. There is an annual conference of archive representatives: last year's was devoted to the establishment of local mini-archives; this year's will deal with instructional data-and-documentation packages.

Future developments

The bulk of the Archive's future activities will inevitably consist of the continuation and strengthening of its existing functions. The acquisition, processing and distribution of survey data will remain its central purpose. Some new developments will naturally arise from the problems thrown up by the very expansion of the Archive's holdings and usage. For example, an exploratory project on the design and implementation of a computer-based information retrieval system is already under way, in anticipation of the growing number of 'search-and-locate' enquiries received by the Archive.

Subject to the provision of proper confidentiality

safeguards, another probable development is the expansion of holdings of large scale surveys commissioned by central government departments and local authorities. Such surveys are particularly attractive to secondary users, partly because of the quality of their design and execution, and partly because of their policy-orientation. The recent deposit of the Family Expenditure, General Household and National Food surveys will, it is hoped, serve as precedents for the release of further government-sponsored surveys. The Archive will also be seeking ways to extend its distribution of data from these surveys beyond the mere extraction and dissemination of sub-sets. In the next few years considerable thought will be given to the feasibility of an on-line data service and of providing 'constructed' statistics.

Finally, the Survey Archive will want to encourage researchers in the public sector – not only central departments and local authorities, but also the quasi-public sector – to make more extensive use of its holdings and facilities. It is widely felt that in Britain relations between academic social science research and the public sector can be greatly improved. The

Archive stands in an ideal position to achieve these improvements.

Survey Archive publications

Recent data acquisitions and developments in the Archive's activities are featured in the *Survey Archive Bulletin*, published three times a year and available free on request. Readers wishing to be placed on the mailing list should write to:

The Secretary,
SSRC Survey Archive,
University of Essex,
Colchester,
Essex.

An up-dated *Inventory* of the Archive's data holdings will be published in May 1979.

Further details about the Survey Archive may be obtained from:

The Director,
SSRC Survey Archive,
University of Essex,
Colchester,
Essex.

Defence Statistics and NATO

K. Pettet, *Principal, Ministry of Defence*

Most government departments have international responsibilities and, in this, the Ministry of Defence is no exception. Moreover, since the arts of government and statistics are so interdependent, the Ministry of Defence Statistics Organization naturally has its international commitments. As might be expected, these commitments stem almost entirely from the firm adherence of the United Kingdom to the North Atlantic Treaty. Within this context, one of the more important of our statistical projects is outlined below.

NATO'S needs

The North Atlantic Treaty Organization comprises 15 nations. Its main headquarters is in Brussels, with three major command headquarters at Mons (Belgium) Northwood (United Kingdom) and Norfolk (USA). In broad terms, the first of these controls the air and land forces in Europe, while the second and third direct the maritime forces in the Channel area and in the Atlantic, respectively.

Whereas the three major commands are essentially service organizations, with some civilian advisers, NATO Headquarters is primarily a civilian, political, organization, though it does include a service staff, which provides the military advice required for the formulation of political decisions.

To assist in arriving at policy decisions, the staffs naturally need data, not only about the NATO nations but, also, about those of the Warsaw Pact. However, as this article is concerned solely with the provision of data in respect of the NATO nations, the Warsaw Pact is mentioned only in so far as it affects the provision of data relating to the NATO nations.

Hitherto, the nations have provided NATO HQ with data concerning their own forces and resources in a wide range of manually compiled reports, supplemented by magnetic tape inputs to a relatively small automated data base. Up till now, this data base has been confined almost exclusively to recording the current situation of fighting units in the land forces in Europe. Although, at one time, this was sufficient, there have been growing demands for an increase in coverage. These demands have arisen for a variety of reasons, among which are:

- i. The advent of negotiations with the Warsaw Pact concerning Mutual and Balanced Force Reductions.

- In these negotiations, new arguments often lead to demands for fresh data for their support or rebuttal.
- ii. The pressing need to find ways of countering the continuing massive increase in Warsaw Pact strength, without beggaring the nations of the NATO alliance.
 - iii. The development of long term studies calling for the manipulation of air and maritime force data in conjunction with land force data.
 - iv. The need for a common set of data assumptions for land, air and maritime forces.
 - v. The requirement to contain data manipulation costs within existing budgetary constraints.

To resolve the problems outlined above, the data base is being expanded to encompass:

- i. Air and maritime forces in like manner to land forces.
- ii. Supporting units and reserves, as well as fighting units stationed outside the NATO area.
- iii. Future plans, in addition to current dispositions.

When this expansion has been completed, it should prove possible to automate much of the work that is now being done manually, particularly in the air and maritime fields. By this means, it is hoped to effect a material increase in the efficiency of collecting, processing and analyzing data for NATO purposes.

The approach

To assist in managing this major reorganization, NATO HQ is being advised by a group of national data providers. This group meets both in Brussels and in other places, as the occasion demands. As might be expected, the responsibility for representing the United Kingdom on this group has fallen to the Defence Statistics Organization.

For simplicity, the transactions of the group may be broken down into two large problem areas:

- i. Evolving a system of data collection and manipulation that is acceptable to NATO HQ, the major NATO commands and the NATO nations.
- ii. Devising a system of data classification that takes into account, not only the diversities in equipment and organization that exist between the NATO nations, but also between the Warsaw Pact nations.

In this situation, the statistician can come into his own in his classical role of bridging the gap between those who need processed information and those who

hold the basic data from which it must be assembled. It demands a good grasp of what is practicable, a keen interest in how others manage their affairs, great patience and a nice sense of how far to go in accommodating the wishes of your associates.

French and English are the two official NATO languages. Clearly, this is to our advantage and we are well placed to help when the group is faced with interpreting the precise meaning of some English word or phrase. Nevertheless, those of our NATO colleagues who are obliged to communicate in what, to them, are foreign languages are often so fluent that the UK representative has to be careful with his usage and it is perfectly possible for, say, a gerund of doubtful parentage to cause raised eyebrows at the meeting and be the subject of some discussion afterwards over a 'working drink'.

The difficulties of securing agreement between so many nations on so many details are enormous. One way of cutting through the tangle that has been found particularly effective, is to break up into small sub-groups to study specific problems and then to offer the agreed sub-group solutions to the main meeting for ratification. As the sub-groups are formed from nations having major interests in the subjects being discussed, their solutions are usually sound and not easily overturned by the objections of nations having only marginal interests. When such a problem cannot be resolved in a matter of hours, it is delegated to a small *ad hoc* group which is convened at a later date to work out proposals for presentation to the next main meeting. The smaller number of nations participating in any such *ad hoc* group makes it more easy to assemble at a location less central than Brussels but more appropriate to the topic for discussion.

Vive la difference

As might be imagined, the fundamental differences between navies, armies and air forces are compounded by the differences between nations in the way they organize similar forces and how they treat functions that do not lie neatly within the province of only one service. A good example is the ground-to-air missile, which some nations assign to the army, some to the air force and others to both. In addition, there are also great differences between both forces and nations in their methods of collecting and processing data, ranging from the most elementary manual methods to the most advanced automated techniques. Devising one standard system capable of coping with these differences is not easy. Furthermore, in designing the new automated system, it has been necessary to keep in mind the danger of excessive rigidity. Every effort has been made to

retain as much as possible of the flexibility provided by the earlier manual methods. This is of particular importance in ensuring prompt responses to political and military developments.

It will come as no surprise to those well versed in the field of international negotiations that the hammering out of the necessary changes in procedure has taken a very long time. However, the recent introduction of a new computer at NATO HQ, coupled with a change to a different programming language, has now forced the procedural changes through, without any possibility of turning back. It may be something of an augury that inanimate objects should be instrumental in banging human heads together. These changes will demand the breaking of much new ground for the reporting of UK air and maritime forces but, for our land forces we are well placed, as we already have an advanced ADP system for the Army.

This system is used both to co-ordinate the manning and equipping of units as they are now and to explore the implications of any reorganization that might be under consideration for the future. The system depicts the entire Regular and Reserve Army, by type of unit, on both a peace and a war footing, as it is now and as it is planned to be, each year for the next 11 years. It shews the detailed entitlements to men and material for each type of unit, both as currently authorized and as planned, so as to take into account the introduction of new equipments and the retirement of old. It then goes on to shew how these entitlements are currently complemented with identifiable men and equipments. It is a powerful tool of management and has been the subject of much close attention by other members of the alliance who are not so well placed. However, it has been designed with the primary aim of meeting the needs of the Army and it will require not a little adaptation before it can meet all of the emerging needs of NATO HQ.

The way ahead

To sum up, participation in this project demands persistence, patience, great attention to detail, a fair knowledge of ADP, sound judgement in matching ends to means and an ability to draw up definitions that are valid, consistent and robust. In fact, the work calls for many of the qualities and skills expected from most statisticians. Agreement between so many nations on so many details does not come easily but the eventual achievement of positive progress can be most satisfying. Although there is still a great deal to be done, the concept of one comprehensive NATO data base has already been developed from a theoretical ideal into a practical possibility.

ANNEX

North Atlantic

Treaty Organization

Belgium
Canada
Denmark
France
Federal Republic of Germany
Greece
Iceland
Italy
Luxembourg
Netherlands
Norway
Portugal
Turkey
United Kingdom
USA

Warsaw Pact

Bulgaria
Czechoslovakia
German Democratic Republic
Hungary
Poland
Romania
USSR

Retailing inquiries: field follow-up surveys

P. F. Andrews, *Higher Executive Officer, Business Statistics Office*

Background

In January 1977 a new series of annual sample inquiries into retailing was launched with the despatch of forms to about 30,000 businesses in Great Britain. These new inquiries, the first of which was in respect of the year 1976, were introduced to replace the large scale periodic census of distribution which began with the year 1950 and ended with 1971.

The Business Statistics Office (BSO) is concerned to limit the burden of form-filling imposed by its inquiries. In the retail inquiries this is done in a number of ways. First, since the inquiries are conducted on a sample basis, only a relatively small proportion of the smaller businesses are receiving forms in any one year (for some trades, the proportion is below 1 in 100 for the smaller businesses). Second, different types of form are used according to the size of business, with more limited information being collected from the smaller retailers. Third, as with all BSO inquiries, it is made clear that estimates are acceptable where figures of accounting accuracy are not available.

Nevertheless, the BSO recognise that the inquiries may create some difficulties for the smaller businesses. In order to assess their reactions to the new inquiries and to gain a better insight into their problems as form-fillers a number of traders who had been sent forms for 1976 and 1977 were interviewed in two field surveys.

The field surveys

In January 1978 staff from the BSO visited 50 selected small retailers in Cardiff and 77 in Bristol who had received the shortest forms in the 1976 inquiry, which were designed for retailers with an annual turnover of less than £50,000. The visits covered traders who had completed their inquiry forms as well as those who, for various reasons, had not. Although no direct appointments were arranged, each trader was advised by post of the general timing of the visit, and around half were available and able to co-operate in the survey.

Traders who had completed their inquiry forms (around two-thirds of those visited) were invited to comment on the problems they had encountered and asked to help in completing a short questionnaire designed to identify areas of difficulty on the inquiry form, the time taken to complete the form and other

general aspects of form filling. Traders who had not completed their form were asked to co-operate by giving the more important figures for their business for inclusion in the results of the inquiry. Proportionately fewer successful interviews were made with this group of traders, mainly because the retailer was not available, the premises were closed, or the occupier had changed.

The results of this pilot survey in Cardiff and Bristol justified a larger-scale visiting programme in respect of the 1977 retailing inquiry. To limit the cost it was decided to select a city or large town with sufficient shops available for visits within a reasonably small area. Birmingham met this criterion.

The inquiry form for small businesses was redesigned and substantially reduced in size between 1976 and 1977, mainly by adopting a more compact format.

For the Birmingham visits the main emphasis was still on finding ways of helping the form-filler and obtaining constructive criticism of the forms themselves. Additionally, it was hoped to assess the impact on traders of the shorter form. The visits were carried out in Birmingham during September and October 1978. A total of 229 calls were made to the addresses of traders with a register turnover of less than £100,000, 142 of whom had completed inquiry forms whilst the remaining 87 had not responded. The increase in the turnover limit for the field visits followed the corresponding increase in the turnover cut-offs used for the forms going to small retailers between the 1976 and 1977 inquiries.

Again, not all traders were available at the time the calls were made (there was limited opportunity for callbacks), and in some instances premises were closed or there had been a change of occupier. Overall, 100 interviews were carried out. There were few refusals of co-operation, and the average length of each interview was about 15 minutes.

Reactions of traders

The reactions of traders to the visits were mixed. Some were surprised, though perhaps pleased, that a government department was interested in what they thought whilst others took the opportunity to make their views about form-filling known. All information obtained during the interviews, whether relating to a

business or the personal views of a trader, has been treated in the strictest confidence.

A common misconception encountered was that the BSO staff were checking on Value Added Tax (VAT) returns on behalf of HM Customs and Excise. In reply, field staff had to make the point that, while the BSO selects the random sample of retailers each year from its register of businesses compiled from limited information provided by HM Customs and Excise under Section 55 of the 1973 Finance Act, no figures of turnover collected by BSO are passed to Customs and Excise for use in the administration of VAT. More generally it was necessary to reassure traders that most information collected in the inquiry could be passed to other government departments for statistical purposes only, and this transfer was subject to ministerial approval. Only information on name and address, trade classification and employment could be passed to other departments for more general purposes.

Estimates

As one way of relieving the form-filling burden, retailers are encouraged to give estimates where necessary. The amount of estimation used by traders in completing forms, and their attitude to estimation generally, was one subject of the survey. In the Birmingham survey just over a third of traders said that they had made some estimates in completing their forms; in the pilot survey around half said they had done so. This fall in the degree of estimation may, at least in part, have reflected the redesign of the inquiry form mentioned previously. The most commonly estimated figures were stocks and the allocation of turnover between commodities sold. Traders who had made estimates generally confirmed their reliability, although it was inevitably difficult to make a more precise assessment of the accuracy of the estimates.

Some traders took the view that estimation detracted from the value of the results. The Birmingham visits suggested that between a fifth and a quarter of small retailers ask their accountants to complete their retailing inquiry forms on their behalf. The consequent need to wait for prepared accounts is one factor in returns from small traders being slower than the BSO would wish. One lesson for the future is the need to get across to respondents that timely unbiased estimates are valuable because they do not significantly worsen the quality of the statistical aggregates while allowing them to be produced more quickly.

Ease of completion of the retail inquiry forms

The surveys indicated that traders who had not previously examined the form in detail were sometimes

surprised to find that it was easier to complete than they had imagined. Some retailers, who had sent the form to their accountants in accordance with their normal procedure on such matters, could have completed it themselves using their knowledge of their own business. Of those traders interviewed who had completed the forms themselves, around two-fifths in the pilot survey had found the 1976 inquiry form easy to complete, while in the Birmingham survey, covering the shortened form for 1977, this rose to over three-fifths.

Very few traders were able to suggest improvements to the inquiry form or methods for improving response.

The proportion of traders who were able to complete their forms in under one hour rose from a half in the pilot survey to two-thirds in Birmingham – one result, possibly, of the redesign and reduction in size of the retail inquiry form between 1976 and 1977.

Attitudes to official statistics

The surveys confirmed how much small traders underestimate their value as individual contributors to official statistics. This attitude was difficult to remove, even though interviewers pointed out that in a sample survey it was particularly important to secure response from the relatively few small retailers selected if the results of the inquiry were to provide government with sufficiently reliable information.

On being questioned about the uses to which government put their figures, most respondents said either that they did not know how their figures could be of use to government or that they thought that their figures would be of no use at all. A few appreciated the government's needs but more thought that only figures from larger firms would be useful. Many of those questioned either had not read or could not recall the letter of explanation which accompanied the inquiry form. Others said that it did not convey the reasons for the inquiry in terms which they appreciated.

As regards retailers' own interests in statistics, when asked if there were any statistics about retailing they would like to have, four-fifths of the traders answering this question replied 'no'. This lack of interest in statistics on the part of smaller traders was further illustrated by the answers given to the question 'Do you make use of or take special note of any statistics from government sources?'. A minimal number said they used such statistics regularly, and only one-tenth occasionally. The remainder said that they never used them. The general view of small retailers that the inquiries provide little or no information of direct use to them is understandable. This, however, points up the need to explain to retailers the value of the inquiry to government and hence indirectly to them.

Medium size retailers

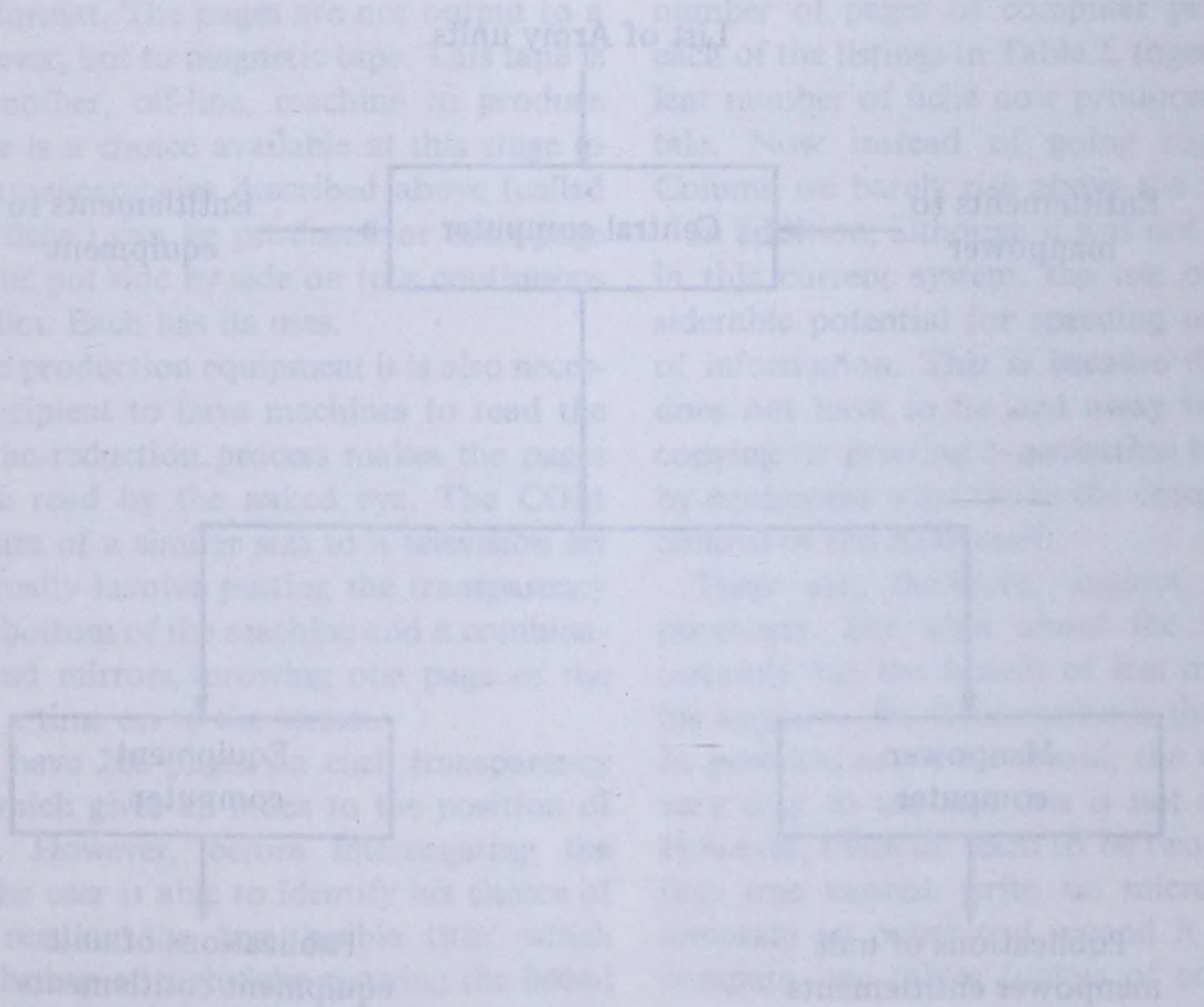
At the same time as smaller firms were surveyed in Birmingham, 24 medium sized retailers in the South East with turnovers in the range £100,000-£1 million were asked the same questions.

Again, it was established that a substantial number of inquiry forms had been passed to accountants for completion, and the impression was that this happened to a greater extent than with the smaller businesses.

The overall attitude to form-filling was found to be much the same as for smaller firms, and those businesses which had received inquiry forms for both 1976 and 1977 greatly appreciated the improvements made to the 1977 form. However, the factor militating against form completion was not so much any difficulty in the form itself, as the lack of time and resources that could be devoted to completing it.

Conclusion

These surveys have provided substantial evidence of current attitudes among smaller traders to the new retailing inquiries and have been useful to the Business Statistics Office in planning for future inquiries. Any future surveys are likely to be incorporated in a wider programme of discussions with form-fillers which BSO is planning as part of its aim of easing the burden of form-filling on industry.



A successful application of computer output microform (COM)

J. R. Merchant, *Statistician and Lt. Col. J. G. Sharp, RAPC, Ministry of Defence*

Stats(E)1 is a statistical branch in the Ministry of Defence which is responsible, amongst many other things, for the maintenance of a data base of information on the manpower and equipment which units in the Army are entitled to hold. There are some 2,000 units and some 46,000 different kinds of equipment in the Army which means that the data base has to be handled by computer if anything useful is to be done with it. In fact, for reasons which need not concern this article, these data are handled by three computers in the way shown diagrammatically in Figure 1.

The listings of the entitlements output from the system are in various forms summarised in Tables 1 and 2. Each publication presents the information to particular customers in the way they find most useful.

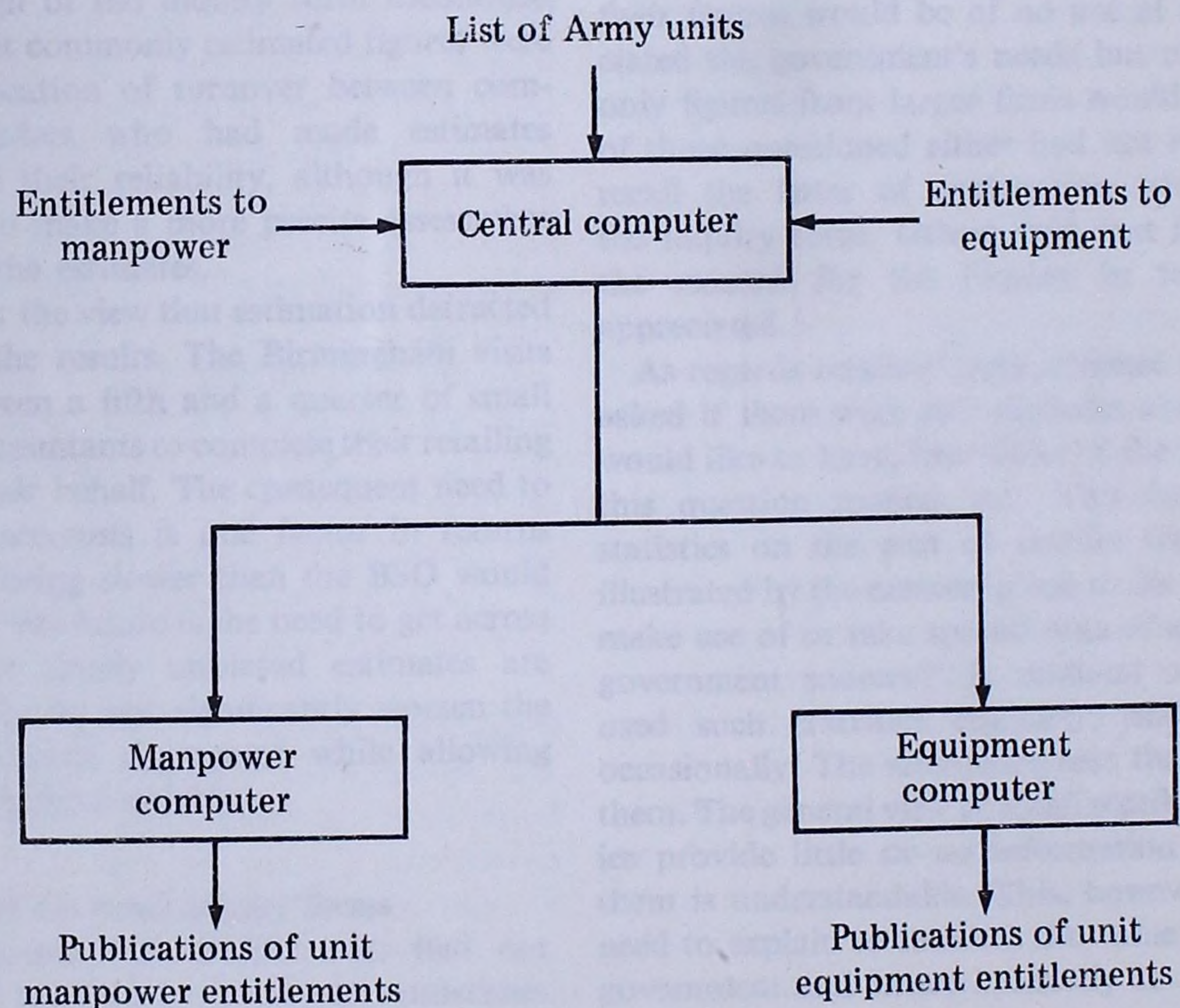
Some customers take more than one listing and some, but very few, take them all. New listings are produced in January and updated in August each year.

As set out in the tables, the listings do not seem to present much of a problem. When seen, however, in reality one's view quickly changes. Listing No. 8 in Table 2, for instance, runs to 9,314 pages and there are several others like it. Taken together, one edition of each of the listings in the tables amounts to 32,000 pages bound into 231 volumes. It can now be seen why customers taking all listings are few and far between.

Of course production of such an enormous volume of information involves many problems and the branch constantly reviews the requirements of its customers and reduces listings whenever possible. Despite such

FIGURE 1

Flow of information on Army unit entitlements to manpower and equipment



attention, the pages produced in the two editions in 1977, if piled on top of each other, would have risen four feet above Nelson's Column!

Apart from the cost of the paper, both the computer and staff time in producing the editions were obviously very expensive. Indeed, in order to service the production of these listings and other output, the branch is the proud employer of one of the few full-time 'bogglers' in the Government Statistical Service. The origin of the title is obscure but her duties are to attend to the receipt, collation, binding and despatch of the data.

The additional difficulty is that many of the listings contain highly classified information to which strict regulations apply about how they are accounted for, who may handle them and the means by which they can be sent from one place to another. Such problems of control are magnified disproportionately when so much paper is produced.

The branch therefore began to investigate the possibility of using Computer Output Microform (or COM for short) in 1976. COM is computer printout recorded on photographic microfilm, the result being similar to a transparency produced by a conventional camera but of a rather larger size, usually about six inches by four inches. The real space advantage is that this little transparency can contain not just one page of print but several. This means that a great deal of information can be stored in a much smaller space than had been possible before.

To produce COM it is necessary to have suitable programs in the computer to produce the output in the required format. The pages are not output to a line printer however, but to magnetic tape. This tape is then used by another, off-line, machine to produce the COM. There is a choice available at this stage in that either the transparencies described above (called 'microfiche' or 'fiche') can be produced or each page of printout can be put side by side on to a continuous strip of 16mm film. Each has its uses.

To go with the production equipment it is also necessary for each recipient to have machines to read the COM because the reduction process makes the pages too small to be read by the naked eye. The COM readers we use are of a similar size to a television set and for fiche usually involve putting the transparency on a tray in the bottom of the machine and a combination of lights and mirrors throwing one page of the transparency at a time on to the screen.

We opted to have 208 pages on each transparency including one which gives an index to the position of the other 207. However, before interrogating the internal index the user is able to identify his choice of microfiche by reading the 'eye legible title' which appears along the top of each fiche showing the broad

subject identity of the internal micro frames. The operator looks at the index page of the selected fiche (always in the same position on the transparency at the bottom of the right-hand corner), finds the position of the page required and moves the tray so that the correct page appears on the screen. It was found that only a little practice was needed to become adept at this procedure.

Much of the development time was spent on trials to find the best type of film and developing process for our purposes and many different makes of COM readers had to be tried out. When we felt confident enough to proceed, 250 readers were purchased and distributed to the users of the output, visits were made to explain the reasons for the change and its advantages and demonstrations were arranged on how to use the fiche and readers. In January 1977 the first sets of listings of equipment entitlements were produced and distributed.

The first production-run produced minor difficulties but in general went very smoothly. When final costs were added up it was found that what would have cost £27,000 in conventional printing had now cost only £2,000. Against this saving of £25,000, of course, must also be set the capital costs of the readers (£250 each) and the production equipment at the computer centre. COM production is also used for several other projects within the various Arms Directorates of the Army. Apart from the cost savings in production and postage the real advantage is in the huge reduction in space taken up by the output. Table 3 shows the number of pages of computer printout contained in each of the listings in Table 2, together with the equivalent number of fiche now produced. This tells its own tale. Now instead of going higher than Nelson's Column we barely rise above the first few steps!

In addition, although it was not an important factor in this current system, the use of COM offers considerable potential for speeding up the dissemination of information. This is because the computer output does not have to be sent away to a separate photocopying or printing organisation but can be processed by equipment adjacent to the computer and under the control of the ADP staff.

There are, therefore, distinct advantages for the purchaser. But what about the user of COM? He certainly has the benefit of less material to store but his access to the information is that bit more difficult. In practice, as we have said, the readers have proved very easy to use and this is not a serious drawback. However, there do seem to be two genuine difficulties; first one cannot write on microfiche as one might annotate on paper and second it is more difficult to compare two tables (unless of course you have two

readers). In some cases this has resulted in a significant reduction in efficiency and we keep machines in the branch very similar to the more conventional copying machine which will produce paper output of a conventional size direct from the fiche. This output can then be sent to those customers in genuine need. However, we firmly believe that this is a major step forward in the dissemination of information and we intend to investigate the possibilities of its extension to other areas of the branch's work. Meanwhile, should anyone wish to discuss further our experiences with the equipment or the introduction of the method, they might wish to contact:

Head of Stats(E)1,
Room 167,
Old War Office Building,
Whitehall SW1A 2EU,
Telephone: 01-218 0668.

APPENDIX

Table 1

Summary of separate listings provided of entitlements to manpower

Listing	Information
1	Global summary by Arm with geographical area (current year only)
2	11 Year Army summary by geographical area
3	11 Year geographical area summary by Arm
4	11 Year summary by geographical area
5	11 Year by Arm within unit by sponsor*
6	Summary of Soldiers' Employment List by Arm (current year only)
7	Arm within unit within geographical area (current year only)
8	Unit within Arm within geographical area (current year only)
9	Combatant Officers Appointment List by Arm (current year only)
10	Quartermasters Appointment List by Arm (current year only)
11	Soldiers' Employment List by Arm (current year only)
12	11 year summary all officers by appointment within Arm
13	11 Year summary soldiers employment by Arm
14	11 year summary of soldiers' by rank (whole Army)
15	Soldiers' Employment List by Divisions of Infantry (current year only)
16	Rank structure by Arm within unit by geographical area (current year only)
17	Quarterly liability types forecast (current year only)

* Manpower planning for each Arm or Corps in the Army is co-ordinated in the Ministry of Defence by a 'sponsor'

Table 2

Summary of separate listings provided of entitlements to equipment

Listings	Information
1	Item totals for each geographical area
2	Global item totals by geographical area
3	11 Year global forecasts for each item
4	11 Year geographical area forecasts for each item
5	Unit entitlements for each item by sponsor*
6	Unit entitlements for each item by geographical area by sponsor
7	Unit entitlements for each item within geographical area by sponsor
8	Unit entitlements for each item within sponsor by geographical area
9	Cost breakdown of unit entitlements

* Each type of Army equipment is managed by a 'sponsor'

Table 3

Sizes of listings of entitlement to equipment

Listings in Table 2	No. of pages of conventional Computer output	No. of microfiche
1	429	9
2	1,560	16
3	757	12
4	1,029	12
5	2,351	18
6	6,408	38
7	4,850	29
8	9,314	107
9	5,110	32
Total	31,808	273

Recently available statistical series and publications

The following publications containing social statistics have recently, or will soon become available during the April-June quarter of 1979. Unless otherwise specified, copies may be purchased from Her Majesty's Stationery Office. A list of release dates of economic series is published monthly in *Economic Trends*.

Department of Education and Science

Statistics of Education, Volume 3, 1976: Further education statistics, 1976

Statistics of Education, Volume 6, 1976: University statistics, 1976

Statistics of Education, Volume 1, 1977: Schools statistics, 1977

Statistics of Education, Volume 2, 1977: School leavers and CSE/GCE examination statistics, 1976-77

Department of Employment

Employment Gazette, published towards the end of each month, contains indicators on earnings, unemployment and prices. Issues due in the second quarter will contain the Family Expenditure Survey results for the third and fourth quarters of 1978.

Department of the Environment

Housing and Construction Statistics, Issue 28: figures for the fourth quarter 1978

Local Housing Statistics, Issue 48: figures for the fourth quarter of 1978

Home Office

Control of Immigration: Statistics 1978

Report of the Police Complaints Board 1978

Report of the Gaming Board for Great Britain 1978

Report of the work of the Equal Opportunities Commission 1978

Report of the Parole Board for 1978

Report of the Commissioner of Police of the Metropolis for 1978

Report of the Charity Commissioners for England and Wales 1978

Report on work of Commission for Racial Equality 1978

Report of HM Chief Inspector of Constabulary for 1978

Office of Population Censuses and Surveys

Population Trends No. 16

OPCS Monitors available free from the Office of Population Censuses and Surveys include:

<i>Births and Deaths</i>	VS	Weekly
<i>Deaths from Accidents</i>	DH4	Monthly
<i>Legal Abortions</i>	AB	Monthly
<i>Adoptions</i>	FM3	Quarterly
<i>Infectious Diseases</i>	MB2	Quarterly

Scottish Office

Scottish Mental Health Inpatient Statistics, 1977

Scottish Housing Statistics No. 4 (Fourth quarter 1978)

Welsh Office

Welsh Social Trends No. 2, 1978

In addition to the above, the following analyses in the Department of Health and Social Security statistical series have recently become available. Extracts and summaries from these will eventually be published in *Social Security Statistics*.

Unemployment benefit

Quarterly analysis of decisions of Insurance Officers, quarter ending 31 March 1979

Monthly analysis of claims by sex and region:

4 weeks ending 29.12.78

5 weeks ending 3.2.79

4 weeks ending 3.3.79

Quarterly analysis of registered unemployed by class, sex and region, quarter ended 8.2.79

Family Income Supplement

Monthly analysis of numbers and characteristics - December 1978, January 1979, February 1979

Guardian's allowance/Child's special allowance

Quarterly analysis of children for whom allowance is in payment, quarter ended 31 March 1979

Attendance allowance

Quarterly analyses of allowances current, awards and cessations in period by age, cause and area separately for higher and lower rates, quarter ended, December 1978

Further information can be obtained from:

Mr. R. J. McWilliam,
Department of Health and Social Security,
Room 2216,
Newcastle Central Office,
Newcastle upon Tyne NE98 1YX.

New surveys assessed by the Survey Control Unit

December 1978 to March 1979

For further information on the surveys listed, the appropriate departmental contact may be obtained from Mr R. C. Ponman (01-233 8583), Survey Control Unit, Central Statistical Office, Great George Street, London SW1P 3AQ.

An introductory note was given in Statistical News 36.41

New surveys assessed December 1978 – March 1979

Title	Sponsor	Those approached	Approximate number approached	Location	Frequency
Business surveys					
Oil companies' assets and liabilities	CSO	Oil companies	20	UK	AH
Factors affecting firms when choosing industrial premises	BRE	Managers	450	GB	AH
Green Belt management experiments	CC	Farmers	43	SE	AH
Training Opportunities Scheme evaluation research	COI/MSC	Employers	200	GB	AH
Third survey of Small Firms Employment Subsidy Scheme – postal	DEM	Manufacturers	721	UK	AH
The effect of incomes policy on firms	DEM	Managers/Trade Union officials	600	UK	AH
Adult Employment Subsidy	DEM	Managers	200	N	AH
Survey of firms drawing Small Firms Employment Subsidy	DEM	Employers	72	UK	AH
Construction industry research project	DOE	Construction companies	40	SE	AH
Obsolescence in inner city premises	DOE	Manufacturers	500	WM	AH
Research into industrial innovations	DOE	Electronics firms	1,690	GB	AH
Transportation of hazardous goods	DTP	Chemicals companies	70	WM	AH
Conference organisers attitudes towards Scarborough	ETB	Managers	40	GB	AH
Effects of moor-burning (Muirburn) on sheep production in West Scotland	HIDB	Farmers	250	S	AH
Protective clothing in the ceramics industry	HSE	Manufacturers of ceramics	300	WM	AH
Vandalism and related problems facing farms on the urban fringe	MAFF	Farmers	2,210	SW	AH
Survey of Phytophthora SPP associated with tomatoes	MAFF	Horticulturalists	42	E	AH
Co-ordination of inspectorate visits to battery hen units	MAFF	Farmers	400	GB	AH
Methods of growing winter barley in the Kirton area	MAFF	Farmers	20	EM	AH
Arable by-products as animal feed in Norfolk	MAFF	Farmers	950	EA	AH
Supply and demand of rainbow trout in GB	MAFF	Fishfarmers	180	GB	AH
Maintenance costs of dairy housing	MAFF	Farmers	70	SW	AH
Pig production in South West England – 1977/78	MAFF	Farmers	663	SW	AH
Study of Warrington local labour market for young people	MSC	Employers	215	NW	AH
Skill shortage study in Dudley and Sandwell	MSC	Engineering and Metal companies	400	WM	AH
Labour shortages in the West Midlands	MSC	Managers	500	WM	AH
Study of hard-to-fill vacancies	MSC	Employers	90	E	AH
Cotton and allied textiles ITB grant and levy exemption return	MSC	Manufacturers	650	GB	A
Chemical and Allied Products ITB voluntary manpower survey	MSC	Chemicals companies	1,397	GB	AH
Hotel and Catering ITB manpower information study – Tier II	MSC	Caterers	2,000	GB	A
Skill shortages within manufacturing firms in Ayrshire and East Renfrewshire	MSCS/SDA	Manufacturers	300	S	AH
Estate agents examination	PC	Estate agents	500	UK	AH
Rugby Portland Cement customer survey	PC	Cement users	180	EW	AH
Local authority surveys					
Condensation problems in local authority houses	BRE	Housing departments	10	EW	AH
Allocation of private sector housing renovation grants	BRE	Housing departments	425	EW	AH
Energy conservation by local authorities	DEN	Architect departments	475	GB	AH
Survey of libraries in secondary schools in England	DES	Education departments	100	E	AH
Trunk road network accident database	DTP	Highways departments	60	E	AH
Local authority housing management and maintenance costs	SDD	Housing departments	56	S	AH

New surveys assessed December 1978 – March 1979 (continued)

<i>Title</i>	<i>Sponsor</i>	<i>Those approached</i>	<i>Approximate number approached</i>	<i>Location</i>	<i>Frequency</i>
Other surveys					
Condensation problems in local authority houses	BRE	Tenants	NK	EW	AH
Energy: background campaign qualitative research	COI/DEN	Adults	32	E	AH
Pelican crossings campaign evaluation – omnibus survey	COI/DTP	Adults	2,000	GB	AH
Two wheeler safety campaign pre-test	COI/DTP	Youths	100	E	AH
Test of 'Shrinking Woman' finished commercial	COI/DTP	Mothers	150	E	AH
Green Cross Man – comics research	COI/DTP	Children	66	E	AH
Motor cycle training course – campaign evaluation	COI/DTP	Youths	2,500	E	AH
Prison officers – background campaign research	COI/HOME	Men	48	E	AH
Inland Revenue – leaflet research	COI/IR	Adults	300	GB	AH
Metrication – omnibus survey	COI/METB	Adults	2,000	GB	AH
Royal Mint qualitative research	COI/MINT	Consumers	55	GB	AH
Evaluation of a news sheet 'squadron'	COI/MOD	Youths	1,000	UK	AH
Army recruitment advertising for 1979	COI/MOD	Youths	52	GB	AH
Qualitative research on proposed advertising campaign for Training Opportunities Scheme	COI/MSC	Employees	60	GB	AH
Training Opportunities Scheme evaluation research	COI/MSC	Adults	3,450	GB	AH
Survey of ethnic minority group unemployed	DEM	Unemployed	5,000	E	AH
Ageing, needs and nutrition – Alternatives to meals-on-wheels	DHSS	Elderly	150	YH	AH
Accidental child poisoning – main survey	DHSS	Parents	280	EW	AH
Acceptability of new supplementary benefit forms	DHSS	Claimants	600	NW	AH
Social provision for battered women – agencies survey	DHSS	Various organisations	12	EM	AH
Study of the 'Parents for Children' adoption agency	DHSS	Married couples	400	GB	AH
The convalescence of rectal cancer patients after treatment	DHSS	Patients	600	SE	AH
Community Health Councils study	DHSS	District nursing officers	15	UK	AH
Greater London house condition survey 1979	DOE	Households	32,000	SE	AH
Quality monitoring – Local Authority housing follow-up	DOE	Tenants	400	EW	AH
'Housing and Construction Statistics' readership survey	DOE	Readers	2,750	UK	AH
Inner city employment aspirations – Newcastle	DOE	Adults	900	N	AH
Inner city private housing development	DOE	Landowners	60	EM	AH
A47 proposed by-pass of West Walton Highway Norfolk PPE	DTP	Adults	80	EA	AH
Marton West Beck cycle route – Middlesborough	DTP	Cyclists	600	N	AH
RUTEX – evaluation of a scheme in Devon	DTP	Households	100	SW	AH
1978 Holiday entitlements	ETB	Adults	3,000	GB	AH
British home tourism survey 1979	ETB	Adults	24,000	GB	AH
Attitudes towards Scarborough, Whitby and Filey	ETB	Tourists	600	GB	AH
'England Holidays '79' brochure evaluation and readership surveys	ETB	Readers	2,850	GB	AH
Survey of Scarborough residents' opinions of tourism	ETB	Households	1,000	YH	AH
Security behaviour of householders in Kent	HOME	Households	1,220	SE	AH
Value of public safety – Stage 2	HOME	Adults	100	SE	AH
Attitudes of ex-officers voluntarily retiring from the Royal Navy	MOD	Ex-officers	100	UK	AH
Survey of unqualified school leavers in Scotland	MSC	Youths	7,500	S	AH
Survey of the long term unemployed	MSC	Unemployed	4,500	GB	AH
Evaluation of the hospital resettlement officer service	MSC	Patients	30	GB	AH
Cohort study of unemployed registrants	MSC	Unemployed	8,500	GB	AH
Behavioural effects of unemployment amongst mature women	MSC	Women	300	EM	AH
Attitudes towards living in the Heathrow area	NAC	Households	1,400	SE	AH
Extension of migrant sample on international passenger survey	OPCS	Immigrants	350	SE	AH
Housing needs of the unmarried or no longer married	OPCS	Adults	1,750	E	AH
Family property in Scotland	OPCS	Households	2,500	S	AH
Community council survey (Tayside and Fife)	SDD	Councillors	267	S	AH
Above tolerable standard housing repairs	SDD	Landlords	180	S	AH
Electoral registration of students	SO	Students	2,500	S	AH
Electoral registration of student and pupil nurses and midwives	SO	Nurses	1,000	S	AH
Road safety education for pre-school children	TRRL	Mothers	1,540	E	AH
Visual impact of moving traffic on rural roads	TRRL	Adults	100	SE	AH
RUTEX – assessment of South Exmoor scheme	TRRL	Households	100	SW	AH
RUTEX – Devon and Exe Valley market bus evaluation	TRRL	Households	15	SW	AH
Welsh dwelling and housing survey – Stage 2	WO	Households	32,000	W	AH
Television advertising campaign – research evaluation	WTB	Parents	1,500	E	AH
Community attitudes to tourism in Wales	WTB	Households	1,200	W	AH

Abbreviations used

General

- ITB - Industry Training Board
- LA - Local Authority
- NK - Not known
- PPE - Public Participation Exercise
- RUTEX Rural Transport Experiment
- TU - Trade Union

Frequency

- A - Annual
- AH - *Ad hoc* (or single time)

Sponsors

- BRE - Building Research Establishment
- CC - Countryside Commission
- COI - Central Office of Information
- CSO - Central Statistical Office
- DEM - Department of Employment
- DEN - Department of Energy
- DES - Department of Education and Science
- DHSS - Department of Health and Social Security

- DOE - Department of the Environment
- DTP - Department of Transport
- ETB - English Tourist Board
- HIDB - Highlands and Islands Development Board
- HOME- Home Office
- HSE - Health and Safety Executive
- IR - Inland Revenue
- MAFF - Ministry of Agriculture, Fisheries and Food
- METB - Metrication Board
- MINT - Royal Mint
- MOD - Ministry of Defence
- MSC - Manpower Services Commission
- MSCS - Manpower Services Commission Office for Scotland
- NAC - Noise Advisory Council
- OPCS - Office of Population Censuses and Surveys
- PC - Price Commission
- SDA - Scottish Development Agency
- SDD - Scottish Development Department

- SO - Scottish Office
- TRRL - Transport and Road Research Laboratory
- WO - Welsh Office
- WTB - Wales Tourist Board

Location

- E - England
- EA - East Anglia
- EM - East Midlands
- EW - England and Wales
- GB - Great Britain
- N - Northern England
- NW - North West England
- S - Scotland
- SE - South East England
- SW - South West England
- UK - United Kingdom
- W - Wales
- WM - West Midlands
- YH - Yorkshire and Humberside

Notes on current developments

REGIONAL STATISTICS

Welsh Social Trends No. 2

The second edition of this publication follows a format similar to the first with a page devoted to each topic covered, containing tables and diagrams as well as a descriptive text.

The publication includes sections on Population and Vital Statistics, Health and Personal Social Services, with a number of new pages examining hospital utilisation, Social Characteristics and Economic Characteristics. The Education section analyses the characteristics of school leavers in greater detail than previously and the section on Housing summarises some of the results of the 1976 House Condition Survey. There are also more detailed tables on Justice and Crime and new analyses of local authority expenditure in the Finance Section.

Reference

Welsh Social Trends No. 2. (HMSO 1979) (Price £4.75 net)

Scottish Housing Statistics

The fourth issue of *Scottish Housing Statistics*, which will be published shortly by HMSO, includes an article reviewing progress in housing action areas. The article gives the reasons for the introduction of housing action areas in Scotland and examines the local authorities' progress in declaring such areas. The types of housing included in housing action areas are considered together with the impact of these areas on the below tolerable standard housing stock. The main points in the article are illustrated by the use of charts, a map and a table.

Reference

Scottish Housing Statistics, 4th issue (forthcoming)

POPULATION AND VITAL STATISTICS

Population Trends

The latest edition of *Population Trends*, the Journal of the Office of Population Censuses and Surveys was published in March. This latest issue contains the following articles:

New directions in family life

This article describes the pattern of pre-maritally conceived births, divorces and re-marriages shown by different generations of people and shows that they are

not isolated changes but inter-related movements in the evolution of family life.

Child deaths from accidents 2: place of death

In an earlier issue of *Population Trends*, number 12, the incidence of accidents to children aged 1 to 14 resulting in the child's death or treatment was discussed. This article discusses the non-transport accidents and in particular the places where they occurred.

Geographical area units

This article gives key facts about the number, size and inter-relationships between the sets of area/units most often used by OPCS in the production of statistics for England and Wales. The area/units are mainly the new local government and health service areas but other units such as parliamentary constituencies and the old local government areas are also included.

The regular series of tables continues, brought up to date with the latest available figures.

Reference

Population Trends 15 (HMSO March 1978) (Price £2.50 net)

GRO (Scotland) – Population and vital statistics

The Registrar General's third quarterly return for 1978 published in March, contained the 1977-based population projections for the regions of Scotland in addition to the usual quarterly tables. The fourth quarterly return (including provisional annual tables) is due for publication in June; provisional annual data for Scotland and fourth quarter data for regions and districts were included in weekly return No. 5/79.

Reference

The Registrar General's third quarterly return for 1978 (HMSO 1979) (Price £2.00 net)

World Fertility Survey

Two publications of possible interest to readers of *Statistical News* have been produced under the World Fertility Survey (WFS) programme. One is *The Netherlands Survey on Fertility and Parenthood Motivation, 1975*, the first summary to be published by a developed country in the WFS programme. Other participants are planning to publish their results in this form.

The second report is *An Assessment of the Reliability of the Indonesia Fertility Survey Data*, the result of a study by the Indonesian Central Bureau of Statistics

in co-operation with the WFS. It examines the reliability of responses on fertility, dates of events, ages and other population characteristics, collected during the Indonesia Fertility Survey.

Further information and copies of publications may be obtained from:

Kay Evans,
Publications Office,
International Statistical Institute,
428 Prinses Beatrixlaan,
2270 AZ Voorburg,
Netherlands.

Population projection seminars

A meeting in January 1977 at which representatives of government departments and academic researchers discussed current demographic trends and their future implications aroused such interest among the Directors of Statistics who were present that the Government Actuary and the Registrars General subsequently initiated a series of seminars for individual departments on population projections, with the co-operation of the members of GSS in the departments concerned.

The seminars are intended for senior officers, inviting them to reconsider how forward planning and departmental policy might best use projections of the future numbers of the population and hence how those projections should be made and presented. This enables users of projections to appreciate the degree of uncertainty inherent in their planning and decision-making, and to make suggestions for improving the supply of information and communication on points of difficulty.

Although it is widely understood that population projections are not forecasts (and this has been emphasized recently by the publication of projections made upon assumptions differing from those of the principal series), there is a need for consistency and uniform assumptions in projected numbers used throughout official studies. There is also a need to consider more deeply how to evaluate the risks involved in policies which are affected by unpredictable changes in population numbers.

The GAD/OPCS/GRO(S) non-technical presentations of their thinking and methods are not standardized, but are designed individually for the particular seminar: an essential and substantial contribution to the exchange of views usually comes from the department involved. Thus the seminar at DES concentrated upon short-term projections of births and the child population, whilst that at DOE discussed household formation and the particular problems of regional projections. A meeting with the senior officials of the Scottish Home and Health Department and the Health Service Planning Council ranged widely over a number

of topics. The purposes of the seminars are not merely to explain the aims, methods and uses of population projection, but principally to ensure that users are provided with the results in the form they require and with the explanations they need.

SOCIAL STATISTICS

Criminal statistics

Home Office Statistical Bulletin

A new Home Office statistical publication has been introduced, to be known as the *Home Office Statistical Bulletin*, to provide a means of publishing statistical material outside the main annual statistical publications.

Hitherto, the Home Office published such material only by way of press notices. The *Home Office Statistical Bulletin* will provide a less ephemeral source of reference and make public access to the data easier. The first issues of the *Home Office Statistical Bulletin* were published in March 1979. Issue No. 1/79 was on 'Indictable offences recorded by the police in England and Wales in 1978' and gave quarterly figures for offences recorded and annual figures for offences cleared up. Issue No. 2/79 on 'Control of Immigration Statistics for 1978' gave quarterly figures for 1978 together with a commentary on points of interest on the figures. Issue No. 3/79, published in April 1979 was on 'Statistics on the Operation of the Prevention of Terrorism (Temporary Provisions) Acts 1974 and 1976: First Quarter 1979.' The *Home Office Statistical Bulletin* will also provide a means of publishing additional statistical information such as small *ad hoc* analyses which may not be appropriate for inclusion in one of the regular annual statistical volumes.

Home Office Statistical Bulletins are issued free of charge and can be received post free on application to:

Home Office,
Statistical Department,
Room 1617,
Tolworth Tower,
Surbiton,
Surrey, KT6 7DS.

or by personal application to:

Senior Librarian,
Home Office,
50 Queen Anne's Gate,
London SW1H 9AT.

Probation and after-care

Probation and After-Care Statistics 1977, England and Wales is an annual publication published for the first time on 7 December 1978, giving statistics on the work of the Probation and After-Care Service. The report

for 1977 is in five parts; the first four follow the sequence of events in which people normally come into contact with the Probation Service. Part 1 gives information on the reports prepared by the Service for the courts and details of the court decisions which determine the new orders taken on. Part II gives details of work in progress at the end of 1977 and examines the terminations of orders. Part III describes other work of the Service, including work in prisons and the involvement of officers in miscellaneous duties, such as assisting the homeless and helping with matrimonial problems and Part V gives preliminary results from a sample study – The National Activity Recording Study – undertaken in November 1977 to investigate the time spent by probation officers on various aspects of their work.

Reference

Probation and After-Care Statistics, England and Wales 1977, (Home Office) (Price £1.95 net)

Housing

National Dwelling and Housing Survey (NDHS)

Phase I

A report by the Department of the Environment on the results of the first phase covering some 415,000 addresses in England was published by HMSO in February. The interviews took place during end-1977 and May 1978; the organisation of the survey was described in *Statistical News* No. 42. NDHS was designed to provide up-to-date national and regional data on a range of housing topics including household formation, sharing and concealed households, vacant dwellings, tenure and the housing stock generally. Information was also collected on waiting lists, degree of satisfaction and ethnic groups of households. A response rate of 85 per cent was obtained in NDHS and, in addition to the national and regional surveys, intensive surveys were undertaken in the London boroughs and sixteen areas of housing stress outside London. The report also includes results of these intensive surveys. Three separate follow-up surveys of the private rented sector, movers and sharing households were commissioned from OPCS. Reports on these are expected to be available later this year. A report on a detailed survey of vacant dwellings identified in the 1977 Labour Force Survey will also be published later this year. A back-up service on the NDHS results and associated surveys is provided by the Department of the Environment and information can be obtained from:

SHB Division,
Department of the Environment,
2 Marsham Street,
London SW1P 3EB.
Telephone: 01-212 4914.

Phase II

An extension of the NDHS to a further thirty five housing authorities is currently in the field. It is designed to provide results from intensive samples for bands in the spectrum of housing circumstances in England. Some 200,000 addresses are being visited and a report will be published later in 1979. Details of Phase II are available from:

Miss V. Roberts,
SHB Division,
Department of the Environment,
2 Marsham Street,
London SW1P 3EB.
Telephone: 01-212 7578.

Phase III

A third phase to the NDHS was announced in Parliament recently by the Secretary of State for the Environment. About 300,000 addresses will be visited in England and results together with those from the two earlier phases will complete the coverage of all rate support grant 'needs' areas and provide an up-to-date picture of England's housing situation. The fieldwork will take place throughout this summer and a consortium of five firms (National Surveys Consortium)* will undertake the interviews. Results are expected to be available in the summer of 1980. Mr. Geoffrey Thomas has been appointed consultant to the Department for Phase III of the NDHS.

It is planned that an article describing some of the operational applications of the results from the NDHS will be published in a future edition of *Statistical News*.

References

National Dwelling and Housing Survey (HMSO) (Price £8.50 net)
'National Dwelling and Housing Survey: organisation and field work'
Statistical News No. 42, August 1978 (HMSO) (Price 80p net)

Local authority surveys of housing and population

The Department of the Environment has produced a short directory of the statistical surveys of households, population and house condition carried out by local authorities that are currently in progress or recently completed. All housing authorities were asked during 1978 to complete a questionnaire for each survey and details of over 200 surveys were provided by 111 authorities.

*National Survey Consortium consists of: British Market Research Bureau Limited, Marplan Ltd, Public Attitude Surveys Limited, Research Bureau Limited, Research Services Limited.

The directory gives the title of each survey carried out, the survey period, type of survey and method of collection, the sampling frame, sampling unit, sample size and response and the present position of the survey (if not completed). The surveys are arranged by alphabetical order of local authority, but an alphabetical subject index at the rear of the publication allows ready access to surveys on particular topics.

Reference

Directory of Local Authority Surveys 1978: Housing and Population (HMSO) (Price £1.50 net)

HEALTH AND SOCIAL SERVICES

Health and safety statistics

The Health and Safety Executive (HSE) published the second issue in this series in February (*Statistical News* 39.37). It presents statistics of accidents at work and occupational diseases and of enforcement action by HSE inspectorates and agencies. There are international comparisons in respect of fatal accidents. For the most part the statistics refer to the five years 1972-76 and are based on reports to the HSE Inspectorates (including the Factory, Mines and Quarries, Explosives and Agricultural Inspectorates) and, particularly in the case of diseases, claims for benefit under the industrial injuries and other schemes. Some further information, up to 1977, is shown in HSE reports on their work in mines and quarries and manufacturing and service industries.

References

Health and Safety Statistics, 1976 (HMSO) (Price £1.75 net)

Health and Safety, Mines and Quarries, 1977 (HMSO) (Price £2.25 net)

Health and Safety, Manufacturing and Service Industries, 1977 (HMSO) (Price £2.75 net)

Statistical News, No. 39, February, 1977 (HMSO) (Price 80p net)

Blindness and partial sight

Statistics on *Blindness and Partial Sight in England 1960-1976* were published by HMSO as No. 129 of the Reports on Public Health and Medical Subjects series on 25 January 1979.

The report provides information on the number of people registered as visually impaired and the causes of their handicap. Information on the causes of handicap is based on a study of registration documents and is analysed by age and sex. There is also, for the blind only, an analysis of residual sight by age and sex.

Reference

Blindness and partial sight in England 1960-76, Reports on Public Health and Medical Subjects No. 129 (HMSO) (Price 80p net)

Care of the mentally handicapped

Nurses and Residential Care Staff caring for the Mentally Handicapped was published by HMSO in March

1979 as Volume II of the Report of the Committee of Enquiry into Mental Handicap Nursing and Care.

This survey was carried out for the Jay Committee in order to provide information from a representative sample of nursing and hostel staff on their present and future roles, training and career structures. A principal objective was to find what emphasis staff placed on the social aspects of caring – that is, on developing their residents' individual abilities and enabling them to live as independently as possible. Interviews were carried out in July 1976 with a large sample of nurses in hospitals for the mentally handicapped and care staff in local authority.

Reference

Nurses and residential care staff caring for the mentally handicapped, (HMSO 1979) (Price £4.00 net)

MANPOWER AND EARNINGS

National survey of engagements and vacancies

During the second quarter of 1977, the Employment Service Division (ESD) of the Manpower Services Commission carried out a national survey of employers. The main purpose of the survey was to obtain reliable estimates of engagements and vacancies in the economy, both at national and regional level. Some results were published in the November 1978 edition of the *Employment Gazette* (pp 1284-1288).

The sample of employers was selected from the 1975 Census of Employment. Before selecting the sample, all census units were divided into 25 strata, comprising five size bands analysed by five broad industrial groups. Different sampling fractions were calculated for each strata, such that large units and those in industries believed to have a high engagement rate, had a higher probability of selection than others. Census units with less than five employees and those in SIC order I were excluded. In this way 12,719 units were selected for sampling.

The survey was carried out by staff in job centres and employment offices of ESD. Questionnaires were delivered to sample establishments by personal visit, during which the purposes of the survey were explained and co-operation invited. This achieved a much higher response than could have been expected from a postal enquiry. When allowance is made for establishments which had closed down, the national response rate was about 66 per cent. The achieved sample covered 3.58 million employees, about 16 per cent of the entire national workforce.

Employers were asked to provide the following information in respect of sample units: (a) engagements and terminations during the three months period April

to July 1977, and employees at the start and finish of this period, analysed by sex and six broad occupational groups; (b) unfilled vacancies on 6 May 1977 by the six occupational groups; (c) engagements which both started and finished during a five week period in May to June 1977. This information was grossed-up to represent total engagements, etc., in the economy (excluding those in Standard Industrial Classification I) during the survey period. Separate grossing-up factors were applied to each stratum of sample selection. The grossed-up results provide a basis for measuring ESD penetration of the labour market, i.e. the proportion of total engagements achieved by the ESD network of employment offices and jobcentres. It is proposed to publish a further article in the *Employment Gazette*, giving details of placing and vacancy penetration.

Further information may be obtained from:

Mr. C. J. Spiller,
Manpower Services Commission,
Employment Service Division (ESF6),
7 St. Martins Place,
London WC2N 4JH.

References

Department of Employment Gazette, November 1978, (Price £1.25 net)

New Earnings Survey 1978

The six-part publication of results of the New Earnings Survey 1978 has been completed (*Statistical News* 43.33). Analyses based on the special question on types of voluntary collective bargaining arrangements were included in Part F.

References

New Earnings Survey 1978, Parts A to F (HMSO) (Price £3.50 net each)
Statistical News No. 43, November 1978 (HMSO) (Price 80p net)

Manpower planning

Recent issues of the *Department of Employment Gazette* have included further articles on manpower planning and related subjects (*Statistical News* 44.43, etc.). The January 1979 issue contained an article on the trends in graduate employment looking at the question of whether sufficient numbers of graduates are opting for employment in the industrial sector of the economy. The February 1979 issue contained an article by Neil Scott of the Careers Advisory Service, University of Nottingham on graduate supply and demand in 1979, giving an estimate of the likely market situation facing those leaving universities and polytechnics in the summer of this year.

Reference

Department of Employment Gazette: January and February 1979 (HMSO) (Price £1.35 net each)

Equal Opportunities Commission

The first of a quarterly series of *Research Bulletins* has been published and sets out to chart the relative position of women and men in contemporary life in

Great Britain. This particular issue takes the form of a statistical handbook which will be developed as more up-to-date information becomes available. Future issues of the bulletin will concentrate on a more analytical treatment of specific topics as well as providing details of current and recent research on equality of opportunity.

Reference

E.O.C. Research Bulletin Vol. 1, No. 1, Winter 1978/79 (Price £1.50 net (ISSN 0142-4866) obtainable from:

Equal Opportunities Commission,
Overseas House,
Quay Street,
Manchester M3 3HN.

Industrial disputes in foreign-owned manufacturing plants

A Research Note in the March 1979 issue of the *British Journal of Industrial Relations* compares the incidence of officially-recorded strikes in foreign and indigenously owned manufacturing establishments in 1973. Because of the important relationship between strike activity and establishment size and the atypical size of foreign-owned establishments, only the 4,741 establishments having 200 to 499 employees were compared. The results indicate that foreign-owned establishments are affected by strikes only slightly more often than their UK-owned counterparts, but they are much more severely affected once a strike has begun.

Reference

The strike record of foreign-owned manufacturing plants in Great Britain by Neil Millward, *British Journal of Industrial Relations* vol. XVII No. 1, March 1979 (Price £4.00 net)

Women and shiftwork: the protective legislation survey

A report of a study carried out by Social Survey Division OPCS to assist the work of the Protective Legislation Working Party on the Equal Opportunities Commission, was published in March 1979.

The Commissioners' concern and hence the two principal aims of the survey were, first to discover the extent to which women may favour or oppose changes in the law affecting women's hours of work; specifically, changes in the Factories Acts which currently forbid women to work shifts in factories, and second to estimate the extent to which women themselves might be willing to work shifts. Having established these two estimates, the survey sought to examine women's reasons for their positions taken on each issue. The sample of 1,700 women was drawn from those areas having the highest proportion of women employed in manual occupations. In addition, a proportion of their husbands were interviewed. Interviews took place in July/August 1977.

Reference

Women and shiftwork: the protective legislation survey, 1979 (HMSO) (Price £5.50 net)

AGRICULTURE AND FOOD

National Food Survey

Summary results of the National Food Survey of Great Britain for October–December 1978 were published in MAFF *Food Facts* No. 2 on 19 March 1979, and subsequently in *Trade and Industry*. Further detailed analyses appear in the *Monthly Digest of Statistics*. Applications for unpublished analyses should be made to:

National Food Survey Branch,
Ministry of Agriculture, Fisheries and Food,
Tolcarne Drive,
Pinner,
Middlesex HA5 2DT.

Agricultural censuses and surveys

The December 1978 agricultural census

The main results of this Census in England and Wales were published in Press Notice No. 109 on 13 March 1979. The United Kingdom results will be published shortly.

The February 1978 irrigation survey

The results of this survey in England and Wales were published in Statistical Information Notice STATS 21/79 on 24 January 1979.

All the statistical material mentioned above may be obtained from:

Ministry of Agriculture, Fisheries and Food,
Room A615,
Government Buildings,
Epsom Road,
Guildford GU1 2LD.

INDUSTRIAL STATISTICS

Output measures: MLH 104 – Petroleum and natural gas

During rebasing of economic series in terms of the base year 1975, the methodology employed in the assessment of the output of industries involved in exploration for, and extraction of, petroleum and natural gas was reviewed. The estimates for activities classified to Minimum List Heading 104 of the Standard Industrial Classification, used in the compilation of index numbers of industrial production and the output measure of gross domestic product, are described in an Occasional Paper available on request from:

Branch 5,
Central Statistical Office,
Great George Street,
London SW1P 3AQ.

Stock of consumer durables in the United Kingdom: end-1966 to end-1977

An article in the March 1978 issue of *Economic Trends* (subsequently reprinted in *Studies in Official Statistics* No. 35) by J. R. Calder entitled 'The stock of consumer durables in the United Kingdom' provided a selection of figures over the run of years end-1966 to end-1976 for the total and major components of consumer durables. Six variants were considered, two methods of calculating depreciation (straight-line and reducing balance) for each of three life-length assumptions (short, medium and long). Estimates were provided at current (end-year) prices and at constant (1970) prices.

The results for the reducing balance, medium life-length variants were used in the compilation of the balance sheets for the personal sector which formed part of the Central Statistical Office's evidence to the Royal Commission on the Distribution of Income and Wealth.

The exercise has now been extended to include estimates at end-1977, and the base-year of the constant price figures has been updated from 1970 to 1975. A short paper summarising the results is available on request, covering roughly the same ground as the *Economic Trends*' article. Off-prints of the original *Economic Trends*' article are also available on payment of a handling charge of £1 per copy. Cheques, etc. should be made payable to the Central Statistical Office.

Enquiries to:

Mr. J. Dryden,
Central Statistical Office,
Great George Street,
London SW1P 3AQ.
Telephone: 01-233 7431.

References

Economic Trends, No. 293, March 1978 (HMSO) (Price £1.95 net)
Studies in Official Statistics No. 35. *Personal sector balance sheets and current developments in Inland Revenue estimates of personal wealth* (December 1978) (HMSO) (Price £2.25 net)

Business Monitors – Annual Censuses of Production 1974 and 1975

Readers of *Statistical News* will be made aware of the results of the 1974 and 1975 Censuses of Production as the Business Monitors become available. The following table lists the Monitors published since that which appeared in the last issue of *Statistical News*.

Business Monitor Number PA Series	Description	Standard Industrial Classification Minimum List Heading
102	Stone and slate quarrying and mining	102
211	Grain milling	211
212	Bread and flour confectionery	212
213	Biscuits	213
214	Bacon curing, meat and fish products	214

215	Milk and milk products	215	429.2	Miscellaneous textile industries	429/2
216	Sugar	216	433	Fur	433
217	Cocoa, chocolate and sugar confectionery	217	445	Dresses, lingerie, infants' wear, etc.	445
218	Fruit and vegetable products	218	446	Hats, caps and millinery	446
232	Soft drinks	232	449.1	Corsets and miscellaneous dress industries	449/1/3 and 4
240	Tobacco	240	461.1	Refractory goods	461/1
261	Coke ovens and manufactured fuel	261	461.1	Building bricks and non-refractory goods	461/2
262	Mineral oil refining	262	464	Cement	464
263	Lubricating oils and greases	263	472	Furniture and upholstery	472
271.1	Inorganic chemicals	271/1	474	Shop and office fittings	474
271.2	Organic chemicals	271/2	475	Wooden containers and baskets	475
271.3	Miscellaneous chemicals	271/3	482.1	Cardboard boxes, cartons and fibre-board packing cases	482/1
275	Soap and detergents	275	482.2	Packaging products of paper and associated materials	482/2
277	Dyestuffs and pigments	277	484.1	Wallcoverings	484/1
278	Fertilizers	278	489	General printing and publishing	489
279.1	Polishes	279/1	491	Rubber	491
279.2	Formulated adhesives, gelatine, etc.	279/2	494.1	Toys, games and children's carriages	494/1 and 2
279.3	Explosives and fireworks	279/3	496	Plastics products	496
279.4	Formulated pesticides, etc.	279/4	602	Electricity	602
279.5	Printing ink	279/5	603	Water supply	603
279.6	Surgical bandages, etc.	279/6			
311	Iron and steel (general)	311			
312	Steel tubes	312			
321	Aluminium and aluminium alloys	321			
331	Agricultural machinery (except tractors)	331			
332	Metal-working machine tools	332			
334	Industrial engines	334			
337	Mechanical handling equipment	337			
338	Office machinery	338			
339.2	Printing, bookbinding and paper goods machinery	339/2			
339.3	Refrigerated machinery, space-heating, ventilating and air-conditioning equipment	339/3 and 4			
339.5	Scales for weighing machinery and portable power tools	339/5 and 6			
339.7	Food and drink processing machinery and packaging and bottling machinery	339/7 and 8			
349.1	Ball, roller, plain and other bearings	349/1			
349.2	Precision chains and other mechanical engineering	349/2 and 3			
351	Photographic and document copying equipment	351			
352	Watches and clocks	352			
353	Surgical instruments and appliances	353			
363	Telegraph and telephone apparatus and equipment	363			
364	Radio and electronic components	364			
365.1	Gramophone records and tape recordings	365/1			
365.2	Broadcast receiving and sound reproducing equipment	365/2			
369.1	Electrical equipment for motor vehicles, cycles and aircraft	369/1			
369.2	Primary and secondary batteries	369/2 and 3			
369.4	Electric lamps, electric light fittings, wiring accessories, etc.	369/4 and 5			
381.1	Motor vehicle manufacturing	381/1			
381.2	Trailers, caravans and freight containers	381/2			
391	Hand tools and implements	391			
399.8	Miscellaneous metal manufacture	399/2/3/4 and 399/8/9/10/11 and 12			
411	Production of man-made fibres	411			
412	Spinning and doubling on the cotton and flax systems	412			
414	Woollen and worsted	414			
417.1	Hosiery and other knitted goods	417/1			
417.2	Warp knitting	417/2			
418	Lace	418			
419	Carpets	419			
421	Narrow fabrics	421			
422.1	Household textiles and handkerchiefs	422/1			
422.2	Canvas goods and sacks and other made-up textiles	422/2			
423	Textile finishing	423			

Copies of these Business Monitors are available on standing order from Her Majesty's Stationery Office, PO Box 569, London SE1 9NH (telephone: 01-928 1321) or through any Government Bookshop. They are not, however, included in the global subscription arrangements of the Business Monitor series.

Further information on the PA series of Business Monitors and the Censuses generally can be obtained from:

Mr. R. J. Egerton,
Business Statistics Office,
Cardiff Road,
Newport,
Gwent NPT 1XG.
Telephone: Newport 56111 (STD Code 0633)
Ext. 2455.

Index of industrial production for Wales

On 27 February the Welsh Office issued a press notice containing the new Index of industrial production for Wales based on 1975=100. This follows an extensive exercise to change the base year from 1970 to 1975, to bring the index into line with the United Kingdom index. Data were published from the first quarter, 1975 to the third quarter, 1978.

The change of base year has entailed a complete revision of the industrial weights at a fine level of detail to take into account the change in the relative importance of the various industries from 1970 to 1975. As is the case in the United Kingdom index, the main effect was to reduce the relative importance of the manufacturing sector. In the Wales index, the weights of the steel and engineering sectors are reduced whilst those for construction and utilities have increased. Besides the changes in the weighting pattern, the opportunity was taken to introduce changes which

improve the quality of data used and the compilation methods. A pamphlet will shortly be issued detailing the new methods and the data sources.

Copies of the press notices on the Index of industrial production for Wales can be obtained on application to:

Mr. E. Swires-Hennessy,
Economic Services Division,
Welsh Office,
31 Cathedral Road,
Cardiff CF1 9UJ.

Telephone: 0222 42661. Ext. 35.

to whom also, enquiries about the index should be made.

Engineering in Britain, West Germany and France (Sussex European Papers No. 3)

by Christopher Saunders

How do the many component branches of the varied engineering industries in Britain, West Germany and France compare in competitive power? In which branches, and which products does each country have comparative advantage and disadvantage? How far is export success related to relative productivity, profits, pay levels or investment? Are the most successful exporters equally successful in their own home markets? Who does best in exports of high, or low, unit values? This study, based on detailed examination of cost structures and foreign trade in the three countries, displays some of the factors underlying successful competition in world trade. It is very relevant to the formation of an industrial strategy.

Of interest to: students, teachers and researchers in industrial economics and international trade; managements and business economists; civil servants and commentators concerned with industrial and commercial policies. Although the analysis is restricted to engineering, many of its implications extend to other industries. No more than general knowledge of economics and simple statistical methods is required.

This book is obtainable from:

Sussex European Research Centre,
University of Sussex,
Falmer,
Brighton BN1 9RF.

Price £2.00 net (£2.25 post free, UK).

ISBN 0 903422 23 9.

Commercial and industrial property statistics

The first issue of a new annual publications was published in November. It is a development of the very successful earlier booklet *Commercial and Industrial Property: Facts and Figures 1975*. It covers a wide range of aspects of commercial and industrial property – the existing stock of buildings, new con-

struction, prices and rents, investment and controls – with many tables giving data for the last eleven years.

Some of the contents are already available in other publications but are gathered together in a single document for convenience. Several tables, however, are published for the first time. Of particular interest are the rents indices shown separately for offices, shops and factories for the years 1962–77 given in Table 24 – the figures for 1962–4, 1976 and 1977 never having appeared before. Also published for the first time are some further analyses provided by Inland Revenue of the sales of non-residential property. Other material in the 1977 edition includes analyses of floor space changes over time, non-residential hereditaments in size groups and regions, capital investment in new buildings, new orders for construction work analysed by value range, cost of construction indices, rent income and taxes on rents and property, Regional Development Grants and applications for planning permissions for commercial and industrial property.

Reference

Commercial and Industrial Property Statistics 1977 (HMSO 1978) (Price £2.25 net)

PRICES

Impact of rising prices on different types of household

The extent to which price increases have affected different groups of households has been studied using the comprehensive information collected in the Family Expenditure Survey on how the different groups spend their money and the detailed information on changes in prices used to compile the Retail Prices Index. The results have been published in two articles in the *Employment Gazette*⁽¹⁾⁽²⁾. The first article presented annual price indicators for various types of household, households of different size and composition with varying levels of income, for the years 1970–76 and discussed some of the methodological problems involved. A further article, published in February 1979, extended the analysis to 1977.

The results of the study as published in both articles have shown that increases in prices since 1970 have, on average, affected different types of household almost equally. The price indicator for 'all households' has shown an increase in prices of 148 per cent between 1970 and 1977. The increases for all the separate groups of households examined fell in a very narrow band between 147 per cent and 153 per cent around this average. Although based on the same sources of information, the price indicators differ materially from the Retail Prices Index (RPI) published each month by the Department of Employment. Nevertheless, the

similarity of inflation rates experienced by different types of household confirms the RPI as a good overall measure.

References

- (1) 'The Impact of Rising Prices on Different Types of Household', *Department of Employment Gazette*, July 1978 (HMSO) (Price £1.25 net)
- (2) 'The Impact of Rising Prices on Different Types of Household', *Employment Gazette*, February 1979 (HMSO) (Price £1.35 net)

Family Expenditure Survey (FES)/Retail Prices Index Weights

The pattern of household expenditure based on the results of the FES for the year ending June 1978 was published in an article in the *Employment Gazette* in March 1979⁽¹⁾. The article, which appears annually, also published the weights to be used in 1979 for the General Index of Retail Prices and explains how they are derived from the FES results.

Results from the FES giving average household expenditure on the principal groups of goods and services for the first two quarters of 1978 were published in the *Employment Gazette* in February 1979⁽²⁾.

References

- (1) 'The Family Expenditure Survey and annual revision of the weights for the retail prices indices' *Employment Gazette*, March 1979 (HMSO) (Price £1.35 net)
- (2) 'Family Spending in the First Half of 1978', *Employment Gazette*, February 1979 (HMSO) (Price £1.35 net)

INCOME AND WEALTH

Inland Revenue publications

Inland Revenue Statistics 1978 was published in December 1978. It contains a wide range of statistics derived from Inland Revenue sources relating to direct taxation, incomes, capital gains, wealth and property valuations.

Statistics of incomes have been derived from tax assessment data, both for individuals and companies, and from the annual Surveys of Personal Incomes. This publication contains summary results from the 1975-76 and 1976-77 Surveys; full results are contained in a separate publication (see below).

Estimates of personal wealth derived from statistics relating to capital transfer tax and estate duty are given, including the distribution of wealth of individuals by type of asset and range of wealth. Two new tables are included, the first giving improved detailed estimates of wealth for 1974, the second giving an analysis of the distribution of wealth among the adult population using the Series C coverage of wealth previously presented by the Royal Commission on the Distribution of Income and Wealth.

The valuation data include figures of rateable values, floor space, agricultural land prices and conveyancing

statistics. Tables relating to Development Land Tax are given for the first time.

Charts have been used to bring out some features of the data contained in the tables.

The Survey of Personal Incomes 1975-76 and 1976-77, giving the full results of these surveys, was published in January. Summary results of the 1975-76 Survey appeared in 1978 in booklet form but this is the first full publication of the results from either Survey. Some tabulations from these surveys are also to be found in *Inland Revenue Statistics 1978* (see above).

The tables in the Survey publication are similar to those from the 1974-75 Survey published in *Inland Revenue Statistics 1977*, except that most of the tabulations are ranged by 'total income' rather than 'total net income', the main difference between the two measures consisting of mortgage interest.

The publication contains distributions of personal income before and after tax and distributions by marital status, size of family and type of income. Most of the data relate to the United Kingdom as a whole but income distributions are given for England, Scotland, Wales and Northern Ireland, and for the English regions and metropolitan countries while summary statistics are provided for the other counties of England and Wales and for the Scottish regions. Illustrative charts are included for the first time as are tables giving quantile shares of income tax and of employment income.

References

- Inland Revenue Statistics 1978* (HMSO 1978) (Price £4.75 net)
The Survey of Personal Incomes 1975-76 and 1976-77 (HMSO 1979) (Price £5.00 net)

Distribution of income

The February issue of *Economic Trends* contains a further article in the series on the distribution of income in the United Kingdom, providing estimates of the distribution for 1976/77. The income-receiving unit used in the estimates is the tax-unit: this is with a few exceptions either a married couple or an unmarried individual.

The article shows that the top 1 per cent of tax-units received 5.5 per cent of total income before tax and the top 10 per cent 26.2 per cent. The bottom 10 per cent received only 2.5 per cent of the total. After tax, the shares of the first two groups fell to 3.8 and 23.1 respectively, and the share of the bottom 10 per cent rose to 3 per cent.

The top 1 per cent of tax-units paid on average 45 per cent of their pre-tax incomes in income tax; the next 9 per cent paid over 25 per cent, but the bottom 20 per cent paid only 2 per cent in tax.

Sources of income vary considerably between different income levels. While wages and salaries make up over 80 per cent of the income of tax-units in the upper half of the distribution, they account for only about a quarter of the income of the bottom quarter, nearly two-thirds of whose income comprises state pensions and non-taxable benefits such as supplementary benefits and unemployment benefit.

Reference

Economic Trends, No. 304, February 1979 (HMSO) (Price £2.10 net)

Survey of shareholdings in companies

A full report of the Department of Industry's survey of shareholdings in UK listed companies was published on 20 April 1979 in *Studies in Official Statistics* No. 34 – *The Ownership of Company Shares*. A survey for 1975. Provisional results of the survey were first published in *Trade and Industry*, 5 August 1977. Revised results together with more detail were published in *Economic Trends*, No. 287, September 1977.

The new publication gives more detailed results than both the earlier ones; it includes, for example, analyses of share ownership for different types of company and share and some separate analyses for large shareholdings. The Department of Industry's survey followed closely the earlier surveys carried out by the Department of Applied Economics, Cambridge University, for 1957, 1962/3 and 1969. As in those surveys, the main aim was to provide information on the distribution of share ownership between different categories of holder such as persons, charities, financial institutions and so on. A feature of the new publication, in addition to providing more information, is a detailed account of the methods used by the Department, and it also includes an assessment of the reliability of the results.

References

The Owners of Quoted Ordinary Shares – A survey for 1963 (Chapman and Hall, 1966)

The Pattern of Ordinary Share Ownership 1957–1970 (Cambridge University Press, 1971)

Economic Trends, No. 287, September 1977 (HMSO) (Price £1.95 net)

Studies in Official Statistics No. 34 (HMSO, 1979) (Price £2.50 net)

Trends in sales of land and buildings, 1973–77

The above article was published in the March issue of *Economic Trends*. It is the fourth in a series published in *Economic Trends* and provides estimates of the value of sales of land and buildings in England and Wales from 1973 to 1978 and detailed estimates of sales in a particular month for each of the years 1973 to 1977.

The article is divided into five sections. The first gives broad trends of the value of sales in England and Wales, Scotland and Northern Ireland. The second provides a detailed analysis of sales in England and Wales for the five survey months, one in each of the

years 1973–77. For each survey month data are analysed by type of property, price range, standard region and sector of seller and purchaser. These surveys are felt to provide reasonably accurate indications of trends in residential property in the lower price ranges but are not expected to adequately cover the more variable field of non-residential property nor the highest price ranges. A comprehensive coverage of large property sales was therefore initiated and the third section provides details of these sales. All sales over £500,000 are included from the second quarter of 1974 and this was extended to all sales over £100,000 from the fourth quarter of 1976. The fourth section gives details of a new analysis of sales of leasehold properties. It analyses for residential and non-residential property the price range, the range of rent, the number of years to run on the lease and whether the lease was new or already existed for leasehold sales in November 1977. The fifth and final section provides figures of the stamp duty paid on the transfer of land and buildings and estimates how much was collected from residential sales and how much was paid by different sectors of purchaser.

Reference

Economic Trends, No. 305, March 1979 (HMSO) (Price £2.10 net)

Postgraduate income and expenditure

A survey was carried out for the Department of Education and Science and the Scottish Education Department into the income and expenditure patterns of postgraduate students during the academic year 1975/6.

The report was published in March 1979. The sample consisted of full-time 'home' postgraduates in Great Britain studying for higher degrees (or their equivalent) at both universities and polytechnics. The students, who were interviewed during May 1976, gave details retrospectively of their income since the beginning of the academic year. They also kept a record of every item of their expenditure for a period of 28 days from the day after their interview. In addition, spouses of married students kept record books for the same period.

The report provides information on postgraduates' income from all sources (including grants, money from parents, spouses and other relatives, earnings, savings, etc.) and their expenditure on board and lodging and other items (including books and equipment for courses), grossed up to cover the whole year. It also gives the students' views on the idea that they might receive a taxed salary in place of their present tax-free maintenance grant.

Reference

Post graduate income and expenditure (HMSO 1979) (Price £5.25 net)

HOME FINANCE

Financial Statistics

In the February issue of *Financial Statistics* the definition of the borrowing requirement of local authorities, general government and public corporations was changed to include transactions in other public sector debt. This resulted in changes to the presentation of certain tables but did not affect the definition of the public sector borrowing requirement. The general result is a simpler presentation of the contributions of sub-sectors to the public sector borrowing requirement. Monthly estimates of local authority borrowing were introduced in the table on financing the local authority borrowing requirement. A rearrangement of the table on the International Monetary Fund gave a clearer presentation and the UK tranche position was valued at the rates of exchange at which IMF accounts for its holdings of sterling.

The March issue contained a minor revision to the definition of the central government borrowing requirement to include certain ways and means advances. The table on sources and uses of funds of other financial institutions was revised to show a similar presentation to that contained in the Institutional Investment press notice. The table on liabilities and assets of building societies was extended to give further details now obtained from a revised enquiry.

The April issue showed the addition of figures on stock appreciation to the appropriation account of public corporations. The table analysing bank advances to UK residents has been extended to show acceptances.

Reference

Financial Statistics (HMSO) (Price £3.20 net)

The financing of North Sea oil 1975-1980

An article in the Bank of England's March 1979 Bulletin presents for the first time, an estimate of the finance required for North Sea oil exploration and development in the years 1975-80. It takes, as a starting point, the latest published forecasts for expenditure in 1977-80 and produces an estimate of the cumulative level of capital investment. The outstanding part still to be financed is then examined in the light of the difficulties in identifying precisely all sources of the finance. The results of the new annual returns from UK banks on North Sea lending over the last two years are then given and explained. It is concluded that adequate finance from external and domestic sources will be readily forthcoming.

Copies of the Bank's Bulletin and offprints of the article may be obtained, free of charge, from:

The Economic Intelligence Department,
Bank of England,
Threadneedle Street,
London EC2R 8AH.

Guide to Public Sector Financial Information

The *Guide to Public Sector Financial Information*, published by the Treasury and the Central Statistical Office, is now available.

The *Guide*, which was fully described in the February issue of *Statistical News*, will help users find their way around the material on public sector financial information. It briefly describes the material available, identifies the published sources, and shows how the information is related in different publications.

The 108-page *Guide* is published by HM Stationery Office, and can be obtained from Government Bookshops or through booksellers (Price £2.50 net). (ISBN 0 11 630759 5).

Reference

Statistical News No. 44, February 1979 (HMSO) (Price 85p net)

OVERSEAS FINANCE

Some aspects of the determination of euro-currency interest rates

An article in the Bank of England's March 1979 Bulletin discusses some systematic relationships which have been observed between domestic and euro-currency interest rates. It describes a model to explain these relationships, based on the extra costs which banks incur from holding reserve requirements against domestic deposits. The article concludes that the euro-currency market is not independent of domestic money markets and that its rôle as a channel for short-term capital flows appears to be very closely linked to the activities of domestic banks.

Copies of the Bank's Bulletin and offprints of the article may be obtained, free of charge, from:

The Economic Intelligence Department,
Bank of England,
Threadneedle Street,
London EC2R 8AH.

OVERSEAS TRADE

Increased detail in the industry analysis of imports and exports

The latest edition of the quarterly Business Monitor MQ10 *Overseas Trade Analysed in Terms of Industries* includes greatly increased detail for the four quarters of 1978. The import and export data was previously reclassified to about 130 Minimum List Headings (MLH) of the Standard Industrial Classification, but the new sub-MLH analysis extends this to some 230 industries. The new detail permits a finer analysis of the UK's trading performance by industrial sector and is especially relevant to the work of the

Sector Working Parties supporting the Industrial Strategy. As a direct consequence the detail has also been increased for 1978 in the most recent quarterly Business Monitor MQ12 *Import Penetration and Export Sales Ratios for Manufacturing Industry* and in the associated article in *Trade and Industry*.

References

Trade and Industry (HMSO) (Price 40p net)
Business Monitor MQ10, (HMSO) (Price £1.95 net each set.)
Business Monitor MQ12
Individual quarterly issues (Price 50p net) available from: Business Statistics Office Library, Cardiff Road, Newport, Gwent NPT 1XG.

Export prices of primary producers

The *National Institute Economic Review* for February 1979 carries a note describing the details of a new index system of commodity prices based on UNCTAD's indices of market prices of the principal commodity exports of developing countries, introduced in this issue. This replaces the old NIESR commodity price index.

COMPUTING

Conference of European Statisticians' Working Party

The 16th session of the Conference of European Statisticians' Working Party on EDP will be held during May 1979. The main topics for discussion include:

- i. Use of advanced techniques for the presentation of computerised statistical output.
- ii. Creation and development of automated data banks.
- iii. The interdependence of trends and requirements for computing technology and statistical service.

The Central Statistical Office will be presenting a paper on the last topic.

Research and development expenditure

Two articles have recently appeared in *Trade and Industry*, providing new analyses of the expenditure on research and development (R&D) by private industry, the public corporations and the research associations. The data arise from surveys carried out by the Department of Industry, from time to time. The most recent survey, for which results became available in mid-1977, was for 1975.

The first of the articles, published on 6 April 1979, considered the distribution of enterprises by the total numbers employed, and the performance of companies controlled from overseas. The following facts have emerged:

- i. 86 per cent of total R&D manpower was employed by enterprises with a total employment of 5,000 or more persons and 87 per cent of all R&D expenditure occurred in the same group.

- ii. The proportion of total manpower employed on R&D varies greatly from industry to industry, and is the largest for both the aerospace and the electronics industries.

- iii. R&D expenditure per employee in enterprises with 10,000 or more employees (£320) was double that of enterprises with less than 500 employees. There was a general tendency for R&D expenditure per employee to rise with the size of the enterprise.

- iv. The 100 enterprises with the largest expenditure on R&D (not necessarily the enterprises with the largest number of employees) contributed 86 per cent of total R&D employees and 89 per cent of R&D expenditure. They received 98½ per cent of government financing of industrial R&D.

- v. Overseas controlled enterprises were responsible for 17 per cent of total R&D expenditure.

The second article, in the same issue of *Trade and Industry*, examined the changing volume of R&D expenditure. Deflators appropriate to labour costs, the materials used and other capital and current costs have been developed by the Department of Industry so that the total expenditure derived from successive surveys for the United Kingdom from 1964 could be reduced to 1975 prices. Broad groups of industry have been dealt with separately.

In an international comparison the UK's constant price R&D expenditure is brought together with comparable statistics prepared by the Organisation for European Economic Co-operation for four other leading R&D countries. Figures of total and R&D employment are also given.

The main features to emerge are:

- i. In 1975 prices, UK intra-mural expenditure rose from 1964 to a plateau of over £1,500 million at 1975 prices in the years 1966-69, and fell to £1,340 million in 1975, the lowest point in the series.

- ii. Only the chemicals, petroleum and allied industries experienced a general upward trend from 1964-75, in real R&D expenditure. Other industries either rose to a peak during the period and then fell away, or steadily, but quite significantly, reduced their expenditures.

- iii. In the period 1967-75 the experience of USA industry was similar to that of the United Kingdom: there was a fall in R&D expenditure of about ten per cent in both countries between 1969 and 1975.

- iv. Both the Federal Republic of Germany and France had upward trends in R&D expenditure between 1967 and 1975. Japan doubled its expenditure between 1967 and 1973, but the level had fallen a little by 1975.

Further information about research and development expenditure and R&D employment statistics,

including a short note describing the R&D price indices, may be obtained from:

Economics and Statistics Division 6B,
Department of Industry,
Room 106,
Abell House,
John Islip Street,
London SW1.
Telephone: 01-211 7152.

Reference

Trade and Industry (HMSO) (Price 40p net)

CONFERENCES AND MEETINGS

COMPSTAT 1980

The fourth Symposium on Computational Statistics, sponsored by the International Association for Statistical Computing, will be held at Edinburgh University from 18-22 August.

The Symposium will include the presentation of papers on computational statistics, including numerical and algorithmic aspects of statistical methods and their applications, and relevant new techniques in computer science. Special sessions are envisaged for the introduction and demonstration of statistical software packages, including the use of interactive terminals, desktop computers and micro computer systems.

Further information on the Symposium and the submission of papers may be obtained from:

The Director,
Program Library Unit,
Edinburgh University,
18 Buccleuch Place,
Edinburgh EH8 9LN.

The fee for participants will be approximately £50.

GOVERNMENT STATISTICAL SERVICE

Appointments and changes

Mr. O. Nankivell, Under Secretary in the Central Statistical Office, left the Service on 1 April 1979 to take up an industrial post.

Mr. J. D. Wells of Department of Industry, Trade and Prices and Consumer Protection joined the Central Statistical Office on 2 April 1979 on promotion to Under Secretary to replace *Mr. O. Nankivell*.

Mr. D. J. Sellwood, Department of Employment, on 21 January 1979 with temporary promotion to Chief Statistician to succeed *Mr. E Hunter*.

Mr. E. Hunter, Chief Statistician, Department of Employment, has moved to special duties for health reasons.

LATE ITEM

International Time Series Meeting (ITSM)

This conference was held at Nottingham University from 26-30 March, 1979, and attracted 125 delegates from 19 countries.

Invited 90-minute papers were given by: *K. J. Astrom*, *F. Eicker*, *E. J. Hannan*, *P. A. W. Lewis*, *L. Ljung*, *C. L. Mallows*, *R. D. Martin*, *E. Parzen*, *P. M. Robinson* and *G. C. Tiao*. There were also 22 shorter contributions.

A report of the meeting and details about the published proceedings will appear in future issues of *TSA&F News*, a quarterly newsletter edited by the conference organiser:

Oliver Anderson,
9 Ingham Grove,
Lenton Gardens,
Nottingham NG7 2LQ.

Alphabetical Index

The index to *Statistical News* covers the last nine issues. Page numbers are prefixed by the issue number, e.g. 37.30 signifies number 37, page 30.

Generally speaking articles relating to the United Kingdom, Great Britain, England and Wales or covering several geographical groups are not indexed under these groups, but topics with a significant regional interest are indicated, e.g. regional earnings. Articles and notes dealing particularly with Scottish statistics are indexed under 'Scotland' as well as the topic, e.g. 'Scotland, population projections', and similarly for Wales and Northern Ireland.

The following conventions have been observed in printing this index: references to items appearing in articles are shown by (A); italics are used for the titles of published books or papers.

- accommodation
 - attitudes to letting, 39.3 (A)
 - Scottish secondary school model, 44.30 (A)
- age: effect on differential response in Family Expenditure Survey, 39.7 (A)
- aggregate materials, forecasts of the demand for, 42.30
- agricultural and food statistics
 - statistics for England and Wales
 - 1974, 37.36
 - 1975, 40.43
- agricultural censuses and surveys
 - April sample pig enquiry, 38.37, 42.32
 - December census, 37.35, 41.41, 42.32, 45.31
 - glasshouse and machinery census, 42.32
 - in Scotland, 37.36, 38.37, 40.43, 41.41, 42.32, 43.36, 44.46
 - irrigation survey, 42.32, 45.31
 - June census, 39.29, 40.43, 41.41, 42.32, 43.35
 - March 1977 orchard fruit survey, 42.32
 - March 1978 sample enquiry, 42.32
 - October census of vegetables and flowers, 37.35, 41.41
 - pig census, August 1978, Scotland, 44.46
 - spring fruit census, 41.41
- The Changing Structure of Agriculture, 1968-1975*, 39.30
- aid to developing countries, 38.40, 44.58
- analysis, hospital activity, 44.41
- animals, experiments on living, 43.36
- Annual Abstract of Statistics, 1977 and 1979*
 - amendments to, 40.51, 44.59
- Annual Digest of Port Statistics*, 40.44
- armed forces pay, 42.28
- army welfare, 41.33
- balance of payments
 - accounting, 42.35
 - exchange rate, 37.41
 - 'green pound', 37.40
 - International Monetary Fund Manual*, 42.35
 - invisibles account, 40.47
 - United Kingdom Balance of Payments 1966-76*, 39.33
 - United Kingdom Balance of Payments 1967-77*, 43.43
- balances commodity, construction and use of, 44.52
- balance sheets, national and sector, 40.45
- Bank of England notes, 43.42
- Bank of England Quarterly Bulletin*, 37.39, 38.40, 39.33, 40.47, 41.42, 42.36, 44.56
- banking statistics, discussed at statistics users' conference, 40.2 (A)
- benefits and taxes, effect on household income, 44.53
- births, illegitimate, 39.21
- blindness and partial sight, 45.29
- British Aid Statistics*, 40.48, 44.58
- British Gas Corporation, 1977 Report, 42.30
- British Industries: A comparison of performance, 38.27
- British Labour Statistics*, 44.42
- bulletins of educational statistics, 42.38
- Business Monitor series, 37.37, 38.38, 39.29, 40.41, 41.37, 43.37, 44.44, 44.60, 45.31
- Business Statistics Office
 - use of personalised forms, 40.51
 - report for 1977, 42.37
- capital expenditure, quarterly inquiry, 41.15
- Census of Population,
 - automatic editing of, 37.10 (A)
 - census tests, 37.27, 38.34
 - life-tables, article on in *Population Trends*, 40.34
 - voluntary tests, 40.34
 - small area statistics, 37.29
- Census of Population 1981, 39.21, 43.21
 - in Scotland, 42.23
 - White Paper, 43.27

- Census of Production
 - 1973, 40.41, 41.37
 - Historical record of, 43.39
 - operating ratios, 41.37
- Census in the South Seas, 38.25 (A)
- Central Statistical Office, publications of, 37.15 (A), 39.36
- Chartered Institute of Public Finance and Accountancy, 38.13 (A)
 - check trading statistics, 40.46
 - Financial, General and Rating Statistics 1978-79*, 42.34
- cigarette smoking, 43.32
- civil liability, Royal Commission on, 41.34
- Classification of Overseas Trade Statistics, Guide to*, 42.14 (A)
- commercial companies, financial balances, 44.55
- commercial and industrial floorspace statistics, 43.39, 44.47, 45.33
- Committees
 - National and Local Government statistical liaison, 43.24
 - Wilson, 43.42
- commodity balances, construction, 44.52
- Common Customs Tariff, see European Communities
- companies
 - industrial and commercial, 37.1 (A), 43.15 (A)
 - constructing a sampling frame of industrial and commercial, 44.6 (A)
 - survey of shareholdings in, 45.35
- company
 - finance, 37.39, 40.45, 44.54
 - profitability, 42.34
 - shares, ownership of, survey, 39.36
 - structure of financing, 40.45
 - rate of return on capital, 40.46
 - reports for national statistics, 44.3(A)
- computer output microform (COM), 45.18 (A)
- computing, see data processing
- concentration ratios, 43.36
- conference
 - European statisticians' working party, 45.06 (A)
 - statistics' users, 40.1 (A), 44.1 (A)
- construction industry
 - contractors' census 1976, 39.29, 1977, 43.44
 - demand for aggregate materials, 42.30
 - materials price index, 44.51
 - output and employment, 42.30
 - private contractors' census 1975, 37.38
 - revised statistics for, 38.42
- consumer
 - credit, 44.55
 - credit grantors inquiry, 42.34
 - consumer durables, stock of, 45.31
 - contraception, trends in, 41.44, 42.22
 - Courrier des statistiques, 43.43
 - credit grantors, consumer inquiry to, 42.34
 - credit statistics of retail sales, 41.42
- criminal statistics
 - Home Office bulletin, 45.27 (A)
 - offences relating to drunkenness, 40.36, 43.30
 - offences relating to motor vehicles, 40.36
 - regional variations in, 41.21 (A)
 - trial disposal rates, 41.20 (A)
- Criminal Statistics, England and Wales*
 - 1976, 39.25
 - 1977, 42.25
- Crown Court centres, output of, 41.20 (A)
- database, designing for use in compiling national accounts, 40.7(A)
- data processing
 - COMPSTAT 78 symposium, 43.1 (A)
 - COMPSTAT 1980, conference, 45.38
 - computer output microform (COM), application of, 45.18(A)
 - conference of European Statisticians' Working Party, 45.06 (A)
 - CSO computer seminar, 37.42
 - International Association for Statistical Computing, 37.42, 42.36
 - package X, 37.42
- day-care, pre-school children and, 41.33
- deaths
 - Mortality Surveillance, England and Wales 1968-1976 (OPCS)*, 39.22
- defence statistics and NATO, 45.12 (A)
- Demographic review 1977*, 42.22
- dentists' remuneration, 42.27
- developing countries and the use of social accounting matrices, 41.10 (A)
- Digest of Welsh Statistics*, 44.38
- dissemination of statistics: Statistics Users' Conference 1978, 44.1 (A)
- distribution of income
 - and wealth, 41.35
 - Royal Commission, 41.35
- distribution and other services, 39.29, 40.42
- dockyard factory, scheduling, 44.12 (A)
- doctors' remuneration, 42.27
- domestic credit expansion and the money supply, 37.39
- drugs, misuse of, 43.32
- drunkenness, 43.30
- Dwelling and Housing Survey, National, 42.3 (A), 42.8 (A)

- earnings**
 change in, 37.33
New Earnings Survey 1977, 37.33, 39.27, 1978, 41,35, 43.34
 public and private sector, 40.38
Economic Trends Annual Supplement, 40.51, 44.59
Economic Trends, 43.41
- education**
 assessing teacher demand, 38.16 (A)
 future school population, 42.25
 primary in England, 44.25 (A)
 publications of the Department of Education and Science, 37.43
 Scottish secondary school accommodation model, 44.30 (A)
 scottish statistics, 38.35
 statistical bulletins, 42.38
- EEC, see European Communities
- elderly, the**
 housing for, 39.5 (A)
 staff in homes for, 39.25
 survey of characteristics of, 41.33
- employment**
 attitudes to employment service, 42.27
 by industry, 42.27
 census of, 41.34
 Equal Opportunities Commission, 45.30
 industrial disputes, 45.30
 labour costs, by industry, 42.27
 labour force projections, 42.26
 London weighting indices, 42.27
 manpower planning, 42.26
 of the highly qualified, 42.26
 post-war trends by industry, 42.27
 public and private sectors, 37.33, 40.37
 self-employment income, 39.28
 size of business units, 41.34
 special schemes, 39.26
 survey in the United Kingdom, 37.44
 unemployment, rates by age, 39.27
 women and shift work, 45.30
- employment analysed by sector and industry, 44.44
- energy**
 balances, 37.35
 elasticities, 37.35
Energy forecasting methodology, 43.40
Energy Papers, 37.35
Energy Statistics, Digest of United Kingdom, 39.28
Energy Trends, 42.29
 engagements and vacancies, national survey of, 45.29
- engineering**
 improvements to statistics, 37.36
 sales and orders, 40.42, 41.38
 in Britain, West Germany and France, 45.33
- environment in which statistical offices will work in ten years time, 38.1 (A)
 environment and road traffic, 40.24 (A)
 environmental pollution, 44.58
 environmental statistics, digest of, 37.38
 Equal Opportunities Commission, 45.30
 equal pay, 37.33
 estate duty, wealth and, 41.35
Estimated Wealth of Individuals in the United Kingdom, 39.28
 estimates, population – New series, 44.36
 euro-currency interest rates, 45.36
- European Communities**
 Common Customs Tariff, 42.14 (A)
 General Industrial Classification of Trade, 42.14 (A)
 purchasing power, 38.41
 statistical classification of, 42.14 (A)
 statistical publications, selected bibliography, 44.58
 the 'green pound', 37.40
- European Statisticians' Working Party, conference, 45.06(A)
- exchange rates, 37.41
- expenditure, government's plans, 1979–80 to 1982–83, 44.56
- experiments on living animals, 43.36
- export credit, 40.47, 43.43
- export prices of primary products, 45.37
- export prospects survey, 37.40, 38.7 (A)
- factory, scheduling a dockyard, 44.12 (A)
Facts from your figures, new CSO booklet, 41.44
Family Expenditure Survey
 and estimates of the redistribution of income, 39.8 (A)
 and the retail price indices, 37.34
1976 Report, 40.38
1977 Report, 41.32, 44.43
 comparison with the national accounts, 38.37
 response rate, 42.25
 year ending June 1978, 45.34
- family planning, trends in, 41.44
- fertility
 trends in, 42.22
 world survey, 42.24
- Financial, General and Rating statistics*, 42.34
- financial information guide to Public Sector, 44.56
- Financial statistics (see statistics users' conference)
 (also see local government)
- Financial Statistics*
Explanatory handbook, 39.36
 improvements to, 41.43, 42.33, 43.42, 44.54, 45.36
- fire, a new report form, 40.50
- floorspace statistics, 43.39, 44.47

- food
 and farming (pocket card), 42.31
 changes in UK consumption of, 42.31
 consumption, 43.35
 orchard fruit census 1977, 37.36
 (see also agricultural and food statistics)
 self-sufficiency in the United Kingdom, 44.45
- footwear, surgical National Health, 44.42
- forecasting methodology, energy, 43.40
- foreign currency contracts, 40.47
- foreign currency debt, repayment of, 40.48
- fuel
 British Gas Corporation, 1977 Report, 42.30
Energy Trends, 42.29
 household expenditure on, 41.37
 industries, metrication in, 42.29
 industries, statistics of, 42.29
 natural gas, temperature correction of, 42.29
United Kingdom Energy Statistics, Digest of, 42.29
- gas, natural, temperature correction of, 42.29
- General Household Survey, 39.23, 41.32, 42.10(A), 42.25
- goods vehicles, survey of, 40.18 (A)
- government statistics, survey into use, 38.19 (A)
- government expenditure plans, 40.47, 44.56
- graduates
 National Survey of 1970 graduates, 39.27
- 'green pound', 37.40
- grid references, occasional paper on, 37.28
- Gross Domestic Product, annual indicators, 39.32
- Guide to the Classification of Overseas Trade Statistics*, 42.14 (A)
- Guide to Official Statistics*
 new edition of, 41.43
- Health and personal social services for Wales, 44.42
Health and Safety Statistics, 1975, 39.37, 1976, 45.29
- Health and Social Security, Department of,
 statistical series from, 37.32, 38.30
- homeless, housing for, 39.5 (A)
- Home Office statistical bulletin, 45.27
- hospital activity analysis, 44.41
- house condition surveys, 39.5 (A)
- household composition: effect on differential response
 in Family Expenditure Survey, 39.9 (A)
- household expenditure on fuels, 41.37
- household, Runcorn census, 37.41
- households
 effects of rising prices on, 45.33
 prices and different types of, 43.41
- Housing, survey, 39.26, 42.3 (A), 42.8 (A)
Housing and Construction Statistics, 38.43
- Housing statistics: recent developments, 39.3 (A)
 Scotland, 41.32
Housing Statistics, Scottish, 43.30, 45.26
- immigration
 from New Commonwealth, 39.21, 41.29, 42.22
 immigrants in labour market, 37.32
- imports and exports, transport inland, 41.41
- import penetration, 39.34
- income surrogate for small areas, 37.34
- Income
 distribution of, 1974/75, 37.34
 1975/76, 42.28
 1976/77, 45.34
 effects of taxes and benefits on households, 44.53
 further study of, 40.38
 personal, survey of, 45.34
 postgraduate, and expenditure, 45.35
 self-employment income, 39.28
 war-widows' income, survey of, 39.28
- industrial and commercial companies, 43.15 (A),
 44.6 (A), 44.47
- Industrial Classification of Economic Activities within
 the European Communities, 42.14 (A)
- industrial firms, measuring economic performance of,
 41.37
- industrial production, index of, 39.31, 42.33
 for Scotland, 38.38
 for Wales, 45.32
- industrial stoppages in manufacturing, 37.33
- industry
 analysis of imports and exports, increased detail,
 45.36
 method of deflating manufacturing stocks, 44.52
 employment analysed by, 44.44
 purchases by, 38.37
- infant feeding, survey of, 41.33
- infant mortality, 43.28
- Inland Revenue
 estimates of personal wealth, 42.28
 Statistics, 1978, 45.34
- input-output summary tables
 1973, 42.32
Insurance Business Statistics, 42.34
- insurance companies and pension funds, 40.46
- insurance companies balance sheets, 43.42
- International Association for Statistical Computing,
 42.36
- international comparisons, taxes and social security
 contributions, 44.58
- international migration, 41.31
- International Monetary Fund Balance of Payments
 Manual, 42.35
- International passenger survey, 40.48

- investment intentions, surveys by Department of Industry, 41.15 (A), 44.47
- irrigation survey, 42.32
- labour
 - costs, 41.34, 42.27
 - force projections, 38.36, 42.26
 - regional civilian projections, 43.27
 - sexual, divisions within, 44.44
- Labour Statistics, British* 44.42
- land and buildings, trends in sales, 45.35
- landlords, attitudes to letting, 43.31
- land prices and rents: decentralisation to Wales, 44.46
- Local Authority survey of housing and population, 45.28
- local government
 - statistical liaison committee, 43.24
- local government financial statistics, 42.33, 43.42
- London weighting, new indices, 38.36, 42.27
- manpower
 - planning, 37.32, 38.36, 39.26, 40.36, 42.26, 43.34, 44.43, 45.30
 - qualified scientists and engineers, 40.37
- manufacturing industry
 - method of deflating stocks, 44.52
 - price indices for capital expenditure of, 41.39
- marital condition, projections of population by, 44.17 (A)
- market sector analysis for Scotland, 37.37
- marriage and divorce, 40.34, 41.29, 42.22
- marriage, fertility in, 41.30, 42.22
- marriage patterns of immigrant population, 41.29
- materials (aggregate) demand for, 42.30
- medium-term planning in U.K. nationalised industries, 42.36
- mental illness
 - and mental handicap statistics, 40.35, 44.42
 - care of the mentally handicapped, 45.29
 - Welsh statistics, 44.38
- metrication
 - report by the Ministry of Agriculture, Fisheries and Food, 37.24 (A)
- migration
 - international, 42.22
 - within Great Britain, 39.21
- Mineral Statistics, United Kingdom*, 42.30
- money and banking, discussed at statistics users' conference, 40.2 (A)
- money supply, 37.39
- mortality
 - infant, 43.28
 - perinatal, 40.34
 - surveillance, 37.29, 39.22
 - trends in, 42.22
- Moser, Sir Claus, an appreciation, 42.1 (A)
- motor trade, inquiry into, 40.43
- motor vehicles
 - census of, 1975, 39.31
 - motor vehicles industry UK, a study of (teaching pack), 42.35
 - offences relating to, 43.40
- National debt
 - distribution of, 40.47
 - in relation to national income, 39.33
- National and Local Government Statistical liaison committee, 43.24
- National Dwelling and Housing Survey, 39.26, 42.3 (A), 42.8 (A), 44.40, 45.28
- National Food Survey*,
 - reports for 1975, 40.39, 1977, 44.44, 1978, 45.31
- National Health Service, allocation of resources, 37.31
 - misuse of drugs, 43.32
- National Health surgical footwear, 44.42
- National Income and Expenditure*
 - 1966-76, 39.31
 - 1967-77, 43.41
- national income accounts, change in presentation, 37.83
 - designing a database for use in compiling, 40.7 (A)
- National Institute Economic Review*, 37.43, 39.37, 40.40, 40.41, 41.44, 42.36, 44.57
- National Ports Council Bulletin*, 40.49
 - import penetration, 39.34, 41.43
- nationalised industries, medium-term planning in, 42.36
- NATO and defence statistics, 45.12 (A)
- NEDO's data bank, 43.4 (A)
- New Earnings Survey*
 - 1976, 39.27
 - 1977, 41.35
 - 1978, 41.35, 43.34, 45.30
 - 1979, 44.43
- nomenclature of goods for trade statistics (NIMEXE), 42.14 (A)
- North Sea oil and gas, 37.41, 45.36
- Nurses and residential care staff caring for the mentally handicapped, 45.29
- occupational mortality, 39.1 (A)
- occupational pensions schemes, 43.34
- occupational segregation: sexual divisions within the labour force, 44.44
- offences relating to motor vehicles, 1977*, 43.40
- Office of Population Censuses and Surveys
 - publications of, 37.29
 - library, 37.30
 - occasional papers, 44.39
- Official Journal of the European Communities* (statistical classifications in), 42.14 (A)

- Organisation for Economic Co-operation and Development, trade data and industrial strategy, 43.4 (A)
 output, by industry, 42.27
 output measures, MLH 104, 45.31
 output statistics, recent improvements, 39.31, 40.44, 41.38, 44.47
 overseas aid, 38.40, 40.48, 42.35, 44.58
 overseas trade
 British ports traffic to 1985, 40.49
 export performance, import penetration and, 41.43
 external trade statistics, 40.49
 overseas travel and tourism, 40.48

 patients' attitudes, Hospital Service, 44.41
 Peers' expenses allowances, 38.36
 pensions, occupational schemes, 43.34
 personal income, 38.36, 41.36
 personal saving ratio, 37.39
 personal sector balance sheets, 42.28
 personal social services statistics,
 classification of, 37.30
 personal wealth
 distribution of, 43.41
 estimates of, 42.28
 personalised forms, introduction of, 40.13 (A), 40.51
 Petroleum and natural gas, output measures MLH 104, 45.31
 planning in social services departments, 43.31
 pollution, environmental, 44.58
population
 and vital statistics, GRO(S), 43.29, 45.26
 and the social services, 38.42
 annual estimates, Scotland, 42.23
 automatic editing of census, 37.10 (A)
 census tests, 38.34
 census use study papers, 41.31
 1981 census, White Paper, 43.27
 distribution, 42.23
 estimates, new series, 41.29, 44.38
 estimates – changes in methodology, 38.35
 family size of immigrant women, 41.29
 fertility in marriage, 41.30
 immigrants, 39.21, 41.29
 infant mortality, 43.28
 international migration, 41.31
 life expectancy, 39.9
 marriage and divorce, 40.34, 41.30, 42.22
 mortality, 37.29, 39.22, 42.22
 perinatal mortality, 40.34
 Population projections, 42.23
 booklet, 41.29
 by regions and counties, 39.23, 41.30
 England – area – 1975–1991, 43.27
 Scotland, 39.23, 42.23
 by marital condition, 44.17 (A)
 regional mortality, 41.29
 seminars, 45.27
 sub-national projections, 43.27
 Trends, 37.29, 38.34, 39.21, 40.34, 41.29, 42.24, 43.28, 44.38, 45.26
Port Statistics, Annual Digest, 40.44
 postcodes, use of in statistical work, 40.16 (A)
 postgraduate income, 45.35
 pre-school children, day-care and, 41.33
 price index for construction materials, 44.51
 price indices
 and different types of household, 43.41
 by industry, 42.27
 for capital expenditure in industry, 41.39
 wholesale, rebased, 43.41
 prices, rising, effect on households, 45.33
 primary education in England, 44.25 (A)
 prison statistics, 43.30
 private sector, employment in, 37.33
 probation and after-care statistics, 45.27
Production, Census of
 historical record of, 43.39
 production, measurement of changes in, 41.38, 42.33
 productivity, by industry, 42.27
 productivity comparisons, 43.9 (A)
 profitability, in companies, 42.34
 publications statistical, of the European communities, 44.58
 public expenditure White Paper, 40.47, 44.56
 public sector
 debt, 38.39
 employment, 37.33
 guide to financial information, 44.56, 45.36
 purchases by industry, 38.37
 purchases inquiry, 1979, 43.37
 purchasing power in the EEC, 38.41

qualified manpower
 national survey of 1970 graduates, 39.27

 RAF manpower, 37.22 (A)
 rate support grants, 42.33
 rates and rateable values, 43.42
 rating statistics, 42.34
 re-distribution of income, effects of taxes and benefits, 40.38
Regional Accounts, 41.44
 regional civilian labour force projections, 43.27
Regional Statistics, No. 13, 1977, 39.34
Regional Statistics, No. 14, 1979, 43.24
regions
 population projections, 39.23

- Rent Acts, review of, 39.4 (A)
- Report, A recent social survey, 43.30
- reports, use of company for national statistics, 44.3 (A)
- research and development, 38.39
 - developments, 40.38
 - expenditure, 45.37
- retail sales
 - calculating weights for, 37.34
 - credit statistics, 41.42
- retailing inquiries: field follow-up surveys, 45.15 (A)
- road condition survey, 39.30
- road traffic and the environment, 40.24 (A)
- Royal Commission on Civil Liability, 41.34
- Royal Statistical Society conference, 42.37

- salaries
 - incomes policies and differentials, 43.32
 - incomes policy and wage inflation, 43.33
 - top, 43.33
- St. Louis models of UK economy, 42.36
- sampling frame of industrial and commercial companies, 44.6 (A)
- savings, and accumulation of wealth, 41.35
- school building survey, 40.21 (A)
- schools, projected population, 42.25
- scientists and engineers, qualified, 40.37
- Scotland
 - agricultural census
 - December, 37.36, 41.41, 42.32
 - June, 39.30
 - April pig sample census, 38.37
 - August pig sample census, 44.46
 - census, 1971, 39.23
 - educational statistics, 38.35
 - index of industrial production for, 38.38
 - local government districts, classification of, 39.12(A)
 - market sector analysis, 37.37
 - social work in, 42.25
- Scottish Economic Bulletin*, 37.37
- Scottish Housing Statistics*, 43.30, 44.41, 45.26
- Scottish secondary school accommodation model, 44.30 (A)
- sea transport statistics, 41.39
- secondary school teachers – a new survey and mathematical model for assessing teacher demand, 38.16 (A)
- Sex Discrimination Act*, 37.33
- shareholding in companies, survey of, 39.36, 40.46, 45.35
- shops enquiry 1977, 41.42
- Small Area Statistics, in areal classification, 41.30
- smoking, cigarette, 43.32
- smoking, knowledge of hazards of, 41.33
- social accounting matrix, nature of, 41.10 (A)
- social accounting matrices and developing countries, 41.10 (A)
- Social security claimants*, 44.42
- Social Security Statistics*, 38.29
- social security contributions and taxes, international comparisons, 44.58
- social services departments. Planning in, 43.31
- social statistics
 - General Household Survey, 1974, 39.24, 41.32, 42.25
 - National Dwelling and Housing Survey, 39.26, 42.3(A), 42.8(A), 44.40
 - misuse of drugs, 43.32
 - recently available series and publications, 38.29
 - Scottish social work, 42.25
- social survey report, A recent, 43.30
- Social Trends*, 39.23, 40.34, 43.29
- Social Trends, Welsh*, 45.26
 - amendments to, 40.35
- South Seas census, 38.25 (A)
- SSRC survey archive, 45.08 (A)
- Standard Industrial Classification, 37.37, 42.14 (A)
- statistical computing
 - COMPSTAT 78 symposium, 43.1 (A)
 - European statisticians' working party, 45.06 (A)
 - International Association for, 42.36
- statistical sources, Reviews of UK, 43.29
- statistics of environmental pollution, 44.58 (A)
- statistics national, use of company reports, 44.3 (A)
- Statistics users' conference 1976, 1977, 40.1 (A), 1978, 44.1 (A)
- Survey Control Unit, CSO, 37.45, 38.31, 39.19, 40.31, 41.26, 42.19, 42.37, 43.21, 44.35, 45.23
 - evaluation of past surveys, 44.40
 - measuring the effectiveness of, 45.01 (A)
- survey of Local Authority housing and population, 45.28
- symposium, COMPSTAT 78, 43.1 (A)

- taxes and social security contributions, international comparisons, 44.38
- taxes and benefits, effects on household income 1976, 40.38, 1977, 44.53
- tax changes, effect on revenue, 39.33
- teacher demand, 38.16 (A)
- teaching pack (a study of the UK motor vehicles industry), 42.35
- Teaching Statistics*, 42.35
- time series analysis and forecasting, 42 37
 - Journal of, 43.43
 - meetings at Nottingham University, 42.37, 43.44, 45.38
- trade, terms of, 43.43
- Trade Union membership, 44.44
- traffic and transportation surveys, 37.19 (A)

- traffic census. Benchmark, 43.40
 transport, inland, of imports and exports, 41.41
Transport Statistics Great Britain 1965-1975, 37.38
 transport statistics, inland historical abstract, 44.53
 transport statistics, 1977, 44.53
 travel and tourism overseas, 40.48
- unemployed
 attitudes to Employment service, 42.27
 characteristics of, 38.35, 40.36
 unemployment
 duration of, 43.34
 long-term, 42.27
 rates by age, 39.27
 young and out of work, 43.34
 unfair dismissal cases
 in 1976, 40.37
United Kingdom Balance of Payments
 1966-76, 39.33
 1967-77, 43.43
United Kingdom Energy Statistics, Digest of, 42.29
 United Kingdom external assets and liabilities,
 an inventory of
 at end-1976, 38.40
 invisibles account, 40.47
United Kingdom Mineral Statistics, 42.30
 United Kingdom, self-sufficiency for food, 44.45
 United Kingdom statistical sources, Review of, 43.29
 United Nations Standard Industrial Trade Classifica-
 tion (SITC), 42.14 (A)
 University graduates 1970, survey of, 39.27
- vacancies and engagements, national survey of, 45.29
 value added
 estimates of, from Annual Census of Production,
 41.4 (A)
 methods of estimating, 41.7 (A)
 operating ratios and company performance, 41.8 (A)
 seminar on, 41.1(A)
 vehicles,
 offences relating to motor, 43.40
 survey of small goods vehicles, 40.18 (A)
- wage rates, indices of, 37.33, 38.36, 43.33, 44.43
 wages
 attitudes to, 40.37
 reform of bargaining system, 43.32
 Wales
 Digest of Welsh Statistics, 44.38
 mental illness and mental handicap hospitals and
 units in, 44.42
 decentralisation to, land prices and rents, 44.46
 health and personal social services for, 44.42
 index of industrial production for, 45.32
 war-widows' income, survey of, 39.28
 wealth, estimates of accumulated and inherited, 41.35
 wealth and income distribution, 41.36
 wealth personal, Distribution of, 43.41
 wealth tables for 1975, 39.28
 Wealth of individuals in the United Kingdom, Estimated,
 39.28, 41.37
 Welsh local government financial statistics, 39.37, 42.34
 Welsh Social Trends, 40.35, 45.26
 Welsh Statistics, digest of, 44.38
 wheelchair users, survey of characteristics, 41.33
 White Paper, 1981 census, 43.27
 Government's expenditure plans 1979-80 to 1982-83,
 44.56
 Wholesale price indices, 43.40
 Wilson Committee, 43.42
 women and shiftwork, 45.30
 world fertility survey, 42.24, 45.26
- young people, commentary in *Social Trends*, 39.23
 youth unemployment, 43.34

HER MAJESTY'S STATIONERY OFFICE

Government Bookshops

49 High Holborn, London WC1V 6HB
13A Castle Street, Edinburgh EH2 3AR
41 The Hayes, Cardiff CF1 1JW
Brazenose Street, Manchester M60 8AS
Southey House, Wine Street, Bristol BS1 2BQ
258 Broad Street, Birmingham B1 2HE
80 Chichester Street, Belfast BT1 4JY

*Government publications are also available
through booksellers*

85p net
Annual subscription £3.88 including postage

ISBN 0 11 723299 8
ISSN 0017-3630