

CENTRAL STATISTICAL OFFICE

CSO

Statistical News



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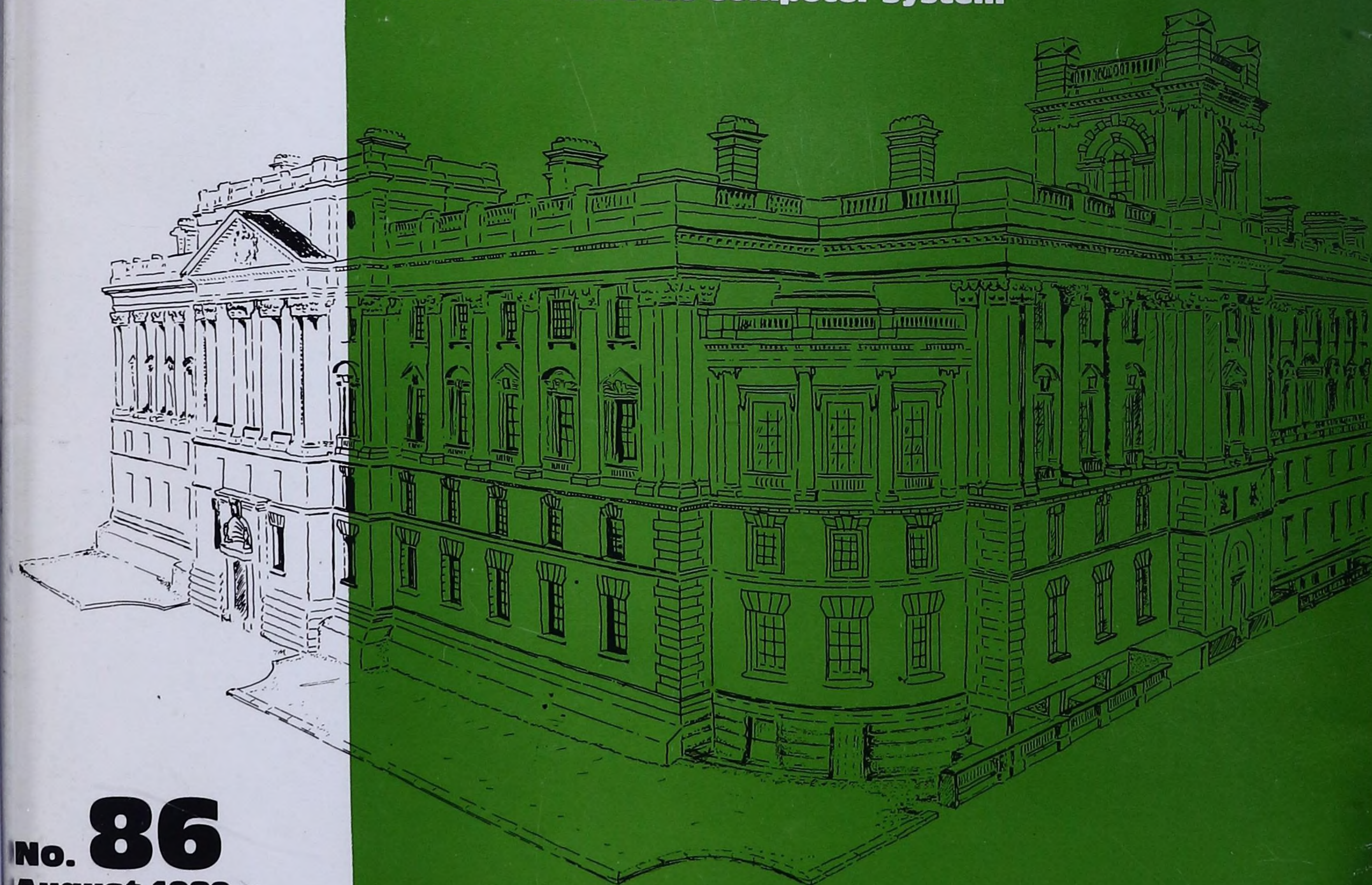
MAFF

The New CSO

Royal Mail Letters

Equal Opportunities in the Civil Service

Financial Accounts Computer System



No. 86
August 1989
HMSO Quarterly

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Government Statistical Service

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 glad to receive comments from readers on the adequacy of its scope, coverage or treatment of topics and their suggestions for improvement.

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FRONT COVER

The cover design depicts a corner of the Government Offices in Great George Street which house the CSO.



Statistical News

Developments in British Official Statistics

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August 1989**

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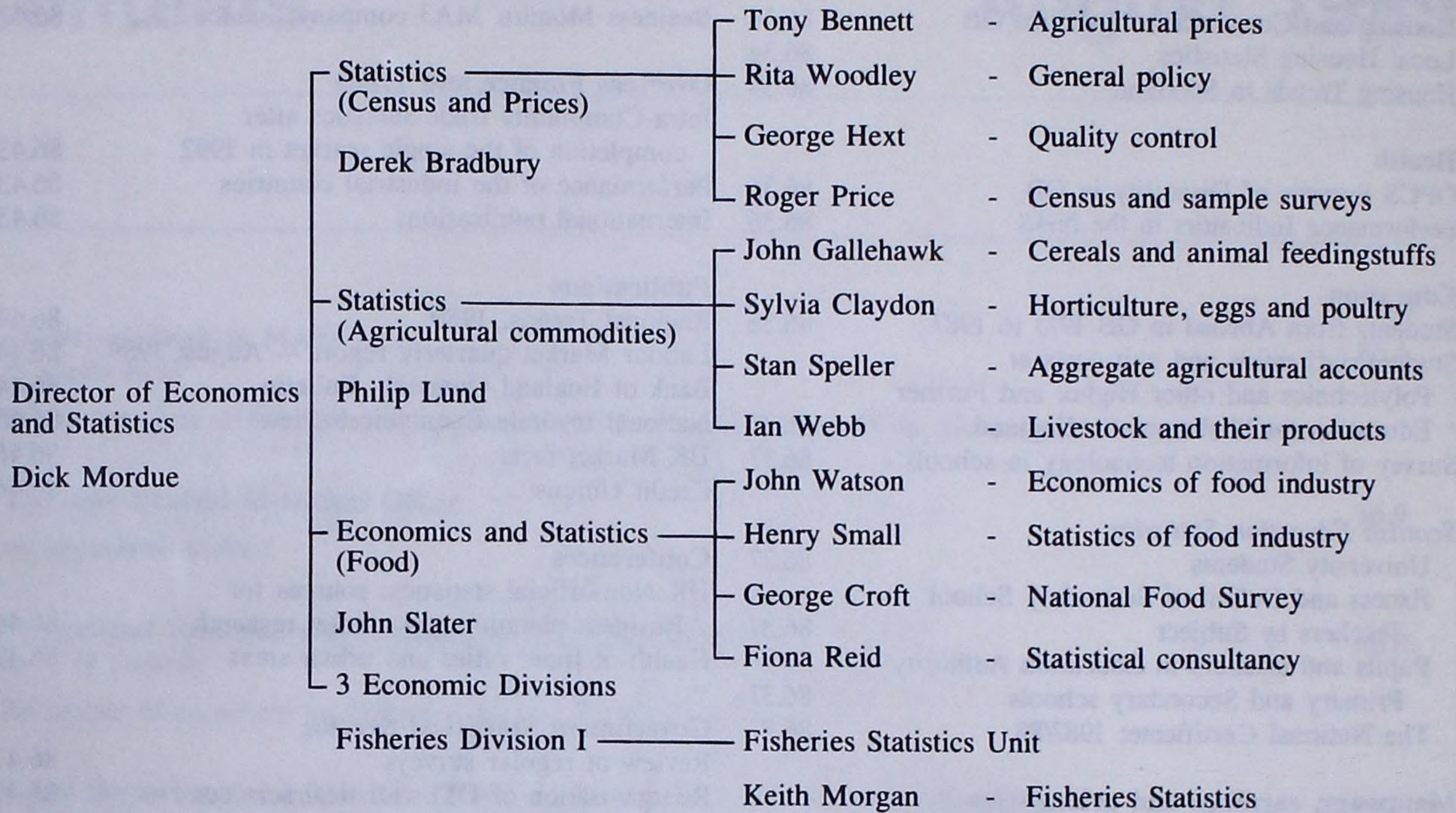
Alphabetical index and classified list of articles
The alphabetical index will in future only be published annually in the November edition. However, a free up-to-date copy of the index and a classified list of articles can be obtained by sending a SAE to: Central Statistical Office, Room 62/3, Great George Street, London, SW1P 3AQ.

THE ORGANISATION OF STATISTICIANS IN MAFF

Grade 3

Grade 5s

Grade 7s



Left to right: John Slater, Philip Lund, Dick Mordue, Keith Morgan, Derek Bradbury and Fiona Reid.

Statistical work in MAFF

Departmental contributions edited by Fiona Reid, Statistician, MAFF

Introduction

It is particularly appropriate that this article on the work of statisticians in the Ministry of Agriculture, Fisheries and Food (MAFF) should appear in this, the Ministry's centenary year. A word or two about the department's history would therefore seem in order.

The origins of the Ministry can be traced back further than a mere 100 years. In 1793 the Society for the Encouragement of Agriculture was founded by Sir John Sinclair, a noted Scottish landowner - who, incidentally, is also credited with introducing the word 'statistics' into the English language. This society was wound up in 1822, and it was not until 1889 that the Ministry's true predecessor, the Board of Agriculture, was born. Duties relating to fisheries were added in 1903, and responsibility for the agricultural and fishing industries in Scotland were devolved eight years later. In 1919 the Board became a Ministry, and the same year saw the establishment of the Forestry Commission which relieved the Ministry of its statutory duties for forestry matters. During the Second World War a Ministry of Food was set up, and in 1955 (around the time that rationing was finally phased out) it was amalgamated with the Ministry of Agriculture and Fisheries to form, more or less, the department which we know today.

Life in the Ministry is complicated by the fact that food is the only area in which there is UK-wide responsibility. Close links are maintained with the Department of Agriculture and Fisheries for Scotland (DAFS), the Department of Agriculture for Northern Ireland (DANI) and the Welsh Office Agriculture Department (WOAD). Statisticians in particular are frequently in communication with these related departments, as the job of compiling aggregate UK figures usually falls to MAFF.

The entry of the UK into the Common Market in 1973 affected many government departments, but probably none more so than MAFF. The operation of the Common Agricultural Policy and the Common Fisheries Policy seems to demand an ever-increasing amount of data and analyses, keeping our statisticians well-occupied. Almost every statistician in the Ministry has some involvement with EC work, and visits to SOEC in Luxembourg are often required.

One feature of statistical life in MAFF is the close working relationship which has evolved between statisticians and economists. Indeed, the two specialisms are structurally linked within the Economics and Statistics Group (ESG), which contains three Economics Divisions, two Statistics Divisions and one joint Division. There is often a thin dividing line between statistical and economics work - for example, some economists collect and analyse survey data, while some statisticians work on supply and demand problems. Economist Dick Mordue took up post as the new Director of Economics and Statistics in January this year.

A chart showing the structure of the statistical divisions in MAFF is given opposite. A brief description of the work of each division is now given, in the order of the food production chain itself - from the division which gathers data on the raw materials of agriculture, through the division responsible for statistics on agricultural production, on to the division which analyses statistics on the finished foodstuffs on the grocer's shelf, and ending with the rather different world of fisheries statistics. In passing, a mention will be made of the more statistical parts of the work of the economics divisions.

Statistics (Census and Prices) Division

This division of about 80 staff (under Derek Bradbury) is located at Guildford and is concerned almost entirely with the collection of statistics and the production of primary results. Within the division there is a broad split between the three 'census' branches, which encompass all the Ministry's main surveys of farms by postal methods, and the 'prices' branch, which processes price data for agricultural and food items.

The division's activities are rooted well before the Ministry itself started in 1889. There has been an annual June census of agriculture since 1866, and indeed some historians trace the beginnings back to the great Domesday Survey of 1086. The collection of grain prices through the Corn Returns is unbroken since 1771, and wheat prices are available from 1316.

The census branches are headed by Rita Woodley (policy, planning, and general operations), Roger Price (all statistical aspects of main censuses and some surveys) and George Hext (quality control investigations and statistical responsibility for several sample surveys). These branches conduct all the activities of farm postal surveys in England; WOAD use many of the division's facilities for parallel surveys.

For farm surveys, the two core elements are the farm register (historically known as the 'Parish List') and the annual census of farms, held every June. The register of farm holdings is updated continuously by information from the Ministry's local offices and from the actual running of the surveys. Specialised surveys require the construction of separate registers, eg for inquiries to English wine growers, and to deer farmers.

The June census itself is addressed to all 157,000 main farm holdings in England. (The 40,000 'minor holdings' below a defined threshold are covered roughly every five years, with a simplified form.) On the main form, there are many detailed items of physical statistics: mostly stocking, cropping, and farm labour. Although there are over 200 items on the full form, the average farmer needs to answer fewer than 20. Provisional census results are available about the third week in August, with casual staff being taken on in June and July to help achieve this.

The census provides a very wide and detailed range of tabulations and analyses, down to parish level, for many hundreds of customers, official and external. The census is also a powerful frame for selection and for raising the results of a wide range of regular sample surveys: for example, a major survey, weighted towards livestock and machinery usage, in December; monthly surveys of cereals stocks; and a survey of methods of straw disposal in October. In addition, the regular EC Farm Structure Survey is serviced from census data supplemented by some sample-based material.

Computing for survey work is in a state of flux, and methods of refurbishment remain under examination. In the meantime the division's statisticians have developed several fast and effective tools for processing and diagnosis. Increasingly these are microcomputer-based; notably, a fast tabulator which can deliver in spreadsheet format a complete census table in under a minute, on an 80386-chip micro.

Prices branch (headed by Tony Bennett) collects a wide range of price and associated material, the results being published in the weekly Agricultural Market Report. The data are obtained in a variety of ways: the Ministry's Horticultural Market Inspectors collect prices as part of their job; there are part-time fee-paid market reporters covering livestock prices; and prices and quantities of grain bought are collected, via the Corn Returns, by the Home-Grown Cereals Authority acting on an agency basis for the Ministry.

Every month the branch produces Agricultural Price Indices of the output prices and input costs of farming. The methodology of these index numbers has been redesigned several times over the years, and now conforms with that required by the EC. Price information is sent to Brussels daily, fortnightly, and annually, for use in setting various EC charges or levies, and each month prices of a large range of products are sent to EUROSTAT for inclusion in the Prix Agricole series of the Cronos databank.

This branch also has responsibility for survey control throughout MAFF and its associated agencies, covering around 100 regular surveys, and each year some 15-20 new ones, mostly *ad hoc*, are handled.

Statistics (Agricultural Commodities) Division

The primary responsibilities of Statistics (Agricultural Commodities) Division are for statistics on, and forecasts of, the output of each agricultural commodity and for the compilation of the aggregate economic accounts for agriculture. The division (under Philip Lund) consists of four branches, three of which deal with groups of commodities and one with the compilation of the aggregate accounts. The allocation of commodities between the branches parallels the main distinctions within UK agriculture. Branch A (headed by John Gallehawk) deals with cereals and other arable crops (excluding potatoes), animal feedingstuffs and seeds; Branch D (Ian Webb) with the more extensive livestock and livestock product sectors (notably cattle, sheep, pigs, wool, milk and milk products); and Branch B (Sylvia Claydon) with the more intensive crop and livestock sectors (horticulture, including

potatoes, eggs and poultry meat). Branch C (Stan Speller) compiles the economic accounts and undertakes various general tasks, including computer operations and the processing and dissemination of detailed commodity data on overseas trade.

The statistics on the production of each commodity are based on a variety of sources. For example, those on meat are obtained from a survey of slaughterhouses run within the division; those for the main cereals are derived from sample surveys conducted by Statistics (Census and Prices) Division; while those for potatoes are obtained as the product of area figures from the June census and field measurements of yields. These yield measurements are produced by the Potato Marketing Board, one of several organisations with which the division has close and regular contact. Others are the Milk Marketing Boards which provide estimates of the total sales of milk off farms and of the division of these sales according to use. This is also an example of the collection of statistics on agricultural output via a relatively small number of first-stage processors rather than from very many individual producers.

The estimates of the volume of production of each commodity provide a starting point for the annual compilation of the industry's aggregate account. Branch C co-ordinates this exercise and also compiles estimates of many of the inputs into agriculture. These are still known as 'bills', a terminology dating from the time when each item in the calculation was rigorously discussed with, and scrutinised by, the Farming Unions since (in pre-EC days) it could have a direct effect on the related determinations of the guaranteed prices for agricultural produce. Technical meetings with the National Farmers' Union continue but the concern is now more with giving an accurate assessment of the changing fortunes of the industry. This objective has also stimulated the development of a range of measures to reflect better the incomes from farming of the various groups of persons, such as farming partners and family workers (and indeed companies), engaged in the industry.

The aggregate account appears in a new annual publication, *Agriculture in the United Kingdom*,¹ which has replaced the previous White Papers on the Annual Review of Agriculture. The new publication also shows supply and utilisation 'balance sheets' for each commodity, constructed from a number of sources. Similar balance sheets are transmitted at frequent intervals to EUROSTAT for publication by them, while attendance at associated EC meetings is a regular commitment for the division. Another is the conduct of a series of quarterly meetings which report on and examine recent information on the output and utilisation of the major commodities. These meetings agree short-term forecasts made on the basis of the most recent data, formal forecasting models and the advice of those attending. These include the relevant commodity policy divisions, technical experts, and economists and statisticians from within both ESG and the other agricultural departments (DAFS, DANI, WOAD). Regular discussions also take place with various trade associations on both the supply and assessment of statistics.

It will be seen that the division has a wide range of contacts within and outside the Ministry, and within and beyond the statistical service. Another important feature of this division's work is its increasing computerisation. About two-thirds of members of staff are regular computer users and further computerisation is one of the division's main specific objectives for the next year.

Economics and Statistics (Food) Division

The potential importance for the food and drinks industry of entry into the EC was recognised in the setting up of the Food Economics Unit in 1972, and in 1980 economic advice and statistical analysis on these sectors were brought together. The Economics and Statistics (Food) Division is headed by an economist, John Slater, and has four branches, covering respectively, economic analysis, industry statistics, the National Food Survey and statistical consultancy.

Economic advice is provided by Branch A, under economist John Watson. In addition to providing analysis on food marketing and on policy issues relating to the food sector, estimates of household expenditure on food for national accounts purposes are constructed in this branch.

Henry Small in Branch B provides statistical advice to the economists and is generally responsible for ensuring that MAFF's needs for food and drink industry statistics are satisfied. This necessitates considerable liaison with other government departments because, although MAFF collects some data on the food industry, the Ministry also relies on statistics collected through the general industry inquiries conducted by BSO. In addition, the branch liaises with the Department of Employment on the food component of the Retail Price Index. However, apart from providing basic statistics, the branch compiles two major series used in the monitoring of policy. One such measure of interest to a wider audience is the estimate of total UK food supplies. The nutritional value of these supplies is calculated - and reassuringly they show that, on average, we get 'enough' to eat. Another important statistic is the estimate of the UK's self sufficiency in food, which measures the performance of UK farming in feeding the nation. For many years it was a specific objective of MAFF to increase self sufficiency, but this aim has become less relevant in an age of surpluses and quotas.

Branch C, headed by George Croft, is entirely dedicated to the running of the National Food Survey (NFS). The Survey was set up during the Second World War to provide an independent check on the food consumption and expenditure of the population, in response to fears that the rationing and control of distribution of the major foodstuffs may have a serious effect on people's health and their efficiency at work. The usefulness of the Survey was soon recognised and when the original circumstances which led to its establishment passed, the NFS was not only retained but was further developed in order to improve its scope and representativeness.

Today, the Survey continues to play an important role in government for both economic and nutritional purposes. For instance, the Survey's results form the basis of estimating consumers' expenditure on food and are used in calculating the weights for certain seasonal foods in the Retail Price Index. In addition, the Survey provides information on household food consumption patterns and trends and it continues to be important for monitoring nutritional intakes and the adequacy of the diet. It has been particularly interesting in recent years to observe the increasing popularity of items such as skimmed milks, low fat spreads and wholemeal bread, reflecting the trend towards healthier eating.

The consultancy branch, headed by Fiona Reid, responds to *ad hoc* requests for statistical advice and analysis which do not naturally fall within the remit of any of the other MAFF statisticians. Many requests stem from the need to monitor efficiently the wide range of new programmes under the Common Agricultural Policy. Recent projects have included designing a sample survey to estimate the extent of animal welfare problems on UK farms, and the analysis of survey data on the costs to the Ministry of visiting farms to verify claims for hill livestock subsidies. The branch also has responsibility for co-ordinating the recently decentralised budget for microcomputers and associated software and hardware for the Economics and Statistics Group - a role which involves the challenging task of providing information on the latest, most appropriate and best value-for-money equipment available.

The Economics Divisions

As previously mentioned, some of the statistical work of the Ministry is in fact carried out by economists. The most important instance of this is the running of the Farm Business Survey by Economics (Farm Business) Division.

This annual survey involves the analysis of trading accounts and balance sheets of a sample of some 2200 farm businesses in England, and covers such topics as farming incomes, inputs, outputs, assets and liabilities. The fieldwork for this survey is undertaken by universities and agricultural colleges, while the division has responsibility for the analysis of the data and for bringing together the results in the annual publication *Farm Incomes in the United Kingdom*.² The same division also co-ordinates the annual Wages and Employment Enquiry, which measures the average earnings and hours worked of hired agricultural workers in England and Wales, based on visits to a sample of around 1900 holdings by Agricultural Wages Inspectors in the course of their enforcement duties.

Economics (Resource Use) Division also has responsibility for statistical work in a number of areas, including the analysis and publication of data on land prices and farm rents, and the estimation of the annual aggregate balance sheet for agriculture. To complete the picture, Economics (International) Division, although not directly involved in data collection or statistical analysis, is a major user of UK, EC and worldwide agricultural data in the course of providing economic analysis of policy.

Fisheries Statistics Unit

The role of the Fisheries Statistics Unit (FSU), which is headed by Keith Morgan, is to provide a statistical information and advisory service for policy purposes, and to publish and disseminate statistical data, in particular to the European Commission in Brussels for implementation of the Common Fisheries Policy (CFP). The FSU is responsible for overseeing all aspects of English and Welsh Fisheries data on fish landings and the fishing fleet, including its collection at the fishing ports; transmission to the centre; validation and processing; retrieval from a database system; analysis and interpretation; and ultimately its presentation to end-users. This involves close liaison with the Sea Fisheries Inspectorate, who collect the data, and the Fisheries Research Laboratory in Lowestoft, who process the data on the Unit's behalf.

Fisheries statistics have been collected for a good many years, and were primarily used for scientific purposes in assessing the state of the fishing stocks. More recently, however, fisheries statistics are being used increasingly for policy purposes, both in formulating new policies and in monitoring and enforcing existing ones (for example, individual vessel catches are currently monitored against a set monthly quota). This development, which has gathered pace since agreement was reached on the CFP in January 1983, has demanded improvements in our statistical information systems in the form of more timely and accurate data on individual vessels to meet administrative requirements.

The FSU is out-bedded in a policy division, which means that there are very close links between members of the FSU and policy branches. This helps to ensure that information needs for policy purposes are clearly understood by the FSU, and can be met as effectively as possible. The main areas of policy work are:

- Quota management and enforcement (eg data is provided on the latest UK catches, quota uptakes and forecasts of future catches, leading to the closures or re-openings of fisheries and catch restrictions);
- Fleet structure (eg providing advice on ways of measuring the capacity of the fishing fleet, using modelling techniques);
- Marketing (eg statistical information is gathered on fish landings, prices, imports and exports);
- Marine Environment and Conservation Measures (eg providing information on fishing activities following pollution incidents).

The work of Fisheries Department is constantly evolving, and one of the major problems it is currently facing is how to match fishing capacity to the limited fish resources available at a time when new technology is making fishing vessels

increasingly efficient at catching fish. The CFP is likewise continuing to evolve and giving rise to ever-growing demands for more detailed information. For example, a regulation was introduced at the end of 1988 for the setting-up of an EC register of all Community fishing vessels; this is to be kept regularly updated so that the Commission can monitor the capacity of the various Member State fleets against the targets it has imposed.

It has been a major challenge in recent years to meet these new requirements for information within existing resources, and this has so far been achieved through careful planning and the phased introduction of new or enhanced computer IT systems. The FSU have recently been involved in the development of an IT Strategy for Fisheries Department. One of the recommendations of the strategy was that the introduction of new technology (such as satellites to monitor fishing activity and electronic logbooks on board fishing vessels) should be further explored in an attempt to improve the quality of catch reporting. It is to be hoped that these new developments in technology will enable the Unit to continue to meet the challenge of satisfying the growing need for information for policy and scientific purposes at reasonable cost, thus helping to ensure that fish stocks are conserved for future generations.

For the future

We hope that the above resumé has at least given a flavour of the work done by statisticians in MAFF. So, what does the future hold for us? As agricultural policies in the EC and in the UK undergo radical changes - with the introduction of schemes encouraging diversification of activities on farms, the reduction of production, and conservation of the countryside - there is plenty of new material to keep statisticians busy in the provision of monitoring, analysis and advice.

As information technology continues to advance at almost alarming rates, statisticians in MAFF - as in other departments - will need to keep abreast of the changes, in order to provide the best possible service. As one step towards this aim, the formation of an IT strategy for the Economics and Statistics Group is currently in hand, under the guidance of outside consultants.

Finally, 1989 has seen major improvements to two of MAFF's main statistical publications - *Agriculture in the UK* and *Farm Incomes in the UK*. With the aid of modern desktop publishing systems, it is proposed that much of our other published material will follow suit in the coming years, as we present statistics of greater relevance in publications well able to compete in the commercial world.

References

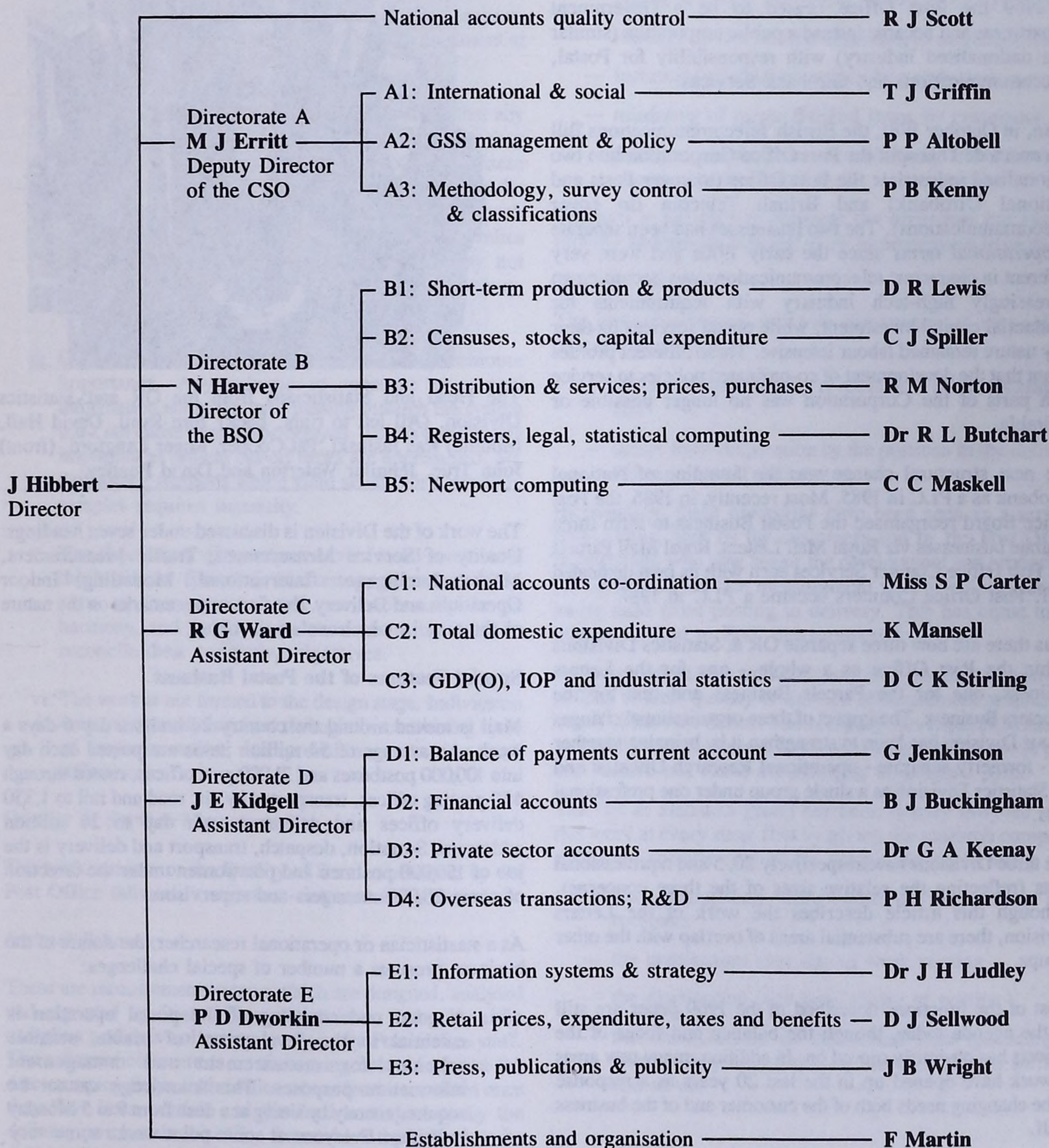
- 1 *Agriculture in the United Kingdom*, (HMSO, annual) (Price £7.60 net).
- 2 *Farm Incomes in the United Kingdom*, (HMSO, annual) (Price £15.25 net).

This is the twenty-first in a series of articles on the structure and functions of the Government Statistical Service.

The New Central Statistical Office

As reported in *Statistical News* No. 85, on 31 July the new Central Statistical Office took over responsibility for the Business Statistics Office; many of the statistical series previously produced by the DTI; and the Retail Prices Index and the Family Expenditure Survey from the Department of Employment.

Details of the new CSO organisation are in the chart below. A note on the reorganisation of DTI statistical services is on page 86.47.



Operational Research and Statistics in Royal Mail Letters

K M Jasinski, Assistant Director, Operational Research and Statistics, Royal Mail Letters

Introduction

In the 20 years since Sam Wood's article 'Statistical and Business Research in the Post Office'¹ was published, the organisation has undergone a fundamental restructuring.

In 1969 the Post Office ceased to be a Government Department and became instead a public corporation (similar to a nationalised industry) with responsibility for Postal, Telecommunications and Girobank Services.

Then, in October 1981, the British Telecommunications Bill was enacted. This split the Post Office Corporation into two nationalised industries: the Post Office (to cover Posts and National Girobank) and British Telecom (to cover Telecommunications). The two businesses had been separate in *operational terms* since the early 1970s and were very different in character: telecommunications was becoming an increasingly high-tech industry with requirements for substantial capital investment, while postal services by their very nature remained labour intensive. These different profiles meant that the development of co-ordinated policies to service both parts of the Corporation was no longer possible or desirable.

The next structural change was the founding of National Girobank as a PLC in 1985. Most recently, in 1986, the Post Office Board reorganised the Postal Business to form three separate businesses viz Royal Mail Letters, Royal Mail Parcels and Post Office Counter Services each with its own dedicated staff. Post Office Counters became a PLC in 1987.

Thus there are now three separate OR & Statistics Divisions within the Post Office as a whole - one for the Letters Business, one for the Parcels Business and one for the Counters Business. The impact of these organisational changes on our Division has been to strengthen it by bringing together the - formerly separate - operational Research Division and the Statistics Division as a single group under one professional head.

The three Divisions have respectively 20, 5 and 6 professional posts (reflecting the relative sizes of the three concerns). Although this article describes the work of the Letters Division, there are substantial areas of overlap with the other groups.

Most of the functions described in the 1969 paper are still on the agenda today, though the balance and focus of the projects has obviously moved on. In addition, many new areas of work have opened up in the last 20 years as a response to the changing needs both of the customer and of the business itself.



The Head and Statisticians from the OR and Statistics Division. (All left to right, back) Tom Ryall, David Hall, (middle) Kas Jasinski, Pat Cooper, Roger Langford, (front) John True, Jennifer Waterton and David Bentley.

The work of the Division is discussed under seven headings: Quality of Service Measurement, Traffic Measurement, Market Intelligence, International, Modelling, Indoor Operations and Delivery. But first some remarks on the nature of the task in which we are involved.

Special Features of the Postal Business

Mail is moved around the country 24 hours a day 6 days a week. An average of 54 million items are posted each day into 100,000 postboxes and 21,000 post offices, routed through 450 posting offices, transported by air, road and rail to 1,350 delivery offices and delivered each day to 23 million addresses. Sortation, despatch, transport and delivery is the job of 150,000 postmen and postwomen under the direction of some 20,000 managers and supervisors.

As a statistician or operational researcher, the nature of the business presents a number of special challenges:

- i. A good understanding of the postal operation is essential to the development of usable, sensible schemes for measurement and management information purposes. This knowledge cannot be acquired merely by sitting at a desk from 9 to 5 Monday to Friday. Everyone at some point works some very odd hours!

ii. 75 per cent of all mail catches the last collection of the day (between 5 pm and 6 pm). In order to get delivery the following day (the aim for 1st Class mail), these items have to be sorted and despatched from the office where they are taken by about 9.30 pm. So, between the hours of 5 pm and 9 pm there is a large peak in the workload requiring a high level of staffing. On the other hand, there is a trough between 12.30 pm - after the 2nd delivery is completed - and 5 pm which processing of 2nd class mail cannot quite fill. This feature of peaks and troughs is not restricted to a 24-hour cycle. There is a lot of variability from day to day, from week to week and even from month to month in the volumes of mail handled. This presents special difficulties for the staffing and management at local offices.

iii. The operation is on a huge scale. This means that any measurement schemes must be kept simple since they are likely to suffer as a consequence of the 'Chinese Whispers' syndrome as information is passed down the channels of communication. Added to which, much of the basic data collection (and computer input) relies on large numbers of non-specialists who may not appreciate the finer points of statistical sampling theory, computing or analysis.

iv. Giving the mail the due service is of paramount importance. Any scheme to measure or record information about the mail passing through the system must not cause items to be delayed. This is particularly important as critical cut-off times are approached. So, developing methods which yield satisfactory 'random' samples requires ingenuity.

v. The department gives expert advice to all sections of the business: financial, marketing, operations. The aims of these groups will not necessarily be in harmony, and a delicate balance has to be found to reconcile their competing objectives.

vi. The work is not limited to the design stage. Individuals must stay closely involved through the continuing cycle of implementation, interpretation, evaluation, and refinement.

Quality of Service Measurement

The work to monitor the Quality of Service achieved by the Post Office falls into two areas - internal and external.

Internal Schemes

These are measurement systems which are designed, analysed and reported by Post Office statisticians, and where the sampling and data collection are done by Post Office staff. The schemes concentrate on measuring delays between the date-stamping stage, in the office where letters are taken once they have been posted, and the final sorting stage by the delivery postman in the office from which the letter is to be delivered.

The schemes cover all types of mail (items posted in postboxes, metered items, items posted by firms under contract), with special arrangements for mail of particular interest (for example, mail which does not receive a date-stamp).

In addition, various internal measures have been devised by statisticians to aid local offices in diagnosing specific problems associated with particular aspects of the process. For example, systems have been developed to allow offices to estimate error rates associated with:

- failing to collect mail from postboxes or post offices,
- missegregation of first class letters as second class,
- incorrect typing of a postcode by a code-desk operator,
- misdating of meter franked items by customers, or
- failing to take the letter out on delivery after it has been sorted onto the frame at the delivery office.

The aim is not only to estimate the error rate but also to provide information that will allow improvements to be made.

External Schemes

The internal schemes omit two components of the mailing process namely:

- transition from posting of an item to its date-stamping and
- delays from preparation by the postman in the delivery office to actual delivery.

Increasingly, these omissions have been seen as a serious shortcoming both by the customers and by the Post Office management who now favour the development and production of a quality of service measurement which will include the entire span from posting to delivery. This has come to be known as 'End to End' measurement.

An independent research company was selected to instigate an End to End Quality of Service Measurement scheme on behalf of the Post Office. The company was required to recruit a panel of individuals and businesses who would agree to post and receive test items according to a specified plan.

The OR & Statistics group has been closely involved with this work at every stage first by giving the research company a detailed specification of the sample design in terms of:

- the geographical distribution of the posters and receivers
- the distribution over day of week posting
- the distribution over time of day of posting
- the characteristic of the posted item (particularly whether they were a suitable size for machine sorting) and so on.

The group has also stipulated how the analysis weights should be calculated and what tables are required. In addition, the group acts as a broker between the producer of the results - ie the agency - and the consumer of the results - ie the agency - and the consumer of the results - ie post office management - by evaluating and monitoring the extent to which the agency are following the specification. As always, interpretation of the results is an integral part of the group's remit.

The results from the 'End to End' scheme will provide the published data against which our service is judged by our customers. 'End to End' measurement will play an increasing role in our work on service measurement in the future. The next step will be to extend the work to cover undated mail. (Only dated mail is included at the moment.)

Traffic Measurement and Productivity Schemes

The Monopolies and Mergers Commission Report of 1984² criticised the Post Office for the inadequacy of the information it collected about the volume of mail it handled (particularly for items not sorted by machine) and for the absence of any productivity scheme to boost performance. Until then data on mail traffic, the number of letters and packets sorted at each office, had relied on an annual count which was done for one week only during October. Given the large variations in the amounts of traffic handled day to day and week to week, this method provided a very unsatisfactory and incomplete picture of the amounts of traffic being processed.

The next five years saw the introduction, enhancement and refinement of a traffic measurement system, linked to a mandatory productivity scheme. The OR & Statistics group has played a large part in developing the traffic measurement system since mail which is not counted automatically as part of its normal processing must be measured by sampling. A number of 'ideal' sampling schemes have been devised to cater for different types of offices and which can be tailored to offices' special needs.

Although the information is stored and analysed locally, and is used to estimate staffing requirements, there is still substantial input from Headquarters who are called on for advice in using the traffic information which is produced. The data are also aggregated nationally to produce national volume figures, growth trends etc.

Market Intelligence

The *Letter Information System* provides commercial intelligence on such things as means of payment, postcode usage, type and size of envelope, class, revenue collected, whether the item was machine sorted and so on. For a 1 in 4 sub-sample a customer questionnaire is linked to each item sampled enquiring about the nature of the item being received. Approximately 70,000 letters are examined each month.

Other *ad hoc* surveys are designed specifically in response to a response for some market intelligence. For example, a survey is currently underway to collect extra information about non-business uses of international mail.

This type of work has become increasingly important as the Post Office attempts to move away from its image as an inward looking, functionally led operation, towards a commercially aware service industry where the customers' preferences are seen as paramount.

There has also been some research by the group to identify the savings which could be made if the customers were to present their mail presorted to a plan laid down by the Post Office. A new pricing strategy is now in operation for high volume posters which ensures that the cost to the customer is more closely related to the Post Office's handling costs.

International

In the region of 2.5 million bags of mail are sent worldwide each year from Britain by Air and by Sea accounting for a significant proportion of the total profit to the Letters Business. The International Letters Department with dedicated staff has been set up to manage the operational, financial and marketing aspects of our overseas operation.

Three main areas of work are carried out on behalf of International letters.

First, the Quality of Service Measurement work described earlier has been adapted for international service measurement. Schemes exist to monitor the progress of items posted in Britain for an overseas destination by sampling them at the point of despatch, and conversely to monitor the time between receipt and delivery of mail from abroad.

This work is extended by Britain's regular participations in schemes designed to measure the time taken 'End to End' to and from many countries (by using panels of people who post and receive test items) under the auspices of CEPT (the European Congress for Post and Telecommunications).

Second, sampling plays a major role in determining the volume of international letter traffic and the revenue it brings the Post Office. The accounting system cannot tell us how much is earned by a particular service because, for example, a franking meter customer can use the same machine to pay for a 1st Class letter, a 2nd Class letter or any one of our many international services.

The third area is one of great significance to the profitability of international letters. In the past, countries have reimbursed each other for the mail they deliver on behalf of other postal administrations according to the total weight of mail exchanged. A new scheme is now underway to change the repayment mechanism to one which relates payment to the number of letters as well as the weight of mail. Thus future settlements will be more closely related to the costs incurred by the receiving administration in delivering the mail. This new scheme places a requirement for accurate information on the average weights of items sent and received from other countries.

International traffic measurement in general is a growing area, with increasing attention being paid to how much mail goes to specific destinations. This work requires close liaison with other countries and contact is maintained through a series of meetings and conferences - with different countries acting as host on each occasion - which are held at regular intervals.

Modelling

A quantitative summary of the effect of various factors on the probability of a letter arriving on time is crucial to the development and improvement of the postal network.

Over the last 2 years, a large research effort has been directed at building up a model which would furnish management with this information. The kinds of factors which have been included in the model are: distance travelled, method of conveyance (air, road, rail), number of 'links' or 'changes' in the routing from posting to delivery, type of delivery area (rural or urban), type of sorting office and so on. Using the model allows the effects on service of altering the network in various ways to be estimated.

The model has been developed by collating information collected from the Letter Information System with routing information from Operational databases. Thus a file is available which holds details of the routing and characteristics of a very large number of letters, together with the time taken for each of the letters to travel from the office of posting to the office of delivery. A General Linear Model is fitted to the data and the effect of each factor estimated.

A further example of the modelling work done by the division is in forecasting the demand for letter services. Most models use the multiple input, single output models of Box and Jenkins; explanatory variables such as price, economic output and special events are modelled in a regression type equation and an ARIMA process is used to model the residual variations.

Indoor Operations

Much research has been done - in conjunction with the Industrial Engineering Division - to establish standard work rates for the various functions within a sorting office. These have been used, together with traffic information, to provide an hour by hour profile of the workload in an office.

A system has also been developed to allow offices to forecast their traffic locally. The system for local offices uses a Bayesian modelling approach which has the advantage of allowing local knowledge about likely scenarios to be taken into account.

The next step - to align staff to the required tasks - is made difficult by the 'peakiness' of the work referred to earlier. Nevertheless, a micro-based system to assist with the staff to traffic alignment has been designed for local office use. The system takes as input the 'workload demand profile'. It will then produce a set of duties which cover the profile efficiently. The facility then exists to refine the computer-generated set of duties into a set which satisfies local requirements.

Other research within sorting offices has concentrated on evaluating the cost effectiveness of new machinery. When a new machine is developed, a cost benefit analysis is done to see under what assumptions it is possible for the machine to 'cost in'.

Delivery Revisions

The delivery of mail is organised locally into a suitable number of postmen 'walks' by allocating the delivery work evenly between each individual in such a way that the mail can all be delivered by a certain time in the morning (9.30 am for first deliveries). Since new delivery points - and indeed new estates or towns - are continuously appearing, delivery revisions are a major technical problem for the Letters Business.

A micro-based system has been supplied to local offices to plan their delivery revisions. The local office first provides data on the characteristics of the delivery area and the amount and type of mail it receives. The computer program will first turn this workload profile into an estimate of the time taken to deliver the mail and will then assist the planner quickly to build up a set of walks to satisfy the constraints of the individual delivery offices and staff.

References

- 1 'Statistical and Business Research in the Post Office' Sam Wood, *Statistical News*, No. 4, February 1969 (HMSO).
- 2 *The report on the letter post service of the Post Office in the Head Post Office areas of Glasgow, Belfast and Cardiff and in the numbered London Postal Districts* (Cmnd. 9332) (HMSO September 1984) (Price £9.90).

This is the twenty-second in a series of articles on the structure and functions of the Government Statistical Service.

Equal Opportunities in the Civil Service: Statistical Monitoring and Modelling

Marta Haworth, Chief Statistician, HM Treasury

Introduction

The Civil Service is an equal opportunity employer. It is Government policy that 'all eligible persons shall have equal opportunity in the Civil Service on the basis of their ability and qualifications and fitness for the work.' This article outlines some of the work done by statisticians in Personnel Statistics (PS) Division of HM Treasury in informing the formulation, monitoring and evaluation of equal opportunity policies. The statisticians - John Parrett, Frank O'Hara, Howard Redway and Julian Revell - work very closely with administrators in Personnel Management Equal Opportunities Policy Division in the Office of the Minister for the Civil Service (OMCS). Their experience suggests that statistical monitoring is a vital aspect of any equal opportunity programme.

There are several areas where PS statisticians make important inputs into equal opportunity policy development and implementation.

- i. Initial *collection of data on staff-in-post* is important in providing a starting point for developing an equal opportunity strategy; it enables policy makers to set priorities and objectives and target particular areas for action.
- ii. More *detailed statistical monitoring of promotion selection boards and recruitment competitions*, or cohort studies, can help provide an understanding of what barriers are preventing greater equality in career development or in promotions.
- iii. In combination with statistical data from wider population surveys (the Census of Population and the Labour Force Survey), *benchmarks* can be set against which *to measure performance*, for example, in recruitment.
- iv. *Manpower planning analyses and projections* can also help in measuring performance and in setting objectives. For example, work on projecting the likely representation of women at senior levels was useful in formulating a longer-term view. (Manpower planning techniques were used to assess their likely future representation if the objective of roughly equal promotion rates between men and women is achieved and barriers to equality are removed.)

Data Collection

Data on each of the 500,000 or so non-industrial staff in the Civil Service are collected regularly on magnetic tape extracts from departmental personnel information systems. The information is amalgamated onto the Service-wide statistical database MANDATE which contains details of gender, marital

status, date of entry, ethnic origin, grade code indicating the type of work and hierarchical position of each individual, previous grade, discipline, geographical location and, as a recent extension, a disability indicator. To protect confidentiality of individual personnel information, the records are anonymised so that the data cannot be linked with named individuals. This means that records relating to individual civil servants cannot be traced over time, but MANDATE does permit the compilation of aggregate statistics and comparisons between different groups.

Ethnic Monitoring Surveys

The information on ethnic origin is derived from ethnic origin surveys of staff which have been carried out over the past four years. Codes indicating ethnic origin are now held on MANDATE statistical records for all staff who responded to the ethnic origin surveys (roughly three quarters of the total) and will continue to be updated by information on new staff. This will be used in the statistical monitoring of the operation of personnel management policies and their impact on different racial groups, so that reasons for any apparent discrepancies can be examined and positive steps taken to overcome any unfair adverse impact on any particular group.

The surveys of ethnic origin were entirely voluntary: staff were not required to complete the survey questionnaire. There was a pilot survey covering some 3,500 staff in the Leeds area in 1982 and following its evaluation, a phased programme of surveys was extended to other areas two years later.

There were extensive consultations about the surveys, involving Trade Unions, Community Relations Councils and the Commission for Racial Equality. The surveys were conducted as follows:

- i. Government departments and trade unions were sent out written guidance and held meetings, to inform staff and to encourage them to respond.
- ii. The questionnaire forms, with an explanatory letter, were sent to all staff.
- iii. The information from completed forms was transferred onto computer personnel systems and the forms were destroyed.
- iv. Two to three months after the forms were sent out, a reminder and another form were sent to all non-respondents and to those who had unintentionally spoilt their form. Information from completed forms was then added to personnel computer records and returned forms were destroyed.
- v. As a check on accuracy, staff were notified of their recorded ethnic group and were invited to alter it if incorrect.

The protection of *confidentiality* of individual records was very important in these surveys. A code of practice was formally agreed with Trade Unions which stipulates that individual name-linked ethnic origin data will never be printed from computer records and that the information will only be used to monitor the effectiveness of equal opportunities policies. The MANDATE statistical database is permitted to hold only an encrypted numerical identifier for each record.

considerable ethnic minority settlement where the percentage of ethnic minority respondents exceeds the region's benchmark for ethnic minority representation in the economically active population. Recruitment monitoring, however, shows that the proportion of ethnic minorities amongst new entrants is higher than for current staff-in-post. The proportion of ethnic minority staff in the Civil Service is therefore likely to increase gradually over the coming years (see Figure 1.)

First comprehensive statistical findings from these surveys became available in Spring 1989. These indicate an overall response rate of over 70 per cent, but the rate varies considerably between individual departments. The proportion of ethnic minority staff respondents is around 4 per cent and broadly comparable with their overall representation in the economically active population, but the response rate achieved raises the question of the effect of a possible non-response bias in the results. In analysing, for example, the data on promotions by ethnic origin, the interest can be focussed on relatively small sub-populations which could be seriously affected by any non-response bias. It is therefore planned to undertake a further investigation, to assess these effects.

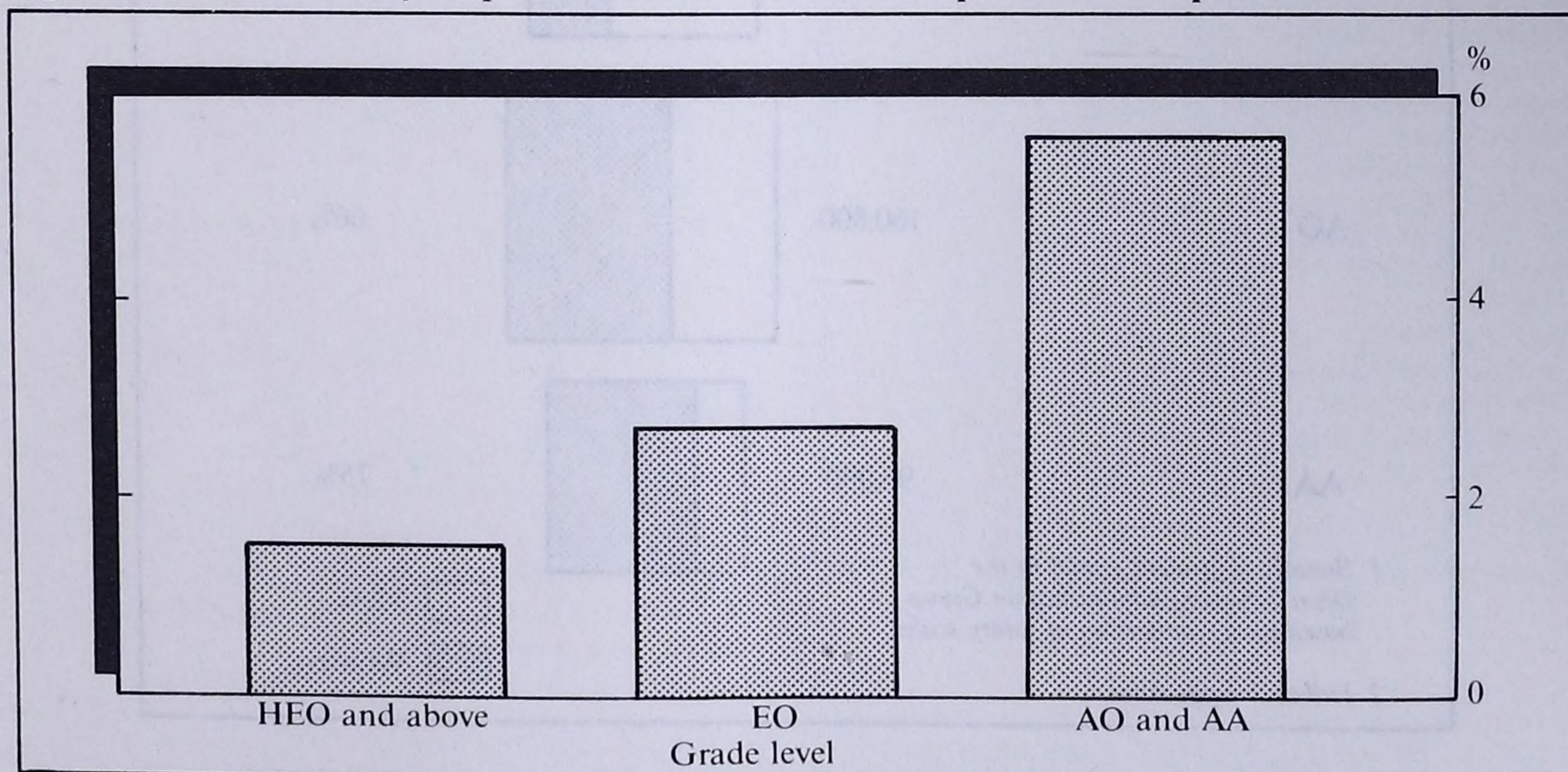
Ethnic Minority staff represent a higher proportion of those staff at lower grade levels and they are similarly better represented amongst new entrants to the lower grades. Statistical monitoring of promotion rates is being undertaken to identify any barriers to equality in career opportunities and will help in developing an appropriate programme of action to remove remaining barriers. Action to encourage ethnic minority applicants for the more senior posts in the Service and to improve success rates is also being undertaken. The statistical monitoring of recruitment competitions has also helped identify areas for action.

Statistical analyses

The information held on MANDATE on *ethnic origin* of staff permits considerable flexibility in the analyses of proportions of people from different racial groups in the Civil Service by department, grade, location and length of service or age and also comparisons of their progress. Although overall, ethnic minority respondents represent 4 per cent of total respondents, the level of representation varies from 13 per cent in London to 2 per cent in the rest of the South East and East Anglia, broadly reflecting the ethnic composition of the economically active populations in these regions. Greater London is the only region among those of

MANDATE also permits analyses of the distribution by *gender* of the Civil Service staff by grade level. Overall, women represent 48 per cent of staff-in-post, between two-thirds and three-quarters of employees at the lowest grade levels of AO and AA and 5 per cent of staff at the top four grades of the Service. This employment pattern is typical of women's employment generally. In the labour force as a whole, women workers are concentrated in certain occupational groups and in the more junior and more poorly paid jobs (see Figure 2 overleaf.)

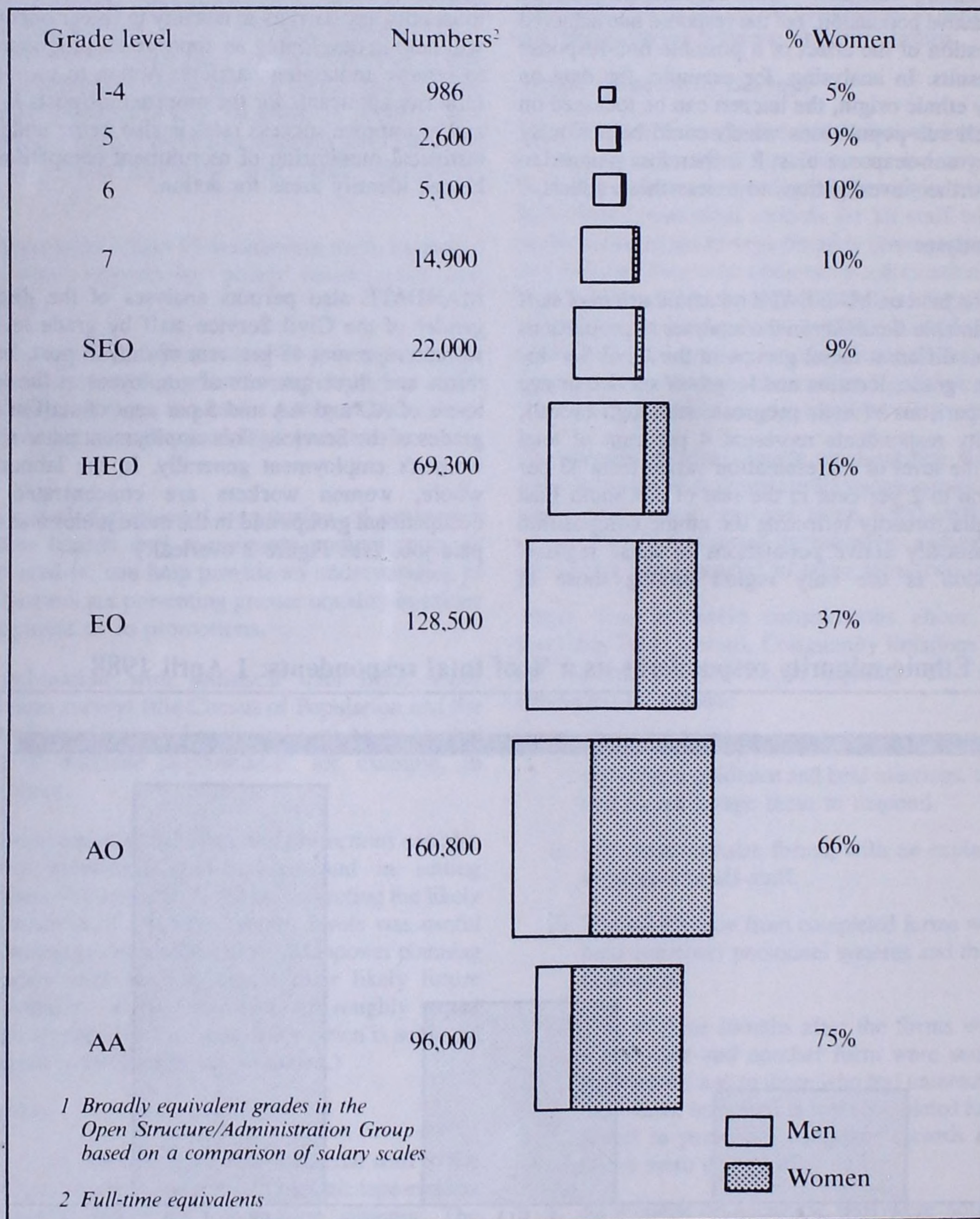
Figure 1 Ethnic minority respondents as a % of total respondents: 1 April 1988



In the Civil Service, the pattern of an under-representation of women at senior levels is, however, changing. Over the last 5 years, there have been significant increases in the proportion of women at all grades from the basic management grade of EO upwards. In 1983, women represented only 28 per cent of staff at EO level compared with 37 per cent in 1988 and only 6 per cent of staff at the more senior Grade 5 level compared with 9 per cent in 1988.

Other statistical analyses are also relevant to the monitoring of progress of women, for example the examination of trends in part-time working, promotions and reinstatements. The increasing availability of part-time work, both at senior levels and in middle management, is of considerable importance here and is helping to reduce resignation levels amongst women staff. (Higher resignation levels have in the past been one of the factors accounting for the under-representation of women at more senior grades.) Part-time working

Figure 2 Staff in Post by Grade Level Equivalents¹ for the Non-industrial Home Civil Service at 1 April 1988



opportunities providing a working pattern which takes account of domestic responsibilities of men and women can therefore help to achieve greater equality which should in time be reflected in a more equitable representation of women at senior grades. The statistics suggest that the percentage of female staff working part-time has increased from just 6 per cent in 1985 to 10 per cent in 1988.

Only basic statistics can currently be derived from MANDATE on staff who are *registered disabled*. Following a sharp decline in the early 1980s from 1.7 per cent, the Service has over the last three years succeeded in maintaining a 1.3 per cent level of representation against the background of a decline in the number of civil servants and a general decline in the number of people in the labour force who are choosing to register as disabled. The percentage of Civil Service staff registered as disabled varies between government departments. For the 1.3 per cent of people who are registered as disabled, the employment pattern is one in which staff are concentrated at junior levels amongst the administration staff.

Manpower Planning and Modelling

The statistical analysis of numbers of staff in particular groups and their promotion rates, together with the examination of historical trends in the rates of entering and leaving, can be used to model future promotion prospects. Inevitably, there are considerable uncertainties about some of the assumptions which have to be made in constructing future projections. However, the use of formal manpower planning techniques can provide a useful tool for evaluating the likely effect of specific personnel management policies. For example, the results of such manpower planning work indicate that over the next decade the proportion of women in the most senior Civil Service posts (currently 5 per cent) is likely to increase markedly, largely reflecting the increasing proportion of women recruits to the fast stream during the 70s and 80s.

Future Developments

The statistics on special groups of staff are being developed further in response to the requirements of personnel management and pay policy work. Future demographic trends which indicate a declining proportion in the numbers of 16-19 year olds over the next 5 years pose particularly difficult challenges in this area. For statisticians, this means improving the statistical information base, and employing new techniques to meet the demands of policy makers. Specifically:

- i. Follow-up surveys and other action are planned to increase response rate for *ethnic monitoring surveys*, to provide more reliable ethnic data for monitoring and to assess the effect of any non-response bias.
- ii. As the historical data build up on the statistical database, *cohort studies* will be possible as an aid to monitoring the progress of specific groups of staff over time.
- iii. For *disabled* staff, it is intended to extend the information on the database to include a simple classification of the nature of the disability. This will allow promotion rates, resignation rates and other aspects of the employment pattern of staff who are registered as disabled to be analysed, to identify areas where positive action is required.
- iv. The modelling of prospects for *women* staff will be extended to examining the effects of performance-related pay.

References

- 1 *Civil Service Statistics 1988*, (HMSO).
- 2 'Ethnic monitoring in the Civil Service - the problem of non-response'. Frank O'Hara, *Statistical News*, February 1985, No. 68.
- 3 *Ethnic Origin surveys. Non-industrial staff in the Civil Service: London and South East of England*. (Cabinet Office: Office of the Minister for the Civil Service, 1987).

Financial Accounts: New Computer System

John Alexander,¹ Statistician, Central Statistical Office

The Central Statistical Office has nearly finished converting to a distributed computer system and completely overhauling its computer techniques. In many areas (national accounts, index of production, balance of payments, for example) this has meant moving to microcomputer systems which are linked to a central shared database (the CSDB). Initial compilation is carried out on spreadsheets and the results are brought together, published and archived using the CSDB.

The financial accounts could not be dealt with easily in spreadsheets and are being processed entirely in the CSDB. As well as removing any capacity problems, this has brought to bear computing facilities available only in the CSDB.

Financial accounts

The financial accounts deal with statistics of borrowing and lending, ie transactions which are subject to repayment. They can be represented in matrix form as illustrated in Table 1. This is a highly compressed summary showing financial flows in 1988. The rows relate to financial instruments, the columns to sectors of the economy and the cells contain time series. There are equivalent matrices of levels outstanding at the end of each accounting period.

Behind this summary there is, in effect, a much more detailed matrix which has more rows and columns and which contains series which are the building bricks of the system. These are aggregated, on both the instrument and sector dimensions, in different ways for different purposes. As well as a standard analysis for each main sector, there are tailor-made analyses for individual sectors and analyses which trace the main financial aggregates such as PSBR, money supply, consumer credit, etc. Further variations are needed for international returns, which use instrument and sector groupings which differ from those normally used in the United Kingdom.

Each building brick series may be a component of many aggregates. In the previous system these were calculated by formulae on the lines of $A = B + C$. That approach had a tendency to become more and more complicated. With ever changing analytical needs, the formulae had become interwoven and difficult to keep track of. Maintenance and development were becoming prohibitively expensive. There was the added problem that the flows and levels had grown up on different instrument classifications which could not easily be related.

TABLE 1: Financial transactions between sectors in 1988

	£ billion			
Financial instrument	Public sector	Monetary sector	Non-bank private sector	Overseas sector
Notes and coin	- 1.5	0.3	1.2	—
Treasury bills and government securities	3.7	- 1.1	- 2.9	0.3
National savings and tax instruments	- 0.4	- 0.3	0.7	—
Issue Department transactions in bills	0.4	0.6	- 1.3	0.2
Other government domestic transactions	1.0	0.1	- 1.1	—
Government overseas transactions	3.3	0.2	- 1.4	- 2.0
Local authority debt	1.5	- 0.4	- 1.0	—
Public corporations debt	0.9	- 0.5	—	- 0.3
Deposits with monetary sector	2.7	-76.1	39.5	33.9
Deposits with other institutions	—	0.4	- 0.9	0.5
Bank lending (excluding public sector)	—	71.9	- 52.4	- 19.5
Other lending	0.2	10.9	- 10.8	- 0.3
Trade and retail credit	- 1.1	—	1.2	- 0.1
Other securities and unit trust units	- 6.2	- 0.2	16.6	- 10.2
Other domestic transactions	- 0.7	- 0.5	- 4.9	6.0
Other overseas transactions	- 0.2	- 0.6	8.2	- 7.4
Accruals adjustments	0.1	—	- 0.1	—
Total financial transactions	3.9	4.7	- 9.6	1.1

NOTE: consistent with *Financial Statistics*, Section 1, July 1989; components are rounded independently of totals.

1. The author is much indebted to colleagues in the CSO for many helpful comments on the draft of this article. He would also like to emphasise that the article describes only a user's application of computer facilities evolved by the CSO computer branch. Their work has been the essential ingredient.

Series labels

The main feature of the new financial computer system is that formulae like $A = B + C$ are, in fact, hardly used. Instead, each series has a label which says where the series needs to be put. Central government transactions in local authority debt, for example, might have half a dozen components. They are added together not by writing down a formula but by selecting all the series with 'central government' and 'local authority debt' in their labels. Maintenance is simplified because to introduce, relocate or remove a series, all that is needed is to include, modify or delete its label. Reclassification is also made easier because the labels can be used to carry alternative classifications.

Classification tables

The labels are assembled in a *classification table* as illustrated in Table 2. These are designed with the fields (columns) to suit the job in hand. The first field always contains the CSDB's unique four-letter identifier of the series. The rest of the row is the series label. This example is an extract from the table used for compiling the financial flow accounts. It contains data management information as well as details of where the series are located in the analysis. The information is heavily abbreviated to include as much as possible when the table is displayed on screen. The fields in the example contain:

1. CSDB series identifier
2. Instrument name at main category level

3. Other details of the series (eg sub-division of the main instrument by particular financial conditions)
4. Transacting sector
5. Type (ie whether an asset or a liability)
6. Element (ie whether a flow or a level)
7. Provider of the series (ie the immediate source from which input data are obtained)
8. Channel (ie the route by which input data are obtained such as pick-up through the CSDB, manual input, etc)
9. Function (ie role played in the compilation process such as free standing input, residual estimate, counterpart, etc)
10. Balancing sector (ie sector which takes the residual estimate where one is needed)
11. Main instrument category (those regularly distinguished in *Financial Statistics*, Table 1.1)
12. Sub-category (sub-divisions of the main instrument which also balance across sectors)
13. Sub-sub-category (sub-divisions of the instrument which are not balanced across sectors)
14. Other fields, only two of which are represented here, used for alternative instrument classifications or any other useful selection criteria.

'Residual estimate' and 'balancing across sectors' are described later in the section on compilation.

TABLE 2: Extract from financial accounts classification table

CDID	Name	Detail	Sector	Type	Element	Provider	Channel	Function	Bal- ancing sector	Sub- cat- egory	Sub- sub- cat- egory	Alter- native A	Alter- native B
AACB	nac		cg	l	f	ty	m	f	pe	06	t	t	
AAIA	nac		pc	a	f	5c	p	f	pe	06	t	t	
AAJB	nac		ms	a	f	be	t	f	pe	06	t	t	
AANB	nac		ic	a	f	be	t	f	pe	06	t	t	
AAPB	nac		pe	a	f	in		r	pe	06	t	t	
AASD	nac		os	a	f	6	p	f	pe	06	t	t	
RZAR	ladc	ecs-secs	la	l	f	in		r	la	192	11	t	
-HGKE	ladc	ecs-secs	ms	a	f	6	p	f	la	192	11	t	
HCQW	ladc	ecs-secs	os	a	f	6	p	f	la	192	11	t	
RZAS	ladc	ecs-othr	la	l	f	in		r	la	192	12	t	
RGKB	ladc	ecs-othr	ms	a	f	6	p	f	la	192	12	t	
HBTN	ladc	ecs-othr	os	a	f	6	p	f	la	192	12	t	
RZAT	ladc	nonecs	la	l	f	in		r	la	192	20	t	
DXMJ	ladc	nonecs	ms	a	f	be	m	f	la	192	20	t	
AAMF	ladc	nonecs	of	a	f		z	f	la	192	20	t	
CGLX	ladc	nonecs-s	os	a	f	6	p	f		192	20	1	
CGQX	ladc	nonecs-o	os	a	f	6	p	f		192	20	2	
RZAQ	ladc	nonecs	os	a	f	in		t	la	192	20	t	
AAEG	ladc		la	l	f	in		t		192	t	t	
AAJJ	ladc		ms	a	f	in		t		192	t	t	
AAMF	ladc		of	a	f		z	f		192	t	t	
AARH	ladc		os	a	f	in		t		192	t	t	

NOTE: the extract relates to two financial instruments, notes and coin (nac) and local authority foreign currency debt (ladc). The latter comprises various sub-instruments under or not under the exchange cover scheme (ecs and nonecs).

Tables of this kind make the methodology visible. They show what series are included and how they are used. They can be seen by everyone with access to the computer and they can be printed and sent to anyone else.

Data acquisition

Classification tables help in managing the data. There is no need, for example, to list series when picking them up as input. They can be handled as *logical groups*, again using the labels.

All series provided by HM Treasury, for example, can be manoeuvred by selecting all series with 'ty' in the provider field. The group definition is stored rather than its contents, so any new series with the relevant selection criteria in its label is automatically included. Groups, once defined, are virtually maintenance free.

Aggregation

One of the main ways of combining the building brick series is by using *aggregation* instructions. An example is shown in Table 3. The underlying process amounts to calculating marginal totals. The fields in the classification table define a multi-dimensional space with one or more series at each co-ordinate intersection. Entries in the *select* column of the aggregation instruction are used to define a sub-space and entries in the *sum* column say which dimension or dimensions of the sub-space are to be collapsed to form marginal totals. A more homely way of expressing this is to say that the aggregation instruction defines a set of pigeon holes and indicates which series are to be put in them and added together.²

The example instruction selects a sub-space comprising flow series (the 'f' entry) for all the combinations of sector, category, sub-category and sub-sub-category (the '*' entries). It then sums across the sub-sub-category dimension to calculate the sub-category totals for all these combinations (the 't' entry).

Entries against category, say, of '06 15 31', say, would limit this aggregation to categories 06, 15 and 31. Entries must reflect values in the classification table and the table must contain rows for the result series. In this case, the result rows would have 't' in the sub-sub-category field.

Aggregations of this kind can do the work of many, often several hundred or more, separate formulae. Like other types of instruction used in the system, they are initiated by making entries in standard forms which are selected from menus and displayed on screen. The introductory entries in this example include the aggregation name and the status (or version of the data). Naming the instruction enables it to be saved for quick retrieval.

TABLE 3: Specimen aggregation instruction

Aggregation name: flfsscl		Classification table: fact1
Title: flf sub-category totals		
Change sign of result? N	Status: FAC	Period: Q
Field name	Select values	Sum to value
name		
detail		
sector	*	
type		
element	f	
provider		
channel		
function		
balancing sector		
category	*	
sub-category	*	
sub-sub-category	*	t
spare a		
spare b		

Compilation

The compilation sequence starts by deriving residual estimates for most of the personal sector and other items where information is not otherwise available. These are based on the constraint that, within a financial instrument, borrowing and lending must balance across all sectors, ie must sum to zero. If other sector entries are known, the last one can be completed as the residual to meet this constraint.

Aggregation instructions derive these residuals and then calculate sub-instrument and instrument totals for each sector. This assembles the data in an instrument-by-sector matrix like Table 1 but in enough detail to provide building bricks for all other analyses. On the instrument dimension, these are obtained by re-classifying series into different instrument groupings using extra fields such as A and B in the right-hand side of Table 2 and re-aggregating. Different sector groupings are built up by aggregating across sectors rather than across instruments to obtain accounts for the public sector, the non-bank private sector, etc. The appropriate component sectors are selected from the underlying detailed matrix.

Operational experience

We began constructing this computer system towards the end of last year and have been running it live since April for flows and June for levels. Most of the development effort went into disentangling the old system rather than building the new one.

2. Some readers will recall that, in an earlier era, this sort of work was done (rather more slowly) using punched cards and knitting needles.

Advantages are already conspicuous and so far we have not encountered any important drawbacks, though it is early to make a balanced assessment. Given that the CSDB is available, the system does not seem to be expensive. Nor does it seem difficult to learn, though it is somewhat abstract, focusing as it does on logic rather than data. The data can be inspected easily, but not in close conjunction with the logic as is usual in spreadsheets. We think that this aspect can be improved as CSDB facilities develop.

The financial accounts call for mostly bulk calculation within a well ordered accounting scheme. The system might not be appropriate for more fragmentary problems. There are, nevertheless, rough edges to the financial work as where input data are not in a form that can be immediately used by the main system. We are handling these in satellite calculations (using CSDB formulae facilities) and rows in the classification table are used to keep track of the series routed through these outlying areas.

Reconciliation accounts

The classification table approach will be useful when we develop accounts which reconcile flows and levels. In principle, matrices of successive end-period levels on the lines of Table 1 are connected by similar matrices of flows, price changes, revaluations, movements between sectors, etc during each accounting period. These can be represented in the classification table using extra entries in the element field. The reconciliation varies from cell to cell with data availability and nature of instrument, but there are a limited number of cases and these can, we think, be evaluated using the CSDB's *calculation* instruction. This carries out all the usual arithmetic operations as well as lead/lag, difference, index, etc, between matrices selected from the classification table. We shall need to include interpolation functions as well.

A small number of these instructions will enable us to evaluate the reconciliation for each cell in the matrix. We shall first need to put the flows and levels onto a common instrument classification, but again the convenience of the system for re-categorising series should enable us to do this fairly easily. The project will nevertheless call for extra data and eliminating discrepancies, when revealed, will depend partly on whether data sources can be improved.

The present system, with only flows and levels, contains about 5,000 series. With reconciliation we expect this to expand to about 10,000 series.

The central shared database

The CSDB is held on the CSO's Sequent Symmetry computer and uses the Ingres relational database package. Conventional uses for this package include survey analysis and stock control. The CSO's computer branch have adapted it to manipulate time series and have also developed the screen-based menu system and other facilities which make it specially convenient for the CSO's work. The general techniques are therefore well established, but their application in the CSO to economic time series is probably a new departure.

Other applications

The classification table approach could perhaps be useful in other areas where time series data are manipulated in an accounting framework. It would, for example, be a way of analysing data from regular surveys which need to be classified by item, respondent, class of respondent, etc and for which various totals and ratios need to be calculated. It would seem suitable for the general run of regular financial surveys.

At the other end of the compilation process, the approach could perhaps be used as a means of expressing relationships between outputs from different compilation systems. The CSO, for example, maintains a comparison between the overseas sector in the financial accounts and the capital account of the balance of payments, which is compiled separately and, for some instruments, follows different conventions. The classification table might be a convenient way of keeping track of this and making the relationship readily accessible.

Summary

The financial accounts are now being compiled using a technique based on series labelling and sorting rather than on formulae. This is being done using the Ingres classification table approach which is suited to the generally well-structured nature of the accounts and their need for re-analysis using alternative categories. The approach might be useful in other areas where time series data are analysed in an accounting framework. Its features are:

- a. The structure of the process is visible and is in large measure self-documenting.
- b. Links within the accounting framework can be traced easily, so modification can be quick and accurate.
- c. Data can be manipulated in bulk by using table fields to define logical groups.
- d. Data management can be tightened by including management information in table fields as well as arithmetical information.
- e. Maintenance is much reduced because logical groups do not need to be re-defined when the contents of the accounting framework are changed or expanded.
- f. Alternative analyses can be made and cross-related easily.

We should like to improve the visibility of the data and the system is probably not suitable for highly fragmented work (though it can accommodate and pull together a degree of fragmentation). But these are not serious shortcomings for the purpose in hand and, in the short time we have been operating it, this new system has worked well. It also appears to have much potential for development.

References

Financial Statistics (HMSO monthly) (Price £7.25 net).

Financial Statistics Explanatory Handbook (HMSO 1988) (Price £6.75 net). Annual subscription £85 net including Explanatory Handbook.

Retirement of Frank Whitehead

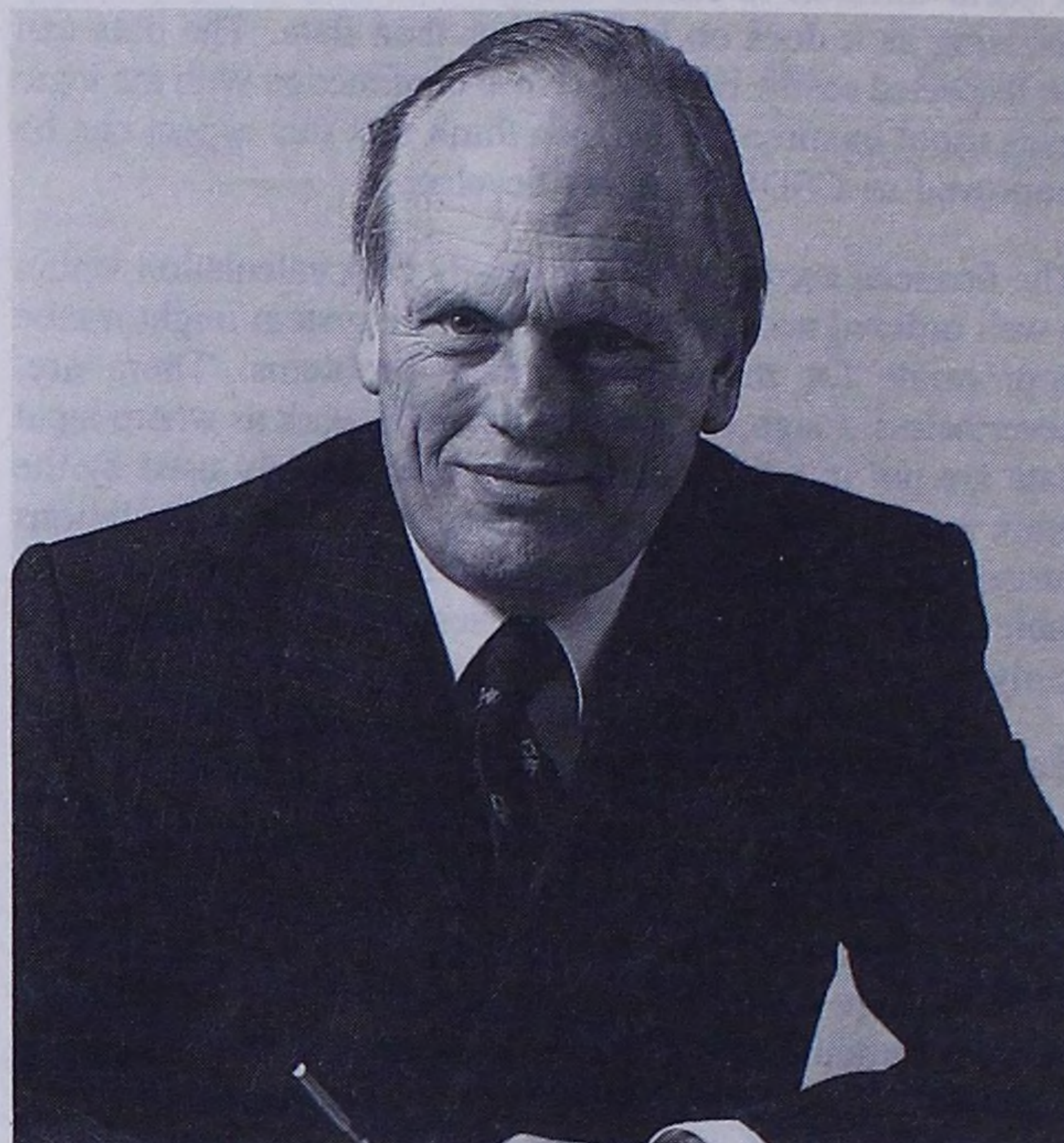
Mr Frank Whitehead who has been Deputy Director (Statistics) at the Office of Population Censuses and Surveys since December 1982 retired at the end of May.

Frank Whitehead graduated in Statistics and Economics at the London School of Economics in 1952. Among his lecturers were Eugene Grebenik and Claus (now Sir Claus) Moser, so he was well prepared for a career in OPCS and the Government Statistical Service. However, initially he worked in private industry and this was followed by a nine year period as a Professional Officer in the Central Statistical Office of the Federation of Rhodesia and Nyasaland where he worked on cost of living surveys in African townships and the first full censuses of Africans in what is now Zimbabwe and Zambia.

In 1964 he started his first spell in what is now OPCS when he worked as a Statistician in the General Register Office. The statistical team was smaller than now. Under the one Chief Statistician covering both the Census and all population statistics John (now Sir John) Boreham, Frank made a major contribution to the 1966 Census of Population. This was both the only 'mid-term' census so far held and the only sample census ever taken in Great Britain; the enumeration being a 10 per cent sample, which involved the identification and solution of a number of technical problems, in addition to the usual challenges provided by any census.

In 1968 he moved on promotion to the Ministry of Social Security as Chief Statistician. This was followed by a spell in charge of health activity statistics covering hospital and community services as well as statistics dealing with nutrition, prescriptions, abortion, smoking and drinking.

He returned to OPCS in 1977 as Head of Social Survey. During this period he was instrumental in a number of important developments in the work of Social Survey and its organisational structure. For example it was under Frank's stewardship that the Labour Force Survey (then biennial) was extended to become a continuous annual enquiry. He was also responsible for establishing clear lines of responsibility for survey projects, within the Division, and for creating greater harmony between the different technical operations. This was also the time of course of the Review of the Government Statistical Service by Sir Derek Rayner. Social Survey was especially subject to scrutiny. Frank Whitehead was closely involved in these negotiations from which Social Survey Division emerged intact but on a course that has recently led to the introduction of a full repayment arrangement for social surveys.



Frank Whitehead

In 1982 he was promoted to Under Secretary on succeeding Philip Redfern as Deputy Director. His period as Deputy Director included some notable events in which he played a key role. While the regular work of the Office has continued, its overall aims and objectives have been revised and established more firmly, plans for the 1991 Census have been laid and a new IT strategy developed. The 150th anniversary of the founding of the GRO was celebrated and a special issue of *Population Trends* was prepared; the second Demographic Review was written, edited and issued; and a second World Population Conference was held in Mexico City where he was the senior civil servant in the UK delegation.

Throughout he has been keen to ensure that OPCS statistical work was linked in appropriately both with the Government Statistical Service as a whole and to the wider interests in demographic work — both nationally and internationally. As Chairman of the Publications Planning Group and of the Editorial Board of *Population Trends*, he has played an active part in the review of the content and form of OPCS published material — to meet the changing interests of customers.

Mr Whitehead is succeeded by Mr Eric Thompson who moves from the post of Director of Statistics at the Department of Transport, and who also worked in the OPCS in the 1960s.

New Surveys notified to the Survey Control Unit

March 1989 to May 1989

For further information the survey listed, the appropriate departmental contact may be obtained from Miss J Dinehart (01-217 4340), Survey Control Unit, Central Statistical Office, Millbank Tower, Millbank, London SW1P 4QX.

New Surveys notified March 1989 to May 1989

Title	Department	Those approached	Approximate number approached	Location	Frequency
Business and Local Authority Surveys					
Economic Evaluation of Woodlands and the 'Set Aside' of Agricultural Land	DAFS	Farms	N/K	S	AH
Survey of New West Midlands Employers	DEM	Employers	150	WM	AH
SEPACS: Priority Suppliers Directory: Postal Survey of Workshop Managers	DEM COI	Employers	250	GB	AH
Publication on Oil and Gas - The 'Brown Book' Readers Survey	DEN	Readers	N/K	UK	AH
Demand for Highly Qualified People in Small Businesses	DES DTI	Employers	1852	UK	AH
Updating Professional Skills	DES	Professionals	123	UK	AH
Housing Association Allocation Policies	DOE	Housing Associations	120	N/K	AH
The Business Expansion Scheme and Rented Housing	DOE	Businesses	95	N/K	AH
Evaluating the Impact of the Landlord and Tenant Act 1987 (Pilot)	DOE	Landlords	40	N/K	AH
Glass Costs Survey	DOE	Glass Suppliers	100	EW	AH
Methodologies for Assessing Housing Conditions	DOE	Local Housing Authorities	367	E	AH
Evaluating the Impact of Block and Area Based Schemes	DOE	Local Housing Authorities	30	E	AH
Appraisal of Shared Ownership	DOE	LAs And Housing Associations	N/K	GB	AH
Area Economic Studies Phase II: Basingstoke and Alton	DOE	Businesses	565	SE	AH
Area Economic Studies Phase II: Medway and Maidstone	DOE	Businesses	40	SE	AH
Local Government Act 1988: Part 1 Return on Competition	DOE	Local Authorities	810	E	HY
Survey on Dissemination and Use of Good Practice Publications	DOE	Local Authorities	57	E	AH
Employment Densities Research	DOE	Employers	2000	UK	AH
National Insurance and Statutory Sick Pay - Employers' Telephone Survey	DSS COI	Heads of Accounts	500	GB	AH
Take up of Parallel Architectures	DTI TA	UK Industries and Universities	40	UK	AH
Trading Places - Readership Survey	DTI	Readers	400	SE	AH
Benchmark Survey for Evaluation of Open Systems Standards Module and Advanced Information Technology Module Technology Transfer Schemes	DTI	Manufacturers	300	UK	AH
Machine Tool Research and Development in the UK	DTI	Manufacturers	140	UK	AH
Industry and the Environment	DTI COI	Manufacturers	500	UK	AH
Need for Training in Advanced Information Technology	DTI	Higher Education Institutions	160	UK	AH
Identification of Key Issues in Standards and Public Procurement for the Industrial Materials Markets	DTI	Manufacturers	90	UK	AH
The Machine Tool Market in the Engineering Sector	DTI	Manufacturers	600	UK	A
Market Assessment Study on Impact of Ozone-Depleting Substances - First Phase on Chlorinated Solvents	DTI	Manufacturers	300	UK	AH
Market Study on Impact of Ozone-Depleting Substances (Interviews)	DTI	Manufacturers	N/K	UK	AH
Market Assessment Study of the Fashion Designer Industry	DTI	Fashion Designer Industry	200	UK	AH
Intra-European Community Trade Statistics after 1992-Consultation Document	DTI MAFF	Exporters	1100	UK	AH
London Taxi Survey: Main Study	DTP TRRL	Drivers	200	SE	AH
ECGD Project Group Quality of Customer Service Survey 1989	ECGD	Exporters and Banks	350	UK	A
Evaluation of Jobshare in an Inner City Area	ES	Employers	N/K	N/K	AH
Evaluation of Local Employer Initiatives	ES	Employers	N/K	GB	AH
Local Authority Attitudes to Sheltered Placement Scheme Sponsorship	ES	Employers	25	GB	AH
Local Labour Market Study-Westerhailes, Edinburgh	IDS SO	Employers	165	S	AH
Local Labour Market Study-Castlemilk, Glasgow	IDS SO	Employers	165	S	AH
Local Labour Market Study-Ferguslie Park, Paisley	IDS SO	Employers	165	S	AH
Local Labour Market Study-Whitfield, Dundee	IDS SO	Employers	165	S	AH
Scottish New Towns Industrial and Commercial Development	IDS	Businesses	530	S	AH
Scottish Management Training Survey	IDS	Exporters	550	S	AH
Economic Value of Sports Shooting in Scotland	IDS SDA	Farms	N/K	S	AH
PAYE Communications with Employers	IR	Employers	143	UK	AH
Cereals Co-responsibility Levy: Seed Coefficient	MAFF	Cereals Seed Merchants	170	UK	AH
Agriculture Development and Advisory Service Divisional Bulletin: Readership Survey	MAFF ADAS	Farms	5400	EW	AH
Attitudes of Employers to having staff in Volunteer Reserve Forces	MOD COI	Employers	20	GB	AH
The Development and Application of Research	NEDO	Readers	77000	UK	AH
Survey of Intermediary Costs	OFT	Financial Advisors	180	UK	AH
Survey of Publishers	OFT	Publishers	684	UK	AH
Survey of Booksellers	OFT	Booksellers	700	UK	AH
Survey of Book Wholesalers to Library Suppliers	OFT	Book Wholesalers	35	UK	AH
Consumer Satisfaction with Local Authority Surveys Before and after Competitive Tendering (Businesses)	SDD	Traders	2250	S	AH
Social Work Client Time Allocation Survey (Pilot)	SED	Social Services	120	S	AH
Support to Adults with Learning Difficulties in Scotland	SO SED	Social Services	300	S	AH
Scottish Travel Fair: Surveys of Non Attendance Buyers	STB	Tourist Businesses in the UK	300	UK	AH
Business Growth Training Campaign Baseline Survey	TA COI	Employers	1000	GB	AH
Employment Training Creative Development Research	TA COI	Employers	80	E	AH
Literacy and Numeracy Training in YTS	TA	Employers	N/K	GB	AH
Evaluation of Technician Engineering Scholarship Schemes (TESS)	TA	Engineering Firms	60	UK	AH
Management Competence Standards Survey	TA	Employers	350	GB	AH
Small Business Survey in South West	TA	Employers	6500	SW	AH
The Retention of Female Employees	TA	Employers	2009	GB	AH
YTS Inner Cities Project	TA COI	Employers	N/K	GB	AH
Evaluation of Special Training Needs in YTS	TA	Employers	N/K	GB	AH
YTS and the Labour Market	TA	Employers	100	GB	AH
YTS Costs and Benefits to Work Experience Providers	TA	Employers	400	ES	AH

<i>Title</i>	<i>Department</i>	<i>Those approached</i>	<i>Approximate number approached</i>	<i>Location</i>	<i>Frequency</i>
Business and Local Authority Surveys (continued)					
Greenbank Project Survey on Low Employer Participation in YTS (with particular regard to Handicapped Young People)	TA	Employers	400	NW	AH
Research into Employers' views on furthering National Training Initiative 2	TA	Employers	50	EW	AH
Developmental Evaluation of Training and Enterprise Councils (TECs)	TA		150	E	AH
Baseline Studies of Training and Enterprise Councils (TECs)	TA		150	E	AH
Characterization of Commercial Vehicle Operation	TRRL DTP	Transport	1000	UK	AH
Further Education Revenue Account	WO	Local Education Authorities	8	W	A
Household and Individual Surveys					
1988 Employment Act Research. Survey of Trade Union Members	DEM COI	Trade Union Members	400	GB	AH
Displacement Effects in the EAS: A Local Labour Market Study	DEM ES	Customers	50	EM	AH
Jobclub Monitor	DEM COI	Unemployed	500	GB	AH
Cold Weather: Telephone Follow-up of Callers to 'Winter Warmth Line'	DH COI	Adults	500	EW	AH
Back to Nursing	DH COI	Nurses	50	E	AH
Nursing: Youth Concept Research	DH COI	Children	54	E	AH
Male Nursing Recruitment	DH COI	Adults	84	E	AH
Capital Bond Consumer Research	DNS	Adults	600	UK	AH
Investment Account Openers Survey	DNS	Adults	700	UK	AH
TNT Mailfast Monitoring Service	DNS	Adults	3384	Non UK	AH
Monitoring Homelessness Policy	DOE	Tenants	500	E	AH
Appraisal of Shared Ownership Schemes	DOE	Owner Occupier	1000	E	AH
Monitoring of Cash Incentives Schemes Part 2	DOE		130	E	AH
Minor Health Risks of Bathing in Water Contaminated with Sewage-Students	DOE	Students	1800	EW	AH
Minor Health Risks of Bathing in Water Contaminated with Sewage-Bathers	DOE	Bathers	1800	EW	AH
Community Charge: Advertising Research	DOE COI	Adults	200	E	AH
Retirement and Retirement Plans	DSS OPCS	Elderly	18500	GB	AH
Disabled Children	DSS OPCS	Disabled Children	101200	GB	AH
Lone Parents Survey	DSS	Parents	4800	GB	AH
Family Credit Campaign Evaluation Research	DSS COI	Parents	800	GB	AH
Pensioners Research	DSS COI	Elderly	20	E	AH
Primary Route Signing - Consultation with Drivers	DTP	Drivers	10000	SE	AH
A12 Lowestoft Roadside Interviews	DTP	Drivers	20000	EA	AH
Heathrow Area and South-West London Orbital Movement Study	DTP	Drivers	22400	SE	AH
A134 to Hardwick Roundabout - Roadside Interview Survey	DTP	Drivers	2000	EA	AH
M11 Junction 5 Improvements	DTP	Drivers	10000	SE	AH
A13 East Traffic Model	DTP	Drivers	30000	SE	AH
A13 West Traffic Model	DTP	Drivers	30000	SE	AH
Survey of Employment Service Referrals to Employment Training	ES DEM	Adults	1200	GB	AH
Enterprise Allowance Scheme Pilots - The Evaluation of Enterprise Evenings	ES	Adults	754	E	AH
Study of Urban Unemployment in Nottingham	ES	Unemployed	60	EM	AH
Smoke Alarms Qualitative Research among Tenants	HOME COI	Tenants	40	E	AH
Feasibility Survey of Accidents and Occupational Illness	HSE	Patients	75	GB	AH
Other Ranks Planning Research	MOD COI		100	E	AH
RAF Officer Recruitment Creative Development Research	MOD COI	Youths	48	E	AH
Royal Navy Tracking	MOD COI	Youths	2000	E	AH
Corporate Complaints Handling Consumer Survey	OFT	Adults	1000	GB	AH
Complaints Handling and Brand Loyalty	OFT	Adults	2000	GB	AH
Attitudes to Public Search Room at St Catherine's House	OPCS	Adults	400	S	AH
East Lothian Tourism Survey	SDD SDA	Tourists	1500	UK	AH
Consumer Satisfaction with Local Authority Services before and after Competitive Tendering (Household)	SDD	Householders	4050	S	AH
Travel Centre's Survey	STB	Adults	400	ES	AH
Holiday Exhibition Visitor Survey	STB	Visitors	350	GB	AH
Employment Training Creative Development Research for the Unemployed	TA COI	Unemployed	30	E	AH
Open University in Wales follow up Study of Designated TVEI Students in three Welsh Local Education Authorities	TA	Youths	478	W	AH
Trainees with Disabilities: Their experiences of ET and the experiences of their Training Providers	TA	Trainees	100	EW	AH
Evaluation of Experimental Programme in High Technology (Graduates)	TA	Graduates	100	GB	AH
Views of Women Qualified Scientists and Engineers	TA	Women	150	GB	AH
Methods used in Learning to Drive	TRRL DTP	Drivers	16000	GB	AH
Attitudes of Drivers who have recently passed the L-Test	TRRL DTP	Drivers	5000	GB	AH
Assessment of Driving Skill of Drivers who have recently passed L-Test	TRRL DTP	Drivers	1300	GB	AH
Survey of Candidates who have recently failed the L-Test	TRRL DTP	Drivers	16000	GB	AH
Accident and Offence Records of Drivers who have recently passed L-Test	TRRL DTP	Drivers	30000	GB	AH
Parking in Calderdale	TRRL DTP	Drivers	550	YH	AH
Survey of Vehicle Operating Characteristics in Urban Areas	TRRL DTP	Car Owners	1000	E	AH
Roadside Survey of Drinking and Driving (1989 Phase)	TRRL DTP	Drivers	8000	SW	AH
Driver Infringement Survey (Manchester)	TRRL	Drivers	800	E	AH
Traffic Management for Safety-Validation Studies	TRRL	Drivers	2500	SE	AH
Questionnaire on A470 Pentrebach to CEFN COED Improvement	WO		600	W	AH
Evaluation of 'Drinkwise Wales' - A (Attendees)	WO HPAW	Adults	250	W	AH
Evaluation of 'Drinkwise Wales' - B (Organisers)	WO HPAW	Adults	50	W	AH

LIST OF ABBREVIATIONS

Location		Departments			
<i>E</i>	<i>England</i>	<i>ADAS</i>	<i>Agriculture Development Advisory Service</i>	<i>HSE</i>	<i>Health and Safety Executive</i>
<i>EM</i>	<i>East Midlands</i>	<i>COI</i>	<i>Central Office of Information</i>	<i>IDS</i>	<i>Industry Department for Scotland</i>
<i>EA</i>	<i>East Anglia</i>	<i>DAFS</i>	<i>Department of Agriculture & Fisheries for Scotland</i>	<i>IR</i>	<i>Inland Revenue</i>
<i>ES</i>	<i>England and Scotland</i>	<i>DEM</i>	<i>Department of Employment</i>	<i>MAFF</i>	<i>Ministry of Agriculture, Fisheries and Food</i>
<i>EW</i>	<i>England and Wales</i>	<i>DEN</i>	<i>Department of Energy</i>	<i>MOD</i>	<i>Ministry of Defence</i>
<i>GB</i>	<i>Great Britain</i>	<i>DES</i>	<i>Department of Education and Science</i>	<i>NEDO</i>	<i>National Economic Development Office</i>
<i>NW</i>	<i>North West</i>	<i>DH</i>	<i>Department of Health</i>	<i>OFT</i>	<i>Office of Fair Trading</i>
<i>S</i>	<i>Scotland</i>	<i>DNS</i>	<i>Department for National Savings</i>	<i>OPCS</i>	<i>Office of Population Censuses and Surveys</i>
<i>SE</i>	<i>South East</i>	<i>DOE</i>	<i>Department of the Environment</i>	<i>SDA</i>	<i>Scottish Development Agency</i>
<i>SW</i>	<i>South West</i>	<i>DSS</i>	<i>Department of Social Security</i>	<i>SDD</i>	<i>Scottish Development Department</i>
<i>UK</i>	<i>United Kingdom</i>	<i>DTI</i>	<i>Department of Trade and Industry</i>	<i>SED</i>	<i>Scottish Education Department</i>
<i>W</i>	<i>Wales</i>	<i>DTP</i>	<i>Department of Transport</i>	<i>SO</i>	<i>Scottish Office</i>
<i>WM</i>	<i>West Midlands</i>	<i>ECGD</i>	<i>Exchequer Credits Guarantee Department</i>	<i>STB</i>	<i>Scottish Tourist Board</i>
<i>YH</i>	<i>Yorkshire & Humberside</i>	<i>ES</i>	<i>Employment Service</i>	<i>TA</i>	<i>Training Agency</i>
		<i>HPAW</i>	<i>Health Promotion Authority for Wales</i>	<i>TRRL</i>	<i>Transport and Road Research Laboratory</i>
		<i>HOME</i>	<i>Home Office</i>	<i>WO</i>	<i>Welsh Office</i>
General		Frequency			
<i>EAS</i>	<i>Enterprise Allowance Scheme</i>	<i>A</i>	<i>Annual</i>		
<i>ET</i>	<i>Employment Training</i>	<i>AH</i>	<i>Ad hoc</i>		
<i>N/K</i>	<i>Not Known</i>	<i>HY</i>	<i>Half yearly</i>		
<i>SEPACS</i>	<i>Sheltered Employment Procurement & Consultancy Services</i>				
<i>TVEI</i>	<i>Technical and Vocational Education Initiative</i>				
<i>YTS</i>	<i>Youth Training Scheme</i>				
<i>TNT</i>	<i>Thomas' National Transportation</i>				

Recently available statistical series and publications (continued from page 86.29)

The Department of Transport is often prepared to sell unpublished data. Further information can be obtained from:

Directorate of Statistics
 Department of Transport
 Romney House
 43 Marsham Street
 London SW1P 3PY
 Telephone: 01-276 8513

Department of Trade and Industry

An article in *British Business* appears every month on 'engineering sales and orders'. Figures are published of sales, net new orders and orders on hand (home, export and total), at constant 1985 prices, for mechanical engineering and instrument and electrical engineering separately and for combined engineering.

British Business (Department of Trade and Industry) (price £1.40 weekly, annual subscription £85 net).

Subscription service; Telephone: 01-215 3949

Northern Ireland Department of Agriculture

Statistical Review of Northern Ireland Agriculture, 1988

This publication, price £10.00, will be available in early March from:

Department of Agriculture
 Economics and Statistics Division
 DANI, Dundonald House
 Upper Newtownards Road
 Belfast BT4 3SB

Scottish Office

Scottish Local Government Financial Statistics 1987-88, published mid-April, price £4.

Scottish Abstract of Statistics 1988, No. 17, price £15.50.

These publications can be obtained from Scottish Office Library, address on page 86.26.

Central Statistical Office

Regional Trends 24 (HMSO July 1989) price £19.50 net.

Recently available statistical series and publications

The following publications containing social statistics have recently, or will soon become available during the July to September quarter of 1989. Unless otherwise specified, copies can be purchased from Her Majesty's Stationery Office. A list of release dates of economic series is published monthly in *Economic Trends*.

Department of Social Security

The Department of Social Security produces regular monthly and quarterly statistical series on such topics as unemployment benefit, child benefit and sickness and invalidity benefits. Extracts and summaries for these series are published in *Social Security Statistics*. Further information can be obtained from:

Mr W J Graham
Department of Social Security
Room 31M
Newcastle upon Tyne NE98 1YX
Telephone: Tyneside (091) 2797373 (GTN 5222)

Department of Health

DSS Tax/Benefit Model Tables, April 1988, price £3.30, available from:

Mr R Pike
Department of Social Security
Room A526
Alexander Fleming House
Elephant and Castle
London SE1 6BY

The following statistical series and publications are available:

Bulletin 2/1/89 *Statistics of Elective Admissions and Patients Waiting Six Months Ending 30 September 1988*
Published March 1989 Price £2.00

Bulletin 4/2/89 Prescriptions Dispensed by Pharmacy and Appliance Contractors
England 1977-1987
Published March 1989 Price £2.00

Statistical Bulletins referred to above may be purchased from:

DH Information Division
PO Box 21
Canons Park
Government Buildings
Honeypot Lane
Stanmore
Middlesex HA7 1AY
Telephone: 01-952 2311

Scottish Education Department

Scottish Education Department Statistical Bulletins on the following subjects:

Excess and Deficit of Secondary School Teachers by Subject Pupils and Teachers in Education Authority Primary and Secondary Schools
The National Certificate — 1987/88

The Social Work Services Group of the Scottish Education Department has published the following bulletins:

Staff of Social Work Departments 1987
Residential Accommodation 1987
Children in Care or Under Supervision as at 31 March 1987
Home Care Services, Day Care Establishments and Day Services 1987
Community Service by Offenders 1986
Referrals of Children to Reporters and Children's Hearings 1987

Copies of the above bulletins may be purchased (price £1 net) from:

The Library
Official Publications Sales
Scottish Office
Room 1/44
New St Andrew's House
Edinburgh EH1 3TA
Telephone: 031-244 4806 (GTN 7188)

Industry Department for Scotland

The following Research Papers have now been published (price £5): *Area Initiatives Evaluation Handbook*: report prepared by PIEDA, Planning and Economic Consultants (Research Paper No. 16).

Young People's Routes into the Labour Market: Andy Furlong and David Raffe, Centre for Educational Sociology, University of Edinburgh (Research Paper No. 17).

The following additional Bulletins are now available (price £1.00):

D1.2 *The rebased Index of Production and Construction for Scotland.*

E1.5 *Offshore employment in the northern North Sea in 1988.*

Copies of Research Papers and Statistical Bulletins may be obtained from:

Scottish Office Library
Official Publications Sales
Room 1/44
New St Andrew's House
Edinburgh EH1 3TA
Telephone: 031-244 4806 (GTN 7188)

Office of Population Censuses and Surveys

Population Trends 57 Autumn (HMSO 1989) (price £6.50 net.)

- OPCS Monitors -

(available from OPCS Information Branch, St Catherines House, 10 Kingsway, London WC2B 6JP. Telephone enquiries 01-242 0262 ext. 2243)

Electoral statistics 1989 — local government areas (EL 89/1) (price £2)

Deaths by cause: 1988 registrations (DH2 89/2) (price £2)

Legal abortions 1988 (AB 89/3) (price £1)

- Reference volumes -

Birth statistics 1987 Series FM1 No. 16)

Marriage and divorce statistics 1987 (Series FM2 No. 14)

Congenital malformation statistics, notifications 1987 (Series MB3 No. 3)

Hospital In-patient Enquiry: In-patient and day case trends 1979-1985 (Series MB4 No. 29)

International migration 1987 (Series MN No. 14)

Mortality statistics, accidents and violence, 1986 (Series DH4 No. 12)

Electoral statistics 1989 (Series EL No. 16)

- Social Survey reports -

A Survey of Funeral Arrangements 1987 by Kate Foster (SS 1287)

OPCS surveys of disability in Great Britain
Report 3: The prevalence of disability among children by Margaret Bone and Howard Meltzer

Report 4: Disabled adults: services, transport and employment by Jean Martin, Amanda White and Howard Meltzer

Report 5: The financial circumstances of families with disabled children living in private households by Malcolm Smyth and Nikki Robus

Welsh Office

Staff of Social Services Department: Year ended 30 September 1988

Welsh Education Statistics Bulletin No. 6 — Survey of Advanced Supplementary Level Examinations

Activities of Social Services Departments: Year ended 31/3/88

Farm Incomes in Wales No. 3 1989

Children in Care or Under Supervision Order in Wales: Year ended 31/3/88.

The above publications are available from:

Publications Unit
Economic and Statistical Services Division
Welsh Office
Cathays Park
Cardiff CF1 3NQ
Telephone: 0222-82 5054 (GTN 2408)

Department of the Environment

Housing and Construction Statistics, Great Britain, 1977-1987
Housing and Construction Statistics, Part 1 No. 37

March Quarter 1989

Housing and Construction Statistics, Part 2 No. 36
December Quarter 1988

Local Housing Statistics, England and Wales, No. 89

April 1989 - Housebuilding and renovations figures for 1987 and 1988.

Local Government Financial Statistics England 1986/1987
Housing Trailers to the 1981 and 1984 Labour Force Surveys
UK Blood Lead Monitoring Programme 1984-7: Results for 1986 (Pollution reports, No. 26)

The above publications are available from Her Majesty's Stationery Office.

Statistical Bulletin (89) 1 : *Air Quality*

Statistical Bulletin (89) 2 : *Water Quality*

Statistical Bulletin (89) 3 : *Radioactivity*

Statistical Bulletin (89) 4 : *Noise, Waste, Landscape and Nature Conservation, and Supplementary*

The above annual bulletins provide additional detailed tables for most of the Chapter topics in the Department's *Digest of Environmental Protection and Water Statistics* published recently by HMSO.

Land Use Change in England, Statistical Bulletin (88)5 figures for 1987

1985 Based Estimates of Numbers of Households in England, the Regions, Counties, Metropolitan Districts and London Boroughs 1985-2001

Housebuilding in England by Local Authority Areas 1980-1987

The above publications are available from:

Department of the Environment
Publication Sales Unit
Victoria Road
Ruislip
Middlesex HA4 ONZ
Telephone: 01-841 3425

The following information is issued in press notices or bulletins on a regular basis:

Monthly: *Housebuilding, construction new orders, building new orders, building materials and components, brick production, and new orders by type of work.*

Quarterly: *Construction output and employment, planning applications and decisions, renovations and homeless households.*

Annually: *Slum clearance.*

Further information is available from:

Department of the Environment
LGS, Room P1/001
2 Marsham Street
London SW1P 3EB
Telephone: 01-276 4003

Scottish Home and Health Department

The following statistical bulletins are available:

No. 1/1987 *Crimes and Offences involving Firearms, Scotland 1985*

No. 2/1987 *Children and Crime, Scotland 1983-1985*

No. 3/1987 *Criminal Proceedings in Scottish Courts, 1985*

No. 4/1987 *Recorded Crimes, Scotland 1986*

No. 5/1987 *Motor Vehicle Offences in Scotland 1985*

No. 6/1987 *Prison Statistics Scotland 1986*

- No. 7/1987 *Children and Crimes, Scotland 1986*
 No. 8/1987 *Homicide in Scotland 1981-1985*
 No. 9/1987 *Criminal Proceedings in Scottish Courts, 1986*
 No. 1/1988 *Recorded Crimes and Offences Involving Firearms, Scotland 1986*
 No. 2/1988 *Recorded Crime in Scotland 1987*
 No. 3/1988 *Penalties Imposed by Criminal Courts in Scotland 1986*
 No. 4/1988 *Children and Crime, Scotland 1987*
 No. 5/1988 *Motor Vehicle Offences in Scotland 1986*
 No. 6/1988 *Recorded Crimes and Offences involving Firearms, Scotland 1987*
 No. 7/1988 *Prison Statistics, Scotland 1987*
 No. 8/1988 *Criminal Proceedings in Scottish Courts, 1987*
 No. 1/1989 *Recorded Crime in Scotland 1988*

Copies of the above bulletins may be purchased (price £1 post paid) from:

The Library
 Official Publications Sales
 Scottish Office
 Room 1/44
 New St Andrew's House
 Edinburgh EH1 3TA
 Telephone: 031-244 4806 (GTN 7188)

Scottish Development Department

The following statistical bulletins are available:

- HSIU No. 31 - Q1(87) - *Housing Trends in Scotland: Quarter ended 31/3/87*
 HSIU No. 32 - Q2(87) - *Housing Trends in Scotland: Quarter ended 30/6/87*
 HSIU No. 33 - Q3(87) - *Housing Trends in Scotland: Quarter ended 30/9/87*
 HSIU No. 34 - Q4(87) - *Housing Trends in Scotland: Quarter ended 31/12/87*
 HSIU No. 35 *Annual Estimates of Households*
 HSU No. 1 *Housing Trends in Scotland 1987 Part 1*
 HSU No. 2 *Housing Trends in Scotland 1987 Part 2*

Note: The Scottish Development Department's series of Statistical Bulletins is now being expanded to include information previously published in the annual publication *Scottish Housing Statistics*, which has been discontinued.

Copies of the above bulletins may be purchased (price 75p for HSIU series and £1 for HSU series) from:

The Scottish Office Library
 Publications Sales
 Room 1/44
 New St Andrew's House
 Edinburgh EH1 3TA
 Telephone: 031-244 4806 (GTN 7188)

Department of Education and Science

The following Statistical Bulletins are now available:

- No. 2/89 *Student Awards in England and Wales 1986-87*
 No. 3/89 *Participation in Education by Young People aged 16 and 17 in each Local Education Authority and Region: England 1983-84 to 1987-88*
 No. 4/89 *Student Numbers in Higher Education Great Britain 1975 to 1987*
 No. 5/89 *Pupil/teacher ratios for each LEA in England January 1988*
 No. 6/89 *First known destination of first degree graduates 1983-87*
 No. 7/89 *Pupils under five years in each LEA in England January 1988*
 No. 8/89 *Statistics of schools in England January 1988*
 No. 9/89 *Student/Staff Ratios and Unit Costs at Polytechnics and other Higher and Further Education Establishments in England*
 No. 10/89 *Survey of Information Technology in Schools*
 No. 11/89 *Students from abroad in Great Britain 1973 to 1987*

Copies of these publications may be obtained from:

The Department of Education and Science
 Statistics Branch
 Room 1/28
 Elizabeth House
 York Road
 London SE1 7PH
 Telephone: 01-934 9038 (GTN 2914-9038)

The following annual publications are available:

- Statistics of Education: School Leavers CSE and GCE 1987*
Statistics of Education: Further Education Student/Staff Ratios 1986-87
Statistics of Education: Schools 1988

Copies (price £12.00) may be obtained from:

Department of Education and Science
 Room 337
 Mowden Hall
 Staindrop Road
 Darlington DL3 9BG

Home Office

The following statistical bulletins are now available:

Issue No.	Title	Price
11/89	<i>Projections of long-term trends in the prison population to 1997</i>	£2.50
12/89	<i>The prison population in 1988</i>	£2.50
13/89	<i>Statistics of drug addicts notified to the Home Office, UK 1988</i>	£2.50
14/89	<i>Statistics of deaths reported to coroners, England and Wales 1988</i>	£2.50
15/89	<i>Statistics of the time taken to process indictable cases in the Magistrates' Courts, October 1988</i>	£2.50

16/89	<i>Statistics on the operation of certain police powers under the Police and Criminal Evidence Act 1984, England and Wales 1988</i>	£2.50
17/89	<i>Statistics on the operation of the prevention of terrorism legislation — first quarter 1989</i>	£2.50
18/89	<i>Statistics on the operation of the Firearms Act 1968, E & W 1988</i>	£2.50
19/89	<i>Reconvictions and recalls of life licensees and mentally disordered offenders: England and Wales 1987</i>	£2.50
20/89	<i>Notifiable offences recorded by the police in England and Wales, first quarter 1989 and notifiable offences in which firearms were reported to have been used: 1988</i>	£2.50
21/89	<i>Cautions, court proceedings and sentencing 1988</i>	£2.50
22/89	<i>Statistics of domestic proceedings in Magistrates' Courts, E & W 1988</i>	£2.50
23/89	<i>Control of Immigration statistics, first quarter 1989</i>	£2.50
24/89	<i>Statistics of the time taken to process indictable cases in Magistrates' Courts February 1989</i>	£2.50

Copies of these bulletins are available from:

Statistical Department
Home Office
Lunar House
Croydon CR0 9YD
Telephone: 01-760 2850, or by personal application to:

Publications Officer
Home Office Library
50 Queen Anne's Gate
London SW1H 9AT

The following statistical publications were issued in April-June 1989:

<i>Fire Statistics, United Kingdom, 1987 (annual)</i>	£5.00
<i>Probation Statistics, E & W 1987 (annual)</i>	£5.00
<i>Statistics of drug addicts notified to the Home Office United Kingdom, 1988, Area Tables.</i>	£2.50

These three publications are available from:

Mrs E Hodges
Room 1834
Lunar House
Croydon
Surrey CR0 9YD

Cheques should be made payable to 'The Accounting Officer Home Office'.

Department of Employment

Employment Gazette, which is published on Thursday towards the beginning of each month, regularly contains recent data and time-series on employment, unemployment, earnings, prices, family expenditure, tourism and other indicators. In

recent months there were special features on 'Retail prices in 1988' (May 1989); 'Pattern of household spending 1987' (May 1989); 'International comparisons of industrial stoppages in 1987' (June 1989); 'Pensioner price indices: revision of weights' (July 1989); 'Industrial stoppages in 1988' (July 1989); 'Tourism comes of age' (July 1989) and 'Tourism and the Tourist Industry — latest statistics' (August 1989).

Employment Gazette is published monthly by Her Majesty's Stationery Office, price £3.80 per issue. Annual subscription inclusive of postage is £39.50.

Department of Employment
Caxton House
Tothill Street
London SW1H 9NF

Department of Transport

Recent Statistical Publications by the Department of Transport:

- Traffic Speeds on London roads — inner area survey* (statistical bulletin (89)30 price £4.00)
- Origins, destinations and transport of UK international trade 1986* (statistical bulletin (89)31 price £150)
- National road maintenance condition survey 1988: sub-national results* (transport statistics report)
- United Kingdom air freight 1977-1987* (HMSO price £5.65)
- Bus and coach statistics 1987/88* (HMSO price £5.00)
- Heavy goods vehicles in Great Britain 1988* (HMSO price on application)
- Local road maintenance expenditure in England and Wales 1987/88* (HMSO price £7.25)
- Road Accident statistics English Regions 1987* (HMSO price on application)
- Seaborne trade statistics of the United Kingdom 1988* (HMSO price £12.70)

The following Department of Transport statistical bulletins are issued on a regular basis:

- Monthly: *New Motor Vehicle Registrations, Great Britain* (price £3.00 per copy; annual subscription £30.00)
- Quarterly: *Road Goods Vehicles on Roll-on Roll-off ferries to Mainland Europe* (price £5.00 per copy)
- Road Casualties Great Britain* (price £4.00 per copy)
- Quarterly Transport Statistics* (price £5.00 per copy, annual subscription £12.00)
- Traffic in Great Britain* (price £8.00 per copy, annual subscription £27.00)

Department of Transport statistical publications are available from:

Publication Sales Unit
Building 1, Victoria Road
South Ruislip
Middlesex HA4 0NZ
Telephone: 01-841 3425

(Continued on page 86.25).

POPULATION AND VITAL STATISTICS

Population Trends

The latest edition of *Population Trends*, the quarterly journal of the Office of Population Censuses and Surveys (OPCS) was published in June and contains the following articles:

Mortality by social class, 1971-85

Recent analyses of British decennial supplement data by social class have suggested that mortality differences are continuing to widen for both men and women. This has stimulated discussion about the validity of the cross-sectional approach used in deriving these estimates. In this article by Peter Goldblatt, Social Studies Research Unit, City University, mobility and mortality data for men in the OPCS Longitudinal Study (LS) are used to examine these changes in more detail.

It appears that although biases inherent in decennial supplement figures contributed to changes since 1971, they were of insufficient magnitude to explain recent trends. Social class differences among men in the LS since 1981 have proved to be as great as those obtained using traditional methods, once adjustment is made for differences in study design.

Mortality and Geography

Later this year OPCS will publish the latest in a series of decennial supplements reviewing geographic patterns in mortality in England and Wales. The report, *Mortality and Geography* by Malcolm Britton, Medical Statistics Division, OPCS analyses mortality according to where people live, their country or place of birth and their recent movements around the country. By bringing together information from a number of different sources the report provides an indication of the key characteristics of geographic patterns in mortality. Overall mortality was highest in the North and West of England and Wales, in urban areas, for people moving within a county and for those born in Scotland and Ireland. Mortality rates for infants in the first month of life followed the overall regional pattern and was also higher among infants of mothers born in the Caribbean and Pakistan.

Changing age distributions among young adults: their demographic effects

That a sharp fall in the number of young people in their early twenties has begun, and will continue for many years, is now well known and a matter of great concern to many organisations and professions. Another effect is that as such fluctuations pass through successively older age-groups the number of people in the most marriageable and most fertile ages varies, which has consequential effects on birth, marriage and death statistics. This article, by John Craig, Demographic Analysis and Vital Statistics Division, OPCS quantifies the extent to which future fluctuations in the 15-44 age band are going to be greater than in the past; and, as an example of the consequences, looks at the effect on past and future fertility measures.

Populations in health areas

This article by R I Armitage, Population and Hospital Statistics Division, OPCS summarises trends in the size and age distribution of the population of England and constituent health regions between 1971 and 1987, and changes which have occurred at the health district level since 1981. The information presented for each health region includes a distribution of the populations in 1971 and 1987 between children, working ages, younger retired and older retired.

Reference

Population Trends 56 (Summer 1989) (HMSO) (Price £6.50 net) ISBN 0 11 691259 6.

Birth Statistics for 1987

There were 681,511 live births in England and Wales in 1987, some 20 thousand (3 per cent) more than in 1986. These and other fertility statistics for 1987 in England and Wales can be found in *Birth Statistics 1987* published recently.

Births outside marriage accounted for 17 thousand of the total increase, and both the number (158 thousand) and the proportion (23.2 per cent) of such births were higher than in any previous year, thus continuing the increasing trend seen over the past twenty years. Nearly half of these births were registered by both parents giving the same address as their place of normal residence, reflecting the increase in the number of couples living together in stable relationships without having legally married.

After allowing for changes in the size and age structure of the female population of child-bearing age, the total period fertility rate for 1987 was 1.81, compared with 1.77 in 1986. Fertility rates rose in 1987 for all age-groups compared with 1986. The increases were higher for women aged over 30 and particularly so for those in the age group 35-39 with an increase of 8 per cent. It is estimated that 18 per cent of the 819 thousand conceptions during 1986 (the same proportion as in 1985) were legally terminated by abortion under the 1967 Abortion Act.

Reference

Birth Statistics 1987 (Series FMI No. 16) (HMSO) (Price 8.70 net) ISBN 0 11 691255 3.

Congenital Malformation Statistics 1987

A statistical review of the notifications of congenital malformations in 1987 in England and Wales was published in May in an OPCS report. This is the first of a series of annual reference volumes; earlier reports in this series included data for the period 1971-1980 and 1981-1985 as well as summary data for 1986, which is reproduced in the appendix to this volume.

The data analysed in this report are collected through the congenital malformations monitoring system which is used primarily to detect changes in the frequency of reporting any particular malformation or group of malformations rather than

trying to estimate the prevalence at birth. Only malformations detected at or within seven days of birth are included in the system to ensure rapid detection of any increase in reporting levels.

The 1987 review found that the notification rate for all malformations was 198.3 per 10,000 total live and still births compared with 197.1 in 1986 and has remained fairly constant since 1977.

Reference

Congenital malformation statistics, notifications 1987 (Series MB3 No. 3) (HMSO) (Price £6.50 net) ISBN 0 11 691263 4.

Deaths from Accidents and Violence in 1986

There were 18,754 accidental and violent deaths in England and Wales in 1986 compared with 19,009 in 1985, a decrease of 1.3 per cent, according to the Registrar General's annual review on deaths attributed to accidental and violent causes published in April. The decrease was mainly the result of a decline in the number of deaths from suicides, from 4,419 in 1985 to 4,126 in 1986 (down 6.6 per cent), and of accidental deaths at home and in residential institutions, from 4,823 in 1985 to 4,626 in 1986 (down 4 per cent).

Reference

Mortality statistics, accidents and violence, 1986 (Series DH4 No. 12) (HMSO) (Price £6.20 net) ISBN 0 11 691253 7.

Marriages and Divorces in 1987

In 1987 there were nearly 352 thousand marriages in England and Wales compared with nearly 348 thousand in 1986, an increase of just over 1 per cent. There were fewer divorces, 151 thousand, in 1987 compared with 154 thousand in 1986, a decrease of 2 per cent. These and other statistics, including those on adoptions in 1987, were published in April in the Registrar General's Annual Statistical Review of marriages and divorces in England and Wales. The review found that the proportion of marriages which were first marriages for both partners was 64 per cent, an increase of one per cent over 1986, reversing the trend observed over the last decade. The median age at marriage for men increased to 27.0 years from 26.9 in 1986 and for women to 24.7 years from 24.6 in 1986, continuing the trend towards later marriage.

The divorce rate - the number of divorces per thousand married couples - was 12.7 in 1987 compared with 12.9 in 1986. However, the divorce rate in 1986 was affected by legislation which came into effect towards the end of 1984; the divorce rate in 1987 was about 8 per cent higher than the rate of 12.0 in 1984.

There were 7.2 thousand children adopted in England and Wales in 1987, 9 per cent less than in 1986.

Reference

Marriage and divorce statistics 1987 (Series FM2 No. 14) (HMSO) (Price £8.70) ISBN 0 11 691258 8.

International Migration in 1987

Facts on international migration derived from the International Passenger Survey were published on 18 April in *International Migration 1987*.

In 1987, the estimated number of people coming to reside in the United Kingdom from outside the British isles was 212 thousand, 15 per cent fewer than in 1986 and also lower than in 1985, but still above the levels of all other years since 1972. The outflow of people from the UK decreased by 3 thousand compared with 1986 to an estimated 210 thousand, the average for the last ten years. The net gain of two thousand persons contrasts with the large gains of the last four years and generally large losses of earlier years. The inflow of British citizens to the UK was 99 thousand, 18 per cent lower than in 1986; the outflow of British citizens fell by only two thousand to 130 thousand. As a result of the considerably reduced inflow the net loss of British citizens through migration was much larger in 1987 at 32 thousand compared with 12 thousand in 1986.

The inflow of non-British citizens intending to stay in the UK for a year or more decreased by 13 per cent compared with 1986 to 113 thousand. The outflow at 80 thousand changed very little from 1986 so that the resultant net gain of non-British citizens at 34 thousand was 15 thousand less than in 1986 and was lower than the net gains in six of the last ten years.

Reference

International migration 1987 (Series MN No. 14) (HMSO) (Price £5.60 net) ISBN 0 11 691251 0.

Scottish Life Tables 1980-82

The *Scottish Life Tables, 1980-82*, together with associated tables and commentary, are contained in this volume which was prepared by Sir Edward A Johnston, KBE, CB, the Government Actuary, at the invitation of the Registrar General for Scotland.

The tables are based on mortality experience in Scotland during the years 1980, 1981 and 1982 and this volume forms the First Supplement to the Registrar General's Annual Report for 1987. It is similar in form to its predecessor, *Life Tables 1970-72*, Supplement to the 1977 Annual Report.

The *Scottish Life Tables, 1980-82*, are the ninth in a series of detailed Life Tables beginning with Tables based on the Census and deaths of 1871. Various abridged Life Tables beginning with those for the last four decades of the 19th Century have also been produced.

Reference

Scottish Life Tables 1980-1982 (HMSO Edinburgh, April 1989) (Price £3 net) ISBN 0 11 493485 1.

SOCIAL STATISTICS

Home Office Bulletins

Control of Immigration Statistics, United Kingdom 1988

The annual Command Paper on immigration statistics was published on 29 June 1989. The statistics relate to persons who are subject to immigration control under the Immigration Act 1971. The Command Paper contains detailed information for 1988 on passengers given leave to enter the United Kingdom and those refused leave to enter and removed; on

people accepted for settlement in the United Kingdom; on entry clearance applications for settlement made in the Indian sub-continent and on persons dealt with under the enforcement powers in the 1971 Act. Historical tables for the years 1978-88 are also included.

Some of the main points described in the commentary include:

- The number of passengers subject to immigration control admitted to the United Kingdom in 1988, excluding European Community nationals, was 7.6 million, marginally more than in 1987 but less than the peak in 1985. 42 per cent of those admitted were nationals of countries in the Americas. A total of 19,200 passengers were refused leave to enter and removed in 1988, more than in 1987 but less than the peak in 1986.
- 49,300 people were accepted for settlement in 1988, this was an increase on the 1987 figure of 46,000, but still considerably less than the numbers accepted in 1985 and earlier years. Ten years before, in 1978, the number accepted was 72,000; in 1985 it was 55,000.
- 46 per cent of those accepted for settlement in 1988 were from the New Commonwealth and Pakistan, 39 per cent from other foreign countries and 15 per cent from the Old Commonwealth. 47 per cent of the total accepted were wives and children.
- There was a substantial increase in 1988 in the number of persons removed from the United Kingdom under enforcement powers. These totalled 3,050, 1,000 more than in 1987. Of the 1988 total, 1,640 were dealt with as illegal entrants, and 1,410 under the deportation process, compared with 1,040 and 950 respectively in 1987.

Enquiries about immigration statistics should be referred to:

Home Office
S3 Division
Lunar House
Wellesley Road
Croydon
Surrey CR0 9YD
Telephone: 01-760 2711

Reference

Control of Immigration Statistics, United Kingdom 1988 (Cm 726) (HMSO) (Price £11.80).

Control of Immigration: Statistics — First Quarter 1989

The quarterly Home Office statistical bulletin on the control of immigration was also published on 29 June 1989. This contains information on acceptances for settlement in the United Kingdom, on entry clearance applications for settlement made in the Indian sub-continent and on persons dealt with under enforcement powers as illegal entrants, or under the deportation process.

Reference

Control of Immigration: Statistics — First Quarter 1989 (Home Office Statistical Bulletin Issue 23/89). (Price £2.50 net).

Statistics of the operation of certain police powers under the Police and Criminal Evidence Act, England and Wales, 1988

This bulletin, now published annually, gives statistics on the operation of certain police powers under the 1984 Act which were implemented on 1 January 1986. Under the Act, there is a requirement for the police to collect and publish statistics on stops and searches of persons and vehicles for prohibited articles; on road checks of vehicles, in connection with investigation of serious offences or escape from custody; on persons detained by the police for more than 24 hours without charge; and on intimate searches for drugs or harmful articles. The bulletin gives the national totals since 1986 and figures for individual forces for 1988.

Reference

Statistics of the operation of certain police powers under the Police and Criminal Evidence Act, England and Wales, 1988 (Home Office statistical bulletin, issue 16/89) (Price £2.50 net).

Statistics on the Operation of the Firearms Act 1968 England and Wales 1988

This Bulletin brings together information on the operation of the Firearms Act 1968. The bulletin provides details of the numbers of firearm and shot gun certificates issued and the numbers of registered dealers.

The bulletin gives all the available historical data on certificates issued in England and Wales, and breakdowns by police force area in 1988. This is the third bulletin in this series, the first and second being No. 2/88 and No. 33/88. Previously these statistics were only published in the Official Report of the House of Commons and in most Annual Reports of Chief Officers of Police.

Reference

Statistics on the operation of the Firearms Act 1968 England and Wales 1988, Home Office Statistical Bulletin (No. 18/89) (Price £2.50 net).

Reconvictions and Recalls of Life Licensees and Mentally Disordered Offenders

The annual Home Office Statistical Bulletin on reconvictions and recalls of persons released on life licence and mentally disordered offenders conditionally discharged was published in June 1989.

Two-year reconviction rates for 'grave offences' for those released or discharged during 1972-85 were low at 1 per cent for life licensees and 2 per cent for mentally disordered offenders. The two-year reconviction rates for 'standard list' offences were much lower, at 10 per cent for life licensees and 14 per cent for mentally disordered offenders, than for all adult males released from custody, at about 50 per cent. The two-year reconviction rates for life licensees has remained relatively stable but that for mentally disordered offenders has fallen since 1983 to around 8 per cent. Life licensees who had previous convictions were twice as likely to be reconvicted than those who had no convictions before the one for which they received the life sentence.

Reference

Reconvictions and recalls of life licensees and mentally disordered offenders: England and Wales 1987 (Home Office Statistical Bulletin Issue 19/89) (Price £2.50 net).

Other social statistics

Family Expenditure Survey (FES)

Summary expenditure results from the 1987 FES were published in 'Labour Market Data' section of *Employment Gazette* for April 1989. An article appeared in the May edition which illustrated some aspects of household finances as shown in the 1987 FES Annual Report. The Report itself, which was published in June 1989, contains 31 tables and 4 charts detailing average weekly expenditure on over 90 commodities and services by households, classified by income level and household composition, together with complementary information on household income and characteristics.

References

Employment Gazette, April 1989, May 1989 (HMSO, monthly) (Price £3.80 net).
Family Expenditure Survey Report for 1989 (HMSO) (Price £17.50).

Income Support Statistics 1988

The DSS Income Support Annual Statistical Enquiry is the main source of detailed information on the characteristics of those receiving the benefit. It is used for monitoring the operation of the scheme and for estimating the effects of proposals for changes as well as providing an important input into financial planning and forecasting of benefit expenditure. It is also the primary source of information for Parliament and the public on the benefit which in 1988/89 cost some £7.5 billion.

As the supplementary benefit scheme was replaced by the Income Support scheme from April 1988 this set of tables is the first annual Income Support enquiry to be published.

The information is obtained from a basic sample of 1 in 100 cases in Local Social Security Offices receiving regular payments on a specified day. Returns from Local Offices were processed by computer leading to the establishment of a database and some 240 tables constituting the main set of results. The tables cover a wide variety of information about recipients; there are details of families with children, ownership of accommodation, types of income, average amounts of benefit, cases receiving other benefits as well as Income Support, length of time on supplementary benefit/income support and other characteristics.

Summary characteristics on Income Support are usually given in the annual HMSO publication *Social Security Statistics*. The full set of tables, derived from the May 1988 enquiry, contained in a bound volume with explanatory notes and definitions, are now available at the unchanged price of £25 per copy from:

Department of Social Security
Canons Park
Government Buildings
Honeypot Lane
Stanmore
Middlesex HA7 1AY
Telephone: 01-952 2311

Judicial Statistics 1988

The *Judicial Statistics Annual Report, 1988* was published in July. The publication contains statistics on the criminal and civil business of those courts in England and Wales for whose administration the Lord Chancellor is responsible. It also covers the work of some associated offices, the Judicial Committee of the Privy Council and certain tribunals.

There are ten chapters in the report covering, for instance, Appeal Courts, the High Court, County Courts, Family Matters, the Crown Court, the Judiciary, Taxation of Costs and Legal Aid. To supplement the last chapter an Information Bulletin entitled *Criminal Legal Aid 1988* was published on the same date. This gives detailed breakdowns on applications for legal aid at individual Petty Sessional Divisions and Crown Court centres and also covers applications to Criminal Legal Aid Committees, in 1988.

Where appropriate each chapter includes a brief description of the function, constitution and jurisdiction of the courts or tribunals concerned. In addition, the commentary highlights the major features of the statistics and notable trends. There are also several comparative tables and charts showing longer-term trends.

Further details can be obtained from:

Statistics Branch
CSI Division
Lord Chancellor's Department
Southside
105 Victoria Street
London SW1E 6QT

References

Judicial Statistics, Annual Report 1988 Cm 745 (HMSO July 1989) (Price £10.10 net).
Criminal Legal Aid 1988, an information bulletin, available free from the Information Office, Lord Chancellor's Department, Southside, 105 Victoria Street, London SW1E 6QT.

A Survey of Funeral Arrangements 1987

The full results of a survey of funeral arrangements in Great Britain carried out by the Social Surveys Division of the OPCS on behalf of the Office of Fair Trading was published on 29 March.

The survey, conducted in November 1987, was carried out in order to review consumers' experience of the funeral trade and to assess the effectiveness of the Code of Practice introduced in 1979. Some of the results from the survey were published by the Office of Fair Trading in January 1 in a report which also made recommendations for action by funeral directors.

A random sample of deaths was selected from the registration system and interviews were carried out with the people responsible for arranging the funerals. A total of 893 interviews were achieved, a response rate of 81 per cent of the eligible sample; half of those interviewed were sons and daughters of the deceased.

Reference

A Survey of Funeral Arrangements 1987 by Kate Foster (SS 1287) (HMSO) (Price £9.80 net) ISBN 0 11 691242 1
Funerals: a Report (Office of Fair Trading).

Hospital In-Patient Enquiry: In-Patient and Day Case Trends 1979-1985

Between 1979 and 1985 the rate of NHS in-patients discharged from hospitals in England increased by 17 per cent from 919.5 per 10,000 of the population to 1074.3. For day cases only, the rate increased by 64 per cent from 121.1 per 10,000 of the population to 199.2. The number of day cases as a proportion of all cases increased from 12 per cent in 1979 to 16 per cent in 1985. These and other statistics based on a one in ten sample of NHS patients in hospitals in England were published on 20 April.

Reference

Hospital In-patient Enquiry: In-patient and day case trends 1979-85 (Series MB4 No. 29) (HMSO) (Price £10.00 net) ISBN 0 11 691254 5.

Membership of trade unions in 1987

An article in *Employment Gazette*, May 1989 gives details on trade union membership, number of trade unions and size of unions.

Trade union membership in the United Kingdom in 1987 showed a decrease for the eighth consecutive year, following its peak level of 13,289,000 in 1979. As at December 31, 1987, total membership stood at 10,475,000, a decrease of 0.6 per cent over December 1986 and 21.2 per cent below the 1979 peak.

The total number of trade unions at the end of 1987 was 330, a decrease of five on the 1986 total and 76 per cent below the peak number of 1,384 recorded in 1920.

Many unions are relatively small. Over half the 1987 total had fewer than 1,000 members but 24 unions had 100,000 or more members. The eight largest unions each had in excess of 350,000 members and accounted for 52.8 per cent of the total membership.

Reference

Employment Gazette, May 1989 (HMSO) (Price £3.80 net).

HOUSING

Housing and Construction Statistics Great Britain

The quarterly publication *Housing and Construction Statistics* is produced in two parts each quarter. Part 1 which contains regular tables on housebuilding performance, housing finance and building materials is published in March, June, September and December each year. Part 2 is published in April, July, October and January and contains regular tables on construction activity and employment, local authority housing loans and sales. It also contains *ad hoc* tables on construction and housing topics and any figures for tables in Part 1 which missed its publication deadline.

Figures for the last 11 years for the tables in Parts 1 and 2 quarterly publications and for many more tables dealing with construction activity, housebuilding, building materials, employment, the private contractors' construction census and many other topics are published in the annual volume *Housing and Construction Statistics 1977-1987* published by HMSO and available from them and leading bookshops.

Detailed notes on the tables in the annual and quarterly publications, including definitions of the terms used are given in the annual volume together with a subject index.

Unless otherwise stated all tables relate to Great Britain

Reference

Housing and Construction Statistics, Great Britain, December quarter, 1988. Part 1 and Part 2 No. 36, March quarter 1989. Part 1 No. 37 (HMSO) (Price £3.90 net).

Local Housing Statistics

Local Housing Statistics is prepared by the Department of the Environment and the Welsh Office to provide figures for individual local authority areas in a quarterly publication. These figures are taken mainly from returns made by the local authorities. Housebuilding figures incorporate reports from the National Housebuilding Council on those dwellings which they inspect for building control purposes; figures at local authority level do not include any allowance for missing returns. Tables are by region, country and local authority area, unless otherwise stated.

The publication also includes tables on housebuilding; renovations; sales of dwellings owned by local authorities and new towns; housing land disposals; local authorities' action under the provisions of the 1985 Housing Act; compulsory purchase orders confirmed and slum clearance.

Enquiries about the contents of this publication should be made to:

Directorate of Housing Monitoring and Analysis
Department of the Environment
Tollgate House
Bristol BS2 9DJ
Telephone: Bristol (0272) 218074

Reference

Local Housing Statistics, England and Wales No. 89 April 1989 (HMSO) (Price £6.50 net).

Housing trends in Scotland

This Bulletin (price £1) summarises housing activity in Scotland during the quarter ended 30 September 1988 as reported to the Scottish Development Department by various housing authorities. Topics covered include new building, improvement of existing houses and council house sales. Annual information on capital payments and allocations and progress in housing action areas previously published in *Scottish Housing Statistics* is also given.

During the quarter 4,435 dwellings were completed compared with 4,951 in the corresponding quarter of 1987. This figure comprises 3,429 private sector dwellings and 1,006 public sector dwellings - decreases of almost 8 per cent and 18 per cent respectively compared with the third quarter of 1987. In the same period the number of dwellings started increased by almost 9 per cent, although within the sectors, the public sector, at 835, decreased by 8 per cent and the private sector, at 3,617, increased by over 13 per cent.

The number of public sector dwellings improved was 12,234, half the number improved in the same period in 1987. Applications by private owners approved decreased by 12 per cent to 6,510.

Sales to sitting tenants at 6,878 were almost 44 per cent higher than in the same period in 1987; 14,143 applications to buy were received, 53 per cent more than in the third quarter of 1987.

Any enquiries about this bulletin (HSU No. 6) should be made to:

Housing Statistics Unit
Scottish Development Department
Room 327
St Andrew's House
Edinburgh EH1 3DD
Telephone (direct line): 031-244 2684

Copies of this bulletin may be obtained from:

Scottish Office Library
Publications Sales
Room 1/44
New St Andrew's House
Edinburgh EH1 3TA
Telephone (direct line): 031-244 4806
Scottish Office Telephone No: 031-556 8400

HEALTH

OPCS Surveys of Disability in Great Britain

Report 3, 4 and 5

The third, fourth and fifth reports of results from the OPCS surveys of people with disabilities in Great Britain were published recently. The subject of the third report was the prevalence of disability among children; the fourth, disabled adults: their use of services, transport and employment; and the fifth the financial circumstances of families with disabled children living in private households.

The four separate surveys, which covered adults and children in private households and communal establishments, were commissioned by the Department of Health and Social Security and carried out by Social Survey Division of OPCS between 1985 and 1988.

The surveys distinguished thirteen types of disability based on those categorised by the International Classification of Impairments, Disabilities and Handicaps - locomotion; reaching and stretching; dexterity; seeing; hearing; intellectual functioning; consciousness; eating, drinking and digesting; disfigurement and deformity.

An innovatory feature of the surveys was the construction of an overall measure of severity which can be used to classify people regardless of age with different numbers and types of disabilities. In essence, the severity of disability in the thirteen different areas of disability is first established and the three highest of the thirteen separate scores are combined to give an overall score from which people are allocated to one of the overall severity categories (category 1 least severe, category 10 most severe). The reports include 'pen pictures' of typical cases in each severity category.

The two reports published last year are: Report 1 - *The prevalence of disability among adults*; and Report 2 - *The financial circumstances of disabled adults living in private households*.

Report 3

The prevalence of disability among children

The overall measure of severity which was developed for the adult surveys was adapted for the children's survey. Adaption was necessary because younger children in particular cannot do what adults can, so that different questions had to be asked to establish the presence of disability. The method of adaption used was designed to make any given level of severity for children equivalent to the same level of severity for adults.

The findings show that about 360,000 children in Great Britain have at least one disability above the relatively low threshold used in the surveys. Of these 2 per cent (about 5,600) live in some kind of communal establishment. This compared with 7 per cent of disabled adults. The majority of children, particularly the more severely disabled, had more than one type of disability. The most common had to do with behaviour, followed by disabilities in the areas of communication, locomotion and continence.

Report 4

Disabled adults: services, transport and employment

This report describes for each of the surveys the circumstances in 1985/6 of disabled adults. These include use of services, use of equipment and adaptations, mobility and the use of transport, social activities, visitors and holidays, informal help and care received by those living in private households and the financial circumstances of those living in communal establishments.

Specific findings showed that nineteen per cent of disabled adults living at home had an informal carer, an unpaid relative or friend providing help with activities such as washing, dressing and feeding. The proportion rose to 86 per cent among those most severely disabled, severity category 9 or 10. Forty per cent of the carers were aged 65 or over and 65 per cent of them were women. Seven out of ten disabled adults at home used some kind of disability related equipment. The proportion rose from 58 per cent of those in severity categories 1 and 2 to 91 per cent of those in severity categories 9 and 10. The rates were very similar among establishment residents. Visitors were much more frequent for people living in private households, where 80 per cent of them had a visitor at least once a week compared with only 25 per cent of those resident in establishments.

Report 5

The financial circumstances of families with disabled children living in private households

The report describes the financial circumstances of families with disabled children living in private households in 1985. It examines three main issues: the extent to which disability

in children affects family income; whether and how much extra expenditure is incurred as a result of disability; the overall impact of disability on the standard of living and financial circumstances of families with disabled children.

The survey brings out two main points about the financial circumstances of families with disabled children. Firstly, parents of disabled children were less likely to work and, if they did, were likely to earn less than parents in general. However the survey did not establish how far the presence of a disabled child in the family was in itself a cause of lower employment or lower earnings. State benefits paid to compensate for the extra costs of disability went some way to compensate for lower incomes, and the likelihood of their receipt increased with severity of disability. Secondly, the majority of families incurred extra expenditure as a consequence of having a disabled child, the amount of which was related, in part, to severity of disability, and also the income available to spend in connection with disability. In the main, differences by severity were only apparent at the higher end of the severity scale, among families with more severely disabled children (categories 7-10). At the lower end of the scale (categories 1-6), where children were less severely disabled, there were no consistent differences. For this reason, the original ten severity categories have been combined into three severity groups - categories 1-6, 7-8 and 9-10 for the purposes of this report.

References

OPCS surveys of disability in Great Britain: Report 3 - The prevalence of disability among children by Margaret Bone and Howard Meltzer, (HMSO) (Price £10.60 net) ISBN 0 11 691250 2.

OPCS surveys of disability in Great Britain: Report 4 - Disabled adults: services, transport and employment by Jean Martin, Amanda White and Howard Meltzer, (HMSO) (Price £15.50 net) ISBN 0 11 691257.

OPCS surveys of disability in Great Britain: Report 5 - The financial circumstances of families with disabled children living in private households by Malcolm Smyth and Nikki Robus (HMSO) (Price £9.00 net) ISBN 0 11 691264 2.

Performance Indicators in the NHS

David Mellor, Minister for Health speaking at the National Association of Health Authorities in Torquay on 23 June 1989 said that if all DHAs could reach the national average for the number of patients they treat, the savings achieved could go a long way to eliminating the national waiting list.

'A recent study by Kevin Cottrell, formerly of the Mersey Regional Health Authority, indicated that in those districts whose patient throughput was below national average, 9,000 extra beds would be made available with £200m in savings for other purposes.'

The NHS is spending £26 billion in 1989

- patient costs in major acute hospitals range between £450 and £1,300. This is a total variance of +22 per cent to -22 per cent of the national average;
- the length of stay varies as low as 3.5 and as high as 9.5 days;
- the number of nurses per acute bed varies between 0.8 and 1.9.

'The indicators also show that:

- general surgery beds remain empty between patients for between 0 to just under 6 days and accommodate an overall range of between 29 and 68 patients per year;
- the proportion of day cases to the total number of general surgery patients treated varies between one per cent and 46 per cent;
- the number of doctors per 100,000 cases varies between 60 and 375.

These indicators are an opportunity for all districts to aim for the quality of care which patients demand.'

Reference

Department of Health Press Release.

EDUCATION

Students from Abroad in Great Britain 1973 to 1987

This Statistical Bulletin (No. 11/89) presents trends in the number of students from abroad from 1973. The bulletin includes statistics on students by type of institution, level of course and sex. Some information on individual countries from which the students come, first year students and subject of study is given.

The main findings are:

- The total number of students from abroad attending publicly-funded institutions in Great Britain increased by 2 per cent to 65,800 in 1987. This is nearly 20 per cent higher than in 1983.
- By 1987, over two-thirds of all students from abroad were studying at universities. Nearly half of these were postgraduates whose numbers have risen by nearly a third since 1983.
- Since 1986 the greatest increase amongst all levels of course was for first degree students, rising from 23,600 in 1986 to 26,200 in 1987. This reflects the continued growth in earlier years in entrants to first degree courses, from 27 per cent of all overseas entrants to higher education courses in 1983 to 30 per cent in 1987.
- The decrease since 1979 in further education numbers continued with a further fall of 17 per cent bringing the numbers down to just under 7,000 in 1987.
- The proportion of women students from abroad in 1987 was almost one-third, compared with a quarter in 1980.
- Social, administrative and business studies was the most popular subject group closely followed by engineering and technology, accounting for 26 and 24 per cent of all students from abroad, respectively.

- In 1987 Hong Kong, Malaysia and the United States each continued to provide considerably more students than any other country.
- The number of students from the European Community increased to 11,500 in 1987, 18 per cent up on 1986 and nearly double the number in the early 1980s.

Enquiries about its contents should be addressed to Michael Hart at the address below (Telephone: 01-934 9094).

Student/Staff Ratios and Unit Costs at Polytechnics and other Higher and Further Education Establishments in England

This Bulletin (No. 9/89) presents data collected from the Department's Annual Monitoring Survey (AMS) for the 1986-87 academic year and the Further Education Revenue Account Survey (FERAS) for the financial year 1986-87.

The AMS currently collects staff and student numbers and class contact hours in most local authority higher and further education establishments in England. The FERAS collects expenditure and income data for local authority higher and further education establishments in England.

From the results of these surveys, certain indicators are derived which are of interest to those involved in college management. Most notable among these are the student/staff ratios (SSR) and unit costs.

The overall student/staff ratio (SSR) in all Local Authority establishments increased from 9.3 to 11.0 between 1981-82 and 1986-87. (These SSRs are based on AMS data only and differ from those calculated from other sources.)

Enquiries about its contents should be addressed to Paul Jackson at the address below (Telephone: 01-934 9132).

Survey of Information Technology in Schools

This bulletin (No. 10/89) summarises the results of the survey carried out in February 1988 on a representative sample of 800 primary and 500 secondary schools. The purpose of the survey was to determine the current level of provision and use of information technology in schools and its contribution across the curriculum. The survey also asked about expenditure and sources of funding, the degree to which microcomputers were used by staff and pupils with special educational needs and the extent of teacher training in the use of microcomputers. This follows a similar survey carried out in November 1985.

Enquiries about its contents should be addressed to Tony Ambler at the address below (Telephone: 01-934 9044).

The above statistical bulletins may be obtained from:

Department of Education and Science
 Statistics Branch
 Room 1/28
 Elizabeth House
 York Road
 London SE1 7PH
 Telephone: 01-934 9038

Scottish Education Statistics

University Students

This bulletin No. 3/H1/1989, is published with the agreement of the Department of Education and Science, the University Grants Committee and the Open University. Data has been supplied by the Universities' Statistical Record and the Open University.

The bulletin gives numbers of full-time students (including those on sandwich courses) and part-time students at UK universities in December 1987, and recent trends in the numbers of students at Scottish universities. In most of the tables Scots domiciled students are separately identified. The bulletin also contains a section on students registered with the Open University in Scotland.

The bulletin concentrates on:

- Scots students at UK universities; and
- All full-time students at Scottish universities

Students in higher education at Scottish central institutions and further education colleges are not included. However, it is planned to issue a bulletin later this year covering all higher education in Scotland.

Copies of this bulletin (Price £1) may be obtained from the Scottish Office Library (address below).

Excess and Deficit of Secondary School Teachers by Subject

This statistical bulletin gives estimates of the net excess or deficit of teachers in each of the main subjects taught in education authority secondary schools in Scotland at September for the years 1979 to 1988.

Pupils and Teachers in Education Authority Primary and Secondary Schools

This bulletin gives the number of pupils and teachers in education authority primary schools and the number of schools at September 1987 and September 1988 (provisional). Information is given for Scotland as a whole, for Regions and Islands Authorities and for administrative divisions of Strathclyde.

The National Certificate: 1987/88

This bulletin, the third in the series, gives information on the National Certificate awarded by the Scottish Vocational Education Council for session 1987/88. It also shows trends since 1985/86 which was the first full year of implementation of the new modular certificate.

Copies of bulletins may be obtained from:

Scottish Office Library
 Official Publication Sales
 Room 1/44
 New St Andrew's House
 Edinburgh EH1 3TA
 Telephone: 031-244 4806

MANPOWER, EARNINGS AND PRICES

The labour market for young and older workers

This article in *Employment Gazette*, June 1989 is by Bill Wells, Department of Employment and based on research carried out by Jonathan Wadsworth of the Centre for Labour Economics.

The labour market experiences of people near the beginning and end of their working lives have distinctive characteristics. This analysis, based on the 1984 and 1987 Labour Force Surveys, identifies those characteristics and shows also that changes in economic circumstances have greater impact on the two age groups at either end of the working spectrum.

- Young workers experienced unemployment much more frequently than other age groups. However, particularly for teenagers, unemployment spells tended to be relatively short: under a year. The opposite was true for older workers.
- Between 1984 and 1987 total employment grew and the overall unemployment rate fell. The young benefited most from this improvement.
- The introduction of the two-year YTS in 1986 and a falling teenage population were major factors in the improvement in the labour market experience of young workers.

Reference

Employment Gazette, June 1989 (HMSO) (Price £3.80 net).

Young people leaving School

An article on this subject appears in the July *Employment Gazette*. It presents estimates and projections to the academic year 2000-01 of the numbers of young people leaving school in Great Britain, distinguishing those available to enter the labour market. The figures show a steady fall in the numbers of school leavers after 1982-83, with the annual total expected to be about a third lower by 1992-93 and 1993-94. The projected number of leavers available to enter the labour market follow a similar pattern.

Reference

Employment Gazette, July 1989 (HMSO) (Price £3.80 net).

Education and labour market status of young people in Great Britain

A special report in *Employment Gazette*, May 1989 gives provisional 1988 estimates on the education and labour market status of 16-18 year olds in Great Britain. Revised figures are also given for 1986 and 1987.

The total population of 16-18 year olds in Great Britain is estimated to have fallen by about 85,000, nearly 3.5 per cent between January 1986 to January 1988.

Reference

Employment Gazette, May 1989 (HMSO) (Price £3.80 net).

Women at Work in Europe

Angela Dale of the City University and Judith Glover of the University of Surrey discuss in the run up to 1992, labour force comparisons across the European Community which will be of increasing interest. This article in *Employment Gazette*, June 1989 identifies main sources of international statistics and highlights the pitfalls and the potential for international analysis within the context of women's employment patterns.

International comparisons on employment-related topics have long been a prime concern of bodies such as the Organisation for Economic Cooperation and Development (OECD) and the European Community (EC), and statistics are regularly compiled and published in OECD *Labour Force Statistics* and by the Statistical Office of the European Community (SOEC) to enable such comparisons to be drawn.

More detailed analysis of this topic is reported in a forthcoming Employment Department research paper.

Reference

Employment Gazette, June 1989 (HMSO) (Price £3.80 net).

National profiles of the self-employed

An article by Professor James Curran and Roger Burrows on this subject was published in the July *Employment Gazette*. With 1 million new self-employed in the 1980s, attention has focused on this rapidly expanding group. Data from the annual General Household Surveys provides new information on the ethnic composition, health and other personal and household characteristics of the self-employed, and points to sharp differences between the self-employed with employees of their own and those working alone.

The most recent Labour Force Survey (LFS) identified some 3 million self-employed members of the employed labour force—an increase of more than a million since 1979. About two-thirds are self-employed people who employ nobody else directly while the great majority of the rest are involved in enterprises employing very few people.

Reference

Employment Gazette, July 1989 (HMSO) (Price £3.80 net).

New Recruits to self-employment in the 1980s

The rapid increase in self-employment in the 1980s has focused attention on the experiences of new recruits to business ownership. This article by Catherine Hakin in *Employment Gazette*, June 1989 presents key findings from a 1987 survey of new entrants to self-employment. It shows that the difficulties encountered are less significant than anticipated.

The rapid increase in self-employment and new business start-ups in the 1980s has focused attention on the experience of new owner-managers—in particular the difficulties and impediments they must overcome to establish their new business on a firm footing.

This article sets out some key findings from a spring 1987 survey of the experiences of these new recruits to self-employment. The results will inform the development and review of policies to help small firms and business start-ups, but they are also of wider interest to the numerous organisations—such as the Small Firms Service and local enterprise agencies—that provide information, advice and counselling to new and expanding small firms.

Reference

Employment Gazette, June 1989 (HMSO) (Price £3.80 net).

Pay determination in private manufacturing

Bargaining structures within manufacturing industry changed significantly between 1979 and 1986. Among the factors looked at in this article in *Employment Gazette*, June 1989, are trade union recognition, industry-wide agreements and the number of bargaining groups in establishments of different sizes. Based on two large-scale CBI surveys it reveals major shifts in British industry's approach to negotiating pay, hours and holiday settlements.

- Between 1979 and 1986 the proportion of plants recognising trade unions for collective bargaining purposes remained about the same.
- The number of employees covered by multi-employer, industry-wide agreements has declined markedly.
- The level of bargaining has shifted towards plant level.
- the number of bargaining groups in establishments with more than 1,000 employees has declined.

This article represents a summary of a report published by the CBI drawing on a research project undertaken by staff in the Employment Affairs Directorate. The report: *The Structure and Processes of Pay Determination in the Private Sector, 1979-86*, is available at £20 to CBI members and academics and £40 to others.

Reference

Employment Gazette, June 1989 (HMSO) (Price £3.80 net).

Retail prices in 1988

An article in *Employment Gazette*, May 1989, describes what happened to retail prices in 1988. It provides a summary of the changes in prices which took place last year and the relative contributions of individual categories of goods and services to the overall movement in the retail prices index.

UK retail prices, as measured by the retail prices index, rose by 7.5 per cent between January 1988 and January 1989. This compares with a rate of increase of 3.3 per cent for the previous year. Over the period January to December taken as a whole, the average level of prices was 4.9 per cent higher than in 1987. This compares with a 4.2 per cent increase the previous year.

Reference

Employment Gazette, May 1989 (HMSO) (Price £3.80 net).

Pensioner price indices: revision of weights

An article in July *Employment Gazette* gives the weights being used in 1989 for the two special price indices which are compiled for pensioner households mainly dependent on state benefits.

Since 1968, following recommendations of the Retail Prices Index Advisory Committee, special price indices have been compiled covering pensioner households mainly dependent on state benefits, whose expenditure has always been excluded from the weighting pattern of the general index of retail prices. The households concerned are those deriving at least three-quarters of their income from national insurance retirement pension and other social security benefits. They account for about 42 per cent of all retired people, the remainder (including most of those with an occupational pension) being covered by the general RPI, which is regarded as the best overall measure of the rate of inflation facing consumers.

Reference

Employment Gazette, July 1989 (HMSO) (Price £3.80 net).

INDUSTRIAL

Business Monitors - Annual Census of Production 1987

Readers of *Statistical News* are made aware of the results of the 1987 Census of Production as the Business Monitors become available. A list of the first of these monitors to be published is given below.

Business Monitor Number	Description	Standard Industrial Classification 1980 Group
PA120	Coke ovens	120
PA130	Extraction of mineral oil and natural gas	130
PA161	Production and distribution of electricity	161
PA162	Public gas supply	162
PA170	Water supply industry	170
PA210	Extraction and preparation of metalliferous ores	210
PA221	Iron and steel industry	221
PA222	Steel tubes	222
PA223	Drawing, cold rolling and cold forming of steel	223
PA224	Non-ferrous metals industry	224
PA231	Extraction of stone, clay, sand and gravel	231
PA239	Extraction of miscellaneous minerals (inc. salt)	239
PA241	Structural clay products	241
PA242	Cement, lime and plaster	242
PA244	Asbestos goods	244
PA245	Working of stone and other non-metallic minerals	245
PA246	Abrasive products	246
PA248	Refractory and ceramic goods	248
PA251	Basic industrial chemicals	251
PA257	Pharmaceutical products	257
PA258	Soap and toilet preparations	258
PA259	Specialised chemical products mainly for household and office use	259
PA260	Production of man-made fibres	260
PA311	Foundries	311
PA312	Forging, pressing and stamping	312
PA313	Bolts, nuts, etc.; springs; non-precision chains; metals treatment	313
PA314	Metal doors, windows, etc	314
PA316	Hand tools and metal goods	316
PA321	Agricultural machinery and tractors	321
PA322	Metal-working machine tools and engineers tools	322
PA323	Textile machinery	323
PA324	Machinery for the food, chemical and related industries, process engineering contractors	324
PA325	Mining machinery, construction and mechanical handling equipment	325
PA326	Mechanical power transmission equipment	326
PA327	Machinery for printing, paper, wood, leather, rubber, glass and related industries: laundry and dry cleaning machinery	327
PA329	Ordnance, small arms and ammunition	329
PA330	Manufacture of office machinery and data processing equipment	330
PA341	Insulated wire and cables	341

Business Monitor Number	Description	Standard Industrial Classification 1980 Group
PA342	Basic electrical equipment	342
PA343	Electrical equipment for industrial use, and batteries and accumulators	343
PA344	Telecommunications equipment, electronic measuring equipment, electronic capital goods and passive components	344
PA345	Miscellaneous electronic equipment	345
PA346	Domestic-type electric appliances	346
PA347	Electric lamps and other electric lighting equipment	347
PA352	Motor vehicle bodies, trailers and caravans	352
PA362	Railway and tramway vehicles	362
PA363	Cycles and motor cycles	363
PA365	Miscellaneous vehicles	365
PA371	Measuring, checking and precision instruments and apparatus	371
PA372	Medical and surgical equipment and orthopaedic appliances	372
PA373	Optical precision instruments and photographic equipment	373
PA374	Clocks, watches and other timing devices	374
PA412	Slaughtering of animals and production of meat and by-products	412
PA414	Processing of fruit and vegetables	414
PA415	Fish processing	415
PA416	Grain milling	416
PA419	Bread, biscuits and flour	419
PA420	Sugar and sugar by-products	420
PA421	Ice-cream, cocoa, chocolate and sugar confectionery	421
PA422	Animal feeding stuffs	422
PA423	Starch and miscellaneous foods	423
PA424	Spirit distilling and compounding	424
PA426	Wines, cider and perry	426
PA427	Brewing and malting	427
PA428	Soft drinks	428
PA429	Tobacco industry	429
PA431	Woollen and worsted industry	431
PA432	Cotton and silk industries	432
PA433	Throwing, texturing, etc. of continuous yarn	433
PA434	Spinning and weaving of flax, hemp and ramie	434
PA435	Jute and polypropylene yarns and fabrics	435
PA436	Hosiery and other knitted goods	436
PA437	Textile finishing	437
PA438	Carpets and other textile floor coverings	438
PA439	Miscellaneous textiles	439
PA441	Leather (tanning & dressing) and fellmongery	441
PA442	Leather goods	442
PA453	Clothing, hats and gloves	453
PA455	Household textiles and other made-up textiles	455
PA456	Fur goods	456
PA461	Sawmilling, planing, etc. of wood	461
PA462	Manufacture of semi-finished wood products and further processing and treatment of wood	462
PA463	Builders' carpentry and joinery	463
PA464	Wooden containers	464
PA465	Miscellaneous wooden articles	465
PA466	Articles of cork and plaiting materials, brushes and brooms	466
PA467	Wooden and upholstered furniture and shop and office fittings	467
PA471	Pulp, paper and board	471
PA472	Conversion of paper and board	472
PA475	Printing and publishing	475
PA481	Rubber products	481
PA483	Processing of plastics	483
PA491	Jewellery and coins	491
PA492	Musical instruments	492
PA493	Photographic and cinematographic processing laboratories	493
PA494	Toys and sports goods	494
PA495	Miscellaneous manufacturing industries	495

Copies of these Business Monitors are available on standing order from Her Majesty's Stationery Office, PO Box 276, London SW8 5DT (Telephone: 01-873 8499) or through any Government Bookshop.

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

Mr J Dowsell
Business Statistics Office
Government Buildings
Cardiff Road
Newport
Gwent NP9 1XG
Telephone: 0633-56111 Ext 2455

Individual monitors or a free brochure describing the full range of Monitors with prices and order form may be obtained from:

The Librarian
Business Statistics Office
Government Buildings
Cardiff Road
Newport
Gwent NP9 1XG
Telephone: 0633-56111 Ext 2973

Survey of industrial investment intentions for 1989 and 1990

The results of the latest survey by DTI of investment intentions is recorded in *British Business*, 16 June 1989. A rise of around 13 per cent in the volume of investment by the manufacturing, construction, distribution and selected service industries in 1989 is indicated. Results from the second survey for 1990 suggest a further, though smaller increase.

Total investment by manufacturers (Divisions 2, 3 and 4 of the 1980 rev SIC) including leased assets is expected to rise by around 15 per cent in 1989 compared with 1988.

Investment by the construction, distribution and selected service industries (Divisions 5, 6, 8 plus Classes 72, 76 and 77 of Division 7 of the 1980 rev SIC), excluding assets leased to manufacturers, is expected to rise by around 12 per cent in 1989 compared with 1988. Inquiries on this subject should be made to the Department of Trade and Industry. Telephone: 0633-81 2149/2215.

Reference

British Business (Department of Trade and Industry) (Price £1.40 net).

VAT registrations and de-registrations of UK businesses, 1980 to 1987

An article in *British Business*, dated 9 June 1989, provides information on the number of businesses registered for VAT in the UK for the period 1980-87. It shows registrations and de-registrations and hence the net changes in the number of businesses registered. The vast majority of businesses which register are small, so that the figures provide a good guide to trends in the size of the UK small business population.

This article gives a region and industry breakdown for each of the years 1980 to 1987 and summary data for countries.

Inquiries and requests for information should be addressed to:

Michael Daly
Employment Department
Steel House
Tothill Street
London SW1H 9NF

Reference

British Business (Department of Trade and Industry) (Price £1.40 net).

Industrial Tribunals statistics

An article in *Employment Gazette*, May 1989, presents a statistical analysis of the cases heard by the industrial tribunals and the employment Appeal Tribunal between April 1987 and March 1988. It also describes some aspects of tribunal procedure.

The administration of the industrial tribunals in Great Britain is divided between two separate offices - each known as the Central Office of the Industrial Tribunals (COIT). The COIT covering tribunals in England and Wales is based at 93 Ebury Bridge Road, London, under the presidency of His Honour Judge Sir David West-Russell, and that covering the Scottish tribunals is at 141 West Nile Street, Glasgow, with Mr Ian Thomson WS, as its president.

In England and Wales there are also 11 regional offices (ROITs), each headed by a regional chairman. In most ROIT areas there are also Offices of the Industrial Tribunals (OITs). The Scottish system is similar, but has no regional offices, being divided into OITs at Glasgow, Edinburgh, Aberdeen and Dundee.

Industrial tribunals are independent judicial bodies which provide a quick, informal and inexpensive means of dealing with certain employment disputes. They hear complaints under several Acts of Parliament and statutory regulations, but the vast majority of cases are brought under the Employment Protection (Consolidation) Act 1978. Nearly 73 per cent of these cases deal with unfair dismissal.

Reference

Employment Gazette, May 1989 (HMSO) (Price £3.80 net).

Industrial stoppages in 1988

This annual article in the July *Employment Gazette* looks at the coverage of statistics, the figures for recent years and for 1988 presents detailed analyses by industry, region, cause and size of dispute.

- There were 3.7 million working days lost through stoppages of work caused by industrial disputes in 1988. This was slightly above the 3.5 million lost in 1987 and is substantially less than the annual average of 10.3 million for the ten years 1978-87.
- As in previous years a relatively small number of stoppages accounted for a majority of working days lost. There were 45 prominent stoppages, which involved the loss of 5,000 or more working days; they accounted for 88 per cent of the total working days lost in 1988.
- Stoppages over pay issues accounted for half (51 per cent) of working days lost.
- There were 781 stoppages recorded as in progress in 1988, compared with 1,016 in 1987 and a ten-year average of 1,443 for the period 1978-87. Just under two-thirds of stoppages lasted less than four working days.

Reference

Employment Gazette, July 1989 (HMSO) (Price £3.80 net).

International comparisons of industrial stoppages in 1987

An annual article in *Employment Gazette*, June 1989 compares working days lost in the United Kingdom with corresponding data for other countries. Such comparisons are affected by differences in methods of compiling data and in the criteria used for inclusion of stoppages in the statistics.

The latest available annual data on industrial disputes statistics in OECD countries relate to 1987. These indicate that in 1987 the United Kingdom stood around the middle of the ranking of countries by incidence rates, that is working days lost per thousand employees.

Reference

Employment Gazette, June 1989 (HMSO) (Price £3.80 net).

ENERGY

Digest of United Kingdom Energy Statistics 1989

The latest edition of this series, prepared by the Economics and Statistics Division of the Department of Energy, was published at the end of July. It contains 75 tables, generally showing data for the years 1984 to 1988, and four pages of maps and charts.

The first section covers general energy statistics and includes tables showing inland consumption of fuels on a primary fuel input basis (in coal equivalent, in oil equivalent and in terms of the thermal content of fuels). Other tables show the estimated value of purchases of fuels, energy consumption by final users and an analysis of consumption by main industrial groups. The section also contains charts showing trends in the inland consumption of primary fuels and equivalents.

The other sections deal separately with individual fuels, prices and values and foreign trade in fuels. Fuel production and consumption statistics are derived mainly from the records of the fuel producers and suppliers. Foreign trade statistics are generally derived from returns made to HM Customs and Excise.

Reference

Digest of United Kingdom Energy Statistics 1989 (HMSO July 1989) (Price £14.50 net).

A new look to Energy Trends

The Department of Energy's monthly bulletin *Energy Trends* recently underwent a major revision in format and a 50 per cent increase in size.

The format of *Energy Trends* has been basically unchanged for over 14 years but the decision to make available more comprehensive and detailed price information provided an opportunity for a review and enlargement of the bulletin. Greater use will also be made of graphical presentation.

The new style *Energy Trends*, which first appeared in June, now contains 21 tables in each issue including those tables which had previously appeared on a quarterly cycle. The Total Energy, Coal, Petroleum, Gas and Electricity sections are essentially unchanged, except for some re-ordering of tables and other presentational alterations, with the most significant changes being restricted to the tables in the Prices section.

Prices of fuels used by industry in Great Britain are now shown in a more detailed table, based on material available from the Department's Quarterly Fuel Stocks and Purchases Inquiry. This Inquiry has recently been considerably expanded. It is planned to include an article on this expansion in a future issue of *Statistical News*. In addition to average prices for each fuel, from the first quarter of 1989 the table also shows separate data for small, medium and large consumers, plus 10 per cent and 90 per cent decile points. For gas the table shows prices for different types of supply.

Domestic and industrial fuel price index numbers are now covered by two separate tables, one particular benefit of this being the ability to update the industrial sector index numbers two months earlier than was previously possible. The last table in the bulletin now shows monthly data for prices, in pence per litre, of petroleum products. This includes 2 and 4 star Motor spirit and Derv Fuel, previously shown quarterly, together with, for the first time, unleaded Motor Spirit, Standard Burning Oil and Gas Oil.

Reference

Energy Trends (Department of Energy) Monthly (Price £9.00 per annum, on subscription only).

Energy Markets in UK Manufacturing Industry

A new book aimed at answering a number of questions on the size and structure of the industrial market for energy in the UK and the impact of energy efficiency measures on that market, has recently been published under the Department of Energy's Energy Efficiency Series.

The first section covers trends in energy consumption between 1973 and 1987/88. It provides estimates of the contribution of output changes, structural changes and energy efficiency measures to the reduction in the energy ratio. The second section provides detailed tables of energy consumption by fuel type and by size of manufacturing establishment within industrial sub-sectors. Separate tables show the ratio of electricity to fossil fuels by industrial sub-sectors and by size of site. These tables provide an indication of the scope for Combined Heat and Power in industry. They reveal a high degree of concentrations, with some 600 establishments accounting for 60 per cent of the energy consumed in industry. Part 3 gives a detailed breakdown of energy purchases by 200 sub-sectors of industry. Changes in energy consumption between 1979 and 1984 can be deduced from the numbers provided. Part 4 gives energy as a proportion of production costs and gross output by sub-sector of industry and fuel type for the years 1979 and 1984. Notwithstanding the variations in fuel prices, fuel mix and levels of energy consumption and manufacturing output, energy expenditure expressed as a proportion of production costs or gross output showed little change between 1979 and 1984.

Reference

Energy Markets in UK Manufacturing Industry, Energy Efficiency Series No. 9 (HMSO June 1989) (Price £40 net).

COMPANY FINANCE

Business Monitor MA3 Company Finance

The Twentieth Issue of this annual publication was published by HMSO at the end of July. It contains results for large companies for standard accounting years 1986 to 1988 and results for small companies for standard accounting years 1986 and 1987. The results have been derived from the published annual accounts of a sample of company groups and independent companies registered in Great Britain. They take the form of standardised balance sheets, income and appropriation accounts and statements of sources and uses of funds. One further table contains selected accounting ratios including Net Income/Average Net Assets, Gross Trading Profit/Turnover and Current Assets (less stock)/Current Liabilities. Analyses are made by area of operation (ie mainly UK or mainly overseas), whether UK or overseas controlled and by broad sector and up to 30 industry groups. There is also an analysis of how capital employed, turnover, gross trading profit and employment were distributed in the industrial and commercial company sector during standard accounting year 1986. An article about trends in company finance revealed by these results was published in *British Business* for 11 August 1989. Other articles on the construction and main features of the sample of companies used for the results appeared in the February and May 1987 issues of *Statistical News*.

The Fourth Issue of Business Monitor MO3 *Finance of Top Companies* with results of the largest 500 members of the sample for standard accounting years 1986 to 1988 is due for publication in November.

The tables in both Monitors are intended to meet the main needs for information but the Company Accounts Analysis System can be used to generate many more combinations of data. Lists are also available which give basic information about the companies in the sample. Information is available as hard copy, tapes or disks and will be charged for at costs of production. Requests for such information should be addressed to:

Davina Rees
Central Statistical Office (D3B)
Room 1.381
Government Buildings
Cardiff Road
Newport
Gwent NP9 1XG
Telephone: 0633-81 2929

A computer tape containing all the data for each company used in the results will be deposited with the Economic and Social Research Council Data Archive at the University of Essex, Wivenhoe Park, Colchester CO4 3SQ (Telephone: 0206-860570).

References

Business Monitor MA3 *Company Finance* Twentieth Issue (HMSO) (Price £9.00).
Business Monitor MO3 *Finance of Top Companies* (HMSO) (available as a package containing the two issues for 1989 plus Business Monitor MA3 Twentieth Issue, price £17.00).
British Business, weekly news from the Department for Enterprise, price £1.40.
'Top Companies in the DTI Company Accounts Analysis', *Statistical News*, No. 76, February 1987.
'Smaller Companies in the DTI Company Accounts Analysis', *Statistical News*, No. 77, May 1987.

OVERSEAS FINANCE AND TRADE

Intra-Community Trade Statistics After Completion of the Single Market in 1992

The current system for collecting trade statistics, which is based on HM Customs' administrative needs, could not operate for trade between Member States of the European Community if the main border formalities are eliminated with the completion of the single market in 1992. After consulting its own users and Member States the Commission has concluded that there would still be a need for comprehensive statistics of trade between Member States. The Commission has therefore developed proposals for a revised system to collect the statistical data, expected to be called INTRASTAT, which will replace the current system. Statistics of trade with countries outside the European Community will continue to be collected under the current system.

Under the revised system businesses would still have to provide comprehensive information on their trade with firms in other Member States. The Commission's proposal is for a Council Regulation which would establish a common statutory system across all Member States which would reduce the burden on traders compared with the present system. The proposal has been published (Official Journal of the European Communities 18.2.89 No. C41/5). The proposal will now be the subject of further negotiation between Member States; the Council has been asked to adopt the proposal (using qualified majority voting) before the end of the year.

The proposed Regulation sets up only the framework of the revised system; it will be added to by a series of more detailed implementing Commission rules and other measures proposed by the Commission and approved by a committee comprising Member States' representatives. The aim is that these implementing regulations should mainly be agreed by the end of 1991 so that the revised system is fully established at least a year before it has to be implemented.

Government has been reviewing its own needs for information and has still to decide how to react to the proposals in the remaining negotiations. In the implementing regulations there is scope for further reducing burdens on businesses by, for example, cutting the number of data items which traders report, cutting the commodity classification detail and exempting smaller firms from reporting the full range of data. The UK will continue to try to strike the difficult balance between minimising the burdens of supplying information while ensuring that information which is needed continues to be available. But in the end the issues will be decided by all Member States under qualified majority voting.

The Department of Trade and Industry has recently started a consultation exercise aimed at collecting views of industry on the proposals. It is aimed principally at those businesses who will have to supply the information and bear the costs, although views of users have also been sought. These views should help in assessing the relative burden that the proposal will impose and the effects of loss of some information to users and will provide an input to assessing the Government's response to the proposals.

Inquiries should be addressed to:

Department of Trade and Industry
Room 282
1 Victoria Street
London SW1H 0ET
Telephone: 01-215 4884

Performance of the Industrial Countries

In 1988 real gross domestic product for the countries making up the Organisation for Economic Cooperation and Development (OECD) was 4.0 per cent higher than the previous year. Industrial production in 1988, by comparison with a year earlier, recorded substantial growth in almost all countries, averaging about 6 per cent; UK growth was 3.9 per cent. UK growth between 1981 and 1988 averaged 98.5 per cent a year compared with 97.6 per cent for all OECD countries.

An article on this subject is published in *British Business*, dated 16 June 1989. Further comparative details are given on unemployment and exports of manufactures.

Further inquiries on this subject should be made to:

Department of Trade and Industry
Room 245
1 Victoria Street
London SW1H 0ET
Telephone: 01-215 4873

Reference

British Business (Department of Trade and Industry) (Price £1.40 net).

International Publications

The following have recently been published and are available from HMSO:

Council of Europe

Computerisation of medical data in hospital services including university hospitals: co-ordinated medical research programme 1985, price £5.40 net.

European Conference of Ministers of Transport

Statistical trends in transport 1965-86, price £18.00 net.

Eurostat

Structure and activity of industry: data by regions 1983/84, price £6.50 net.

Energy balance sheets 1986-87, price £11.75 net.

Industry: statistical yearbook 1988, price £21.00 net.

Structure and activity of industry: data by size of enterprises 1984, price £7.25 net.

Food and Agriculture Organisation, Commodities and Trade Division

World statistical compendium for raw hides and skins, leather and leather footwear 1968-87, price £12.00 net.

Yearbook of forest products 1976-87, price £22.75 net.

Trade yearbook 1987, price £12.00 net.

World agricultural statistics pocket book 1987, price £4 net.

International Energy Agency

Energy statistics 1986/87, price £23.00 net.

Energy balance of OECD countries 1986/87 includes insert, 'OECD energy flow chart, based on IEA statistics', price £16.00 net.

International Monetary Fund

Government finance statistics yearbook, Vol. 12, 1988, price £16.25 net.

World economic outlook April 1989, price £16.75 net.

United Nations Conference on Trade and Development

Commodity yearbook 1988, price £40 net.

United Nations, Department of International Economic and Social Affairs, Population Division

Mortality of children under age 5: world estimates and projections, 1950-2025, price £6.75 net.

Population bulletin of the United Nations, No. 25, 1988, price £9.50 net.

United Nations, Department of International Economic and Social Affairs, Statistical Office

1985/86 statistical yearbook, 35th issue, price £60.00 net.

United Nations, Economic Commission for Europe

Annual bulletin of coal statistics for Europe, Vol. 22, 1987, price £12 net.

Annual bulletin of electric energy statistics for Europe, Vol. 23, 1987, price £15 net.

Statistics of road traffic accidents in Europe, Vol. 34, 1987, price £15.00 net.

Annual bulletin of trade in chemical products, Vol. 14, 1987, price £27.00 net.

Annual review of engineering industries and automation 1987, 2 vols, (not sold separately), price £28.50 per set.

Census of motor traffic on main international arteries 1985, price £6 net.

United Nations, International Narcotics Control Board

Statistics on psychotropic substances for 1987, price £12.75 net.

Narcotic drugs: estimated world requirements for 1989: statistics for 1987, price £24.00 net.

Readers should note that publications of international organisations are subject to price changes.

PUBLICATIONS

Regional Trends

The 1989 edition of *Regional Trends* was published on 6 July. Detailed information is presented for Scotland, Wales, Northern Ireland and the eight standard regions of England, through tables, charts and maps. Data cover a wide range of social, demographic and economic topics, ranging from population to GDP and from law enforcement to industry. The volume contains twelve pages of sub-regional statistics covering the English and Welsh counties, the Scottish local regions and the education and library boards of Northern

Ireland. There are ten pages of urban statistics covering all metropolitan district councils, London boroughs, districts with populations greater than 150,000 (1981) and other districts which have Urban Programme status. Variations within each region, which can be just as important as those between regions, are drawn out in separate regional profiles which comprise the first chapter of the book. The final chapter contains two pages of European Communities' regional statistics covering 58 EC regions.

The publication is primarily a descriptive brief for government about broad regional changes, but is also intended for those with general regional interests and for specialist users such as planners or marketing managers. This edition covers new items on, for example, children removed to a place of safety, radiation dose rates and legal aid.

Reference

Regional Trends 24, 1989 (HMSO July 1989) (Price £19.50 net).

Labour Market Quarterly Report

The August issue of the *Labour Market Quarterly Report* was published by the Training Agency in mid-August 1989. With the aid of diagrams and tables it gives a commentary on the training implications of current labour market trends. This edition carries a Special Feature on Skills Supply and Demand.

For further information or copies of the LMQR please contact Mrs Christine Harrison, Employment Department, The Training Agency, LM5, Room W815, Moorfoot, Sheffield S1 4PQ, telephone: 0742-704075.

Bank of England Quarterly Bulletin

In addition to regular articles providing commentary on recent developments in the UK and world economies and on domestic and international financial markets, the May issue of the Bank's *Quarterly Bulletin* contains the following items:

The market in currency options

This article, one in a series of background articles for the general reader explaining how different financial markets and other parts of the financial system work, outlines the basic mechanics of currency options and the theory of options pricing and presents data on the growth of the market in currency options over recent years. A feature 'box' describes some of the innovative variants on the basic currency option that have been developed to meet the requirements of end-users of options.

Trends in profit margins

The increase in inflation in the past twelve months has been attributed to a number of factors, but one widely held view is that a significant element can be ascribed to the growth in profit margins. This article sets out the methodology underlying the calculations of the profit margins figures used in regular reporting in the *Bulletin*, and presents a variety of measures which suggest that, economy-wide, profits have indeed contributed significantly to inflation: and an accompanying note gives some international comparisons which suggest that UK experience has not been an isolated

development. The article goes on to examine the determinants of margins, suggesting that competitiveness and capacity utilisation are important influences.

Stockbuilding behaviour in the United Kingdom

The stock/output ratio in the UK economy has declined sharply in the 1980s. This article analyses the behaviour of stocks and considers some possible explanations for the decline, arguing in particular that changes in the financial environment facing firms and in particular the effects of the tax system and the behaviour of real interest rates have been an important determinant of stocks.

Inflation adjusted sectoral saving and financial balances

This article, one in an annual series, presents revised and updated estimates of sectoral saving and financial balances adjusted for the effects of actual price inflation on net monetary assets and liabilities, together with estimates of the ex-ante inflation gains and losses accruing to each sector based on a measure of implicit long-term inflation expectations. Alternative figures for the ex-post and ex-ante adjustment for inflation based on net monetary positions for each sector derived from balance sheet data (as opposed to cumulative flows) are also presented.

Developments in international banking and capital markets in 1988

This article continues the annual series on developments in international banking and capital markets. The growth of total international bank lending slowed down considerably in 1988, despite the continuing large payments imbalances and a buoyant world economy. Increased emphasis on profitability rather than growth following the Basle proposals on capital adequacy may have been an important contributory factor, especially in the slow-down in interbank lending (where margins are low). In the international bond markets, primary activity was buoyant — reflecting in particular the strength of investment in the industrial countries and a surge in take-over activity — though secondary market trading declined. The article also contains a more detailed review of developments in the international banking market in London in the past three years.

Other items

The May *Bulletin* also reproduces speeches by the Governor on the economic and monetary development of the European Community and the challenges posed for the City by completion of the internal market; and on the growth in consumer indebtedness over recent years and its implications for the incidence of payments difficulties.

The Bank's *Quarterly Bulletin* may be obtained (at £7.50 per copy or £27.00 for an annual subscription) from:

Bank of England
Bulletin Group
Economics Division
Threadneedle Street
London EC2R 8AH

National Institute Economic Review

Productivity, machinery and skills: clothing manufacture in Britain

This study by Hilary Steedman and Karin Wagner compares samples of matched plants in Britain and Germany engaged in the manufacture of women's outerwear; it follows earlier matched plant studies, also published in the *National Institute Economic Review*, which examined matched plants in metal-working and furniture manufacture in these two countries. German clothing manufacturers specialise in high-fashion items produced in great variety of which a high proportion is exported at high unit prices; the typical British manufacturer concentrates on more standardised items produced in long runs and is consequently more vulnerable to competition from lower-cost producers in developing countries. The study examines the contribution of machinery, new technology and skills to differences in clothing productivity in the two countries. A final section discusses future trends in the industry in the light of the 1992 proposals for a Single European Market.

Two nations of shopkeepers: training for retailing in France and Britain

Previous comparisons of French and British vocational training, published by the National Institute in this series, have focused on mechanics, electricians, construction workers and office workers; these drew attention to the importance of French full-time vocational secondary schools for 14-18 year-olds. This article by Valerie Jarvis and S J Prais compares training for the retail trades in the two countries during the present period of structural change brought about by the advance of self-service. In the light of French experience, current British policies for raising the numbers trained in retailing occupations, and for more coherent training standards, are critically examined.

New Measures of British Service Outputs

Official statistics suggest that over the last two decades the commercial service sector has grown rapidly both in absolute terms and relative to the rest of the British economy. Given the importance of service activities, and the fact that many of them are notoriously difficult to quantify, it is desirable that the reliability of service output measures be subject to scrutiny and, where possible, improvement. Accordingly this article by A D Smith presents some alternative output measures which have been compiled for financial, recreational and catering services, and compares the picture which emerges, for the economy as a whole and for individual service industries, with that portrayed by official data.

New Section containing brief Macro Modelling Notes

Macro Modelling Notes is a new section of the Review, which we hope will appear on a regular basis. It will contain a small number of very short papers that have arisen from applied macro modelling work at the Institute or elsewhere. In the course of building and operating macro models, a large amount of information is used and produced that may never enter the public domain. This may be because the information is not substantial enough to justify a whole journal article, or because it is specific to the practice of using a macro

econometric model. However this information is often of general interest to other economists, and is nearly always helpful to other macro modellers. This section is designed as an outlet for information of this kind, which might otherwise not be published in any readily accessible form. The three notes in this issue provide three different examples of this type of note. The first involves econometric practice, and shows how long-run standard errors can be simply derived using standard regression techniques. The second presents some econometric results on export pricing obtained during normal 'model maintenance' of our world model GEM. The third considers the problem of setting terminal dates for a consistent expectations model.

This new section of the Review is designed as a vehicle for all UK and overseas macro modellers, and therefore outside submissions are strongly encouraged. Submissions must be of about the length of the notes shown here, and contain relevant material that does not form part of a larger article soon to be published. Unlike Review articles, these notes will not normally be refereed, but the Editorial Board may consult expert advice when necessary.

Reference

National Institute Review No. 128, May 1989 issue is available from the National Institute of Economic and Social Research, 2 Dean Trench Street, Smith Square, London SW1P 3HE (Price: annual subscription £45.00 net or £12.50 per single issue).

UK Market Facts

The Business Information Service at the University of Warwick has launched a new service which provides comprehensive coverage of UK market information through a single publication. It will enable businesses and researchers to find out basic market facts and figures and to spot trends without needing to engage in a lengthy and expensive search through many different sources.

To ensure it is up-to-date the publication *UK Market Facts* will appear six times a year, and it will include 60–80 pages of basic statistics for a range of consumer and industrial products and services.

Relevant data will be regularly extracted from statistical surveys and market research reports produced by official and non-official sources including market research publishers, trade associations and professional bodies, periodicals, academic institutions, polling organisations and the DTI's *Business Monitor* series.

The publication has been compiled for the Business Information Service by David Mort of Business Information Associates. Telephone: (0203) 525496.

This is the second in a new series of regular publications published by the Business Information Service and follows the success of the recent launch of *Towards 1992*, an abstracting journal on the single European market.

For further information, please contact Geoffrey Middleton, Publicity Services Officer, Senate House, University of Warwick, Coventry, CV4 7AL. Telephone: (0203) 523876. Subscription to this new service will be £140 per annum with discounts available for multiple copies.

Credit Unions

Major changes in the organisations supporting credit unions may be required if the movement is to take hold in Great Britain. That is the conclusion of the first independent study of the work of credit unions in this country, published on 27 April 1989 by the Policy Studies Institute.

A credit union is a cooperative savings and loans club. A group of people with a 'common bond' join together to make regular contributions into a pool of savings. The same people can borrow from the pool, at low rates of interest, when they need money to spend.

In spite of a recent spurt in the number of credit unions operating in Great Britain, they still have only 35,000 members. The movement has been much more successful in Northern Ireland, though, where nearly one third of Catholics belong to a credit union - that's a market penetration 300 times better than has been achieved in Britain. The groups in Northern Ireland also have a stronger financial base, with assets of more than £500,000 per union, compared with only about £70,000 in Britain.

Credit unions in Ireland, north and south of the border, are supported by a strong League of Credit Unions, and by the active encouragement of the Catholic Church. Neither of these is available in Britain, where the movement is split between two rival associations, and supported by an uncoordinated medley of national government agencies, local authorities, consumer groups, churches and charities.

Worries about the credit boom have stimulated growing interest in the potential value of credit unions - especially for the poor.

Credit Unions in the United Kingdom, by Richard Berthoud and Teresa Hinton. The book costs £7.95 and is available from all good bookshops or direct from PSI (100 Park Village East, London NW1 3SR). Funding for the research was provided by the Joseph Rowntree Memorial Trust.

The authors are available for interview, for further information, contact Helen Kinnings at the PSI Press Office on 01-387 2171.

CONFERENCES

UK Non-Official Statistics: Sources for Business Planning & Market Research

The University of Warwick Business Information Service is planning a one-day seminar covering the range of statistics available from non-official sources. It will take place on **Friday 27 October 1989** at the University's Radcliffe House Conference Centre.

Speakers will outline the major sources of non-official statistics and examine the advantages and disadvantages of accessing and using these sources. Specific areas to be covered include statistics available from trade associations, financial institutions, market research organisations and the media.

The fee which includes tea, coffee, lunch and background papers, will be £90 for subscribers to the Business Information Service and £100 for non-subscribers.

For further details contact Margaret Brittin at the University of Warwick Business Information Service, University of Warwick Library, Gibbet Hill Road, Coventry CV4 7AL. Telephone: 0203-523251/523051.

Health of Inner Cities and Urban Areas

A major interdisciplinary and international conference will take place in Cardiff 4 to 7 September 1989. Organised jointly by the Institute of Statisticians and the International Society for Research on Civilisation Diseases and the Environment (SIRMCE), the Conference will be a major forum for the exchange of ideas, research work, knowledge and experience on health issues and problems arising in, and out of, the urban living experience. The depth and breadth of this experience, and the range of experts, professionals, and organisations involved will take the Conference Programme over a diverse array of topics, from patterns of behaviour in societies, mental health, ecotoxicology, national and international health promotion, to town planning and urban regeneration.

In the light of the Conference's main location in Cardiff at St. David's Hall, there will also take place, as part of the Conference, a Minisymposium on *Health Promotion Issues in Wales and West Germany*.

Further details are available from:

Lori Butterworth
Conference Administrator
Meeting Point West
Paramount House
77 Mutley Plain Lane
Plymouth
Devon PL4 7DS
Telephone: 0752-225512

GOVERNMENT STATISTICAL SERVICE

Review of Regular Surveys

Set out below is a list of recently completed quinquennial reviews of surveys to businesses and local authorities. These surveys are subject to a departmental review and a report which is monitored by the Survey Control Unit. Any enquiries concerning a survey or its review should be made to the appropriate departmental contact point given below.

I Surveys to Businesses

Return of Red Deer Killed
Annual Survey of Red Deer Venison Sales
Annual Survey of Red Deer Venison Purchases

Dr J M Dunn
Dept of Agriculture and Fisheries for Scotland
Pentland House
Robb's Loan
Edinburgh EH14 1TW

II Surveys to Local Authorities

Revenue Account - Education
Revenue Account - Libraries, Museums and Art Galleries
Revenue Account - Personal Social Services
Revenue Account - Police Services
Revenue Account - School Crossing Patrols and Reg of Electors
Revenue Account - Fire Service
Revenue Account - Magistrates and Other Courts; Civil Defence
Revenue Account - Probation
Revenue Account - Housing Benefit
Revenue Account - Housing Other than Housing
Revenue Account - Highways and Other Transport Services
Revenue Account - Careers Service and Sheltered Workshops
Revenue Account - Agriculture and Fisheries:
Consumer Protection: Coast Protection
Revenue Account - General Administration, Cost of Rate Collection
Revenue Account - Refuse Collection and Disposal, Environmental Health, Cemeteries and Crematoria
Revenue Account - Recreation, Services and Planning
Revenue Account - Trading Services other than Passenger Transport
Revenue Account - Rate Fund Services Summary
Special Funds - Excluding Capital and Superannuation Funds
Local Government Superannuation Funds and Police and Firemen's Pension Schemes
Capital Funds and Capital Reserve Funds
Quarterly Capital Payments Return
Budget Return of Expenditure and Rates
Capital Estimates and Commitments Return
Accumulated Capital Receipts Survey
Forecast of Local Authority External Borrowing and Lending Inquiry
Capital Outturn Returns

Mrs C Wells
Finance, Local Authority Statistics
DOE
2 Marsham Street
London SW1P 3EB

Reorganisation of DTI Statistical Services

As a result of the changes in departmental statistical responsibilities arising from the recommendations of the scrutiny of government economic statistics, there are major changes to the organisation of statistical services in the Department of Trade and Industry.

The Business Statistics Office (BSO) has transferred in its entirety to the Central Statistical Office (CSO); most of S2 Division (in particular the work on monthly overseas trade statistics) and part of S1 Division (mainly on the monthly Index of Production) have also transferred to the CSO.

The remaining statistical services in DTI have been split between a number of Divisions. There is a central branch, within the Microeconomics and Statistics Division (EcMS), known as the Trade and Industry Statistics Unit (TISU). Other statistical work is being transferred to the four Market Assessment Units, which deal with specific market sectors:

- CVM consumer goods and vehicles
- EM engineering products
- IMM industrial materials (including metals)
- MIT manufacturing and information technologies
(including computers and computer services).

Finally, two statistical sections dealing with wider economic issues will be located in EME Division (Education and Management Economics).

The central unit, TISU, will be directed by the Department's Chief Statistician, John Astin (Grade 5), who will be responsible, as head of the statistics profession, for the general oversight of statistical work in the DTI.

The address of the Trade and Industry Statistics Unit, to whom all initial enquiries should be made, is:

20 Victoria Street
London SW1H 0NF
Telephone inquiries: 01-215 3188
Fax: 01-215 3467

An organisation chart of the new CSO showing senior personnel and their responsibilities is on page 86.9.

Appointments and changes

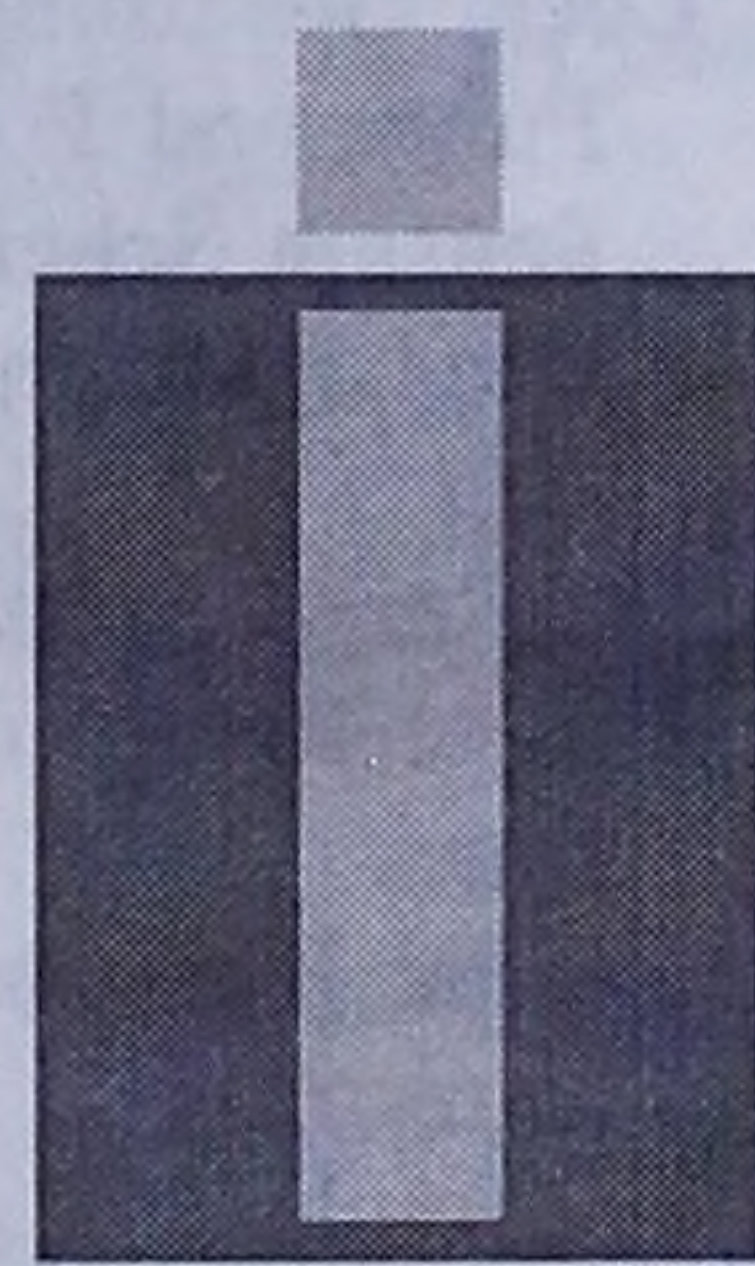
Mr T Simmons, Grade 5 (Chief Statistician), went on secondment to the International Energy Authority and was replaced by *Mr G C White*, Grade 7 (Statistician) in HM Treasury on promotion to Grade 5 on 1 August 1989.

Mrs R J Butler, Grade 5 (Chief Statistician), transferred to an Administrative post at the Department of Social Security on 1 August and was replaced by *Mr I W V Taylor*, Grade 7 (Statistician) in HM Treasury on promotion to Grade 5.

Mr A H Cowley, Grade 6 (Statistician), has been awarded personal promotion to Grade 5 (Chief Statistician) and remains at Customs and Excise.

Mr P J Stibbard, Grade 3, Department of Trade and Industry, transferred to the Department of Employment on 31 July 1989.

Mr R Williams, was temporarily promoted to Chief Statistician in the BSO on 1 February 1989.



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Formerly Business Monitor PA1004

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