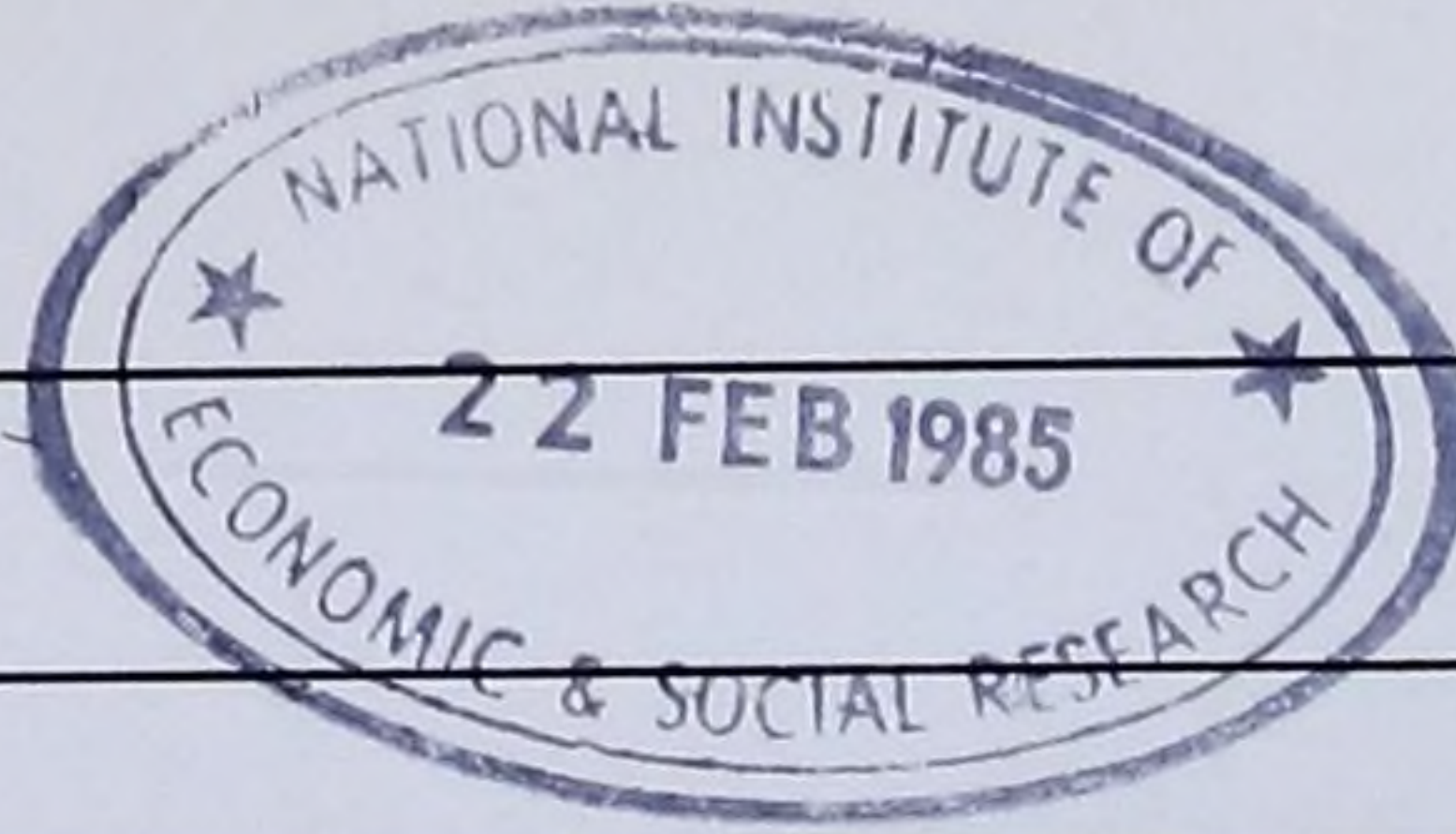


68

February 1985



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STATISTICAL NEWS

Developments in British Official Statistics



A publication of the Government Statistical Service

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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 very 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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Developments in British
Official Statistics

No. 68
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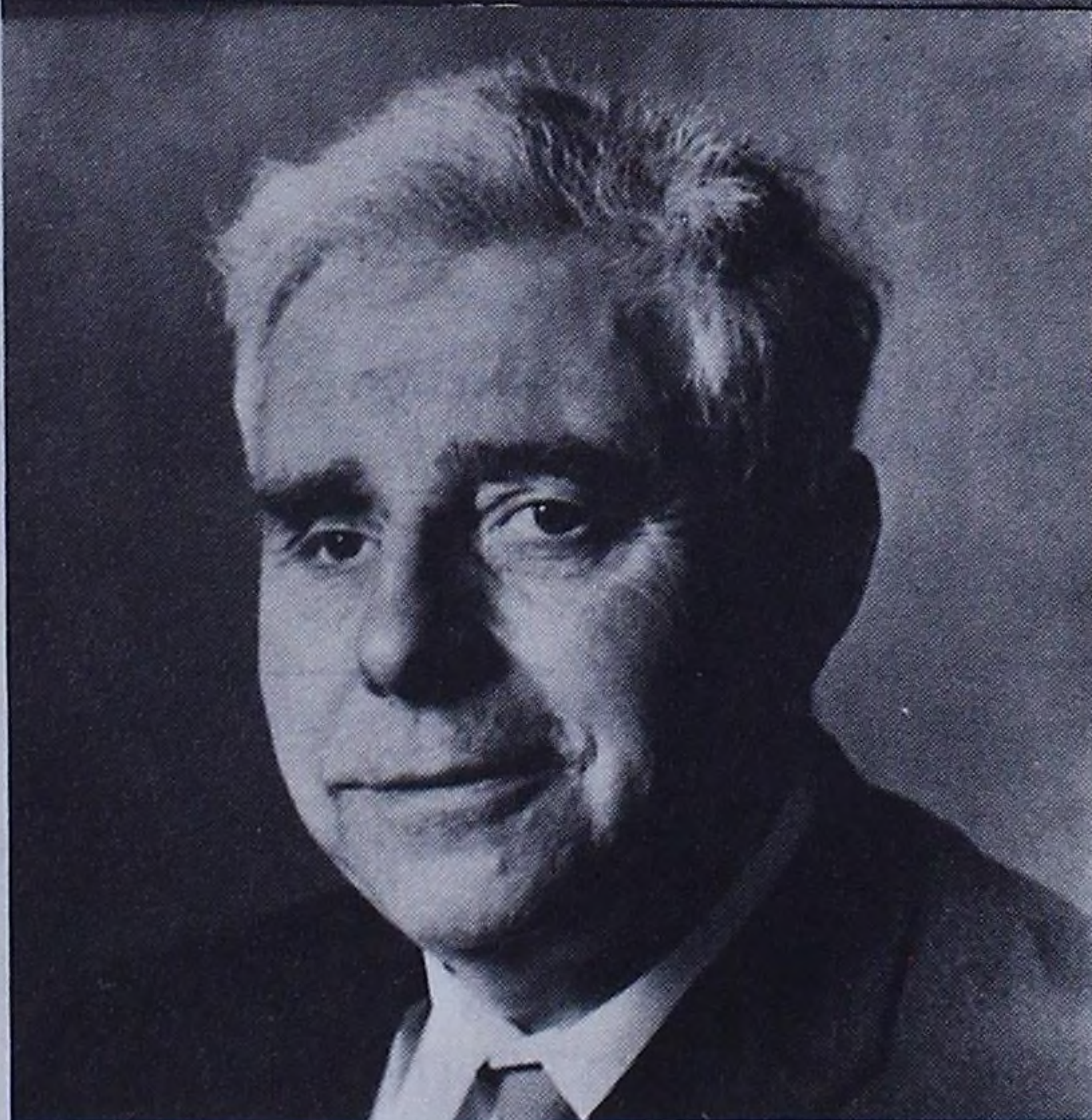
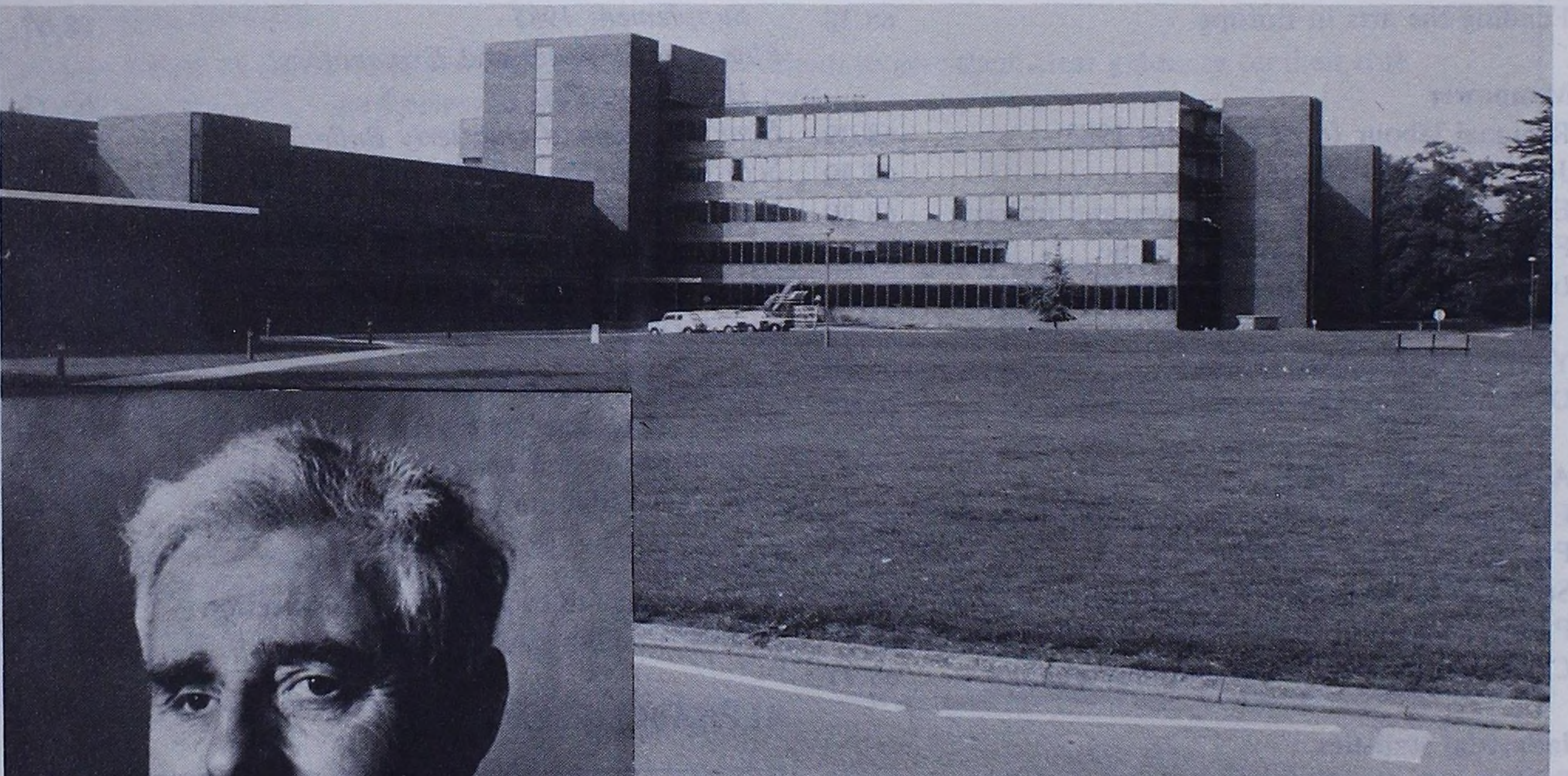
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We are pleased to announce that the 1985 subscription for *Statistical News* is £15.00 (1984 – £16.80). Single copies £3.95 (1984 – £4.20)



The Director and Senior Managers – Business Statistics Office

From left to right: Bill Knight, Steven Curtis, Bernard Mitchell, Ray Ash, Cyril Maskall, Roger Norton and David Lewis



Above: View of the Business Statistics Office from the grounds

Left: Martin Fessey, the first Director of the Business Statistics Office

The Business Statistics Office after 15 years

Ray Ash, Director, Business Statistics Office

Introduction

The Business Statistics Office (BSO) began operating at the beginning of 1969 under my predecessor Martin Fessey and initially took over the work previously carried out by the former Census Office of the then Board of Trade, located at Eastcote, whose main functions had been to carry out at five or ten yearly intervals large scale censuses of production and distribution. The censuses were supported by what was increasingly seen as an inadequate range of official business statistics covering the long periods between censuses. Moreover, the censuses themselves, although providing very detailed information about specific topics, including local area statistics, were extremely costly to set up and the information from them was several years out-of-date by the time it became available.

The absence of a suitable range of business statistics capable of monitoring satisfactorily changes in the British economy began to be heavily criticised in the 1950s and 1960s, culminating in the *Fourth Report from the Estimates Committee* in 1966/67¹ which called for more timely and detailed industrial statistics. The Report reflected political interest at that time in indicative planning and Government intervention in industry, supported by a composite range of macro-economic and micro-economic statistics. The late Jack Stafford's article on the development of industrial statistics published in the first edition of *Statistical News*² outlined the response of the Government Statistical Service (GSS) and announced the creation of the BSO with responsibility for collecting and publishing industrial statistics and for developing what was then referred to as a common register of businesses. The very ambitious development plans envisaged the BSO as very much the main, if not the sole collector of business statistics with its statistical output providing a full support service to industry as well as to Government. The advocates of these proposals were attracted by the possibilities of greater operating economies of scale in concentrating at the BSO much of the collection and processing of business statistics, including increased opportunities for reducing to an absolute minimum the duplication in the collection of data from businesses. They were also able to point to the wider possibilities of the common register as a catalyst in providing congruent macro-economic statistics with a more coherent approach to the application of standard classifications to particular businesses.

The early years

Following its creation the BSO moved by stages to Newport, South Wales and by 1972 was located in a purpose built office on the outskirts of the town.

By the mid-1970s the BSO, acting in conjunction with other statistics divisions of the Department of Trade and Industry, had accomplished one of its primary tasks, that is the design and implementation of a new system of industrial statistics comprising an integrated package of short term, annual and less frequent inquiries to businesses. This was followed by the introduction of a new system of annual inquiries to distribution and services industries, supplemented to a limited extent by continuing short term inquiries. The BSO also created new Business Monitor³ series through which as much as possible of that information was published.

It set up and maintained, not without difficulty, business registers on which its own inquiries are based. Recently its two main business registers have been linked, a development which has enabled more general use to be made of information from VAT records provided by Customs and Excise about births, deaths and other business changes.

Since 1971, the BSO has had its own computer branch, centred on the use of large ICL mainframe computers and has developed internally, processing systems which support virtually all of its work on statistics and business registers.

Inevitably, the infant BSO had to cope with considerable problems, and its staff, most of whom had not previously worked on statistics, can take considerable pride in its progressive development.

The interdepartmental role of the BSO

Martin Fessey's paper, 'Business Statistics: A Decade of Central Collection'⁴, recorded in considerable detail those early developments and also the failure to make as much progress as originally planned in extending the BSO's role as a collecting agency for other government departments. A further consequence of this departure from the original plan was that business registers created by the BSO have been developed and used mainly to support the inquiries which the BSO itself carries out.

It is fortunate that the new system of integrated inquiries which the BSO implemented in its earlier years could be based mainly on industries for which its parent department, the Department of Trade and Industry

(DTI), had a traditional sponsorship role. It is not coincidental that the principal customers among official statistics users for BSO's statistical output are the Central Statistical Office (CSO) and the Treasury (which do not themselves conduct statistical inquiries) and DTI itself. BSO's role as a collector of statistics for other government departments has mainly been confined to the smaller departments, for example the Department of Energy, the Scottish Office and the Welsh Office, although some small inquiries are carried out for the Department of the Environment. Additionally, as part of its larger integrated inquiries, for example the censuses of production and the quarterly inquiries to manufacturers about product sales, the BSO collects information about a minority of industries sponsored by departments other than DTI.

The outcome is that some major statistical inquiries to businesses continue to be collected by other government departments where the information provided is for their own departmental purposes. This limitation on the central collection of business statistics is of course understandable, especially where the departments concerned could point to the well established involvement of regional and local office networks in the collection of the relevant information. However, those decisions were strongly challenged at the time because they imposed a very specific limitation on the advantages which the BSO's creators hoped for from the central collection of statistics and the use of a common register.

It seems to me that an appreciable extension of the central collection of statistics would imply, and indeed form part of, any future move towards further centralisation of the GSS, or at least centralisation of the relevant management structures. A development of that kind has been considered several times in the past but rejected so far because there are powerful arguments against separating the management of parts of the GSS from the departmental organisations which they support.

Retrenchment

The climate which favoured the expanded collection of official statistics began to change in the mid-1970s with the rising concern about the costs of public expenditure and, in the case of business statistics, because of complaints, particularly from representatives of small firms about the costs which Government imposed on them (which inevitably included the costs of providing statistical information). The change of climate became more pronounced during the last five years with the Government's policies of less intervention in industry and of cutting back the Civil Service as part of its drive to reduce public expenditure.

The number of staff at the BSO peaked at around 1,100 in 1975. It has since fallen by over one third,

mainly since 1979, to the present level of around 725. Within that reduced total, approximately 60 staff are engaged on new work transferred to the BSO during the last four years. All parts of the Office have contributed to the staff savings.

The BSO successfully responded to these challenges as intended by becoming more efficient. But the pressures to reduce costs to government and to industry have led inevitably to reductions in the volume of information collected. Laurie Berman's article in *British business*⁵ summarised the cuts in the statistical inquiries that were made at the beginning of this decade. A few of the BSO's smaller inquiries were discontinued and some information is now collected less frequently, for example, some of the details formerly collected annually about distribution and services. However, the most difficult part of the retrenchment has been the collection of information from inquiries which are still carried out with the same frequency as before but with fewer forms being sent to the smaller businesses.

The changes were achieved in various ways. In the case of the quarterly inquiries to manufacturers about product sales, the exemption limits affecting smaller businesses were raised. Sampling was introduced or its use extended in most of the BSO's annual or less frequent inquiries. Increased importance was attached to extracting as much information as possible from smaller numbers of forms and from register details on which the inquiries are based, and greater efforts have been made to improve response rates. Considerable software development was required to accommodate changes in the inquiry designs and estimation procedures.

Despite these endeavours, there has undoubtedly been a reduction in the range and quality of statistical information affected by the changes described above. The emphasis has been to meet official needs for statistics, although the considerable overlap that exists between the official requirements for business statistics and the requirements of other users means that a very considerable range of useful statistics continues to be made available outside Government, for example, to statistics users in industry, although not as much as some would like and not as much as was provided in previous years.

BSO's statistical output involves the use of both statutory and voluntary inquiries. As a rough guide, the voluntary inquiries relate to readily available requests for information which those contributing to the inquiries are able and willing to provide on a monthly or quarterly basis, for example, the information required for the producer price index, the retail sales index and short term information about changes in capital expenditure and stocks. Statutory requests usually relate to the more difficult inquiries, for example, those which collect information quarterly

SENIOR MANAGEMENT AND BRANCH RESPONSIBILITIES

about manufacturers' product sales or annual censuses of production. They are also used to obtain other statistics annually or less frequently which benchmark short term trends and in cases where a very high response is essential, for example, in the collection of information required for the maintenance of business registers.

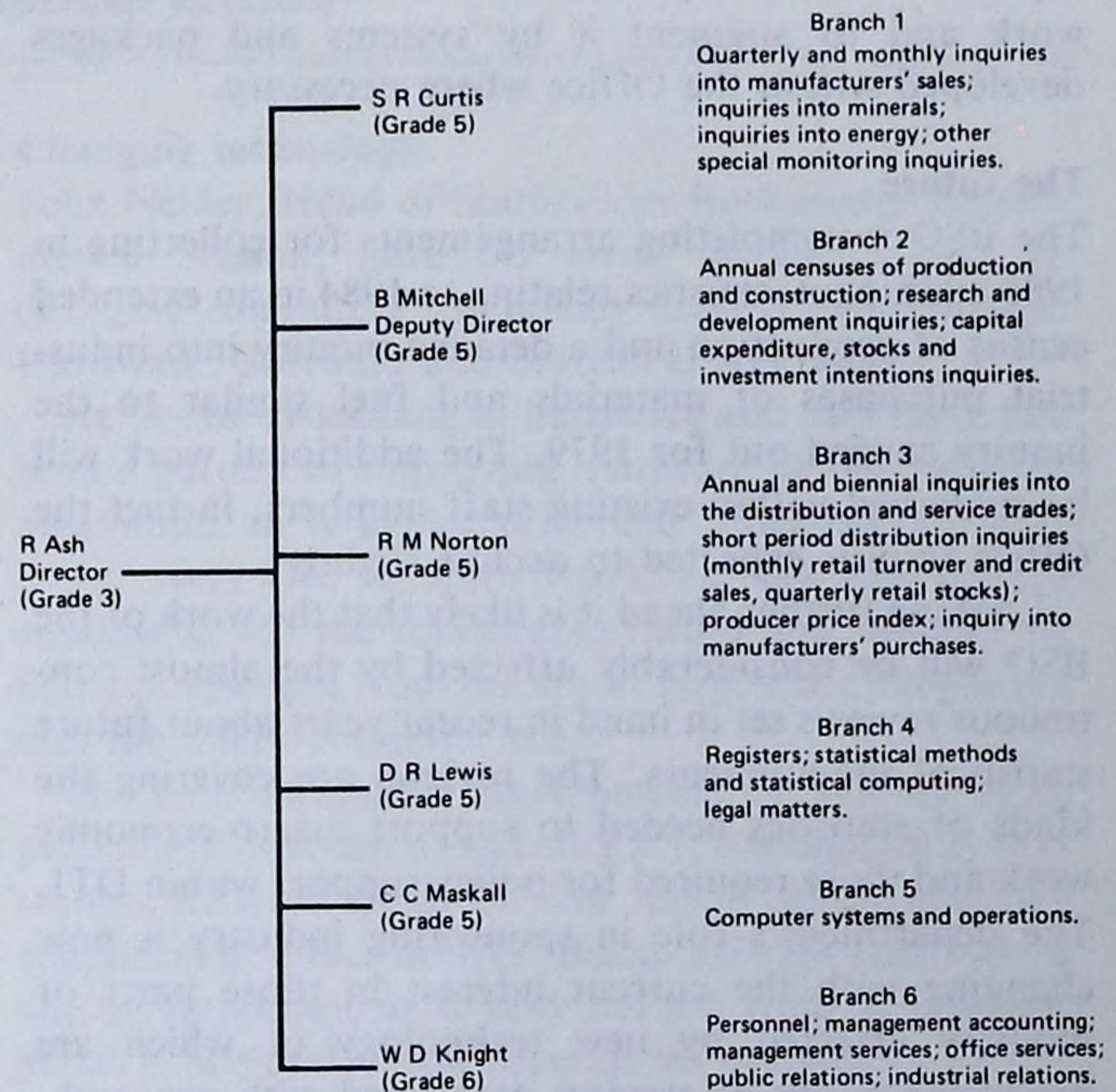
Of the 375,000 forms sent out by the BSO in 1984, approximately 160,000 were statutory requests and 215,000 were associated with the collection of information through voluntary inquiries.

The search for economies in the collection of statistical information will continue. The need for each of the BSO's statistical inquiries is being reviewed at least once every five years as part of a rolling review programme for statistics initiated by the Prime Minister. These and other reviews will help to ensure that information which has outlived its usefulness is no longer collected and to identify situations where more information may be needed.

Relations with other statistics divisions in DTI

BSO is one of three statistics divisions within DTI. The other two divisions are important users of the BSO's statistical output and in that sense they have the same customer relationship with the BSO as any other official user of its output. However, the relationships between three statistics divisions within the same department are both somewhat more complex and more intimate. The department's Director of Statistics post was abolished in 1983, since when its two London based divisions, but not the BSO, have reported to DTI's Chief Economic Adviser. The process of eliminating awkward interfaces between the divisions continues. One such development in recent years is the decision that the BSO should assume responsibility, in a limited number of cases, for all aspects of statistical work including the provision of statistical interpretation and other briefing required by policy divisions, where it is not considered sensible or cost effective to separate those activities from the collection of the relevant statistics. The BSO has assumed full responsibility on that basis for work associated with the producer price index, statistics on capital expenditure, stocks and investment intentions and distribution statistics.

Among the three divisions it is generally agreed that the BSO's position as a collecting agency, means that it has the prime responsibility for guarding against the improper disclosure of information which could be identified with individual businesses. It takes the lead, therefore, in matters associated with departmental rules on data confidentiality and on the operation of or possible amendments to the Statistics of Trade Act, 1947.



Current developments

The BSO is taking advantage of the prospects offered by developments in computing and information technology for the purposes of providing modern, cost effective services to its customers. Increasingly this is affecting the way things are done in the Office, not only in the traditional area of processing statistical information but also in the presentation and use of information required for management purposes. The use of micro-computer technology and more staff working on-line to its two main frame computers is expected to bring about a reduction in the amount of intermediate paper output. The changes are being supported by developments aimed at modernising the BSO's computer systems, for example, a data management approach using data base management systems, data dictionary and other modern techniques. We expect to make increased use of standard tabulation, data editing and information retrieval packages. A standard software approach – The Automatic Publication System – is being developed for the preparation of statistical data tabulations which should reduce to a minimum, the amount of manual intervention required in the production of printers' copy for Business Monitor publications, including the intervention hitherto necessary to avoid the direct or indirect disclosure of details relating to individual businesses. The rapid completion of these projects will depend crucially on the availability of appropriate computer

systems and packages which satisfy or can be adapted to meet the BSO's requirements and on the retention by the BSO of a nucleus of highly skilled computing experts with the experience necessary to further the work and to augment it by systems and packages developed within the Office where necessary.

The future

The BSO is completing arrangements for collecting in 1985 additional statistics relating to 1984 in an extended census of production and a detailed inquiry into industrial purchases of materials and fuel similar to the inquiry carried out for 1979. The additional work will be contained within existing staff numbers, in fact the Office total is expected to decline slightly.

Looking further ahead it is likely that the work of the BSO will be considerably affected by the almost continuous reviews set in hand in recent years about future statistical requirements. The reviews are covering the kinds of statistics needed to support macro-economic work and those required for policy support within DTI. The department's role in sponsoring industry is now changing with the current interest in those parts of industry affected by new technology or which are producing goods or services associated with new technology. In addition to the statistics that may be required to support these policy developments, there is current interest in the possibility of collecting more detailed information about the services sector generally, both for macro-economic work and in support of Government policy concerning this sector.

However, any proposals for changing the collection of statistics would have to take account of the constraints to which I referred earlier, including the Government's determination to restrain public expenditure and to minimise the costs to industry arising from the completion of statistical forms.

Those constraints would make it difficult to expand the regular collection of some business statistics without a rigorous search for compensating reductions in the overall collection. They also imply that new demands for statistical information would have to be accommodated, wherever possible, within current plans for the allocation of resources to the BSO. Apart from releasing more resources from statistical work that is discontinued because it ceases to be of sufficient importance, the only way in which that would be possible is through greater efficiency, a requirement that chimes in well with the more general campaign for increased efficiency expressed through the Government's Financial Management Initiative. It is absolutely necessary, therefore, for the BSO to maintain its drive for greater efficiency if it is to find the resources necessary to support a modern statistical service capable of meeting future requirements. On the basis of its past record and current plans I am sure that it will be able to do so.

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 4. 'Business statistics: A decade of central collection' by M. C. Fessey, *Journal of the Royal Statistical Society Series A (General)* Vol 141 Pt 4, 1978
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- Business Statistics Office Report for 1977*. BSO, Cardiff Road, Newport, 1978
- See the inside back cover for details of how to obtain copies of *Statistical News* articles.

This is the fourth in a series of articles on the structure and functions of the Government Statistical Service. The fifth in the series, on the Scottish Office, will appear in the May 1985 issue.

Government Statistics in the 1980s – a half term report

Terry Orchard, Statistician, Central Statistical Office

About eighty members of the Government Statistical Service (GSS) gathered at the Civil Service College on 12 October to participate in discussions led by Sir John Boreham, Director of the CSO and Head of the GSS, about Government statistics in the 1980s. The four other distinguished speakers were: Dr John Nelder, Head of Statistics at Rothamsted Experimental Station; William Keegan, Business Editor of the *Observer*; Sir Terry Burns, Chief Economic Adviser to the Treasury and Professor Halsey of Nuffield College, Oxford.

Opening address

In his opening address, Sir John Boreham looked back to the start of the eighties and the White Paper on the Government Statistical Service (Cmnd. 8236 HMSO April 1981, price £2.10 net) and forward to their end, by when only five of the current senior management team will remain. He asked himself four questions: shall we have unified grading down to Grade 7 (Principal)?; will there be a Statistician Group?; will there still be a Head of the GSS?; will there still be a GSS?, and he hoped the answer to each would be yes but he surmised that none is open or shut.

Sir John said the White Paper on the GSS is of particular importance because it sets out Government policy. In particular he thought the GSS must ensure that its output is used in Government management, whether high level management, like financial management by the Treasury, or political, like fixing the maximum time for which people can be detained before their trial. All the output must give good value for money, must be cheap, available quickly, and of the relevant quantity. He would ask various questions of the GSS, most of which would be followed up by; 'if not, why not and what should I do?'. He hoped the seminar would provide the sort of informed discussion needed to answer all of these questions.

The discussion following Sir John's opening remarks centred on integrity. The point was made that statisticians should not use integrity as a justification for publishing the figures and no more. Bias in the collection of statistics was also discussed. Some people thought the selection of statistics to meet the needs of Government threatened the integrity of the GSS but more thought the GSS still produces a broad range of statistics including some, such as those on wealth, which are of no direct interest to the present Government. The idea of a Statistics Council to act as an independent arbitrator on issues of integrity was also discussed.

Changing technology

John Nelder, Head of Statistics at Rothamsted Experimental Station, gave his views on the impact of changing computing technology under three headings: Hardware, Software and Statistical Analysis.

He began by looking at hardware and said there had been a pattern of improving hardware by one order of magnitude, in terms of price and processing productivity, every five to seven years. He saw this pattern continuing for the foreseeable future and thought we had just emerged from the era of large scale integration into the micro computer era.

The four hardware developments he saw as being particularly relevant to statistics are: paging, array processors, network hardware and optical cables, and high resolution graphics devices. But in his view hardware is not all important as it only defines what is possible. What is achievable still depends on software.

Dr Nelder regarded operating systems as the most important pieces of software and felt it was helpful that users of micro computers were forcing some standardisation, especially on UNIX. He also saw some standardisation coming in the protocols for networks but not in data management systems, although these may be embedded in operating systems.

For many users the most valuable package is one for statistical analysis. One aim of these was to shield users from the operating systems. With better and more standard operating systems, packages are making more use of the facilities offered by these and also introducing the ideas of expert systems.

In introducing the section of his talk which looked at changes in statistical analysis, Dr Nelder said this was relevant because statisticians are concerned with measurement and the accuracy of measurement. He saw modelling as the key activity: to replace data with a set of theoretical values derived from a few parameters in order to summarise, explore and predict.

He closed by posing, then answering, his question 'Why do more model fitting?' by recalling the comments of a shopkeeper in Washington DC. When in reply to a question, Dr Nelder told him he was a statistician, the shopkeeper said: "I reckon we have got more statistics than we know what to do with". Dr Nelder agreed with this: we seem to be getting buried under a pile of paper and he hoped more model fitting will provide a way out.

The discussion focussed on problems of organising programming resources, for example should statis-

ticians do programming or should we recruit programmers who are at ease with statistics. Dr Nelder thought a major cause of the problems was the view, held by many managers, that computing is essentially a low grade activity. He thought good expert systems, necessarily developed by expert people, will solve some of the problems. These should provide statisticians with easy to use tools for their data analysis.

Publications and service to the press

William Keegan, Business Editor of the *Observer*, gave a journalist's view of the GSS publications and the service to the Press. He briefly outlined his career: on the *Financial Times*, the *Daily Mail*, the Bank of England, and now with the *Observer*.

One of the first things he learnt as a journalist, is that you can never take for granted the public's understanding of even the most simple concept. For this reason the press is a better medium than television for presenting statistical information because it gives people time to digest the material. He said more effort should be put into making the message easier for the general public to understand. He pointed to the steady evolution of *Economic Trends* and *Social Trends*, which he thought were excellent but he thought the material in *Social Trends* would be much more valuable to the press if it came out steadily during the year.

Commenting on the widely accepted view of the complete integrity of the GSS, he pointed out that the GSS must be aware that any change in the statistics can look like deliberate distortion to an outside user even if the changes are justified and carefully explained. An obvious example is the propaganda war over the unemployment figures which the GSS cannot avoid being caught up in.

Mr Keegan said his problems with balance of payments figures were a good example of the way outside users suffered when changes in presentation were made to suit politicians. At the time of the first surge in oil prices it was politically beneficial to show the oil and non-oil balance of payments figures separately. Now that the exports of oil products are booming and those of manufactured goods are not, the GSS publishes a combined figure.

He also saw the clear separation of GSS press notices and departmental press notices giving policy comment, as an essential safeguard to the integrity of the GSS. He referred to the Treasury *Economic Progress Report* as a good example of what worried him about bias in presenting information. This has a commentary which aims to provide journalists with headlines which seem to be biased towards the Government's views. He thus finished his talk by re-emphasising the need for the GSS to maintain its integrity and to continue to publish good quality basic economic and social statistics.

Sir John Boreham started the discussion by saying that the GSS knows it is caught up in a propaganda war in which our figures are used. Our task is thus to ensure that the message of our statistics is easy for most people to understand.

Integrity was the main topic of the discussions which followed. Everyone agreed it must be maintained. There were also discussions about the relationship between journalists and statisticians. The popular press was regarded as having low standards in the way it used statistics but nobody thought the GSS should counter this by aiming its output at the mass market.

Economic statistics

Sir Terry Burns, of HM Treasury, gave his views on economic statistics under the four headings: Who is the customer, what is the framework for choosing statistics on the economy, how has our interest changed, and what has been the impact of new technology.

He said the Government was obviously the key customer but there were also important private sector customers who were interested in monitoring the effect of the Government's actions. Thus the GSS should not place too much emphasis on meeting the needs of Government.

He used the statistics on output, borrowing and inflation, for short-term temperature taking and sometimes found it difficult to get an accurate picture because of the changes and revisions. His main need therefore was for reliable initial estimates; but he also needed long term runs, international comparisons, consistent definitions, and timely statistics which can be integrated with other indicators.

Sir Terry said his requirements were dictated by the framework used to monitor the economy. This could change and so the statistical service had to be flexible, to take for example due account of the increased importance of the service industries. This required solving problems like measuring the output of the service industries. He also said the changing role of the company sector in the National Accounts, which used to concentrate on the personal sector, has now put pressure on the statistical base.

Sir Terry went on to talk about the problems of defining income, and the relationship between stocks and capital flows, in times of high inflation. He said the relaxation of capital controls around the world had caused problems, partly because data provided by the exchange controls has been lost, and partly because it is now difficult to define the economic boundaries of the nation.

He finished his talk by saying how few benefits he has got from new technology. He still finds it difficult to make comparisons over long time periods and feels somewhat frustrated by the availability of micro com-



Left to right: Sir John Boreham, Professor Halsey, John Nelder and William Keegan (Sir Terry Burns was not present for the photograph session)

puter packages which only serve to highlight what could be done if the data were available.

The first speaker from the floor referred to Sir Terry's remarks about revisions to initial estimates and asked him what should be done when the initial figures are always very uncertain. Sir Terry said he knew it was very difficult to adjust for suspected bias but it has to be done and the suppliers should be better placed to do this than the customers. They should not just rely on adjusting the figures later. Likewise, the suppliers are the people who should be best able to say what adjustments are needed to the measures of GDP. Another participant then asked if the GSS should produce estimates of GDP which balanced. Sir Terry said he would like them to try harder to do so, but he would also want to see the raw figures to check on the adjustments.

Sir Terry was then asked if he thought some of the problems arose from the economists' definition of income and if he thought the definition was still appropriate. In reply Sir Terry thought there was a need to try harder to measure changes in stocks, and income. For example, why should capital gains on overseas holdings be excluded.

The discussion then moved on to more general matters: a suggestion that progress in introducing new technology would be smoothed by giving people more

freedom to control their expenditure on computers, whether Sir Terry thought the relationship between economists and statisticians will change in the future, and what changes Sir Terry thought might occur if unified grading was extended. He foresaw little change, at least in the short-term.

Social statistics

Professor Halsey of Nuffield College, Oxford had planned to talk about demographic and social change but, having listened to all the earlier talks and discussions, he decided instead to tell participants what the GSS looked like to a social researcher.

He first asked himself the question, 'What is the state of the GSS after Rayner?' and decided that things are not really too bad. The GSS still provides a good service and contributes to analysis and commentary on many social issues.

He stated two doctrines: that the primary task of the GSS is to serve Government, and that members of the GSS ought to be more responsible for the use of their products. He said his talk would aim at countering these, particularly the first.

He criticised the GSS for being too concerned with objective statements and thus selecting the soft option of easy measurement. He gave as examples the use of

administrative definitions for unemployment and poverty which are different to the subjective definitions commonly used outside the government service. He said this means social researchers have to get the information on things such as attitudes to Government and the fear of mugging, by searching around various questionable sources. The GSS could help them by being much bolder about getting these sort of data. He also criticised the GSS for being parochial and continuing to concentrate on collecting data about Britain even though there is now more interest in international comparisons.

Professor Halsey went on to talk about the deficiencies in the official statistics arising from the choice of Government needs as the primary objective. There is little long run data because the Government's interests are of a much shorter time span than are social researchers'. Also the official statistics on ethnic minorities are poor and are getting worse because they have become a political issue. He wanted to persuade Sir John Boreham to reduce the size of the 'G' in the GSS and to recognise that they have a duty to serve the Crown rather than Government. In his view this needed extra resources, not just a shift. He finished by saying that he would like to see a CSS (a Country Statistical

Service) as well as a GSS. This CSS would take account of the needs of the public for statistical information on the issues that concern them. He knew he would not get it but he was still hopeful he might see some slight shift in the right direction.

Sir John Boreham opened the discussion by agreeing that there was a need to know more about what people think and for more international comparisons, but not necessarily done by the GSS, although things like the population census, can only be done by the Government. He pointed out that the problems with statistics on ethnic minority groups were not just due to lack of resources; some pressure groups oppose their collection because they regard them as a smokescreen to distract public attention from the lack of action on the problems themselves.

The general discussions were mainly concerned with social research by the Government, and Professor Halsey's idea of a CSS. It was also suggested that the Government should not be a general provider of information. Professor Halsey disagreed, he thought the Government should be concerned about what the public thought of their quality of life and should seek information on this.

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The use of automatic editing in the 1981 Census

J D Brant, Statistician, Department of Health and Social Security, (formerly at the Office of Population Censuses and Surveys) and Miss S M Chalk, Senior Assistant Statistician, Office of Population Censuses and Surveys

Introduction

Many countries are now developing computational techniques to speed up the production of census results. One of these techniques is automatic editing – a fully automated system for control and correction of information. Traditionally correction of all information between the stages of data input and tabulation has been controlled and executed manually. The correction procedure, whether automatic or manual, is costly and lengthy, but it is important because missing, invalid or inconsistent information can create many problems for table production and analyses. This article briefly describes the automatic editing system used in the 1981 Census and summarises the results of checks on this system for England and Wales.

Why impute

Many statisticians might argue that imputation should not be done at all and that the data should be presented as collected. However, there are three reasons why imputation was carried out on 1981 Census data by the Office of Population Censuses and Surveys (OPCS). Firstly, if imputation is not carried out on the data at source then the resulting statistics are capable of inconsistent interpretation. For example, Table 1, below, shows the sex and marital status distribution, including 'not stated' categories of 1,100 people. Using all of the information in this table (i.e. redistributing separately for males, females and sex 'not stated') the 'not stated' marital status category would be redistributed in a different way to a method using only the marital status distribution (col (a) of Table 1). The two redistributions are shown in Table 2 and it can be seen that the redistribution of 'not stated' items depends on the detail of the Table available.

Table 1

	(a) <i>Total</i>	(b) <i>Male</i>	(c) <i>Female</i>	(d) <i>Not stated</i>
Total	1,100	450	550	100
Single	430	200	200	30
Married	460	200	250	10
Widowed	70	15	50	5
Divorced	40	15	20	5
Not stated	100	20	30	50

Secondly, OPCS has the fullest possible range of information on which to impute. It therefore has the best opportunity to take account of differential non-response of the type seen in the example above.

Thirdly, the user of census statistics does not have to worry about 'not stated' categories and is saved time and effort.

Background

Many automatic editing systems are based on the editing and imputation methods described by Fellegi and Holt (1976)¹. These methods give a scheme for choosing which items to alter when the data are inconsistent (see Diary 1 section). The items selected are imputed by a hot deck system (see Hot deck system section), along with any invalid or missing items. Such techniques have been incorporated into the system developed in this country to process census returns and, following the use of this system in the 1974 Test Census, a survey was conducted by Census Division of OPCS to assess the quality of the data thus produced. The results of this survey can be found in an article by Werner (1977)². Overall, automatic editing produced better quality data in 1974 than would a technique assigning values to missing items in proportion to the known response distribution for each item. This conclusion led OPCS to extend and develop automatic editing to cover all items in the 1981 Census that were processed for all census returns (some difficult to code items were only processed for a ten per cent sample of the returns).

Diary 1

For the 1981 Census the first stage of automatic editing was called 'Diary 1'. This system identified missing, invalid and inconsistent data, and determined the action

Table 2

	<i>Redistribution of the not stated items</i>	
	<i>using all of Table 1</i>	<i>using col (a) of Table 1</i>
Single	51	43
Married	33	46
Widowed	9	7
Divorced	7	4

required to correct these errors. In some cases Diary 1 imputed an appropriate value itself. For example, persons under the age of sixteen with an erroneous marital status were assigned a value of single by Diary 1. In the majority of cases, however, the item was flagged for imputation by the second stage of the system. Each enumeration district (e.d.) was regarded independently by Diary 1 and counts of the number of errors of each type (missing, invalid and inconsistent) for each item were made. Any e.d. which contained more than a predetermined number of errors for any item (or for all of the items together)—the tolerance levels—was rejected for clerical scrutiny. The e.d. was then resubmitted to Diary 1 with corrections, or with relaxed tolerance levels, in order to pass to the next stage of the editing.

The identification and resolution of inconsistencies was carried out in Diary 1 by a set of edit elimination matrices. One matrix was used for household records to resolve inconsistencies between the items access (to accommodation), building type (type of building and whether there were persons present in it on Census night), sharing (whether the building was shared with another household) and number of rooms. Four matrices were used for personal records: one for inmates of children's homes, one for inmates of old persons' homes or homes for the disabled, one for managers or staff of communal establishments and one for records not covered by the previous three. These matrices resolved inconsistencies between the items: age, marital status, activity last week, employment status, and, for people in communal establishments, position within the establishment.

The application of automatic editing in England and Wales (and in Scotland) differed from most other countries in that the actions required to resolve inconsistencies in every possible combination of data were determined before processing commenced. These actions were then stored in the edit elimination matrices so that any inconsistencies detected during processing could be quickly resolved. In most other applications the required action is determined during processing itself. Details of both methods are available from OPCS.

The advantage of using an edit elimination matrix is that it is computationally quicker than computing the action required each time a record is input. However, the disadvantage is that if a variable or edit is changed at a late stage of planning then the entire matrix might need to be reworked and reprogrammed.

Hot deck system

The second procedure was based on a 'hot deck' technique which utilized expected relationships between variables to impute values for missing or unacceptable data. The hot decks were a set of structures which stored

item-values from wholly valid records according to the value of various other items. For example, tenure and the number of persons in a household can often provide a good indication of the number of cars a household is likely to possess. An example of the structure of a deck for the item 'number of cars' is given at Figure 1.

Figure 1
Hot deck structure for 'number of cars'

Tenure	Number of persons							
	1	2	3	4	5	6	7	8+
1 Owner occupied
2 Renting from local authority or housing association
3 Renting with a job
4 Renting furnished from private landlord
5 Renting unfurnished from private landlord

Each combination of item-values in a deck is called a cell. A set of 'start values' was given to these cells based on national distributions from the 1971 Census and during processing these cells were constantly updated with values from valid records (deck admissions). An extraction was then made from a cell in the appropriate deck each time a record occurred that had been flagged for imputation by Diary 1.

Whenever possible the records of more than one processing unit (one processing unit (PU) was fifty geographically close e.d.s), were processed together. Thus the continual update of the decks with new values ensured that any local variation in characteristics was reflected in the imputations. For housing items in particular, where characteristics such as tenure tend to be geographically clustered, this should have greatly improved the quality of the data. Further details of the hot deck system are available from OPCS.

Checks on automatic editing

The main objective of both the 1974 and 1981 clerical checks was to determine whether the distribution of the values imputed by automatic editing for an item accurately reflected the true distribution of the missing item-values. In the 1974 Test Census check the true values of missing items were found from a combination of census form checking and field follow-up interviews with the households concerned.

It was intended that the 1981 check should follow a similar procedure, but a number of surveys requiring public co-operation were conducted soon after the Census so, to spare the public any further inconvenience, it was decided that the interview stage of the check should not be carried out. However, this meant that from the clerical part of the check (that is, the

check back to census forms) the values of some items could only be determined if the error had occurred during data preparation. For example, age could only be determined for 5.5 per cent of the cases in which it was imputed. In the remaining cases it was missing and there was no way of checking the imputed value.

For this clerical check a random sample of eighteen PUs in England and Wales were selected: this equated to a sample of about 0.8 per cent of records. Within this sample the values of about seven per cent of household items and nine per cent of personal items had been imputed although, of course, the rates for individual items were generally much lower. Fewer than one and a half per cent of most items' values were imputed, the notable exception being for the item Employment Status with an imputation rate of over nine per cent of the population at risk. The sample census forms were examined to see if the true values of these imputed items could be determined from the available information both on those census forms with imputed items and on the census forms of neighbouring households. So, for example, efforts were made to manually assign a value of tenure using tenure, building type and access (to accommodation) information from the neighbouring households as well as building type and access information from the household with tenure missing. Obviously it was impossible to assign values to all cases where an item had been imputed, and it was more difficult to assign values for some items than for others; but, in total, values were assigned to seventy-four per cent of the imputed household items and fifty-eight per cent of the imputed personal items. For the purpose of this check these values were assumed to be the true values of the imputed items.

To complement this clerical check it was decided to use a link between the Census and a sample of survey forms (which had been established for other purposes within OPCS) in order to find out how census items requiring imputation had been reported in the linked survey. A sample of forms from the National Food,

Family Expenditure, General Household and Labour Force Surveys carried out early in 1981 had been matched with census forms. If a linked census form had an imputation then the imputed value and survey value were matched. However, the size of the surveys, difficulties with matching and the relatively small number of imputations produced very few matched cases against which the quality of the imputations could be checked.

The results of the two checks were analysed separately because of the problems associated with pooling information from different sources. Details of the statistical tests carried out and the results which emerged are available from the Office of Population, Censuses and Surveys, Census Division, St Catherine's House, 10 Kingsway, London WC2B 6JP (Telephone: 01-242 0262).

Conclusions from checks on auto edit

On the whole the clerical and survey checks indicated that automatic editing had performed well, producing accurate results for all items but employment status. However, statistical tests on the clerical check data indicated that very few items seemed to suffer from appreciable non-response bias and therefore a method of apportioning values to missing data in direct proportion to the known item-distribution for each item would have generally produced similar results in terms of the net univariate distribution. For the future it might be possible to reduce the number of decks used for each item and to reduce the number of cells in many decks without significantly affecting accuracy. This will be investigated before the next census, together with the possibility of modifying the Employment Status deck to improve its accuracy of imputation.

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Statistics Users' Conference on The Census of Population and associated social statistics

Ian Maclean, Secretary of the Statistics Users' Council

Oliver Twist would not stand out at an annual Statistics Users' Conference and this year was no exception. Statistics derived from Government sources are generally of excellent quality and remarkably cheap by commercial standards. This applies in particular to information derived from such a vast source as the entire adult population. It is not surprising that users want more, either in terms of greater detail, or the answers to additional questions.

The Conference aroused widespread interest, with over two hundred delegates forming the largest attendance of any of the series. An attendance also notable for the wide ranging background of the delegates – universities, polytechnics, local authorities, health authorities, banks and building societies, shops and stores, market research companies, and many different Government departments. The Census of Population is perhaps, above all other sources, the foundation stone of social statistics and the attendance reflected its importance.

The Conference, which was opened by Lord Glenarthur Parliamentary Under-Secretary of State at the Department of Health and Social Security, Minister responsible for the Census, was organised in three main sessions:

- Session 1 A general introduction and overview – Chaired by Sir John Boreham, Director of the Central Statistical Office and Head of the Government Statistical Service
- Session 2 Looking back at the 1981 Census and the use which has been made of it – Chaired by Roger Thatcher, Registrar-General for England and Wales
- Session 3 Looking forward to the 1991 Census and to the surveys that could be undertaken to provide census type social statistics in the inter-censal years – Chaired by Professor A. H. Halsey of Oxford University

Session 1 – Chaired by Sir John Boreham

There were three papers. A broad review by Deo Ramprakash and Jackie Morris of the Central Statistical Office (CSO) of the social statistics available from the GSS provided a valuable record of how the various different series can be brought together.

Frank Whitehead, Deputy Director of the Office of Population Censuses and Surveys (OPCS), then discussed the role of OPCS, with particular reference to



Ian Maclean

the Census. The 1981 Census was generally considered to have been highly successful. There were some problems, but the co-operation of the public had been excellent and the results had been produced far more quickly than previously.

The third paper was by Keith Francis of Hampshire County Council and presented a user's view, describing the ways in which local authorities use the Census and local data, and where authorities' needs differ from central government and the action taken to fill the gaps. Dr Francis suggested ways in which the Census and other social statistics could be improved for local authority users and outlined various methods of co-operation to resolve the problem of the extra cost of data of value to other users but not required by the Government.

Session 2 – Chaired by Roger Thatcher

Many Government Departments are major users of social statistics and not simply the Department that collects the data. This was recognised in a paper from the Department of the Environment describing the use they made of the Census. There is a special Census Unit in the Department and its work of analysing Census statistics was described. The use of the Census was also discussed in terms of urban and rural policy, rate support grant allocation, housing and population and household projections.

The Statistics Users' Council and Conferences

The Statistics Users' Conference is an annual event held under the auspices of the Statistics Users' Council, a different area of statistics being covered each year. For 1984, the fourteenth in the Series, the subject was the Census of Population and Associated Social Statistics and the Conference was held on 22 November at the Royal Society, London. Previous Conferences have included Transport Statistics sponsored by the Chartered Institute of Transport, Business Statistics sponsored by the CBI, Financial Statistics sponsored by the Bank of England, and Distribution Statistics sponsored by the National Economic Development Office (NEDO). This year the Conference was organised by the Council with the help of a Planning Committee comprising representatives from the CSO, OPCS, local government and learned societies.

The aim is to provide a forum for the exchange of views between the Government Statistical Services (GSS) and users of statistics. The GSS have the opportunity to outline their policy and to describe the changes that have taken place or are likely to take place. Statistics users can make the GSS aware of how statistics are applied, the statistics that are found to be of particular value and the improvements they would like to see.

Considerable emphasis is placed on discussion. Papers are therefore circulated in advance and the speakers then just review their papers for seven minutes in order to allow the maximum time for discussion, which is recorded and included with the papers as the Conference Proceedings. The bound volumes, price £25, are available from Ian Maclean, Secretary of the Statistics Users' Council at Lancaster House, More Lane, Esher, Surrey KT10 8AP. Telephone: Esher (0372) 63121.

The Statistics Users' Council was formed in 1970. Membership includes the CBI, TUC, Social Science Research Council, Royal Statistical Society, Market Research Society, Industrial Marketing Research Association, Society of Business Economists, Institute of Statisticians, NEDO and representatives of the Government Statistical Service.

The commercial use of Census statistics has expanded very rapidly in recent years as business organisations, particularly those with retail outlets, have recognised that the Census can provide them with accurate and detailed information on where to site activities. Two papers outlined the business view. The work of a census agency was described and the National Provincial Building Society reviewed how the Census was used in practice. Census agencies are a relatively new development. Well established in the USA, they have now spread to the United Kingdom. One of the leading firms – CACI – has built up a turnover of £2.5 million since 1979 from over one thousand customers. Detailed Census statistics are relatively difficult to digest. An agency packages it into a product that customers can use more easily. One of the principal 'products' from CACI is ACORN (a classification of residential neighbourhoods). In this the country is divided into thirty nine types of neighbourhood, each with suggested different lifestyle and consumption requirements. ACORN has also been linked to Post Office postal codes, so ACORN types can be approximated for postcode areas, substantially increasing its value to marketing based on these areas.

The local authority use of data was described in a paper by Keith Hudson of Portsmouth City Council, with particular reference to the need to provide comparative information. The Census is, of course, of prime importance in the data base for local authorities and, recognising this, many local authorities and other census users combined together to fund a computer

package – SASPAC – to analyse the small area statistics (SAS) available from the 1981 Census. The development of the computer package was fully described by Keith Dugmore of LAMSAC. The suggestion was also made that Government administrative records are greatly under-utilised as sources of statistics and suggestions were put forward for improving the position.

Session 2 was concluded with a paper from Professor David Rhind of Birkbeck College on developments in automated mapping. Census statistics have long been the subject for maps and with the advances in data processing techniques the scope has been greatly widened. The paper described several of the current methods in use.

Session 3 – Chaired by Professor A. H. Halsey
Social Statistics 1985 to 1991.

A Census in 1991 is still a long way off, and the attention of the Conference focused on the period until the 1990s. In today's society ten years is far too long a period between Census-type bench mark data. The decisions that need to be made by local authorities and business require much more up-to-date information. This need could have been met in large measure by a mid-term census and regret at its absence was voiced at the Conference. Two papers by Bob Barnes of OPCS and Alan Oliver at the Department of Employment described current developments in the major social surveys and the new Labour Force survey, but it was recognised that these in no way filled the gap, particularly in terms of the small area statistics so vital to both local authority and business users.

A paper from Steve Brazier of Nottingham City Council described the experience of his local authority in trying to produce census-type data of its own. The approach of a market research company to collecting data was also described by Dawn Mitchell of Research Services, reference being made to the overlap between the application of commercial research for social purposes, with the development of classification methods for adults such as SAGACITY. SAGACITY allocates all adults to one of twelve cells within each sex defined by the three dimensions:

- i Life cycle: dependants, pre-family, family, late
- ii Social grade: heads of household in manual versus non-manual occupations
- iii Household income: high versus low estimated household income, based on claimed or estimated income of the head of household and the economic activity of the spouse, if any.

The Electricity Council represents a very large industry whose need for good forecasting (new power stations take upwards of seven years to plan and build), has led to the demand for good, accurate information. One particularly important area of information for the Electricity Council is naturally the purchase of electrical appliances and the paper from John Martyn of the Electricity Council, jointly with Trevor Sharot of Audits of Great Britain (AGB) Research, described how they set up a large-scale 'home-audit' to provide the information. Every quarter contact is made with twenty-five thousand randomly selected householders throughout Great Britain.

The series of British Social Attitude surveys set up by Social and Community Planning Research was described by its co-director, Professor Roger Jowell. The surveys cover a wide range of attitudes on political, economic, social and moral issues. This paper, with its emphasis on qualitative, rather than quantitative information, was a timely reminder that however valuable the Census is, we need to go much further if we are to achieve any real understanding of what is happening around us.

The final two papers concentrated on the 1991 Census. Richard Masters of the Grampian Regional Council provided a spirited critique of the limitations of the 1981 Census and the enormous problems arising from the lack of a mid-term Census. He suggested that the 1981 Census may well have marked the peak of user interest in the Census, as other data sources are developed to meet the continuous information requirements of users. This was not to suggest that the 1991 Census would not be of value, but it would be more in the nature of a bench mark than an operational data base.

Dr Glennie, the Registrar-General for Scotland, naturally refuted several of the criticisms – (it was pure coincidence that both the critic and defender of the 1991

Census should be given by speakers based north of the Border). Dr Glennie, in reviewing the 1991 Census, invited users to put forward their suggestions as early as possible, as the planning process for the Census was long and extended and the form of the Census was likely to be 'set' within the next two years. While making the observation that 'the needs of the users must be met without placing too heavy a burden on the public', Dr Glennie emphasised several points of great interest to users – in particular the need to disseminate the results in the right format and at the right time.

As noted earlier, the papers were circulated to delegates before the Conference and speakers only briefly highlighted their papers in order to allow the maximum time for discussion which as usual was varied and at times heated. The discussion in particular focused attention on the major gap between Government and external user interest – data for small areas. Government, it appears, plans in great broad sweeps. The rest of us are concerned with what is happening in Ealing, Elgin, Esher or Eastleigh. Government apparently has much longer term horizons than people concerned with local decisions if it considers ten years to be an adequate frequency for such a basic data base as the Census of Population. The discussion left no doubt that the absence of a mid-term Census would lead to the development of other surveys, but whether these can be cost-effective by comparison with the mid-term Census was open to debate. The arguments for the central collection of this type of information were strong, both in terms of cost and comparability. The view was widely held that the cost of individual studies by each local authority or company that wanted similar information would in total far exceed that of central collection and the problem of maintaining uniformity of definition, survey methods and presentation, would be very great. The point was made that such basic information as that collected by the Census of Population is as much part of the infrastructure of a modern society as the central provision of law and order or a road network. Users were grateful to have the Census at ten-year intervals, but decisions now need to be made on much more up-to-date information. Society was seen as changing more rapidly and ten year intervals are far too long for the provision of the basic statistical information.

Author's note: A mid-term Census represents the maximum gap. The tragedy from the point of view of users is that while cost is the apparent reason for the cancellation of the mid-term census, in practice the cost could be recouped entirely from users. The market economy encourages us to do those things we are best at doing, provided the demand is there. The Government is really the only effective provider of Census-type data and the demand is certainly there, so hopefully we may see a change of heart in the not too distant future.

Integrity in the Government Statistical Service

The following note on integrity has been issued to members of the Government Statistical Service by the Head of the GSS, Sir John Boreham, to give them clear guidance on their role in maintaining public confidence in the work of the GSS.

Introduction

Our main job in the Government Statistical Service is to provide the Government with the statistical information and advice it needs to develop and manage policy. Many of us work closely with administrative colleagues in policy divisions and we should try to develop our output so that it is most useful to the process of managing policy. At the same time we publish information to provide the public with the information needed to debate the issues, so we need to maintain public confidence in the honesty of our statistics because any loss of this confidence in the figures would make them less useful to everyone, including the Government.

The Head of the Government Statistical Service has a special duty to maintain the integrity of our work. In the performance of this he has the right of direct access to the Prime Minister but that is something of a last resort. The real safeguard to integrity is the way we go about our work in the GSS.

The GSS is not a centralised service and so it is right that the day to day responsibility for integrity is decentralised. The White Paper on the *Government Statistical Services* (Cmnd. 8236)¹ explains this clearly:

‘The senior professional statistician will carry responsibility for the integrity and validity of the departmental statistics and for the professional competence of the department’s statisticians. In all these responsibilities he will also be expected to assist the Head of the Government Statistical Service in his duties’.

It is impossible to lay down a set of rules which will cover all eventualities but the following are guidelines to the safeguards we need to operate in order to maintain justifiable public confidence in our work.

Protecting confidentiality

1. The Government Statistical Service Code of Practice on the handling of data obtained from statistical inquiries (Cmnd. 9270)² must be adhered to at all times.

The preparation of statistics

2. Public confidence in the way we produce our statistics depends on the general acceptance that our methods are sound and our data are sufficient and accurate:

a. We should always select statistical methods which are consistent with the quality and quantity of data, and the speed with which the result is required.

b. We should always be completely open about the methods we use to compile statistics or produce estimates and forecasts. This does not mean that we must supply a detailed description with the figures but we should be prepared to provide such information to anyone who asks for it, if time and the cost of doing so permit.

c. Unless there are overriding requirements for confidentiality, we should, where practical, discuss the methods we use to prepare statistics which have a direct bearing on the welfare of individuals or organisations, with appropriate representatives before the figures are produced and take note of any substantial comments. Where an undertaking has been given to the use of a particular method, no substantial changes should be made without consulting interested parties to try to get their agreement.

3. Our analyses and commentaries should always be impartial. We should not select or treat figures to satisfy a particular social, economic or political viewpoint.

4. Where statistics are known to be subject to significant errors or uncertainties which could result in misleading interpretation we should give clear warnings about these and their effect on any inferences which people may draw from the statistics.

Publication of statistics

5. The public should in general have access to any major statistics which are available to the Government, in as much detail as is consistent with the preservation of confidentiality. The Head of the Government Statistical Service should be consulted when a Department is considering whether to delay or to suspend the regular publication of statistics which are still available to the Government.

6. We use Press Notices to provide fast publication of important statistics. The following rules apply to the release of statistical information by the GSS in a Press Notice:

a. Whenever a pre-announced timetable has been agreed for regularly published statistics we should adhere to it whenever possible.

b. The expected delay between the completion of the figures for a Press Notice and its publication should normally be no more than two clear working days.

c. Only people who strictly need to know should see sensitive statistics before they are released, and then only for the minimum time necessary.

d. These statistical Press Notices should contain a clear and standardised identification that they are prepared by the Government Statistical Service. This establishes a clear separation between the statistical information and any policy comment. It also emphasises their professional origin.

e. They should include, where appropriate, commentary which gives statistical information without any policy implications. Where they regularly include comparisons with earlier figures, these should normally be over standard periods for any given series or make use of accepted statistical techniques of time series analysis. Major revisions to earlier published figures should be mentioned, and explained in simple language.

7. We should also aim to meet pre-announced dates for regular statistical publications other than Press Notices. These should also clearly distinguish between statistical information and any policy comment,

The use of our statistics by others

8. We should try to ensure that comments, interpretation and analysis from elsewhere are not passed off as originating from the Government Statistical Service.

9. Where necessary we should try, by logic and diplomacy, to persuade colleagues and Ministers of the risks of losing public confidence they would run if they suppressed, delayed or misused our statistics, or selected figures to satisfy their particular social, economic or political viewpoint.

10. We should recognise that even though Ministers are personally responsible for the content and accuracy of their replies to Parliamentary Questions, we also have an important responsibility to try to make sure that our Ministers are supplied with figures that are accurate and relevant and are not intended to mislead the questioner.

Statistical activities during a general election

11. During a general election period (from the day after the election is called to the day after polling day) we should do everything possible to avoid competition with parliamentary candidates for the attention of the public. In addition, we should recognise that during this period, even more care than usual must be taken to ensure that information is presented impartially and objectively. The following guidelines should be followed:

a. Regular press notices, bulletins and publications can continue to be issued and published. However no *ad hoc* press notices, bulletins or publications should be released other than those for which a

release date has previously been published or approval given by the Minister concerned. Announcements of bulletins and publications should be limited to simple statements of title, price and availability. They should not seek to interpret or analyse figures or to draw attention to specific data in the bulletin or publication. However a second press notice may be issued after the election drawing attention to an item published during the campaign period.

b. Regular and continuous postal or interview surveys to individuals, households, businesses or other organisations may continue. So may *ad hoc* surveys which are directly related to and in support of a continuing statistical series.

c. *Ad hoc* postal or interview surveys to both businesses or other organisations and individuals or households may give rise to controversy or be related to an election issue. Departments should therefore seek the approval of the Minister concerned for any such *ad hoc* survey during the election period. Each case will be judged on its merits, including the costs which would be incurred through cancellation.

d. Requests for information from all Parliamentary candidates should be referred to the appropriate Minister's Private Office. But Departments can provide organisations or members of the public with factual information which is (a) not classified or (b) does not require disproportionate time or effort to produce. When there is doubt about the application of this guidance in a particular case, Departments should consult their Private Offices or the Press Secretary at 10 Downing Street.

e. Requests for advice on the interpretation or analysis of statistics should not normally be met. However explanations of the kind normally included in the commentary of GSS publications should continue to be given.

f. Requests for guidance on methodology should continue to be met although it is particularly important that any such explanation should avoid any assessment of the published figures.

g. Requests for single copies of leaflets, background papers or free publications which were available before the election period should continue to be met, but no bulk issues should be made. Regular mailings of statistical bulletins to customers on existing mailing lists may continue.

References

1. *Government Statistical Services*, Cmnd. 8236 (HMSO) April 1981 (Price £2.10 net.)
2. *The Government Statistical Service. Code of Practice on the Handling of Data obtained from Statistical Inquiries*. Cmnd. 9270 (HMSO) June 1984 (Price £1.30) 'Guidelines on handling of Government statistical information', *Statistical News*, No. 66.32 (HMSO 1984) (Price £4.20 net)

Heavier goods vehicles: first statistics

Peter Wilding, Statistician, Department of Transport

Increase in weight limits

During the 1980s, public attention has been directed to the role of the 'heavy goods vehicle' in the road freight industry. Environmentalists tend to stress the pollution and safety aspects of the intrusion of large lorries upon the communities through which they pass. Operators within the freight industry tend to stress the efficiency gains to be derived from the economies of scale of operation of heavy lorries. The report of an independent inquiry under Sir Arthur Armitage¹, which considered both the social and economic impact of heavy lorries, and how best the freight industry could be developed to serve the public interest, was presented in December 1980. The Government replied in a White Paper², setting out its plans for the future development of the road freight industry.

Following these reports, new lorry regulations were announced on 1 May 1983. The maximum weight limit for articulated vehicles was increased from 32.52 tonnes gross train weight (GTW) to 38 tonnes GTW, but to mitigate their environmental impact new controls on lorry dimensions ensured that there would be no increase in lorry size. In addition new safety controls were also announced. However the maximum weight limit for rigid vehicles remained unchanged at 30.49 tonnes gross vehicle weight (GVW). It is expected that the increase in the maximum weight limit of articulated

goods vehicles will reduce the industries' transport costs by allowing fuller payloads to be carried on journeys. This should reduce the total number of heavy articulated vehicles that would otherwise have been used to carry out freight movements, and the number of journeys they make, reducing the overall level of heavy goods vehicle traffic and its environmental impact.

In order to monitor the impact of the increase in weight limit for articulated goods vehicles upon the structure of the stock of goods vehicles, and their pattern of freight activity, two sources of information are being developed. Although information for 1983 is limited, the purpose of this short article is to alert users of transport statistics to new information on heavier goods vehicles. During 1983 these have been used to assess the immediate short run impact of the change in weight limit since its introduction in May 1983, and they will be used in the future to assess the longer run effects. Both information sources relate to goods vehicles licensed to use the public road network in Great Britain. They exclude foreign goods vehicles which operate on roads in Great Britain. (Foreign goods vehicles account for only a very small proportion of freight activity on GB roads, about 0.2 per cent of goods lifted in 1983, but they are subject to the same weight limits as domestically licensed vehicles).



Information sources

The Driver and Vehicle Licensing Centre (DVLC) at Swansea has been used to generate a register of all vehicles in Great Britain licensed to use the public road network, which can be analysed according to vehicle types, and their characteristics. This source provides information on the flow of new registrations of heavy goods vehicles each month, and on the stock of heavy goods vehicles at the end of each calendar quarter. The register excludes heavy goods vehicles, and any other form of vehicle, which has not been licensed to use the public road network. Nevertheless, the DVLC register can be used to provide a reasonably accurate picture of the impact of the change in maximum weight upon the structure of the stock of heavy goods vehicles in Great Britain since 1 May 1983.

Many owners or operators of heavy goods vehicles supply the Department each year with information about their goods movements and their vehicle mileages, collected through the Continuing Survey of Roads Goods Transport (CSRGT). This survey provides the Department with its main source of statistics on road transport which provide an input into the setting of taxation rates for heavy goods vehicles, and road building plans. This survey also provides information which will be used to monitor the impact of the change in maximum weight upon the pattern and efficiency of freight activity carried out by heavy goods vehicles licensed to use the public road network. Each week the CSRGT collects journey details provided by operators from a weekly sample of about 350 heavy goods vehicles, heavier than 3.5 tonnes GVW and 1,525 kgs unladen weight (ULW), taken from the DVLC register.

Statistics from the DVLC register

Each quarter the DVLC register is used to produce summary counts of the stock of vehicles within the main vehicle taxation classes. Stock counts of heavy goods vehicles are taken from this source. Table 1 sets out figures which show the stock of heavy goods vehicles, heavier than 3.5 tonnes GVW and 1,525 kgs ULW, at quarterly intervals since Q1 1983. The figures at Q1 1983 are the last count based on the old maximum weight limits of 32.52 tonnes GTW for articulated goods vehicles, whereas the figures at Q3 1983 are the first full quarterly count on the new maximum weight limit of 38 tonnes GTW. This table shows that most of the articulated goods vehicles greater than the old maximum weight limit of 32.52 tonnes GTW were licensed at the new maximum weight limit of 38 tonnes GTW. At Q2 1984 there were just over 15,000 heavy articulated goods vehicles (15,277) at the new maximum weight limit.

Each month statistics analysing the detailed characteristics of the flow of new vehicles to the total stock of vehicles are taken from the DVLC register³. Table 2 is a summary abstract taken from a more detailed analysis of monthly new goods vehicle registrations on the DVLC register. It shows that between May 1983 and August 1984 there were over 6,500 new registrations of heavy goods vehicles greater than 34 tonnes GTW (6,798). Statistics derived from the DVLC register are not produced in sufficient detail to provide a count of new registrations of all heavy goods vehicles greater than 32.52 tonnes GTW. However, a count of new registrations over 34 tonnes GTW will capture most of the new heavier goods vehicles taxed above the old

Table 1
Stock of heavy goods vehicles greater than 3.5 tonnes GVW and 1,525 kgs ULW: Great Britain

		1983			1984		
		Q1	Q2	Q3	Q4	Q1	Q2
Articulated Goods Vehicles GVW – tonnes							
Over	Not over						
32	33	72 000 (estimated)	68 923	66 505	63 642	62 771	58 541
33	37	Max weight limit	596	666	982	1 154	1 149
37	38	32.52 tonnes GVW	3 004	6 417	10 262	13 302	15 277
All articulated vehicles over 38 tonnes GVW			433 ¹	74	34	29	34
All articulated vehicles over 32 tonnes GVW		72 822 ²	72 956	73 662	74 920	77 256	75 001
All articulated vehicles over 3.5 tonnes GVW		87 259	87 104	87 550	88 622	91 111	89 038
All rigid vehicles over 3.5 tonnes GVW		347 497	347 964	348 809	347 647	352 486	349 298
All heavy goods vehicles greater than 3.5 tonnes GVW		434 756	435 068	436 359	436 269	443 597	438 336

1. Some GVW records prior to the change to GVW taxation in October 1982 were incorrect, and have subsequently been corrected as these vehicles have become taxed according to their GVW.

2. An estimated 822 vehicles did not comply with the Construction and Use regulations and exceeded the 32.52 tonne limit. They were authorised for road use under section 42 of the road traffic act, and were licensed at DVLC as 'Special Type' vehicles.

Source: Goods vehicle list DVLC

maximum weight limit of 32.52 tonnes GTW. Most of these will have been licensed at the new 38 tonne limit. This implies that of the stock of 15,000 or so heavy articulated goods vehicles licensed at 38 tonnes GTW, about 8,500 vehicles were re-licensed mostly from the previous maximum limit of 32.52 tonnes GTW. This explains why the stock of articulated goods vehicles licensed at 32.52 tonnes GTW has fallen by 8 per cent from about 69,000 vehicles (68,923) at Q2 1983, to just over 58,500 vehicles (58,541) at Q2 1984 (see Table 1). Some of the heavy goods vehicles previously taxed at the old limit of 32.52 tonnes GTW were capable then of operating at 38 tonnes GTW, and conversion to the new weight limit was straightforward and instantaneous for this group of vehicles. The long term effects of the increase in the maximum weight limit for articulated goods vehicles upon the structure of the stock of goods vehicles will depend upon how operators replace old vehicles with new, partly in response to the new taxation structure for goods vehicles based on GTW and GVW and axle configuration operative from 1 October 1982.

Up until September 1982, all goods vehicles had been taxed according to their unladen weight. From October 1982 most goods vehicles greater than 1,525 kgs unladen weight (ULW) are now assessed for vehicle excise duty in relation to their GTW or GVW, and axle configuration. The change was made to share the tax burden more fairly according to the road wear caused by different types of goods vehicle. In addition a tax incentive was provided for operators to use goods vehicles with more axles which cause less road wear and reduce road maintenance costs⁴. At the new 38 tonne GTW limit articulated vehicles are required to operate with at least five axles in total, and it was estimated that moving freight in 38 tonne GTW vehicles would reduce road wear by up to 20 per cent compared to moving the same freight in four axle vehicles at the previous limit of 32.52 tonnes GTW.

Table 2 shows that heavy articulated goods vehicles heavier than 34 tonnes GTW accounted for about 8 per cent of all heavy goods vehicles new vehicle registrations between May 1983 and August 1984, and that the proportion has been fairly constant. All vehicles at the new 38 tonne GVW limit are required to operate with at least five axles in total although the combination of tractor and trailer axles may vary. Lower tax rates are set for three axle articulated tractors pulling trailers with three axles or more at the 38 tonne GTW limit, because they cause less road damage than a five axle articulated vehicle. Table 2 shows that new registrations in this category although relatively small in number have increased substantially since 1 May 1983.

At the end of each calendar year a detailed annual vehicle census is taken from the DVLC register. Table 3 summarises an abstract of statistics on the stock of

Table 2
New registrations of heavy goods vehicles: Great Britain

	<i>All heavy goods vehicles</i>	<i>Heavy goods vehicles greater than 34 tonnes GTW</i>	<i>3 axle articulated tractors with 3 or more trailer axles</i>	<i>Per cent of heavy goods vehicles greater than 34 tonnes GTW</i>
1983				
May	5 219	285	10	5
June	4 935	288	4	6
July	3 759	210	8	6
August	7 207	501	21	7
September	5 167	482	16	9
October	7 214	484	21	7
November	5 514	444	18	8
December	3 777	263	16	7
1984				
January	5 494	561	43	10
February	5 586	508	27	9
March	7 857	576	50	7
April	6 216	501	39	8
May	5 099	472	37	9
June	6 658	391	51	6
July	3 661	238	30	7
August	6 681	594	70	9
Total	90 004	6 798	461	8

Source: Monthly new vehicle registrations DVLC

articulated goods vehicles taken from a new goods vehicle census at year end 1983. This census is designed specifically to analyse all heavy and light goods vehicles within the new goods vehicle taxation class structure by the minimum number of trailer axles declared by the operator for tax purposes, and gross vehicle weight. The table shows that at year end 1983 there were 11,528 articulated vehicles at the maximum weight limit of 38 tonnes GTW, of which 9,893 vehicles were two axle tractors taxed to operate with any number of trailer axles, although operation at this limit requires the use of at least five axles in total. The next goods vehicle census taken from the DVLC register at year end 1984, which will provide the next set of observations on the heavy goods vehicle stock, will be available by the end of March 1985.

Statistics from the CSRGT

1983 results from the CSRGT provide only partial annual estimates of the initial impact of the increase in the weight limit for articulated vehicles upon freight activity, since the increase did not become effective until 1 May 1983. Freight activity analyses for 1983 within the new taxation class structure are limited because of programming constraints. However, greater flexibility of analysis of 1984 data will provide information (for

Table 3
Abstract from vehicle stock: Great Britain: December 1983

Articulated vehicles: by gross train weight and axle configuration

Gross train weight (tonnes)		2 axle vehicles				3 axle vehicles			
		trailer axles				trailer axles			
		1, 2 or 3 (G) ¹	not less than 2 (L) ¹	not less than 3 (M) ¹	Total	1, 2 or 3 (H) ¹	not less than 2 (N) ¹	not less than 3 (P) ¹	Total
Over	Not over								
3.5	7.5	111	1	0	112	1	1	0	2
7.5	12.0	361	0	0	361	1	0	0	1
12.0	33.0	71 014	517	916	72 447	104	187	32	323
33.0	38.0	9 893	23	175	10 091	1 229	49	159	1 437
38.0		3	0	0	3	1	0	0	1
Others		67	4	0	71	3	1	0	4
All vehicles		81 449	545	1 091	83 085	1 339	238	191	1 768

¹ Wheelplan codes used at DVLC to define taxable axle configurations for articulated vehicles.
Source: Goods vehicle census DVLC

example, average load factors, capacity utilisation, vehicle mileages, and the commodity composition of freight activity), which can be used to assess the efficiency changes and changing transport costs resulting from the increase in weight limit for articulated vehicles. Table 3 shows the distribution of articulated goods vehicles within the taxable axle configurations operated by DVLC for goods vehicle taxation. Tables 4 and 5 set out summary 1983 estimates of average tonne kilometres (goods moved) and average tonnes (goods lifted) per vehicle for articulated vehicles taxed to operate with any number of trailer axles analysed by GVW and GTW. For other taxation class groups sample size was usually too small to provide meaningful estimates.

Table 4 indicates that the heavier articulated goods vehicles licensed at 38 tonnes GTW generated the highest average goods moved per vehicle. Two axle articulated tractors pulling trailers with any number of axles (wheelplan code G) generated 1.19m tonne km per vehicle, and three axle articulated tractors (wheelplan code H) generated 1.37m tonne km per vehicle. This reflects the fact that heavy articulated vehicles tend on average to carry loads greater distances than the heaviest rigid vehicle.

Table 5 indicates that three axle articulated tractors licensed at 38 tonnes GTW (wheelplan code H) carry, on average, a heavier load per vehicle (just over 10,500 tonnes) than two axle articulated tractors (wheelplan code G; 7,500 tonnes). The average load carried by three

Table 4
Tonne kilometres per vehicle: (>3.5 tonnes GVW: >1,525 kgs ULW):
1983 (goods moved) thousands

GVW		All rigid vehicles	2 axle articu- lated, any num- ber of trailer axles (G)	3 axle articu- lated, any num- ber of trailer axles (H)	All vehicles
Over	Not over				
3.5	11	25	9	—	25
11	16	59	34	—	59
16	24	149	109	—	146
24	32	388	406	—	391
32	36	—	685	—	684
36	40	—	1 189	1 375	1 224
40		—	—	—	670
Total		103	622	1 094	209

Source: CSRGT 1983

Table 5
Tonne per vehicle: (>3.5 tonnes GVW: >1,525 kgs ULW):
1983 (goods lifted) thousands

GVW		All rigid vehicles	2 axle articu- lated, any num- ber of trailer axles (G)	3 axle articu- lated, any num- ber of trailer axles (H)	All vehicles
Over	Not over				
3.5	11	0.6	0.4	—	0.6
11	16	1.4	1.0	—	1.4
16	24	2.9	2.2	—	2.9
24	32	10.1	3.5	—	8.8
32	36	—	5.6	—	5.6
36	40	—	7.5	10.6	7.8
40		—	—	—	5.0
Total		2.4	5.1	8.0	3.0

Source: CSRGT 1983

axle articulated tractors is of the same order of the higher density loads carried by maximum weight rigid vehicles (10,000 tonnes). However, the estimate for three axle articulated tractors will be relatively unreliable since it is only based on a sample of 48 vehicles, compared with 363 for two axle tractors.

Statistics on heavy road goods vehicles

Comprehensive statistics on all heavy goods vehicles licensed to use the public road network in Great Britain, including the heavier articulated vehicles allowable from 1 May 1983, are published annually in two reports by the Department (available from the address given below). *Heavy Goods Vehicles in Great Britain* (price £8) summarises statistics on the stock of all licensed heavy goods vehicles. *The Transport of Goods by Road in Great Britain* (price £8) summarises the freight

activity and vehicle mileages done by these vehicles. Readers requiring further information, or more detailed statistics not contained in these reports, should telephone the Department on 01-212 6463/8076 or write to:

Department of Transport
Room B6/40
Romney House
43 Marsham Street
LONDON
SW1P 3PY

References

1. *Report of the inquiry into lorries, people and the environment*—The Armitage Report—(HMSO) December 1980 (Price £8.50 net)
 2. *Lorries, people and the environment* Cmnd. 8139 (HMSO 1981) (Price £1.50 net)
 3. *Vehicle registrations statistics: a user guide* (Department of Transport 1983)
 4. *Rates of vehicle excise duty: V149* (Department of Transport: Annual).
- Items 3 and 4 are free and are available from the address above.

Sir John Boreham's visit to China



A distinguished delegation of officials from the Statistical Offices of the Peoples Republic of China visited the United Kingdom on 15–25 November 1983, the main purpose was to study the system of national accounts. (See *Statistical News* 64.14).

Following that visit, Mr Zhang Sai, Director General of the State Statistical Bureau of China, invited Sir John and Lady Boreham to visit the Chinese Statistical Service in November 1984. The photograph shows Sir John with (left to right) Miss Huang (Interpreter), Mr Yue Wei (Deputy Director), and Mr Zhong Zhaoxiu (Director, economic balances) in front of a Ming statue of a senior official, (possibly a Director of Statistics?).

28 Years in the Government Statistical Service – In retrospect

Stanley James, Retired Head of Statistics Division 1, Department of Trade and Industry

A degree in mathematics followed by a diploma in statistics with special reference to its application to economics had always seemed to me to point in the direction of a GSS career. But in 1951 I had been sidetracked from that into a university lectureship and it was not until 1956 that a combination of reasons for wanting to work in London led me to think again of the GSS. About that time a competition for main-grade posts in the Central Statistical Office (CSO) and the Board of Trade (BOT) came up and I applied. A few weeks later there was a gruelling interview with Harry Campion, as he then was, in the chair, asking tricky questions about how to get a random sample of households from a list of addresses, with all the possible problems of multiple occupancy to be thought up and solved on the spur of the moment. Fearing the worst I returned to Nottingham and was relieved to hear a few weeks later that I had been accepted. In the event I was appointed to Inland Revenue (IR) instead of either the CSO or BOT. Knowing very little of the sort of work done there, I quite wrongly thought that it would be very boring and if I had not already put in my resignation I would probably have withdrawn my application.

Despite my initial misgivings I found the work at IR so absorbing that I stayed there in all for twelve years. After seven on company statistics I moved to the distribution of personal incomes seat, which was responsible for the important annual Survey of Personal Incomes (SPI), providing a picture of distribution of such incomes by size of total income, type of income, family structure and location of family – in this it was one of a limited set of official statistics with the regional dimension which was later to become so popular. The SPI was also used, projected three years forward, as the basis for all the personal tax costings required in the run-up to the Budget. Both in this and many other ways IR statisticians had (and still have) to be closely – perhaps uniquely – involved in the thinking of their administrative colleagues. There was indeed little that could be done in the tax world without figures being required, and this produced a multiplicity of challenging tasks, for example, the need to provide some of the earliest estimates which had then been made of the long-term yield of a possible capital gains tax.

In 1966 when I was promoted to Chief Statistician I had hoped I might get a change of department but for various reasons I was talked out of it and it was not until 1968 that I moved to the CSO, one of my two original choices. I found myself responsible for two areas of



Stanley James, who retired in November 1984 as the Under Secretary in charge of industrial statistics at the Department of Trade and Industry was well-known and a very popular colleague. We therefore asked him to write this personal reminiscence of his years in the GSS.

work there, financial statistics (which had become increasingly important since the Radcliffe Committee a few years earlier) and forecasting.

Three years later my promotion to Under-Secretary brought in additional areas of work to add to financial statistics and forecasting; research and special studies, and statistics of research and development expenditure and of qualified scientists and engineers. This was a mixed and interesting bag and working under Claus Moser and John Boreham (later both knighted) provided a lot of valuable training in management techniques. In 1972 there was a further change impending in CSO organisation when I heard that I was to succeed Toby Paine (to whom I had worked for 11 years in my previous spell) as Director of IR Statistics Division. I returned with some misgivings – hadn't I already worked too long on tax statistics? – and an understanding that I might move again after 5 years.

I have already spoken of Inland Revenue work and so will pass quickly over the next spell there. But 1974 should perhaps be mentioned because, busy as IR statistics always was, this was the climactic year. The return of the Labour government brought work on five new taxes, for the granting of stock relief against company profits made Corporation Tax a virtually new tax; Estate Duty was changed out of all recognition to Capital Transfer Tax; the Wealth Tax never in fact came into operation but was the subject of a bitterly fought scrutiny in a House of Commons Select Committee; Petroleum Revenue Tax was about to be launched; and least in yield but not in the amount of time it consumed, the earlier Development Gains Tax was to be reshaped as the Development Land Tax. All that, and the ceaseless reshaping and restructuring of income tax was going on at the same time. At least statisticians felt wanted!

If I was to see some further area of statistical work before I retired, then 1977 when I turned fifty seemed a good year to do it. By then the second of my two original choices, the Board of Trade, had been fragmented into the Departments of Industry, Trade and Prices and Consumer Protection, but the economic and statistics divisions continued to serve all three and at this time a post came up in Economics and Statistics (EcS) 6. I followed Rita Maurice as Head of that Division, and found myself looking after a considerable range of company financial statistics, plus the distributive and service trades, capital expenditure and stocks, and a further look at R&D (research and development), but this time industrial rather than government expenditure – the latter was to be added at a later date. Most of these areas were quite new to me and it was particularly interesting, after contributing for so long to the income measure of gross domestic product (GDP), to see something of the inputs to the expenditure measure. The capital expenditure and stocks work, for example, fed very directly into the national accounts picture, and the monthly retail sales inquiry contributed quite considerably to the consumers' expenditure estimate.

All proceeded smoothly for a couple of years and then like a bolt from the blue came the Rayner Reviews. The Department of Industry's first choice of area for a Rayner scrutiny was statistics. What followed in the next six months was rather nightmarish and it was a chastening experience to have to struggle to explain what we saw as the value of our statistical work to our departments in particular and the government in general to what seemed rather uncomprehending official and Ministerial ears. What other developed countries see as pretty basic statistical requirements, such as a monthly

index of production and even quarterly national accounts were called in question though both of these have – so far – survived. The immediate Rayner recommendations for us involved the abolition of some work, the dispersal of other parts to the Business Statistics Office and the collapsing of basically three statistical divisions to two. EcS 6 as it stood was virtually disbanded but fortunately for me Peter Rees, the Head of EcS 3, was due to retire early in 1980 at the age of 60 and I moved across to a restructured EcS 3, now renamed Statistics 1. The move proved in the event a refreshing one as again it brought the need to absorb a new field of statistics, that of industrial statistics, involving much work on the index of industrial production and the quarterly sales inquiries with their wealth of information on product detail. This last in combination with the trade statistics leads on the estimates of import penetration and export sales performance, of vital concern both to industry and to those monitoring industrial performance. Sadly because of double pressures on staff numbers and the number of inquiry forms it is thought tolerable to burden industry with, the quality of some of the product detail was never as good as we would have liked. This final move also gave me more insight into the building up of the CSO's third GDP measure, the output one, and last but not least one of the most splendid views of London, from the 19th Floor of Millbank Tower.

As we progress in our career I suppose we must all expect to spend more and more of our time on management matters and less on actual statistical work. But this process seems to have been compounded over the last five years by the seemingly endless series of scrutinies we have had to face into the whys and wherefores of our statistics; by ever-repeated demands that we should try to cut our demands for manpower and other resources; and by the various management budget systems which we have had to grapple with as departments have devised different and changing ways of coping with the requirements of the financial management initiative. Because I always enjoyed the statistics in their own right this increasing divorce from much direct or even indirect contact with actual statistical work has been, I must admit, a little disenchanting, and has contributed to my decision to accept the latest early retirement offer which came round. But even with the benefit of hindsight I can see no other career which I could have embarked on in 1956 which would have provided a lifetime of work of such an interesting, challenging and often fundamentally important nature, and for that I will always remain grateful to statistics as a subject and the GSS as an institution.

Ethnic monitoring in the Civil Service – the problem of non-response

Frank O'Hara, Statistician, Her Majesty's Treasury

The Government is committed to equal opportunity in the employment field and wishes to monitor the success (or otherwise) of its internal policies on equal opportunity. This involves ascertaining as far as possible the race and ethnic origins of serving Civil Servants and of job applicants so that the various career stages of appointment and promotion can be monitored for any evidence of racial or ethnic bias.

Pilot surveys were undertaken at Leeds in 1982, using questionnaires on which respondents recorded which of a number of racial/ethnic origin descriptions suited them best. These surveys were restricted to certain grades, and the information relating to individuals obtained from them was analysed and then destroyed. A response rate of about 90 per cent was obtained in both the in-service and recruitment surveys.

In November 1983 the in-service survey was extended to the North-West Economic Planning Region and the County of Avon, again using self-recording by questionnaire. All non-industrial Civil Servants were covered, and in this case the information was retained on computerised personnel records as confidential data. Surveys of recruitment schemes in the same areas followed in the Spring and Summer of 1984.

The response rate in the in-service survey of November 1983 was 77 per cent. This was made up of 49,360 valid responses from a total staff in post of 64,047. The percentage of respondents who identified themselves as coming from an ethnic minority was 0.86 per cent i.e. 426 staff.

While this response to a voluntary survey represented a praiseworthy effort by both management and unions, it was well below the level of the Leeds pilot survey and it left us with an acute case of the non-response problem. To illustrate, the figure of 14,687 non-respondents is more than 34 times the 426 ethnic minority respondents. So the estimate of the ethnic minority proportion can have little precision.

If indeed the respondents were a random sample of the population surveyed then the resulting confidence interval would be quite narrow (95 per cent confidence interval: 0.82 per cent to 0.90 per cent). But in fact respondents (and similarly non-respondents) are a self-selected sample, and so there is a distinct possibility that the sample of respondents is biased in respect of ethnic origin.

Realistic limits, albeit rather wide ones, can be

obtained for the proportion of the ethnic minority in the population. Since 426 out of the total population of 64,047 identified themselves as belonging to the ethnic minorities, there must be at least 0.665 per cent of ethnic minority Civil Servants in the North-West and Avon. That sets a lower limit. An upper limit can be set from the fact that the true ethnic minority proportion is likely to be lower than the 2.6 per cent of the working population in the North-West and Avon estimated from the 1981 Census to belong to the ethnic minority. That is so because the number of people from the ethnic minorities has been increasing over time, and was less than 2.6 per cent in these areas when most Civil Servants were recruited. In fact, the best estimates obtainable from the 1961 and 1971 Censuses are 0.5 per cent and 1.6 per cent respectively. Using these working population percentages and assuming that recruits to the Civil Service in the past have reflected these percentages, it is estimated that the expected proportion in 1983 for people from the ethnic minorities among Civil Servants in the North-West and Avon would be 1.8 per cent.

The likelihood of the true ethnic minority proportion in the survey areas being as high as 1.8 per cent cannot be quantified. However, a proportion of 1.8 per cent implies 1089 ethnic minority Civil Servants and thence a response rate for them of $426/1089 = 39$ per cent compared with a white response rate of 78 per cent. This hypothetical response rate for the ethnic minority 'looks' rather low but we have no better means of judging it.

An obvious way of dealing with non-response in the survey would have been to have some sort of follow-up of non-respondents, however slight, to try to glean something of their ethnic origin. The need for such a follow-up was argued both at the planning stage and after the first results were known. But the agreed view of management and unions was that any follow-up would so erode the voluntary nature of the survey as to be counter-productive.

It has been decided that the surveys should be extended to the whole of the Civil Service. One ray of hope for better response rates is that ethnic recording may become more acceptable over time. More time for closer briefing by management and unions before future surveys are launched may help. Also, new entrants to the Civil Service may be more willing to reveal their ethnic origin than established Civil Servants have been

in the past. If ethnic origin were reported for all new entrants the 77 per cent response in the North-West and Avon could advance to about 90 per cent over the next ten years. The success of such a plan would depend on a vigorous effort by management to obtain ethnic data from all new entrants.

References

- Ethnic monitoring in the Civil Service; a survey in Leeds* Volume 1 (HMSO 1982) (Price £2.00 net) ISBN 0 11 630463 4: Volume 2 (HMSO 1983) (Price £1.50 net) ISBN 0 11 630467 7
- Ethnic Surveys of non-industrial staff in the Civil Service: North-West and Avon* (Cabinet Office (MPO) 1984). Available, free of charges from the Central Management Library, Cabinet Office, Great George Street, London, SW1P 3AQ ISBN 0 7115 0064 9
- 'The Family Expenditure Survey' by W. F. F. Kemsley *Statistical News* 31.16 (HMSO November 1975)

Recently available statistical series and publications

The following publications containing social statistics have recently, or will soon become available during the January to March quarter of 1985. Unless otherwise specified, copies may be purchased from Her Majesty's Stationery Office. A list of release dates of economic series is published monthly in *Economic Trends*.

Department of Transport

Transport Statistics Great Britain 1973-1983 (HMSO £19.50)

Road Accidents Great Britain 1973-1983 (HMSO £6.30)

Nationality of Vessels in the United Kingdom Seaborne Trade 1981-1983 Business Monitor MA8 (HMSO £9.50)

International Road Haulage by United Kingdom Registered Vehicles, Annual Report on 1983 Survey Results (Department of Transport, at address below, price £10.00)

Vehicle Excise Duty in Great Britain in 1984/85 (Department of Transport, address below, price £12.00)

The following statistical bulletins are issued on a regular basis:

Quarterly: *Traffic in Great Britain third quarter 1984*

Road Accident and Casualties in Great Britain third quarter 1984

Road goods vehicles on roll-on roll-off ferries to mainland Europe third quarter 1984

Quarterly Transport Statistics third quarter 1984

Quarterly Analysis of new car registrations third quarter 1984

DTp publications and statistical bulletins are available from:

Publications Sales Unit,
Building No 1, Victoria Road
South Ruislip
Middlesex HA4 0NZ

Office of Population Censuses and Surveys

Census 1981

Britain's elderly population. Census Guide No. 1 (available from OPCS Information Branch, St Catherine's House, 10 Kingsway, London WC2B 6JP).

People in Britain: London. Census wallchart No. 3

People in Britain: Housing. Census wallchart No. 4 (both available from above address)

OPCS Monitors (available free from above address)

Evaluation of the 1981 Census: Post Enumeration Survey (quality check) CEN 84/3

Births by birthplace of parent 1983 FM1 84/9

Births by birthplace of mother: local authority areas 1983 FM1 84/10

Divorces 1983 FM2 84/1

Marriages 1983 FM2 84/2

Population projections: mid-1983 based PP2 84/1

International migration, mid 1983 – mid 1984 MN 85/1

Hospital In-patient Enquiry day-case statistics 1982 MB4 84/3

Hospital In-patient Enquiry maternity statistics 1983 MB4 84/4

Labour Force Survey 1983: country of birth, ethnic origin, nationality and year of entry LFS 84/2 and PP1 84/5

Communicable disease statistics 1982: Annual Report MB2 85/2

Deaths by cause 1984 DH2 85/1
Annual Reference Volumes

Communicable disease statistics 1983 MB2 No. 10

Hospital In-patient Enquiry: Main tables 1982 (microfiche) MB4 No. 21

Mortality statistics 1983 DH1 No. 14

Mortality statistics: childhood 1983 DH3 No. 12

Mortality statistics: accidents and violence 1983 BH4 No. 9

Mortality statistics: area 1983 (microfiche) DH5 No. 10
Social Survey Reports

The heights and weights of adults in Great Britain by Ian Knight (SS 1138)

Department of the Environment

Local Government Financial Statistics England and Wales 1982/83

Housing and Construction Statistics, second quarter 1984 Part 1 No. 19 and Part 2 No. 19

Local Housing Statistics Issue 72, figures for third quarter 1984

The following information is issued in statistical bulletins on a regular basis:

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

Quarterly: *Tender price indices, output price indices, construction output and employment, planning applications and decisions: England, renovations*

Half yearly: *Homeless households*

Annually: *Slum clearance*

Statistical bulletins are available from:

DOE, SPPG4
Room 513, Kingsgate House
66-74 Victoria Street
London SW1E 6SJ.

Home Office

Statistical Bulletins on the following subjects:

Statistics of mentally disturbed offenders, England and Wales 1983

Projections of trends in the prison population to 1993

Drug addicts known to the Home Office 1984

Control of immigration statistics United Kingdom 4th quarter 1984

Notifiable offences recorded by the police, England and Wales 1984

Monitoring the Criminal Justice Act 1982

Statistics on the operation of the Prevention of Terrorism (Temporary provisions) Acts 1974, 1976 and 1984 - 4th quarter 1984

Statistical Bulletins are available from:

Home Office,
Statistical Department,
Room 1813, Tolworth Tower
Surbiton, Surrey KT6 7DS

Department of Education and Science

Statistical Bulletins on the following subjects:

12/84 Teachers in Service and Teacher Vacancies, 1983/84

13/84 School standards and spending: statistical analysis

14/84 Employment of newly-trained teachers

Statistical Bulletins are available free of charge from:

Department of Education and Science
Room 1/28, Elizabeth House
York Road, London SE1 7PH

Department of Health and Social Security

The Department of Health and Social Security produce regular monthly and quarterly statistical series on such topics as Unemployment benefit, Child benefit and Sickness, invalidity and injury benefits. Extracts and summaries from these series are eventually published in *Social Security Statistics*.

Further information can be obtained from:

Mr R.V. Easey
Department of Health and Social Security
Room A2111
Newcastle Central Office
Newcastle-upon-Tyne NE98 1YX
Telephone: Tyneside (091) 2797373

Statistical Bulletin No. 2/84: *NHS Hospital Activity statistics for England 1973-83*. Price £1 and available from:

Department of Health and Social Security
Information Division
Canons Park
Government Buildings
Honeypot Lane
Stanmore HA7 1AY

Scottish Education Department

Statistical Bulletins on the following subjects:—

Pupils and Teachers in Education Authority Primary and Secondary Schools

Pupil Projections

Special Schools

First Destination of University First Degree Graduates

School Leavers

Excess and Deficit of Teachers by Subject

Autumn Enrolments of Students in Vocational Further Education

Provision for Pre-School Children

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

Children's Hearing Statistics 1982

Community Service by Offenders 1982

Children in Care or under Supervision as at 31 March 1983

Staff of Scottish Social Work Departments 1983

Home Care Services, Day Care Establishments and Day Services, 1983

Copies of the above bulletins may be purchased (price 50p post paid) from:

The Library
Official Publication Sales
Scottish Office
Room 2/65, New St Andrew's House
Edinburgh EH1 3TG
Telephone: 031-556 8400 Ext. 5901

Industry Department for Scotland

The following Statistical Bulletins are available:

D1.1 *Index of industrial production and construction for Scotland for 1954-1983*

E1.1 *Offshore employment in Northern North Sea 1983*

G1.1 *Recent trends in Scottish employment: seasonally adjusted series*

Recent Research Papers

No. 8 *Compilation analysis and updating of occupation by industry matrices for Scotland, 1961-1977: a report on a study conducted by N. A. Fraser and L. Moar, Fraser of Allander Institute.*

No. 9 *Transport costs in peripheral areas: report by PEIDA, Planning and Economic Consultants.*

Copies of Statistical Bulletins (price 50p each) and Research Papers (price £5 each) may be purchased from:

Scottish Office Library
Official Publications Sales
Room 2/65, New St Andrews House
Edinburgh EH1 3TG

Department of Employment

Employment Gazette, published towards the end of each month, regularly contains recent data and time-series on employment, unemployment, earnings, prices, family expenditure, and other indicators. Subjects of

recent articles have included; young self-employed workers: patterns of household spending in 1983; unemployment plans in Northern Ireland; and membership of Trade Unions. An historical supplement on price statistics is planned for the *March Gazette* and further supplements on earnings statistics and unemployment statistics are being prepared for later in the year. *Employment Gazette* is published monthly by Her Majesty's Stationery Office, price £2.95 net per issue. Annual subscription inclusive of postage is £34.50.

Welsh Office

Digest of Welsh Statistics No 30 1984

Health and Personal Social Services Statistics for Wales No 11 1984

Statistics of Education in Wales No 9 1984

Residential Accommodation for the Elderly, Younger Physically Handicapped and Blind: Year ended 31/3/84

Welsh Local Government Financial Statistics No 8 1984.

The above publications are available only from:

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

FACTS AT YOUR FINGERTIPS

The 1985 Edition of *United Kingdom in Figures*, an annual pocket sized introduction to the wide range of social and economic statistics produced by the Government Statistical Service appears this year in a new format. It contains essential facts and figures for 1963, 1973, 1982 and 1983 on population, employment, education, the environment, law, energy, and the standard of living plus a summary of the nation's accounts for 1983. There are additional facts about climate, sport, holidays and tourism, agriculture and parliamentary elections. Also included are tables showing how the value of the pound has changed since 1914, as well as selected regional statistics.

Free copies are available from: Information Services Division, Room 58/G, Government Offices, Great George Street, London, SW1P 3AQ

New surveys notified by the Survey Control Unit September to November 1984

For further information on the surveys listed, the appropriate departmental contact may be obtained from Miss C. MacMillan (01-233 5018), Survey Control Unit, Central Statistical Office, Great George Street, London SW1P 3AQ.

An introductory note was given in Statistical News 36.41

New surveys notified September to November 1984

<i>Title</i>	<i>Sponsor</i>	<i>Those approached</i>	<i>Approximate number approached</i>	<i>Location</i>	<i>Frequency</i>
Business surveys					
Overseas investment research target market study	COI	Manufacturers	180	GB	AH
Job release scheme: interview survey of employers 1984	DEM	Employers	750	GB	AH
Non-improving landlords	DOE	Landlords	330	E	AH
Review of housing association management allowances	DOE	Housing associations	774	EW	AH
Urban and regional policies and economic development – Newcastle metropolitan region employees survey	DOE	Employees	2250	N	AH
Survey of coordinate measuring machine usage in the United Kingdom	DTI	Engineering and Vehicle industries	480	UK	AH
Survey on usage of producer services	DTI	Mechanical Engineering firms	600	E	AH
Survey of suppliers of producer services	DTI	Technical and marketing organisations	130	E	AH
Insurance companies: income and expenditure account	DTI	Insurance companies	115	UK	A
Severn Bridge traffic survey: roadside interview of goods vehicles	DTP	Goods vehicle drivers	700	SW	AH
A13 trunk road improvement schemes – survey of Tilbury Docks traffic	DTP	Commercial vehicle drivers	800	SE	AH
Annual return of narcotic drugs	HO	Pharmaceutical manufacturers and wholesalers	244	UK	A
Scottish Development Agency's services to small firms	IDS	Small firms	385	S	AH
Review of the mechanical engineering industry in Scotland	IDS	Mechanical engineering firms	190	S	AH
Effectiveness of rural economic policy in the Highlands and Islands Development Board area	IDS	Manufacturers	200	S	AH
Farmers take up of benefits after arterial drainage improvement schemes	MAFF	Farmers	560	EW	AH
Survey of English wine	MAFF	Vine growers	400	EW	AH
The use of sex control methods by United Kingdom trout farms	MAFF	Fish farmers	50	UK	AH
Implementation of engineering training agreement	MSC	Engineering firms	NK	GB	AH
Evaluation of adult training strategy pilot: study of grant recipients	MSC	Employers	71	GB	AH
Vocational training standards in Britain compared with other advanced countries	MSC	Employers	15	GB	AH
CBI/MSD survey of skill shortages in manufacturing industry	MSC	Manufacturers	2500	UK	AH
Inquiry into dental services	OFT	Dentists	2000	GB	AH
Drinking in Scotland 1984 (Licencees)	OPCS	Licensed traders	217	S	AH
Motorcycle training	TRRL	Training centres	750	GB	AH
Small firms service	WO	Small firms	360	W	AH
Local authority surveys					
Intermediate treatment evaluation project	DHSS	Social service and probation departments	170	EW	AH
Dwelling stock, lettings and sale return	DOE	Housing departments	45	E	AH
Postal survey on houses in multiple occupation	DOE	Environmental health departments	403	EW	AH
Application for improvement, repairs and intermediate grant	DOE	Housing departments	367	E	Q
Treatment of disused mineshafts survey	DOE	Minerals planning departments	11	GB	AH
Marine dredging for sand and gravel	DOE	Planning departments	120	GB	AH
Cleansing service in Scotland	SDD	Cleansing departments	56	S	AH
Road safety education in schools and dissemination strategies	TRRL	Road safety officers	170	UK	AH
Other surveys					
Guide to home heating costs	COI	Householders	224	GB	AH
Attendance allowance leaflet Test Stage II	COI	Adults	350	GB	AH
Crime prevention 1984: 'Magpies' campaign evaluation	COI	Adults	2000	GB	AH

New surveys notified September to November 1984

<i>Title</i>	<i>Sponsor</i>	<i>Those approached</i>	<i>Approximate number approached</i>	<i>Location</i>	<i>Frequency</i>
Other surveys (continued)					
Mind how you go! Series evaluation research	COI	Parents	10000	GB	AH
Close to the edge (revised version) pretest	COI	Children	70	E	AH
Office of Fair Trading 'Home Improvements' booklet test	COI	Householders	60	UK	AH
1984/5 drink and drive campaign evaluation	COI	Drivers	1000	GB	AH
Pickup courses during the period 1/11/84 to 30/11/84	DES	Education institutions	120	E	AH
Follow-up survey of experimental unemployment review schemes	DHSS	Unemployed	2100	GB	AH
Coronary artery bypass surgery: patients likely to make a poor recovery	DHSS	Patients	80	SE	AH
The investment account and fixed interest certificate survey	DNS	Holders of accounts and certificates	1280	GB	AH
The deposit bond poster survey	DNS	Adults	2400	GB	AH
Development for a possible large scale household survey in 1986	DOE	Householders	NK	E	AH
Evaluation of shopping centre improvements under the urban programme	DOE	Shoppers	400	WM	AH
Effects of home accidents (part 1—pilot stage)	DTI	Adults	180	EW	AH
Electric blanket user study	DTI	Electric blanket users	300	GB	AH
A30 Honiton to Exeter improvement survey 1984	DTP	Drivers	3000	SW	AH
Roadside interview: A590 Dalton-in-Furness Cumbria	DTP	Drivers	4000	NW	AH
A23 Coulsdon inner relief road	DTP	Drivers	20000	SE	AH
A34 Tothill—Donnington supplementary survey—Newbury by-pass	DTP	Drivers	5000	SE	AH
Preston—Ormskirk trunk road review and scheme identification study	DTP	Drivers	2500	NW	AH
A3 Liphook to Petersfield—additional roadside interview	DTP	Drivers	400	SE	AH
A13 improvements: Thames Avenue—Wennington	DTP	Drivers	6500	SE	AH
Severn Bridge traffic survey	DTP	Drivers	15000	SW	AH
Travel costs of Youth Training Scheme trainees	MSC	Trainees	4000	GB	AH
Long term perspective on impact of information technology	NEDO	Readers	2500	UK	AH
Stonehaven by-pass survey	SDD	Householders	600	S	AH
Low cost home ownership initiatives: survey of purchasers	SDD	Owner occupiers	1150	S	AH
Screening sites for traffic nuisance studies by postal questionnaire	TRRL	Residents	NK	GB	AH
Testing a 'common technique' for assessing lorry nuisance	TRRL	Adults	NK	E	AH
Littlemore bus users	TRRL	Passengers	30	SE	AH
Needs of operators and users of minibuses used to carry disabled and elderly	TRRL	Drivers and passengers	80	EM/WM	AH
Survey of the use of motorway hardshoulders	TRRL	Drivers	750	GB	AH
Motorway communications: a second survey	TRRL	Drivers	2000	EW	AH
Signpost trial interview survey	TRRL	Drivers	300	E	AH
All Wales perinatal mortality survey	WO	Medical staff	400	W	AH

LIST OF ABBREVIATIONS

General		Locations	
<i>CBI</i>	<i>Confederation of British Industry</i>	<i>E</i>	<i>England</i>
<i>NK</i>	<i>Not Known</i>	<i>EW</i>	<i>England and Wales</i>
Sponsors		<i>GB</i>	<i>Great Britain</i>
<i>COI</i>	<i>Central Office of Information</i>	<i>N</i>	<i>Northern England</i>
<i>DEM</i>	<i>Department of Employment</i>	<i>NW</i>	<i>North West England</i>
<i>DES</i>	<i>Department of Education and Science</i>	<i>S</i>	<i>Scotland</i>
<i>DHSS</i>	<i>Department of Health and Social Security</i>	<i>SE</i>	<i>South East England</i>
<i>DNS</i>	<i>Department of National Savings</i>	<i>SW</i>	<i>South West England</i>
<i>DOE</i>	<i>Department of the Environment</i>	<i>UK</i>	<i>United Kingdom</i>
<i>DTI</i>	<i>Department of Trade and Industry</i>	<i>W</i>	<i>Wales</i>
<i>DTP</i>	<i>Department of Transport</i>	<i>WM</i>	<i>West Midlands</i>
<i>HO</i>	<i>Home Office</i>	Frequency	
<i>IDS</i>	<i>Industry Department for Scotland</i>	<i>A</i>	<i>Annual</i>
<i>MAFF</i>	<i>Ministry of Agriculture, Fisheries and Food</i>	<i>AH</i>	<i>Ad Hoc</i>
<i>MSC</i>	<i>Manpower Services Commission</i>	<i>Q</i>	<i>Quarterly</i>
<i>NEDO</i>	<i>National Economic Development Office</i>		
<i>OFT</i>	<i>Office of Fair Trading</i>		
<i>OPCS</i>	<i>Office of Population Censuses and Surveys</i>		
<i>SDD</i>	<i>Scottish Development Department</i>		
<i>TRRL</i>	<i>Transport and Road Research Laboratory</i>		
<i>WO</i>	<i>Welsh Office</i>		

Notes on Current developments

POPULATION AND VITAL STATISTICS

Census 1981

People in Britain

The fourth in a new series of wallcharts (measuring approximately 85 cm × 70 cm) illustrating some of the main findings of the 1981 Census is now available. It shows the distribution of the main types of housing tenure in 1981 and changes during the last twenty years, together with indications of the improvement in housing conditions since the beginning of the century.

Britain's elderly population

The first of a series of *Census Guides*, summarising the main results of the Census in an attractive booklet format was published by OPCS in December. This first guide focuses on the main findings about the population of pensionable age and explains how to obtain more information especially for individual local authorities. It covers such topics as: trends over time; balance of the sexes; geographical distribution; mobility and country of birth; household composition; car availability, housing tenure and amenities; jobs and social class.

Further guides on children, workers and households are being planned for publication in 1985.

References

OPCS *People in Britain: Housing Census Wallchart No. 4* (OPCS, 1984) (Price £2.00) from OPCS Information Branch—see address on page 68.29)

OPCS *Britain's elderly population Census Guide No. 1* (OPCS, 1984) (Price £1.50 from OPCS Information Branch—see address on page 68.29)

(An additional charge of £1.00 plus VAT will be made per invoice if payment is not presented with the order for either item.)

Population Trends

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

A Review of 1983

The population of England and Wales (49.7 million) increased slightly (by 52 thousand, or 0.1 per cent) between mid-1982 and mid-1983. This contrasts with the slight fall of 33 thousand between mid-1981 and mid-1982. Although natural change (births *minus* deaths) was much the same over the two years, net migration during mid 1982-mid 1983 was negligible whereas during the previous year there was an estimated net outward flow of 67 thousand persons.

The total number of deaths registered in England and Wales in 1983 was 579,600, a figure marginally lower than that of 581,900 in 1982. The overall level of mor-

tality as measured by the crude death rate has remained more or less the same since 1980 at 11.7 per 1,000 population. The longer term trend is more satisfactorily measured by the standardised mortality ratio (SMR), which was 84 in 1983 (1968 = 100). This indicates that in 1983 there were 16 per cent fewer deaths than would have occurred had the age/sex-specific mortality rates of 1968 applied in 1983. For the third year in succession there was no influenza epidemic, nor any prolonged hot or cold weather influencing the seasonal pattern of mortality.

The number of deaths of children under one year of age was 6,380 giving an infant mortality rate of 10.1 per 1,000 live births compared to 10.8 in 1982 and 17.5 in 1971. The number of perinatal deaths (stillbirths and deaths in the first week of life) also continued to fall and in 1983 amounted to 6,580 or 10.4 per 1,000 live births compared to 11.3 per 1,000 in 1982 and 22.3 in 1971. These are the lowest rates ever recorded in England and Wales.

New seat-belt regulations (making the wearing of front-seat belts compulsory) were introduced in January 1983. There is therefore some interest in whether this has had an affect on deaths of drivers and passengers. The overall figures for motor and other road vehicle accident deaths show a decline from 1979-83 for each of the age-groups 15-24, 25-44, 45-64 and 65-74. There has been a decline for drivers in these four age-groups and passengers for the three older age-groups. However, there was an increase in deaths to pedestrians aged 15-24 and 25-44.

There were 629 thousand live births in England and Wales in 1983, some 3 thousand more than in 1982. The general trend has been downwards in the past three years and the 1983 figure was 4 per cent lower than the most recent peak number of 656 thousand births reached in 1980.

The number of marriages recorded in England and Wales in 1983 was 344 thousand an increase of less than 1 per cent on the number recorded in 1982. Only 64 per cent of all marriages were first marriages for both parties; in 17 per cent both parties had been previously married; and in the remaining 19 per cent one partner had been previously married.

The number of divorce petitions filed in 1983 fell to 169,000 from 174,000 in 1982; there has been relatively little change in the number since 1977, following a previous period of steep increase. The number of decrees made absolute in 1983 was 147,500, corresponding to a divorce rate of about 12 per 1,000 married men and women. The overall number has varied comparatively little since 1978.

The falls in marriage and remarriage rates have been accompanied by an increase in the extent to which couples cohabit, that is live together as man and wife without any civil or religious ceremony. Questions about cohabitation were first included in the General Household Survey in 1979, when it was found that about 3 per cent of women aged 18-49 in Great Britain were cohabiting. By 1982 the proportion had risen to 4 per cent. About 45 per cent of the cohabiting women had been or still were legally married, the rest were single.

The number of legal abortions carried out on women resident in England and Wales was 127,400, a fall of 1 per cent from the 1982 figure. Nevertheless the number of abortions to girls under the age of 16 rose further to 4,090 an increase of 6 per cent over 1982. For older teenage girls there was little change in the number from the previous year; there were 31,200 abortions to girls aged 16-19 in 1983 compared with 31,300 in 1982.

In 1983 the estimated number of immigrants to the United Kingdom from countries outside the British Isles was 202 thousand, the same as in 1982. This level was markedly higher than the corresponding figures for 1980 and 1981 and confirmed a return to the levels of 1973-9. The estimated number of emigrants fell sharply from 259,000 in 1982 to 185,000 in 1983 – a fall of 29 per cent. As a result there was an estimated net gain to the United Kingdom of 17 thousand persons, the first such gain since 1979.

The Review also comments on several other aspects of the current demographic scene, including age distribution of the population, major causes of death, congenital malformations, household size and structure, fertility trends, age at motherhood, internal population movement and changes of population distribution within the country.

Infants aged under one in the census, 1861-1981

The completeness of the enumeration of infants aged less than one year in the population censuses for England and Wales has been studied for as long as 120 years and there has always been a tendency for a small proportion of parents to omit to record such babies on their census returns. In this article, by Barry Werner of OPCS Population Statistics Division, the published estimates of such under-recording in censuses held between 1861 and 1981 are reviewed and, where necessary, are supplemented by new estimates in order to give a comparable series covering all twelve censuses held during the period.

The effect of change of address in the early years of marriage on regional populations

This article by Emily Grundy and John Fox of the City University notes that in Britain and other countries with low and increasingly homogeneous fertility rates, internal migration has an important effect on regional and sub-regional variations in population size and structure. Much analysis of national migration data has been directed at quantifying the effect of migration and identifying the direction of migration flows. The characteristics of migrants have also been studied and it is well established that, for example, occupational class, education and tenure, are associated with differentials in long distance migration rates. Life cycle events, such as marriage, childbearing, divorce and widowhood, have also been recognised as important influences on migration and residential mobility.

Centres of population of local authority districts, counties and regions, 1981 and 1971

This article from OPCS Population Statistics Division announces that in the 1981 Census, as in the 1971 Census, each enumeration district and each ward was given a grid reference which represented, approximately, the centre of population of the area. For 1981, equivalent grid references have been calculated for larger areas and are now available from OPCS. The position of these centres of population, and movements between 1971 and 1981, provide some helpful insights.

The In Brief section of the current issue features a note on the revised estimates of the number of centenarians in England and Wales based on the 1981 Census figures. Also included is the complete text of the declaration made by Lord Glenarthur, Parliamentary Under Secretary of State at the Department of Health and Social Security at the Second International Conference on Population, held in Mexico City in August 1984.

Reference

Population Trends 38 Winter 1984 (HMSO, 1984) (Price £4.50 net)

Vital Statistics (Scotland)

The Registrar General's 4-weekly *Vital Statistics Return* relating to weeks 45 to 48 includes a paper highlighting a levelling-off in the number of births in Scotland since mid 1984, following a steady decline in recent years. This Return also contains vital statistics relating to the third quarter of 1984.

Registrar General Northern Ireland: annual report

The sixtieth edition of the *Annual Report* covering 1981 was recently published. The Report contains sections on population, marriages, births, deaths, migration, administration, meteorology and life tables. Many tables include a run of years. For 1981 figures are given in more detail with a breakdown into District Council Areas for some tables. There are also some comparative statistics for Northern Ireland, England and Wales, Scotland and the Irish Republic.

Reference

Registrar General Northern Ireland Annual Report 1981 No. 60 (HMSO Belfast 1984) (Price £12.30 net)

SOCIAL STATISTICS

Family Expenditure Survey (FES) 1983

The Family Expenditure Survey Report for 1983 was published in January 1985. The report contains thirty-one tables and four charts detailing average weekly expenditure on over ninety commodities and services by households, classified by income level and household composition, together with complementary information on household income and characteristics. A special annex in the report discusses the recording of expenditure on housing in the survey, including the effect of the introduction of the Housing Benefit Scheme.

Following publication of summary expenditure results from the 1983 FES in the September 1984 edition of *Employment Gazette*, an article (with seven tables) in the December 1984 issue illustrated some aspects of household finances shown in the 1983 report. These included the variation of the pattern of expenditure and income with household composition and broad income level, and with the employment status of heads of household, and married women within the household. The availability of certain durable goods according to household size and composition is examined. Regional analyses are given, based on results for the two years 1982 and 1983. A special analysis of housing expenditure is also included, based on the Annex in the 1983 report.

References

Family Expenditure Survey Report for 1983 (HMSO) (Price £14.25 net)
Employment Gazette, September and December 1984 (HMSO) (Price £2.75 per issue)

Regional Trends 20

The 1985 edition of *Regional Trends*, which will be published this Spring, includes over 130 tables and 50 maps or charts and brings together detailed information on Scotland, Wales, Northern Ireland and the eight regions of England. The volume includes twelve pages of statistics for the English and Welsh counties, Scottish local regions and educational and library boards in

Northern Ireland.

The statistics and commentary cover a wide range of topics – social, demographic and economic – highlighting variations and similarities between regions. Variations within each region are drawn out in a separate profile for each region.

Regional Trends is an important reference document for anyone with regional interests e.g. marketing managers, regional planners, researchers, academics and government officials.

The new edition contains more results from the 1981 Census of Population and from the Annual Census of Production and four new tables on housing. Other new items include data on hospital in-patient unit costs, preventive medicine and completed spells of unemployment.

Reference

Regional Trends 20 1985 edition (HMSO 1985) (Price to be announced).

Social Security 1984 Edition

This is the twelfth issue of the annual *Social Security Statistics* compiled by the Department of Health and Social Security. It provides tables covering each of the social security benefits, National Insurance contributions, finance and relative movements on contributions, benefits and prices and earnings. Tables showing trends over several years are included and detailed analyses are provided for the most recent year available.

The tables are grouped in sections according to benefit or subject and relate to Great Britain unless otherwise stated. A brief descriptive note of the main features of the relevant benefit, as they currently apply, appears as a prologue to each section. These notes do not purport to cover all the conditions for entitlement to benefit or payment of contributions, nor do they give a history of the various changes which have occurred over the years. If more information is required on a particular subject, a copy of the appropriate explanatory leaflet should be consulted, and a list of these is given in the first appendix. Other appendixes give the sources of the statistics, useful publications, description of social security regions and description of standard regions.

Any enquiries, or requests for further information, regarding statistics about social security should be sent to:

Department of Health and Social Security
Statistics and Research Division
HQ Division SR8
Room A2111
Newcastle Central Office
Newcastle Upon Tyne NE98 1YX
Telephone: Newcastle (0632) 79 7373.

Reference

Social Security Statistics 1984 (HMSO December 1984) (Price £14.25 net).

The effects of taxes and benefits on household income 1983

The latest analysis of the redistributive effects of government revenue raising and expenditure was published in the December 1984 issue of *Economic Trends*. Based mainly on data from the Family Expenditure Survey 1983, the analysis shows how the spread of household incomes is reduced by government intervention through the tax-benefit system. The payment of cash benefits (including the state retirement pension) plays the largest part in reducing overall income inequality, and the impact of the system as a whole is more marked amongst retired than amongst non-retired households.

The impact of the taxes and benefits varies according to life-cycle stages marking significant changes in the economic circumstances of households through life. To study these effects, households are divided into eight groups chosen to represent the stages of a typical life-cycle. This analysis shows that taxes and benefits have a smoothing effect on income through the life-cycle, compensating for the drop in economic activity rates for households with young children and helping to offset the decline in income of the elderly.

The special feature in this year's article is an examination of changes in government revenue and expenditure and their effect on households between 1975 and 1983. Although the distribution of income before taxes and benefits became more unequal over this period, this trend was largely offset by corresponding growth in cash benefits. The twenty per cent of households with the lowest incomes before taxes and benefits now rely almost entirely on cash benefits. The mix of household types forming this group changed considerably between 1975 and 1983, with increasing numbers of households with children appearing in the low income group and a decreasing proportion of retired households.

Further information can be obtained from:

Jenny Church
Branch 8
Central Statistical Office
Great George Street
London SW1P 3AQ
Telephone: 01 233 8078/8300

Reference

Economic Trends, No 374, December 1984 (HMSO) (Price £11.25 net)

Criminal Statistics Scotland 1980-1982

This volume is the last to be published in the series. Statistics for the years 1983 onwards will be published in *Statistical Bulletins*, the range of which will be extended to cover the topics covered in *Criminal Statistics, Scotland*. This change means that topical statistics will be available more quickly.

Reference

Criminal Statistics Scotland 1980-82 Cmnd. 9403 (HMSO 1984) (Price £6.60 net)

Scottish Housing Statistics 1983

Published in December 1984 this is the first of the new annual series and contains mainly annual information which in previous years was published in the quarterly editions of *Scottish Housing Statistics* now replaced by this publication and a series of *Statistical Bulletins*. (see *Statistical News* 64.22).

Prepared by the Scottish Development Department the volume brings together in a convenient form the main series of statistics relating to Scottish housing. It includes – a note on Scottish housing in 1983, notes and definitions, key indicators 1974-1983, and sections on: housebuilding, public sector house sales, improvement, finance, rents, housing plans, special needs housing, and homelessness in Scotland.

Reference

Scottish Housing Statistics 1983 (HMSO Edinburgh) (Price £8.50 net) ISBN 0 11 492425 2

HEALTH

Adult heights and weights

The report of the first fully representative survey of heights and weights ever to be undertaken among the adult population of Great Britain was published in December. Against the background of recent concern expressed both in the medical profession and among the public at large that the population in Britain is becoming overweight and that this is responsible, in part, for the increase in deaths from heart disease, the Department of Health and Social Security commissioned the survey (which was undertaken by Social Survey Division of OPCS) as part of their programme of nutritional surveillance both as a national benchmark against which regional studies could be compared and as a starting point for future monitoring of height and weight in the population.

Reference

The heights and weights of adults in Great Britain, by Ian Knight, (HMSO 1984) (Price £9.70 net)

Scottish Health

National Manpower Statistics

The second issue (referring to 30 September 1984) of a six-monthly report giving details of NHS manpower in Scotland is due to be published in February 1985. The booklet gives trends since 1975, and for current data, analyses by nature of contract, sex and employing authority.

Fireworks Injuries Enquiry 1984

This booklet is due to be published in February 1985. It is a survey in October/November 1984 of injuries caused by fireworks and treated in hospitals in Scotland; showing place of accident, type of fireworks, severity of injury, and age group of injured persons.

Agency Nursing Staff, September 1984

This booklet was published in December 1984. It shows agency nursing staff by health board and grade, showing hours worked, and average Whole Time Equivalent. A time series from 1978 to 1984 shows the average Whole Time Equivalent of all agency nursing staff by health board.

Copies (prices below) can be obtained from:

Information Services Division
Common Services Agency
Scottish Health Service, Trinity Park House
South Trinity Road, Edinburgh EH5 3SQ
Telephone: 031 552 6255 Ext 2707

References

- National Manpower Statistics September 1984* (Price £3) ISSN 0263-8916
Fireworks Injuries Enquiry 1984 (Price £2) ISSN 0265-895X
Agency Nursing Staff September 1984 (Free) ISSN 0265-9050

EDUCATION AND THE ARTS

Education Data Advisory Panel Sub-Group

The Department of Education and Science has set up a Sub-Group (under the chairmanship of Mr P. Turnbull, Chief Statistician) of its Education Data Advisory Panel with the following terms of reference:

'To review and prepare a report on the needs of the Department, the local authorities and the associations over the next few years for information on expenditure, staff and students in further education establishments. Taking account of costs of collection of data both to the institutions and the Department the review will identify gaps in information currently collected and any information now collected which can no longer be justified.'

The membership of the Sub-Group consists of representatives of twenty-four bodies with an interest in

data on expenditure, staff and students in further education, including the Local Authority Associations and the National Advisory Body for Public Sector Higher Education. It is hoped to complete the review and prepare a report by May 1985.

Provision for pre-school children

A statistical bulletin giving information on the provision of nursery education in education authority schools in Scotland, 1982/83 including data on day-care services such as day nurseries, pre-school play-groups and child-minding facilities provided by local authorities or approved by them.

For purchasing details of this and other Scottish Education Department Bulletins see page 68.30.

Funding the arts in Europe

The funding of the arts is undergoing critical re-examination throughout Western Europe. There is growing awareness of the enhanced role the arts will play in a future characterised by less work and new attitudes to free time. At the same time the arts are feeling a financial pinch and the question of the provision and allocation of arts finance has become a matter of vital importance to artists, audiences and arts administrators alike.

A new book from the European Centre for Political Studies at the Policy Studies Institute, *Funding the arts in Europe*, published in November 1984, draws together specialised research on and professional experience of the funding of the arts in eight Western European countries – Austria, France, Great Britain, West Germany, Italy, Norway, Sweden, and Switzerland.

The book consists of papers and official reports from a Research Workshop organised in Munich by the Council of Europe and the Bavarian Ministry of Education and Culture. The introduction is by John Myerscough, Fellow of the Policy Studies Institute, who also served as Chairman of the Munich Workshop. The British involvement in this event was influential and reflects the active policy debate and developing state of research on the arts in Britain.

For further information please contact:

John Myerscough
Elizabeth Worth
Policy Studies Institute
1-2 Castle Lane
London SW1E 6DR
Telephone: 01-828 7055

Reference

- Funding the arts in Europe*, edited by John Myerscough, Studies in European Politics 8 (Policy Studies Institute) (Price £4.50 from the address above) ISBN 0-85374-245-6

MANPOWER AND EARNINGS

Regional Labour Force estimates for 1983

An article in the October 1984 issue of *Employment Gazette* presented estimates of the civilian labour force in the countries and regions of Great Britain in mid-1983. These estimates were based on results from the 1983 Labour Force Survey. Slightly revised labour force estimates for the years 1971, 75, 77, 79 and 81, incorporating improved information on the economic activity of full-time students, were also presented. These regional estimates are consistent with the national estimates published in the August 1984 issue of *Employment Gazette*.

The article gives estimates separately for males and females. Estimates broken down additionally by age and, for 1983 only, by county for England and Wales and by region for Scotland, are available on request from:

Department of Employment
Statistics C5
Caxton House
Tothill Street
London SW1H 9NF

Reference

Employment Gazette, October 1984 (HMSO) (Price £2.75 net)

Job Generation Conference

In October 1984 the Department of Trade and Industry (DTI) sponsored a conference in London on job generation. It was aimed at studying statistical research in the United States, where so many new jobs have been created while European countries have struggled with less apparent success in the same endeavour. In spite of much debate about the difficult task of obtaining reliable statistics, there is consensus that in the United States, smallest firms are the most dynamic and have the highest net growth rates. Similar conclusions have been reached in research on the United Kingdom scene, much of it undertaken by Pom Ganguly, statistician in the DTI's small firms division, (see page 67.40) who, in an article in *British business*, 19 October 1984, reports on the conference, which he chaired. He describes the stirrings of a statistical battle between Professor Birch, whose work has held such sway in US government circles, and Catherine Armington and Marjorie Odle, based on their work at the prestigious Brookings Institution in Washington.

Reference

British business (HMSO weekly) (Price £1.25 net)

The engineering industry: its manpower and training

Manpower and training in the engineering industry is the subject of a recent Engineering Industry Training Board (EITB) Reference Paper. The report presents a brief outline of some of the facts about the industry's manpower and training; what has happened in the past and the plans for the future. There are chapters on output, foreign trade, employment, by size of establishment and occupation and training, with supporting charts and graphs.

The Research Information Services of the EITB are now producing sector, region and occupation profiles about the engineering industry employment and training. The profiles cost £10 plus VAT (payable to EITB) and can be obtained from:

Tony Fidgett
EITB
54 Clarendon Road
Watford WD1 1LB
Telephone: Watford (0923) 38441

Reference

The Engineering Industry: its manpower and training—EITB Reference Paper RP/1/84 (Price £1) is available from EITB Publications, PO Box 75, Stockport, Cheshire SK4 1PH

First employment of young people

An article in the October 1984 issue of *Employment Gazette* contained results from the 1983 New Entrants to Employment Survey, showing the distribution of 16 year-old entrants (including apprentices) in England and Wales by region, industry, occupation, educational qualifications and length of training. The 1983 survey results relate only to young entrants to employment not covered by the Youth Training Scheme. Results of surveys for 1978, 1979 and 1980 were reported in the May 1984 issue of *Employment Gazette*.

Reference

Employment Gazette, May 1984 (pp 230-234) October 1984 (pp 445-448) (HMSO) (Price £2.75 net per issue)

Industrial tribunals and the Employment Appeal Tribunal

An article in *Employment Gazette*, November 1984, describes the role of industrial tribunals and the Employment Appeal Tribunal (EAT) and their procedures. Statistical information is given on cases dealt with by each body in 1983. Tables cover analysis by ACAS region, outcome of applications, compensation, pre-hearing assessments, EAT appeals registered and disposed of, breakdown of appeals registered by jurisdiction. Some tables give comparable figures for 1981, 1982 and 1983, others relate only to 1983.

Reference

Employment Gazette, November 1984 (HMSO monthly) (Price £2.75 net)

Young self-employed workers

Employment Gazette, November 1984, contains an article by Joan Payne of the National Children's Bureau on 'Young self-employed workers'.

As unemployment continues at a high level, especially among the young, there is an increasing interest in self-employment as an alternative route into work. A national survey of young people carried out in 1981 provided information on those who had opted for self-employment: in an existing family business, as a budding entrepreneur, or as a labour-only sub-contractor doing 'casual' work. The results indicate that substantial differences exist among these three groups.

Reference

Employment Gazette, November 1984 (HMSO monthly) (Price £2.75 net)

Demand and supply for statisticians

A Joint Working Party has been set up to look into the demand and supply position for statisticians in the United Kingdom. The sponsoring organisations are: the Institute of Statisticians (IoS), the Royal Statistical Society (RSS), the Committee of Professors of Statistics (COPS), the Association of Statistics Lecturers in Polytechnics (ASLIP) and the Polytechnic Heads Standing Conference (PHSC).

Prof. D. J. Bartholomew (RSS and COPS) is the Chairman of the Joint Working Party and he would like to hear from anyone with information or views on the subject. Statistical material is being assembled and enquiries are being made among large employers and educational institutions; further sources of data would be welcomed. The Chairman is particularly keen to hear from employers about their recent recruitment experience and to have their views on the present and future role of statisticians in their organisation. The experience of those advising university and polytechnic applicants on choice of degree subject would also be welcome as well as those statisticians looking for employment or who have been made redundant.

One of the chief difficulties arises from the fact that many statisticians work in jobs which do not carry a statistical label and that much statistical work is done by people who do not regard themselves as statisticians. In this case the interpretation of 'statistics' is in a broader sense and responses from related fields such as operational research and market research would be very welcome.

To be of help to the Joint Working Party replies should be submitted by mid-March and addressed to:

Prof. D. J. Bartholomew
Department of Statistics and Mathematical
Sciences
London School of Economics
Houghton Street, London WC2A 2AE

AGRICULTURE AND FOOD

Estimates of yield and production in England and Wales – 1984 harvest

- a. Details of the preliminary assessments of yields for the principal cereal crops and for rape grown for oilseed were published in Statistical Information Notice *STATS 216/84* on September 7, 1984. The estimates were based on reports covering a wide and representative sample of different areas of the country made by local ADAS advisory officers towards the end of August.
- b. Provisional estimates of yield for certain crops with likely ranges for wheat and barley within which the final figures are expected to lie were published in Statistical Information Notice *STATS 237/84* on October 2, 1984. The estimates were based on reports made by ADAS advisory officers towards the end of September.
- c. Provisional estimates of yield and production for certain crops were published in Statistical Information Notice *STATS 263/84* on November 7, 1984. The estimates for wheat, barley and oats took into consideration information derived from the 1984/85 Cereals on Farms Survey whilst the estimates for the other crops were based on reports made by ADAS advisory officers.
- d. Provisional estimates of yield and production for the principal crops were published in Statistical Information Notice *STATS 284/84* on 4 December 1984. The estimates for wheat, barley and oats took into consideration information derived from the 1984/85 Cereals on Farms Survey whilst those for the other crops were based on crop yield assessments made by ADAS advisory officers. Final estimates of yield and production for the 1983 harvest covering England, England and Wales and United Kingdom were published in the same notice.

Pig survey – August 1984

The results of this survey on pigs for England and Wales and United Kingdom, which is conducted in accordance with European Community legislation, were published in Statistical Information Notice *STATS 247/84* on October 15, 1984.

Stocks of home-grown wheat, barley and oats

- a. *1983/84 Cereals on Farms Survey*
Figures for the series of monthly surveys of stocks of wheat, barley and oats from the 1983 harvest were published in Statistical Information Notice *STATS 249/84* on October 16, 1984.
- b. *1984/85 Cereals on Farms Survey*
Results of the August/September survey – the first

in a series of monthly surveys – were published in Statistical Information Notice *STATS 278/84* on November 29, 1984.

Potato crisps and snack foods

Results of the first quarter 1984 were published in Statistical Information Notice *STATS 170/84* on July 11, 1984. Results for the second quarter 1984 were published in Statistical Information Notice *STATS 285/84* on December 3, 1984.

Canned and bottled fruit and vegetables

Results for the second quarter 1984 were published in Statistical Information Notice *STATS 253/84* on October 22, 1984. Results for the third quarter 1984 were published in Statistical Information Notice *STATS 296/84* December 19, 1984.

Copies of the Statistical Information Notices can be obtained, free of charge, from:

Ministry of Agriculture, Fisheries and Food
Press Office
Whitehall Place
London SW1A 2HH
Telephone: 01-233 8226

INDUSTRIAL STATISTICS

Business starts and stops: regional analysis

An article in *British business*, 2 November 1984, by Pom Ganguly, Statistician in the Department of Trade and Industry's Small Firms Division provides information on a regional basis for stocks, starts and stops of firms by size-band of turnover and sector of trade for the United Kingdom over the period 1980-1983. This takes the analysis one step further, from the information contained in a previous *British business* article on 18 May 1984.

Previous articles in *British business* (covered in *Statistical News* 56.29, 57.26, 58.32, 59.45, 61.24, 63.36, 64.29, 65.36, 66.53 and 67.40) have provided regional analyses of the stocks of businesses and of births and deaths of firms in the United Kingdom based on VAT data.

Inquiries about, but not requests for, the articles should be addressed to:

Mr Pom Ganguly
Small Firms Division, DTI
Room 214, Ashdown House
123 Victoria Street
London, SW1E 6RB

Reference

British business (HMSO weekly) (Price £1.25 net)

British businesses by turnover size

British business, 14 December 1984, contained an article, 'Business analysis by turnover size: 1984'. The article shows, for Great Britain, the number of records held on the register which the Business Statistics Office maintains largely from information obtained by HM Customs and Excise in the administration of VAT.

The industrial classification used is based on the VAT trade classification which is aligned to the 1968 revision to the standard industrial classification, SIC(1968). The coverage of the production industries (mining and quarrying, public utilities and manufacturing industries) in these tables, however, is similar to that of Divisions 1 to 4 of the 1980 revision to the standard industrial classification SIC(1980).

In addition to overall distributions by size of turnover and by industrial grouping, there are separate turnover size analyses for sole proprietorships, for partnerships and for corporate businesses, general government and non-profit-making bodies. The basic information in the tables relates to mid-1983 when the turnover figures held on the register for most records related to a period close to the calendar year 1982.

Reference

British business (HMSO weekly) (Price £1.25 net).

The United Kingdom home laundry appliances industry

This report entitled *Strategy, technology and skills* is intended as a contribution to answering the question 'What skills does the British engineering industry need to assist it to become more competitive on world markets?' It was initiated following a review of published information on the implications of the use of information technology for skills and manpower in the engineering industry, prepared for the Engineering Industry Training Board during 1982. There are eight chapters covering the historical background, goals and strategies, production methods, employment, technical change and skills needed for change in the industry.

Reference

Strategy, technology and skills – EITB Occasional Paper No 12 (Price £4) is available from EITB Publications, PO Box 75, Stockport, Cheshire SK4 1PH.

Census of Production – Northern Ireland

The *Report on the Census of Production and Construction in Northern Ireland 1981* was published in October 1984 by HMSO on behalf of the Department of Economic Development for Northern Ireland. It is available only from HMSO Bookshop, Belfast, price £6.80 net.

ENERGY

Electricity supply statistics

The 1984 edition of the *Handbook of Electricity Supply Statistics* has recently been issued by the Intelligence Section of the Electricity Council.

The publication primarily concerns public electricity supply in England and Wales, where the service is provided by the Electricity Council, the Central Council for the Supply Industry, and the thirteen Electricity Boards – the Central Electricity Generating Board (CEGB), responsible for generation and bulk supply, and the twelve Area Electricity Boards, for distribution and sales of electricity to consumers.

There are eighty two tables covering – power stations, national grid system, distribution systems, transmission and distribution, generation, finance, commercial, CEGB bulk supply tariff, appliances and contracting, Scotland and Northern Ireland, employment and earnings, electricity supply in Great Britain, energy in the European Community, world electricity production, and miscellaneous.

The Handbook can be obtained, free of charge, from:

Intelligence Section
Electricity Council
30 Millbank
London SW1P 4RD

TRANSPORT

Transport Statistics Great Britain

Transport Statistics Great Britain 1973-1983 has been prepared by the Statistics Directorate of the Department of Transport in collaboration with the Scottish Development Department, the Welsh Office, and other government departments.

The publication is designed to bring together a comprehensive range of statistics relating to transport in order to facilitate informed discussion on transport developments and policies. As in previous editions, most of the tables cover eleven years, although some span a longer or shorter period. The structure of this year's edition is essentially the same as last year's, but a calendar of events has been added at the end of the publication and a complete list of the Department of Transport's statistical publications is given inside the front cover. The inclusion of six tables relating to shipping is the most significant change in the statistics published this year.

Reference

Transport Statistics Great Britain 1973-1983 (HMSO December 1984) (Price £19.50 net) ISBN 0 11 550665 9

International road haulage in 1983

The Department of Transport has recently published its fifth report on the International Road Haulage Survey (IRHS). In addition to the survey results, giving a detailed analysis of the United Kingdom international road haulage operations, the report also contains background information from other sources such as ports and Customs statistics. It shows, for example, that the division of international traffic between hire and reward and own account services exhibits a marked difference from the domestic road haulage situation. Other figures in the report show that the general trend of international freight is firmly upwards.

The International Road Haulage Survey, which was begun in 1979 to meet the requirements of EC Directive 78/546, is complementary to the Department of Transport's Continuing Survey of Road Goods Transport which covers domestic road haulage under the same Directive. The IRHS report contains ten basic tables giving details of the countries in which goods were loaded and unloaded, the types of commodity carried, the type of service – whether for hire and reward or for own account – and the region in which the goods were loaded or unloaded in the United Kingdom. The survey methodology is also described in detail.

Copies of the report (price £10) are available from:

Department of Transport
Publications Sales Unit
Building 1, Victoria Road
South Ruislip
Middlesex HA4 0NZ.

(Cheques/postal orders should be made payable to the Department of Transport and crossed.)

The Scottish transport industry in 1979 – a statistical analysis

This discussion paper (ESU No. 18, author Dr D. Bruce) gives an overview of the economic importance of the various transport modes in Scotland in 1979 with more detailed information on road and rail costs. It examines freight transport output in terms of commodities carried, cost structures in terms of total costs and costs per unit of output, and looks at cross border transport separately. It gives an indication of the use and problems associated with the sources of Scottish data in this field.

Free copies of this paper are available from:

Industry Department for Scotland
Room 5/31
New St Andrews House
Edinburgh EH1 3TA

HOME FINANCE

The Chancellor of the Exchequer's Autumn Statement

An article in *Economic Progress Report No. 173* November/December 1984, published by HM Treasury, gives the major points from the published statement and from the Chancellor's speech on presenting it to the House of Commons on 12 November 1984. The statement brings together a number of economic announcements. These include the short-term forecast which the Treasury is required to publish by the Industry Act 1975, decisions on outline public expenditure plans for the forthcoming financial year, any changes in national insurance contributions applying from the following April and changes in the currency. The statement also contains a set of 'ready reckoners' for calculating the effects on government revenue of illustrative tax changes.

References

Economic Progress Report available, free of charge, from Publications Division, Central Office of Information, Hercules Road, London SE1 7DU.
House of Commons Paper 12, *Autumn Statement 1984* (HMSO November 1984) (Price £4.00 net) ISBN 0 10 201285 7

Business Expansion Scheme (BES)

The BES set up in 1983 as a successor to the 1981 Business Start-up Scheme is now in its second year and is proving particularly successful.

It provides income tax relief for new investments by individuals not closely connected with the firms concerned which must be unquoted UK trading companies. Certain businesses are excluded from the scheme: dealing in land, shares or commodities; leasing and letting assets on hire; and banking, insurance and other financial services. Farming, originally included, was excluded under the 1984 Finance Act.

The November/December *Economic Progress Report* (No. 173) published by HM Treasury contained an article on the first years figures. The analysis was based on detailed information about investments in 1983/84 that was available by mid-August 1984, and covers total investment of £73 million in 312 companies. Details are not yet available for a further 100 companies which raised money directly.

Five tables give the main results i.e. investment in start-up and established companies; size of company by capital and reserves and by employees; amounts raised by each company and companies by trade group.

Enquiries concerning more detailed results should be addressed to:

Board of Inland Revenue, Room 111, New Wing
Somerset House, London WC2R 1LB

Reference

Economic Progress Report is available, free of charge, from Publications Division, Central Office of Information, Hercules Road, London, SE1 7DU

Investment intentions survey 1973-83

An article in *British business*, 12 October 1984, gives a comparison of estimates of expected capital expenditure obtained from the Department of Trade and Industry's investment intentions inquiries of firms in the manufacturing and the distribution and service industries with actual expenditure as recorded. It provides an annual supplement to the more limited comparison published regularly in *Economic Trends*.

A further article in the 14 December 1984 issue of *British business* gives details of the indicated volume of investment by the manufacturing, construction, distribution and selected industries in 1985.

Reference

British business (HMSO weekly)(Price £1.25 net)

Welsh Local Government Financial Statistics

The eighth edition of *Welsh Local Government Financial Statistics* was published in December 1984. This publication is the main source of information on expenditure by local authorities in Wales and was laid before Parliament on 12 December 1984. This volume gives detailed information on revenue and capital expenditure for 1982/83 together with some historical data both for Wales as a whole and for individual authorities. Summary data giving revenue budgets for 1984/85 and revised estimates for 1983/84 is also presented. In addition information on rates, rateable values and rate rebates for 1984/85 is given. Finally the publication tabulates summary data on the Rate Support Grant and other financial assistance by central government in recent years.

Copies are available at a cost of £3.00 including postage from:

Publications Unit
Economic and Statistical Services Division
Welsh Office
Cathays Park
Cardiff CF1 3NQ

ENVIRONMENT

Environmental protection

The latest edition of the *Digest of Environmental Protection and Water Statistics*, to be published shortly, is the seventh in an annual series, which highlights trends in some of the main aspects of environmental pollution and protection, and of water supply. In this edition a chapter on derelict land and mineral workings has been included for the first time. Other chapters cover the topics of air pollution, water pollution and sewage, radioactivity, noise, solid waste, water supply and use, and landscape and nature conservation.

Another new feature is the use of two colours for the graphs and charts section.

Sets of 'additional tables' are available from the Department of Environment separately and details of these are given in the Digest. This publication package is intended to provide an understandable set of statistics on broad trends in the main publication, whilst allowing users with an interest in particular areas to purchase sets of more detailed tables.

Reference

Digest of Environmental Protection and Water Statistics 1984 (HMSO 1985)
(Price to be announced)

RESEARCH AND DEVELOPMENT

Annual review of research and development

Recently published is the factual material assembled for the second *Annual Review of Government Funded R&D* carried out during 1984.

The objectives of the annual review of R&D are to bring together the various elements of Government R&D expenditures in order that the overall balance can be examined, overlaps and duplications identified and omissions recognised. The Advisory Council for Applied Research and Development (ACARD) was invited to give its independent advice, and the Review's findings with ACARD's comments are a contribution to Public Expenditure Survey discussions.

The Review presents outturn expenditure figures for Government Departments' R&D programmes for the years 1981/82-1984/85, and planned expenditure for the years of the 1984 PES, 1985/86-1987/88, analysed by main areas of activity and by the sectors carrying out the work. Each main programme is classified by the primary purpose for carrying it out (eg advancement of science, supporting policy making, etc) and is accompanied by a brief statement of its objectives. There is a commentary section which explains the background to the Review and gives a commentary on the main trends apparent in each of the principal primary purpose groupings.

Reference

Annual Review of Government Funded R&D 1984 (HMSO) December 1984
(Price £7.50 net) ISBN 0 11 630826 5

Industrial research and development

Business Monitor MO 14

A new edition of this Business Monitor has been published, providing details of expenditure and employment on research and development (R&D) within industry, during 1981. It contains the results of a survey of R&D performed by private industry, the

public corporation and research association. Some of the data were previously in *British business*, and now appear with minor revisions.

This Monitor, the third in the series, uses the Standard Industrial Classification, revised in 1980. The change in classification has, of course, produced some problems for comparisons over time. However, by aggregating the forty-one product groups used in the analysis, it was possible to identify eight broader areas. These were consistent over the period since 1964, for which the statistics are available. For seven of these broad groups, covering manufacturing industry, R&D price deflators have been calculated. It is thus possible to show that the 'volume' of R&D in 1981 was higher than that observed in any earlier survey year.

Industrial Research and Development in 1983

An article with the above title was published in *British business* for 18 January 1985. It provides the result of a sample survey of enterprises in private industry, on the level of R&D spending during the calendar year 1983. This was the first sample survey, and took place two years after a full inquiry into 1981 spending patterns. Until 1981 there had been a triennial pattern of inquiries but it is intended that detailed results will now be available every fourth year, with interim sample estimates. The sample was selected from the larger spenders of R&D in 1981. Altogether seventy-five enterprises were approached, including twenty-five with significant electronics related research. The sample of seventy-five accounted for 85 per cent of R&D in 1981.

A reversal of the increase in spending between 1978 and 1981 occurred in the further two years to 1983, if rises in R&D prices are eliminated. Overall, the volume of R&D in 1983 was six per cent lower than in 1981. The main areas of growth appear to have been in the electronics oriented industries, with notable increases in R&D on electronic data-processing equipment, telegraph and telephone apparatus and electronic components. Outside this electronics field the only industries which appear to have registered any substantial increases are those of pharmaceuticals and motor vehicles.

Further information can be obtained from:

Department of Trade and Industry
Statistics 2C
Room 343, Sanctuary Buildings
16-20 Great Smith Street
London SW1P 3DB
Telephone: 01-215 3177 or 3413

References

British business, 9 December 1983 and 18 January 1985 (HMSO) (Prices £1.10 net and £1.25 net respectively)
Business Monitor MO 14, Industrial Research and Development Expenditure and Employment, 1981 (HMSO) (Price £7.50 net)

Survey of numerical and statistical techniques met by administrators

The Civil Service College's Statistics and Operational Research Directorate has completed a survey of numerical and statistical techniques met by administrative civil servants. The results have been used to revise some of the training courses mounted by the College.

The survey's aim was to establish detailed information on the work, undertaken by administrators in government departments, which involved numeracy or statistics so that College training covered the correct range of subjects. The survey covered about 400 civil servants from Executive Officer to Assistant Secretary in fourteen different departments and achieved a response rate of 90 per cent.

The survey used a questionnaire based on research undertaken at the Centre for Statistical Education at Sheffield University. The questionnaire asked for the following on a wide range of techniques:

1. did the responder use or meet the techniques
2. the context of any use
3. the responder's view of his/her familiarity with the technique.

The techniques included ranged from the very elementary to relatively advanced techniques, for example:

- percentage calculations, rates of change
- rounding
- constructing histograms
- using logarithmic scales
- weighted averages
- variances
- moving averages
- seasonal patterns in data
- regression equations
- using probabilities in simulations
- detecting and estimating trends
- multivariate analysis
- sample surveys

In total, over sixty techniques were included on the questionnaire.

The survey clearly showed that the higher grades met more, and more advanced, techniques than the lower grades. Executive Officers needed competence at basic numerical skills and, only exceptionally, knowledge of more advanced techniques or ideas, such as sampling or statistical distributions. By contrast, the senior grades surveyed needed both competence at the basic skills and, for many of them, an understanding of more advanced statistical techniques and ideas.

The results of the survey are available from:

Richard Eason
Director of Statistics and Operational Research
Civil Service College

11 Belgrave Road
London SW1V 1RB
Telephone: 01-834 6644 Ext. 241 (GTN 2803 241)

INTERNATIONAL

United Nations Statistical Computing Project (UNSCP)

Progress on this project, funded and organised by the United Nations Economic Commission for Europe (UNECE), the United Nations Development Programme (UNDP) and individual countries, has been reported in previous issues of *Statistical News* 57.26, 57.33, 58.28, 59.47, 60.30 and 62.26.

The project was originally to run until the end of 1984, when UNDP funding is scheduled to cease. However, given its success in developing statistical software for use in national statistical offices, and the desire of participating countries that it should continue, ways and means have been sought to extend its life.

At the 32nd plenary session of the Conference of European Statisticians (18-22 June 1984) it was agreed that a new project on the structure, design and development of software systems for statistical data processing should be included in the Conference's future programme of work. This will continue the co-operative work of the UNSCP and will be organised in a similar way except that there will no longer be a steering committee based in the UNECE (though this decision will be reviewed in mid-1985). A series of joint groups, with a lead country, will continue UNSCP work in the following areas:

1. The further development and maintenance of the INTERTAB tabulation system: for 3 years starting in 1985.
2. The development of complementary software to the RAPID statistical database management system and its installation in statistical offices: for 2 years starting in 1985.
3. The development of generalised survey processing systems: for 2 years starting in 1985.
4. The development of the AERO system into a fully interactive editing system, serving also as a training aid for the end users of up-to-date data editing systems: for 2 years starting in 1985.

The GSS will continue to be represented on the project by OPCS who will be the lead country on the generalised survey processing system joint group. For further information contact John Dixie at the Computer Division, Office of Population Censuses and Surveys, Titchfield, Fareham, Hants, PO15 5RS. Telephone: 0329-42511 Ext. 310.

PUBLICATIONS

CSO periodicals – reduced prices

Central Statistical Office (CSO) periodicals are cheaper in 1985 than in 1984. This has been achieved by using more efficient means of distribution and production in conjunction with HMSO, the publishers of all CSO books. There will be no reduction in the quality, size or coverage of the various publications.

The greatest benefits are being passed on in the new concessionary annual subscription rates and the largest reduction has been applied to *Economic Trends*, the monthly journal which, in charts, tables and articles brings together information from many sources to present a concise but comprehensive view of the state of British economy. The annual subscription comes down from its 1984 rate of £149.25 (including the annual supplement and postage) to £125.00 in 1985. Single copies are reduced from £11.25 to £9.95.

In addition the fifteenth edition of *Social Trends* published in January 1985 is £19.95, its price being held for the fourth issue running.

The *Annual Abstract*, also out in January 1985 is reduced from £17.95 to £17.50.

From January 1985 the full list of prices for periodicals is:

	1985	1984
<i>Economic Trends</i> – single copy	£9.95	(£11.25)
Annual subscription including Annual Supplement and postage	£125.00	(£149.25)
<i>Financial Statistics</i> – single copy	£7.95	(£8.25)
Annual subscription including Explanatory Handbook and postage	£100.00	(£107.25)
<i>Monthly Digest of Statistics</i> – single copy	£5.95	(£6.30)
Annual subscription including Annual Supplement and postage	£70.00	(£78.35)
<i>Statistical News</i> – single copy	£3.95	(£4.20)
Annual subscription including postage	£15.00	(£16.80)

Annual Abstract of Statistics 1985 Edition

The one hundred and twenty first edition of the *Annual Abstract of Statistics* was published on 17 January. The Abstract contains 345 tables for the United Kingdom that cover a wide range of subjects including population, agriculture, retailing, transport, national income and expenditure, labour, banking, prices, external trade and defence.

The majority of the tables give annual figures from 1973 to 1983 where available; and some give monthly

data to early 1984. Current series for many of the tables in the Abstract are published in *Economic Trends*, the *Monthly Digest of Statistics* and *Financial Statistics*. Regional information, supplementary to the national figures, is published in *Regional Trends*. All of these publications are prepared by the Central Statistical Office.

Changes in content this year include the addition of three new tables – Defence energy consumption; Seaport traffic of Great Britain; and Water authority expenditure. Two tables were deleted – Educational building and Indices of basic wage rates of manual workers. The first five tables of the Scottish crime section have been revised and the following tables have been reclassified on to the 1980 Standard Industrial Classification – Employees: analysis by industry; Administrative, technical and clerical workers; Industrial stoppages; Size of manufacturing units; Average earnings index, all employees; Import penetration and export sales ratios; Analysis of advances to UK residents; Acquisitions and mergers of companies.

Reference

Annual Abstract of Statistics, No. 121, 1985 edition (HMSO) (Reduced Price £17.50 net) ISBN 0 11 620103 7*

Economic Trends Annual Supplement

The 1985 edition of the *Economic Trends Annual Supplement* was published on 15 January 1985. This tenth issue of the Supplement brings together long runs of quarterly and annual data for the key series of economic statistics which are included in the monthly *Economic Trends*. It is of special value to economists, planners, analysts and academic researchers. Some 300 series are included, linked to give continuous runs as far back as possible in the post-1945 period. In many cases there are both seasonally adjusted and unadjusted figures and over half the series span more than twenty five years. Tables in the Supplement are backed by concise notes and definitions and an index to further, more detailed sources.

Among changes this year were the rebasing onto 1980=100 of retail sales, average earnings and employees employed in manufacturing industries. Money stock and liquidity pages have been renamed Monetary aggregates and show the 'Broad money' series £M3 and PSL 2. UK banks' loans, advances and acceptances to UK residents are on a new basis and finally the first stages of producing a computerised publication have started with the introduction of some seventy camera-ready tables.

The following amendments should be made to this edition:

- Page 65 Advances on new dwellings**
1976 Q2 delete 237 insert 287
- Page 72 Retail distribution**
1967 Q1 delete 16 insert - 16
- Page 73 Materials and fuel**
1980 Q1 delete - 264 insert - 254
Work in progress
1979 Q4 delete - 186 insert - 188
Other industries
1976 Q2 delete - 30 insert 30
- Page 201 Central government other**
1981 delete 826 insert 828
- Page 208 Building societies**
Line 10 delete 'over 80' insert 84

References

Economic Trends Annual Supplement No. 10 1985 Edition (HMSO) (Price £14.25 net) ISBN 0 11 620130 4
Economic Trends (HMSO monthly) (Price £9.95 net, annual subscription including Supplement £125.00)

Monthly Digest of Statistics Annual Supplement

The 1985 *Annual Supplement* was published with the January issue. This edition replaces the one published in April 1984. The definitions relate to the tables as they appear in issue No. 469 of the *Monthly Digest* for January 1985. If further new series are added or changes made in the content before the next edition of the *Supplement* additional definitions will be given, where necessary, in the footnotes to the tables in the *Digest*. The definitions in the *Supplement* also apply to corresponding items in the *Annual Abstract of Statistics* and *Regional Trends*.

References

Monthly Digest of Statistics (HMSO) (Price £5.95 net—annual subscription including Supplement £70.00 net)
Monthly Digest of Statistics Supplement of Definitions and Explanatory Notes 1985 Edition (HMSO) (Price £2.75 net)

Financial Statistics and Explanatory Handbook

The 1985 edition of *Financial Statistics Explanatory Handbook* will be published with the February issue. An up-to-date *Handbook* is an invaluable aid to interpreting and understanding *Financial Statistics*. The *Handbook* includes definitions and descriptions of the data series, and methods of compilation and is consistent with the January 1985 issue of *Financial Statistics*.

For the first issue of *Financial Statistics* for 1985 a new section, 14, devoted to balance sheets is introduced. Initially this section contains assets and liabilities data relating to the non-bank private sector based on former supplementary table S15. Additional balance sheet information is included with the individual sectors' transaction data. It is hoped to expand the coverage of section 14 as and when resources permit.

Also from January 1985 several other supplementary tables are published monthly in sections 1-13 of the

book. These are mainly tables which appeared quarterly and contained information updated at fairly regular intervals. The changes are as follows:

<i>Old table number</i>	<i>Revised table number</i>
S1	8.7
S2	10.10
S3	7.2
S4	7.3
S5	9.4
S7	13.15
S8	4.4
S9	4.8
S14	10.8
S15	14.1, 2, 3 and 4
S24	12.2

Financial Statistics is now produced entirely from data stored on the CSO computer. Apart from publication economies, this enables a much wider selection of series to be made available in computer readable form. Each series in the tables has been allocated a four letter identifier which can be used to access the series on the CSO Databank. This databank service is operated by SIA Computer Services on behalf of the CSO; more details can be obtained from the Supplementary Information Section each month in *Financial Statistics*.

References

Financial Statistics (HMSO monthly) (Price £7.95 net, annual subscription including postage and Handbook £100.00)
Financial Statistics Explanatory Handbook 1985 Edition (HMSO) February 1985 (Price £7.95 net)
CSO Databank, enquiries to SIA Computer Services, Ebury Gate, 23 Lower Belgrave Street, London, SW1W 0NW, Telephone: 01 730 4544

Bank of England Quarterly Bulletin

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

Some aspects of UK monetary policy

In an open lecture delivered at the University of Kent at Canterbury the Governor discusses the objectives and practical operation of monetary policy. The ultimate objectives are stability of the currency and, more fundamentally, the creation of a strong and growing economy. Intermediate objectives are couched in the form of targets for the monetary aggregates and set out in the Government's medium-term financial strategy. In considering the implementation of policy, the Governor notes that the authorities' influence on interest rates through official operations in the money market has limits and that in the short term the demand for credit tends to be rather insensitive to changes in interest rates. He goes on to explain why overfunding of the public

sector's borrowing requirement is a rational approach to offsetting the monetary effects of excess demand for credit and that it has occurred, on and off, throughout the post-war period.

Funding the public sector borrowing requirement: 1952-83

This article reviews the way in which the PSBR has been financed over most of the post-war period, concentrating on the implications of that financing for the banking system and monetary developments more widely. Since the adoption of targets for broad money in 1976, funding policy has assumed particular importance. Associated with this, certain developments, notably the occurrence in some periods of sales of debt to the non-bank private sector in excess of the PSBR, i.e. 'over-funding', and the potential implications of this for the liquidity of the banking system, have attracted much attention. This article seeks to set these developments in a longer historical context.

Distribution of the national debt: end-March 1984

This article, which continues an annual series, analyses the national debt by instrument and by holders. It illustrates how the average remaining life of dated stocks has fallen in recent years as issues have concentrated more on shorter maturities. The article also explains why market holding of national debt instruments rose by substantially more than the central government borrowing requirement during 1983/4.

The future structure of the gilt-edged market

Draft proposals for the Bank of England's dealing and supervisory relationship with certain participants in the gilt-edged market are reprinted; these proposals were originally published by the Bank on 7 November 1984.

The role and future of the international financial institutions

In the Jane Hodge Memorial Lecture, the Governor looks at some of the more important features of the IMF and World Bank and considers their future in the light of the problems with which they have to deal. The Fund is still the only international institution which can provide the expertise and finance to help economies return to equilibrium. The World Bank's role in assisting structural adjustment in developing countries should assume greater importance but an increase in its capital is likely to be necessary. The Fund and Bank will need to work more closely together on questions relating to developing countries.

Other items

Also reprinted are the Governor's Mansion House Speech in which he reviews progress on monetary

policy, the future of The Stock Exchange and investor protection. He comments on recent difficulties at Johnson Matthey Bankers, a subject also used by the Deputy Governor to illustrate the theme of a speech on the respective responsibilities of the private and public sectors. The December Bulletin also describes a recent meeting of the Bank's Panel of Academic Consultants on employment, real wages and unemployment in the United Kingdom, and updates and extends some annual tables on the financing of North Sea and other UK oil and gas development.

The Bank's *Quarterly Bulletin* (£7.50 per copy) may be obtained from:

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

Scottish Economic Bulletin

The latest edition of the *Scottish Economic Bulletin* published in December contains an economic review, three articles, revised charts and statistics.

The economic review which takes account of data available up to 20 November discusses the United Kingdom background before examining the situation in Scotland in general and in particular industries.

The first article 'Changes in regional policy' summarises the principal features of the new scheme and details the changes to the Assisted Area map in Scotland.

The second article is by D. Bruce and A. Howson and concerns 'Revised travel-to-work areas in Scotland'. This summarises the methodology used in, and results for Scotland of, the 1984 review of travel-to-work areas.

In the third article 'Input-output tables for Scotland for 1979 further results' W. M. McNie outlines a selection of the more interesting summary results to emerge from the latest work on the tables.

The main development in the charts and statistics are some further alignment to the standard main annual economic series style of presentation and development of tables for Scottish Regions. These moves follow reactions to a recent readership survey.

Reference

Scottish Economic Bulletin No. 30 (HMSO) December 1984 (Price £6 net)

National Institute Economic Review

The latest issue of the *National Institute Economic Review* includes the following items:

Macroeconomic policy in France and Britain. The main purpose of this study by K. Barker, A. Britton and R. Major is to draw lessons for Britain from the experience of France. Inflation in France is steady and stubborn, whilst in Britain it is erratic and perhaps less

deep-rooted. Unemployment in Britain has a large component caused by a deficiency of demand following the abrupt recession of 1980-1. France has avoided the dramatic fall in output which this country suffered during the recent recession, and partly for that reason the level of unemployment is not so high. The authors think that this difference probably owes something to the less destabilising macroeconomic policy in France.

The sources of recovery in the United Kingdom in the 1930s. An article by G. D. N. Worswick examines the nature of the recovery of the British economy in the 1930s. The fall in output and employment after 1929 was primarily attributable to the fall in exports brought about by the collapse of world trade. Britain left the gold standard in 1931, which permitted the authorities to pursue a policy of 'cheap housebuilding'. Low interest rates triggered a great expansion of housebuilding, which led the recovery. Other influences are examined, and a final section asks whether the experience of the 1930s has lessons for the present day.

Employment and real wages in the inter-war period. The first part of this article by N. H. Dimsdale examines alternative measures of real wages and own product real wages in UK in the inter-war period, showing how the various measures differ widely in the scale and timing of their movement. The second part seeks to estimate econometrically the effects on employment of real wages and demand variables. The influence of real wages was stronger in the 1920s than in the depression. Both the fall in employment 1929-32 and the recovery 1932-37 are largely accounted for by the demand variables.

Reference

National Institute Economic Review No. 110 November 1984, available from the National Institute of Economic and Social Research, 2 Dean Trench Street, Smith Square, London SW1P 3HE (Price £8.50 including postage)

World Fertility Survey

Recent publications by this world-wide survey of possible interest to readers of *Statistical News* include:

Comparative studies

No. 29 *Childspacing in Asia: Similarities and Differences* by Ronald R. Rindfuss and seven others

No. 30 *A Comparative Analysis of Determinants of Birth Intervals* by G. Rodríguez, J. Hobcraft, J. McDonald, J. Menken and J. Trussell

No. 36 *Differentials in Contraceptive Use* by Z. A. Sathar and V. C. Chidambaram

No. 37 *The Availability of Contraceptive Services* by Elise F. Jones

Scientific reports series

No. 50 *Evaluation des données de l'Enquête Haïtienne sur la Fécondité* by Camille Tardieu

Further information about these and other WFS publications can be obtained from:

Publications Office
International Statistical Institute
428 Prinses Beatrixlaan
PO Box 950
2270 AZ Voorburg
Netherlands

International publications

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

United Nations

Department of International Economic and Social Affairs

Energy statistics yearbook 1982, price £57 net

Population studies:

No. 83 *Population projections: methodology of the United Nations: papers of the United Nations ad hoc expert group on Demographic Projections*, United Nations headquarters, November 16-19, 1981 price £10.45 net

No. 84 *Data bases for mortality measurement: papers of the meeting of the United Nations/World Health Organisation working group on Data Bases for Management of Levels, Trends and Differentials in Mortality: Bangkok, October 20-23, 1981* price £17.10 net

Statistical papers series M:

No. 75 *Directory of environment statistics*, price £28.50 net

No. 76 *Price and quantity measurement in external trade: two studies of national practise* price £11.90 net

Yearbook of international trade statistics 1982 (2 vols. not to be sold separately): *Vol. 1: Trade by country: Vol. 2: Trade by commodity: commodity matrix tables*, price £76 net

Commission for Europe

Annual bulletin of general energy statistics for Europe 1982, price £14.25 net

Bulletin of statistics on world trade in engineering products 1982, price £36.10 net

Economic Survey of Europe in 1983, price £33.25 net

Strategy for energy use in the iron and steel industry, price £19.95 net

Economic and Social Commission for Asia and the Pacific

Statistical yearbook for Asia and the Pacific 1982, price £49.40 net

Food and Agriculture Organisation (FAO)
FAO statistics series No. 56 *FAO fertilizer yearbook, Vol. 33, 1983*, price £10.80 net

Eurostat

A guide to current sources of wage statistics in the European Community, by David Marsden and Lydia Redlbacher, price £6.50 net

Analytical tables of foreign trade SITC/CTC Rev 2 - 1983. Single series, import or export, price £93.90 net: Complete series, import and export, price £157 net

Analytical tables of foreign trade NIMEXE 1983: complete issue, import and export, price £235 net: single volumes, price £15.70 net each

Agricultural prices 1972-1983, price £10.50 net

Balance of payments methodology of France, price £12.40 net

Community survey of orchard fruit trees, price £4 net

Employment and unemployment series:

1984/2 Social aspects of employment in the iron and steel industry (ECSC), price £1.30 net

1984/3 Employment in 1983, price £1.30 net

Government financing of research and development 1975-1983, price £5.90 net

National accounts ESA: detailed tables by branch, price £7.90 net

Studies of national accounts: No. 6 *The degree of similarity in the economics of the EEC countries 1975 and 1970/1981*, by Marco Pecci-Borioni, price £2.75 net

Yearbook of fishery statistics 1984, price £5.90 net

Council of Europe

Directorate of Economic and Social Affairs. Demographic Section

Population studies (series), No. 9 *Socio-economic differences in mortality in Europe*, by Elsebeth Lynge, price £3.25 net

Protection of personal data used for scientific research and statistics: recommendation No.

R(83) 10 adopted by the Committee of Ministers of the Council of Europe on September 23 1983 and explanatory memorandum, price £1.75 net

OECD

Educational trends in the 1970s: a quantitative analysis, price £6 net

Geographical distribution of financial flows to developing countries: disbursements, commitments, economic indicators: 1980-1983, price £16 net

The pulp and paper industry in the OECD member countries 1982, price £6.20 net

Tourism policy and international tourism in OECD member countries: evolution of tourism in OECD member countries 1983, price £9.80 net

Youth employment in France: recent strategies, price £4.50 net

European Communities Commission

The farm accountancy data network: farm accounts results 1978/79-1981/82, price £3.30 net

International Monetary Fund

Direction of trade statistics yearbook 1984, price £7.65 net

International financial statistics: supplement series, No. 7 *Supplement on balance of payments*, price £5.40 net

International Energy Agency

Coal information 1984, price £40 net

International Atomic Energy Agency

Reference series, data 2, *Nuclear power reactors in the world 1984*, price £2.50 net

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

Directory of Academic Statisticians

The Committee of Professors of Statistics publishes annually a Directory listing all statisticians in university departments and university-linked research units in the United Kingdom and Northern Ireland, with a brief description of their fields of interest. Copies of the 1984 edition are available at a cost of £4 from the Editor, Professor R. M. Loynes, University of Sheffield, Sheffield S3 74H. Telephone: 0742 78555. (Cheques should be made payable to COPS.)

GOVERNMENT STATISTICAL SERVICE

Review of regular surveys

As part of the system for reviewing all regular statistical surveys to businesses and local authorities every five years, two reports of completed reviews are summarised below. The procedure for reviewing surveys was set out in *Statistical News*, May 1983 (61.33).

Export values verification and related surveys

The export values verification survey and its related exercises were reviewed in 1984 by HM Customs and Excise and the Survey Control Unit of the Central Statistical Office.

The review accepted the need for the information to be collected to enable the Department of Trade and Industry to calculate the adjustment required to the balance of payments figures to compensate for incorrect values declared on export documents. The survey results are also used by HM Treasury and DTI to provide information on the currencies being used by exporters. Since 1979 the frequency of the survey has been reduced from a monthly to a twice-yearly exercise with a consequent reduction of 30,000 forms despatched per annum. It is now estimated that the survey costs government some

£60,000 per annum, and respondents less than £10,000 per annum.

The review recognized that the operation of this survey is largely constrained by other activities in Customs and Excise but identified some areas where changes to the procedures were practicable and could improve the survey results. The operation of the survey will be considered further as part of an overall investigation into the automation of Customs and Excise statistical office procedures.

Further information is available from:

Mr R. Foster
HM Customs and Excise Statistical Office
Room 407E, Portcullis House
27 Victoria Avenue
Southend on Sea SS2 0AL

Monthly inquiries into sales of manufacturing industries

A report presenting the findings of a review of the monthly inquiries into sales of manufacturing industry conducted by the Business Statistics Office has recently been published. In summary the report affirms the need for the inquiries since data collected in them are used primarily for providing the government with a short-term indicator of industrial output (the index of industrial production). It is estimated that the cost to government of these inquiries in 1983 was around £260,000. The cost to industry is estimated at around £80,000 per annum.

The main recommendations of the report are:

- i. An investigation should be undertaken into the possibility of introducing sampling in the monthly inquiries to replace the present possibly unrepresentative panel of contributors. A necessary consequence of this would be to make all of the monthly inquiries statutory but there would probably be some savings in numbers of forms
- ii. The information collected in the quarterly engineering inquiry, which was also covered by the review, should be in future collected as part of the more extensive quarterly inquiry into manufacturers' sales
- iii. Seven inquiries should be dropped, the introduction of three new inquiries should be considered
- iv. Information on orders-on-hand in the textile and clothing industries where the only requirement is for EUROSTAT (the Statistical Office of the European Communities) should no longer be collected.

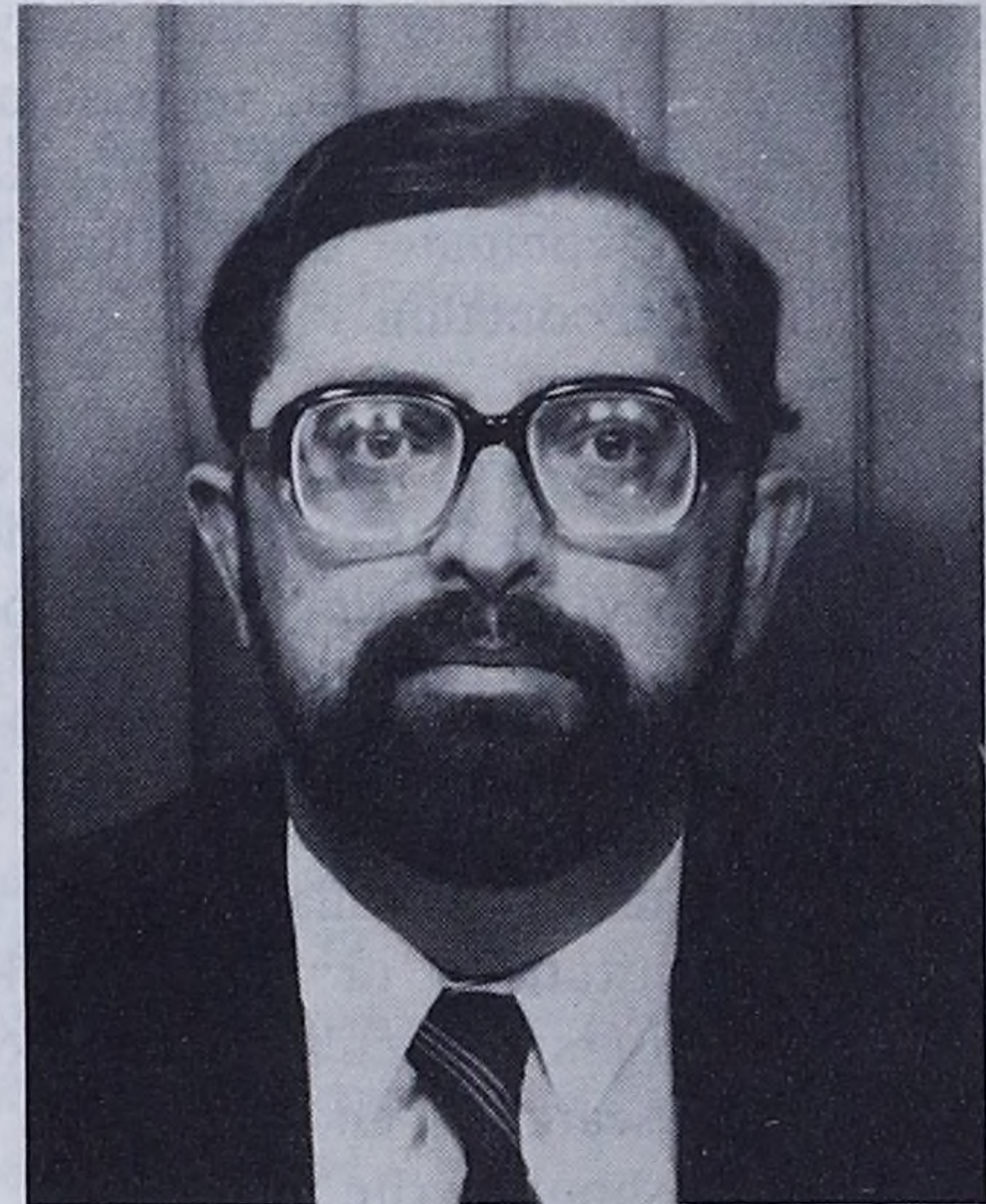
Copies of the joint Survey Control Unit/Business Statistics Office report are available, price £1.50, from:
The Librarian, Business Statistics Office
Government Buildings, Cardiff Road, Newport
Gwent NP9 1XG
Telephone: Newport (0633) 56111 ext. 2399.

Manufacturers' sales of motor vehicle components

This is a recently completed category B review. Smaller surveys to businesses are subject to an internal departmental review and a report which is monitored by the Survey Control Unit. Any enquiries concerning this survey or its review should be made to the departmental contact point given below:

Mr D. Heron
Department of Trade and Industry
Statistics Division
Millbank Tower
Millbank
London SW1P 4QU

Appointments and changes



Neil Harvey, aged 47; joined the Civil Service in 1965 in the Department of Economic Affairs and worked there on economic statistics, economic forecasting and the early development of the medium term econometric model. He spent 1969 to 1973 in the Treasury, engaged mainly on financial and monetary forecasting and then transferred on promotion to Chief Statistician to the Inland Revenue where he worked on statistics of personal incomes and support for the Budget. In 1977 he moved to HM Customs and Excise where he was in charge of the office at Southend responsible for the collection and processing of overseas trade statistics. He was promoted to Under Secretary (Grade 3) and transferred to the Department of Trade and Industry on 10 December 1984 where he succeeded *Stanley James* as Head of S1 Division.

Mr T. J. Kavanagh, Statistician, Central Statistical Office, was promoted to Grade 5 (Chief Statistician) on 8 October 1984 and transferred to the Home Office.

New Year Honours List 1985

Mr L. G. Adams, Principal, Central Statistical Office was awarded the ISO.

LATE ITEMS

University of Essex; 18th Essex Summer school in social science data analysis and collection

The Essex Department of Government and the European Consortium for Political Research will be sponsoring the 18th school, to be held at Essex in three continuous but independent sessions; 12 July to 26 July; 27 July to 9 August; 10 August to 23 August. Special emphasis will be on introductory courses for participants who lack any training in statistics or computing. Full supporting interactive computing facilities, including the use of micro-computers, will be available.

Among the courses offered will be:

Introductory level—introduction to data analysis with SPSS (probability, crosstabulation, regression, factor analysis); data analysis for beginners; mathematics for social scientists; micro-computer applications in social research (including introduction to basic and pascal); introductory econometrics.

Intermediate and advanced level—cluster analysis; analysis of textual data; linear structural relationships; analysis of contingency tables (log linear modelling); survey design and analysis; dimensional analysis; time series and forecasting; scaling and factor analysis; multi-level data analysis; casual modelling.

Financial support may be available to participants from their own Institutions or National Research Councils. The organisers particularly wish to attract advanced students, researchers and academics.

Interested persons should write to:

Mrs Carole Welge (Organising Secretary)
18th Essex Summer School
Department of Government
University of Essex
Colchester CO4 3SQ

LETTERS TO THE EDITOR

The editor is willing to consider for publication letters of interest but cannot enter into correspondence on the matters raised.

Address: The Editor
Statistical News
Room 74A/3rd
Central Statistical Office
Great George Street
London SW1P 3AQ

Women's health care preferences: a WNC survey

Since 1969 the Women's National Commission (WNC), a government advisory committee, has acted as a channel for women's opinions to be taken into account in government deliberations. It submits to Ministers reports researched by working groups drawn from representatives of the fifty main national women's organisations who comprise the WNC.

A recent working group studying health service provision for women, commissioned a survey to establish women's health care preferences. This, WNC's first survey, had several draft stages before a trial run amongst female Cabinet Office colleagues, who made helpful comments on content and layout. The Office of Population Censuses and Surveys also gave advice on this unofficial survey.

It was intended to encourage discussion of health care provision for women, as well as to collect replies and the six page questionnaire was widely distributed. 20,000 copies were given out in mid-1984 by women's organisations at annual conferences or through regional networks and from WNC offices. Return postage was not provided and we were pleased to receive 6,000 replies. Those received after the closing date or which did not relate to health services in Great Britain were excluded, 5,968 replies being used for analysis.

The questionnaire covered seven areas: health education and preventive health care; general practitioner (GP) services; use of private health care; knowledge of local health authorities; National Health Service (NHS) provision of an all female staffed hospital service; preferences for a female or male doctor and maternity care.

The survey showed that the NHS could be improved to better suit women's needs. There was a strong preference among respondents for more accessible GP surgery times, at evenings (71.4 per cent) and weekends (55.2 per cent). The demand for more health educational information (84.7 per cent) revealed an interest in remaining healthy which was also evident in the support for a pre-pregnancy service (80 per cent) and those who would use a well woman clinic if provided (85.2 per cent).

A preference for female doctors was strongest when wanting advice on gynaecological and related matters (42 per cent). The majority generally had no preference as to the sex of their doctor (74.2 per cent) but 72 per cent supported women being offered a male or female doctor for hospital treatment with 48.3 per cent agreeing that the NHS should provide women with a hospital service staffed entirely by women, preferably by one unit in each region.

Reference

Women's health care preferences: a survey and *Women and the Health Service: report of an ad hoc working group* are both available free from the Women's National Commission, Room 71/3, Government Offices, Great George Street, London SW1P 3AQ

Alphabetical Index

The index to *Statistical News* covers the last nine issues. Page numbers are prefixed by the issue number, e.g. 64.18 signifies number 64, page 18.

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

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

- abortion statistics, 64.24
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